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Series	Ports	Cavities
<b>Series Z Cartridges</b> 3/8-24 UNF Cartridge Thread 5 mm Valve Hex Size 11 - 14 Nm Valve Installation Torque	3-Port	T-382A
<b>Series P Cartridges</b> M16 Cartridge Thread 22,2 mm Valve Hex Size 27 - 33 Nm Valve Installation Torque	2-Port 2-Port (Deep) 3-Port	T-8A T-8DP T-9A
<b>Series O Cartridges</b> M16 Cartridge Thread 19,1 mm Valve Hex Size 25,4 mm Valve Hex Size 27 - 33 Nm Valve Installation Torque	2-Port 2-Port (Deep) 3-Port 3-Port 4-Port	T-162A T-162DP T-150A T-163A T-30A
<b>Series OC Cartridges</b> 3/4-16 UNF Cartridge Thread 22,2 mm Valve Hex Size 19-22 lbf ft Valve Installation Torque	4-Port (Common)	SC-08-04
<b>Series 1 Cartridges</b> M20 Cartridge Thread 22,2 mm Valve Hex Size 41 - 47 Nm Valve Installation Torque	2-Port 2-Port 3-Port 4-Port 4-Port 6-Port	T-10A T-13A T-11A T-21A T-31A T-61A
<b>Series 1C Cartridges</b> 7/8-14 UNF Cartridge Thread 25,4 mm Valve Hex Size 23-26 lbf ft Valve Installation Torque	2-Port (Common) 4-Port (Common)	SC-10-02 SC-10-04
<b>Series 2 Cartridges</b> 1"-14 UNS Cartridge Thread 28,6 mm Valve Hex Size 61 - 68 Nm Valve Installation Torque	2-Port 2-Port 3-Port 4-Port 4-Port 4-Port (Dual path) 6-Port 6-Port	T-3A T-5A T-2A T-22A T-32A T-52AD T-52A T-62A
<b>Series 3 Cartridges</b> M36 Cartridge Thread 31,8 mm Valve Hex Size 203 - 217 Nm Valve Installation Torque	2-Port 3-Port 4-Port 4-Port 4-Port (Dual path) 6-Port 6-Port	T-16A T-17A T-23A T-33A T-53AD T-53A T-63A
<b>Series 4 Cartridges</b> M48 Cartridge Thread	2-Port 2-Port (Undercut)	T-18A T-18AU

41,3 mm Valve Hex Size  
474 - 508 Nm Valve Installation Torque

3-Port	T-19A
3-Port (Undercut)	T-19AU
4-Port	T-24A
4-Port (Undercut)	T-24AU
4-Port	T-34A
4-Port (Dual path)	T-54AD
6-Port	T-54A
6-Port	T-64A



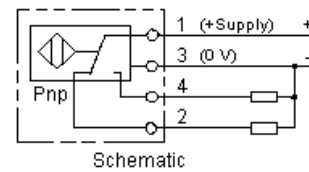
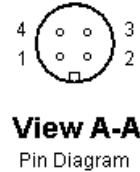
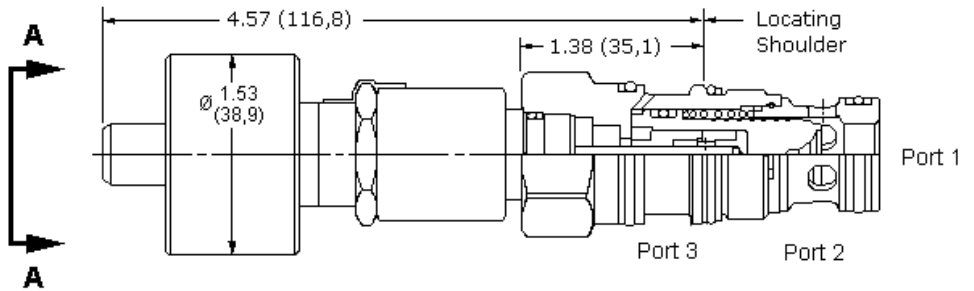
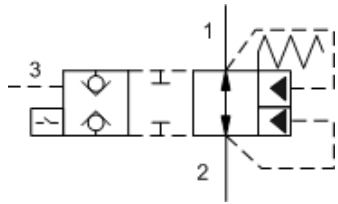
The XMD CAN-to-USB hardware interface cable is a USB 2.0 high-speed device that allows the Controller Area Network (CAN) in the XMD to be transmitted and received using the CANpoint XMD Configuration Software on a computer or laptop.

### TECHNICAL DATA

Cable Length	16 ft
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### USED WITH

XMD-01      XMD-02



in (mm)

These unbalanced, pilot-to-close logic valves are 2-way switching elements that are spring biased open. Pressure at either work port 1 or 2 will tend to keep the valve open while pressure at port 3 will tend to close it. The force generated at port 3 must be greater than the sum of the forces acting at port 1 and port 2 plus the spring force for the valve to close. NOTE: The pilot area (port 3) is 1.8 times the area at port 1 and 2.25 times the area at port 2.

This valve incorporates a position switch to provide confirmation that the valve is spring biased to the fully open position.

**TECHNICAL DATA**

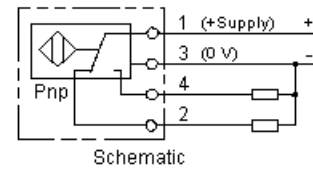
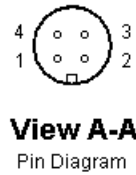
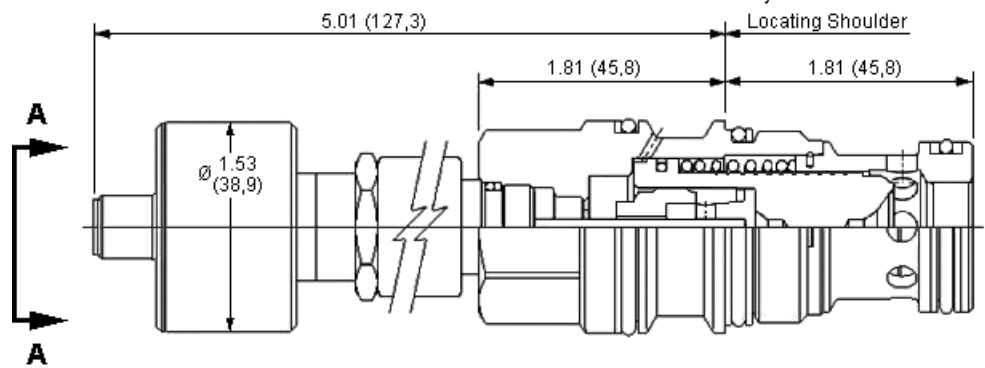
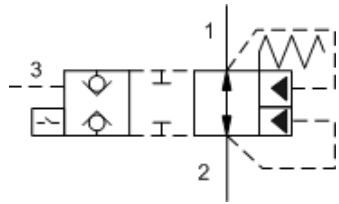
NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	5000 psi
Maximum Valve Leakage at 110 SUS (24 cSt)	1 drops/min.
Pilot Volume Displacement	.07 in <sup>3</sup>
Pilot Passage into Valve	.035 in.
Area Ratio, A3 to A1	1.8:1
Area Ratio, A3 to A2	2.25:1
Seal kit - Cartridge	Buna: 990202007
Seal kit - Cartridge	Polyurethane: 990002002
Seal kit - Cartridge	Viton: 990202006

**CONFIGURATION OPTIONS**

**Model Code Example: LOFOZDN**

<b>CRACKING PRESSURE</b>	<b>(D)</b>	<b>SEAL MATERIAL</b>	<b>(N)</b>
D 50 psi (3,5 bar)		N Buna-N	
		V Viton	



in (mm)

These unbalanced, pilot-to-close logic valves are 2-way switching elements that are spring biased open. Pressure at either work port 1 or 2 will tend to keep the valve open while pressure at port 3 will tend to close it. The force generated at port 3 must be greater than the sum of the forces acting at port 1 and port 2 plus the spring force for the valve to close. NOTE: The pilot area (port 3) is 1.8 times the area at port 1 and 2.25 times the area at port 2.

This valve incorporates a position switch to provide confirmation that the valve is spring biased to the fully open position.

**TECHNICAL DATA**

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	5000 psi
Maximum Valve Leakage at 110 SUS (24 cSt)	1 drops/min.
Pilot Volume Displacement	.25 in <sup>3</sup>
Pilot Passage into Valve	.06 in.
Area Ratio, A3 to A1	1.8:1
Area Ratio, A3 to A2	2.25:1
Seal kit - Cartridge	Buna: 990017007
Seal kit - Cartridge	Polyurethane: 990017002
Seal kit - Cartridge	Viton: 990117006

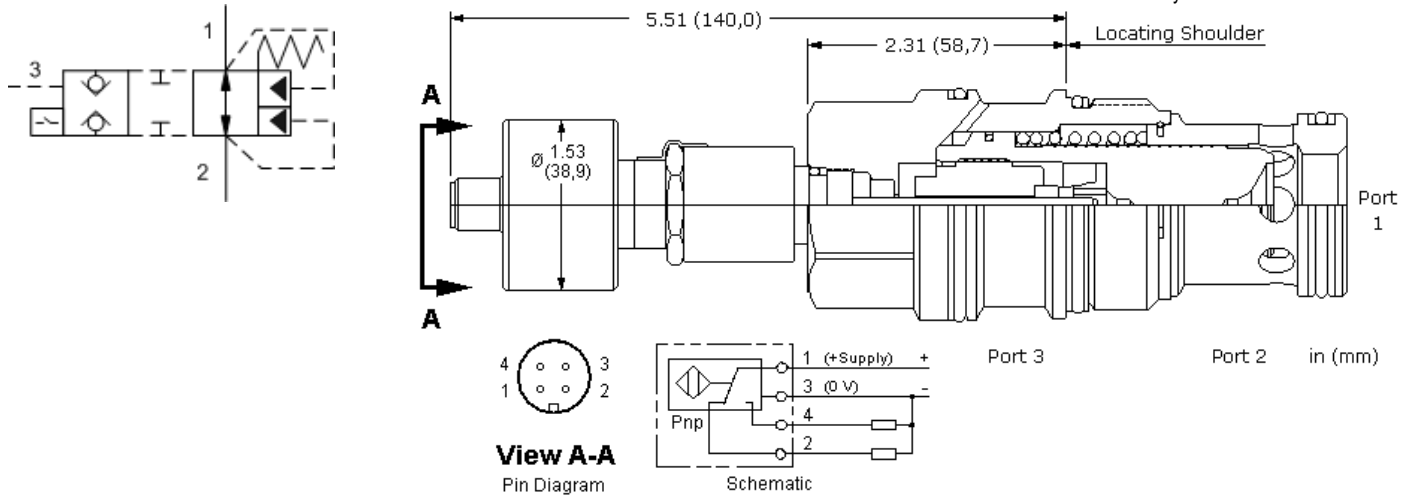
**CONFIGURATION OPTIONS**

**Model Code Example: LOHOZDN**

**CRACKING PRESSURE** (D) **SEAL MATERIAL** (N)

<b>D</b> 50 psi (3,5 bar)	<b>N</b> Buna-N
	V Viton





These unbalanced, pilot-to-close logic valves are 2-way switching elements that are spring biased open. Pressure at either work port 1 or 2 will tend to keep the valve open while pressure at port 3 will tend to close it. The force generated at port 3 must be greater than the sum of the forces acting at port 1 and port 2 plus the spring force for the valve to close. NOTE: The pilot area (port 3) is 1.8 times the area at port 1 and 2.25 times the area at port 2.

This valve incorporates a position switch to provide confirmation that the valve is spring biased to the fully open position.

**TECHNICAL DATA**

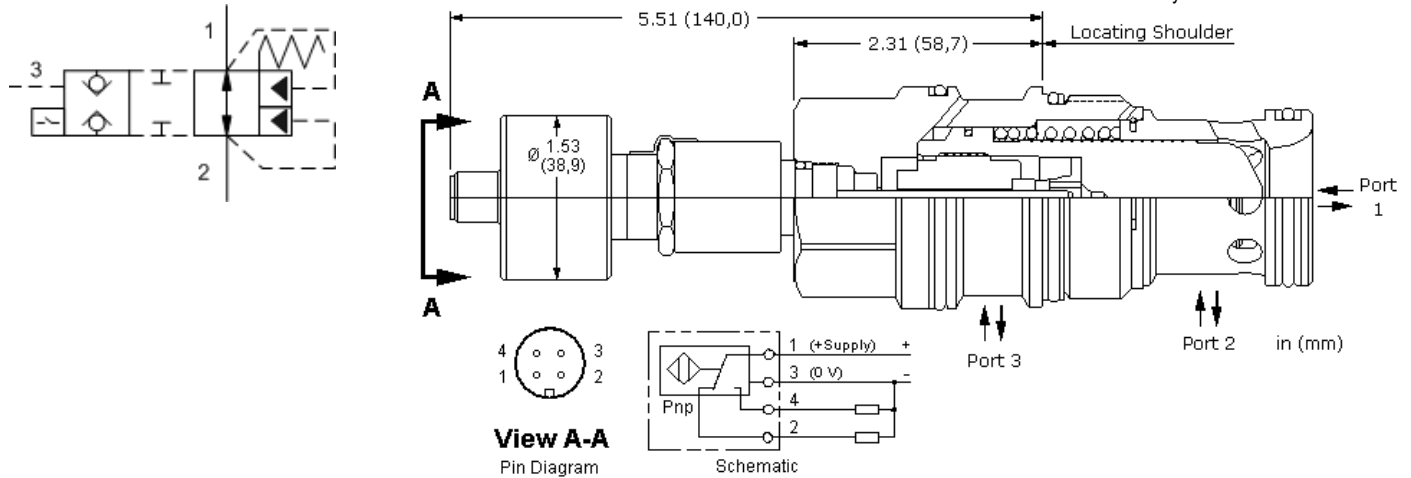
NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	5000 psi
Maximum Valve Leakage at 110 SUS (24 cSt)	1 drops/min.
Pilot Volume Displacement	.42 in <sup>3</sup>
Pilot Passage into Valve	.09 in.
Area Ratio, A3 to A1	1.8:1
Area Ratio, A3 to A2	2.25:1
Seal kit - Cartridge	Buna: 990019007
Seal kit - Cartridge	Polyurethane: 990019002
Seal kit - Cartridge	Viton: 990019006

**CONFIGURATION OPTIONS**

Model Code Example: LOJOZDN

<b>CRACKING PRESSURE</b>	<b>(D)</b>	<b>SEAL MATERIAL</b>	<b>(N)</b>
D 50 psi (3,5 bar)		N Buna-N	
		V Viton	



These unbalanced, pilot-to-close logic valves are 2-way switching elements that are spring biased open. Pressure at either work port 1 or 2 will tend to keep the valve open while pressure at port 3 will tend to close it. The force generated at port 3 must be greater than the sum of the forces acting at port 1 and port 2 plus the spring force for the valve to close. NOTE: The pilot area (port 3) is 1.8 times the area at port 1 and 2.25 times the area at port 2.

This valve incorporates a position switch to provide confirmation that the valve is spring biased to the fully open position.

**TECHNICAL DATA**

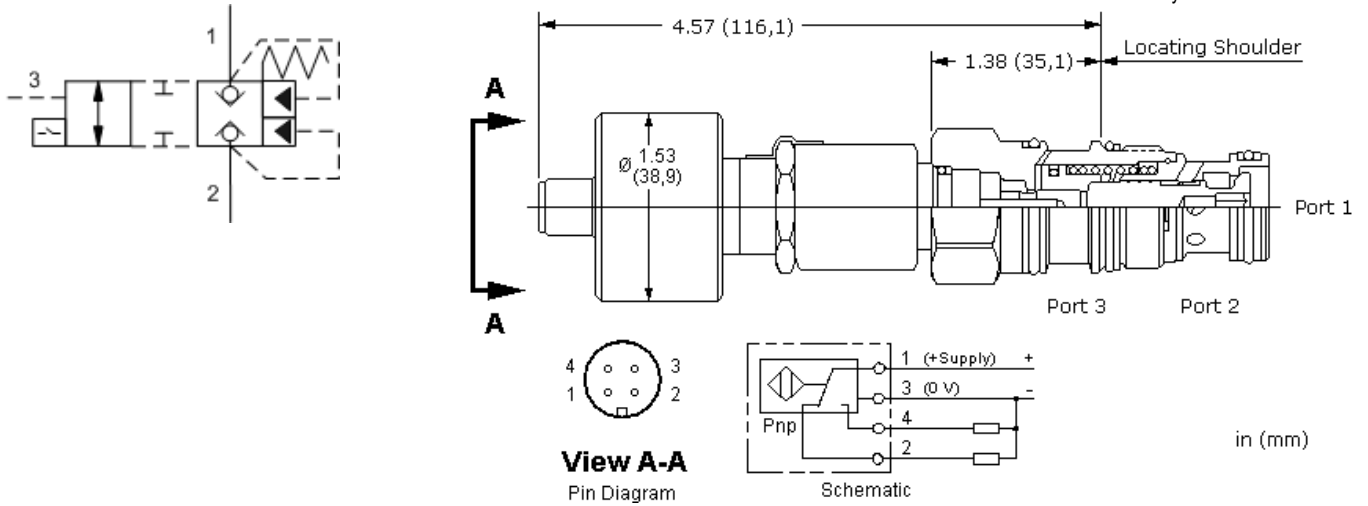
NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	5000 psi
Maximum Valve Leakage at 110 SUS (24 cSt)	1 drops/min.
Pilot Volume Displacement	.47 in <sup>3</sup>
Pilot Passage into Valve	.09 in.
Area Ratio, A3 to A1	1.8:1
Area Ratio, A3 to A2	2.25:1
Seal kit - Cartridge	Buna: 990019007
Seal kit - Cartridge	Polyurethane: 990019002
Seal kit - Cartridge	Viton: 990019006

**CONFIGURATION OPTIONS**

**Model Code Example: LOKOZDN**

<b>CRACKING PRESSURE</b>	<b>(D)</b>	<b>SEAL MATERIAL</b>	<b>(N)</b>
D 50 psi (3,5 bar)		N Buna-N	
		V Viton	



These unbalanced poppet, logic valves are 2-way switching elements that are spring-biased closed. Pressure at either work port 1 or 2 will further bias the valve to the closed position while pressure at port 3 will tend to open it. The force generated at port 3 must be greater than the sum of the forces acting at port 1 and port 2 plus the spring force for the valve to open. NOTE: The pilot area (port 3) is 1.8 times the area at port 1 and 2.25 times the area at port 2.

This valve incorporates a position switch to provide confirmation that the valve is closed.

**TECHNICAL DATA**

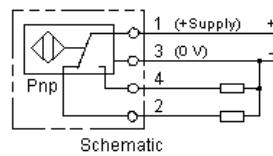
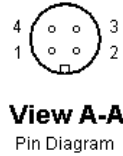
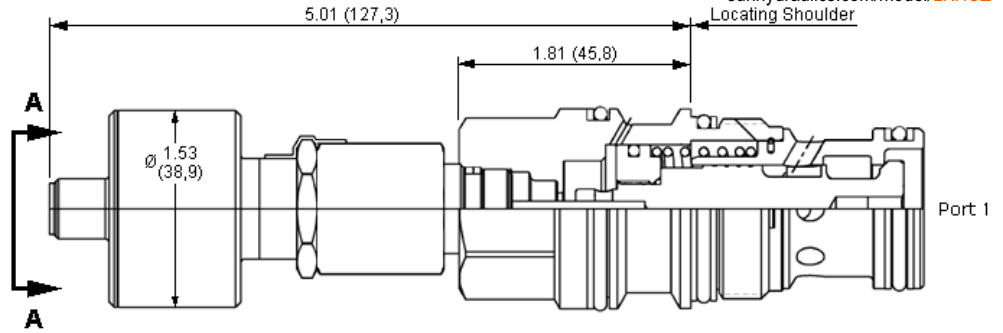
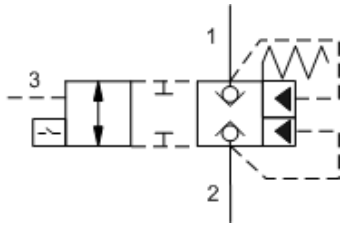
NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	5000 psi
Maximum Valve Leakage at 110 SUS (24 cSt)	1 drops/min.
Pilot Volume Displacement	.06 in <sup>3</sup>
Pilot Passage into Valve	.035 in.
Area Ratio, A3 to A1	1.8:1
Area Ratio, A3 to A2	2.25:1
Transition leakage at 110 SUS (24 cSt)	2 in <sup>3</sup> /min.@1000 psi
Seal kit - Cartridge	Buna: 990202007
Seal kit - Cartridge	EPDM: 990202014
Seal kit - Cartridge	Polyurethane: 990002002
Seal kit - Cartridge	Viton: 990202006

**CONFIGURATION OPTIONS**

**Model Code Example: LKFCZDN**

<b>MINIMUM PILOT PRESSURE</b>	<b>(D)</b>	<b>SEAL MATERIAL</b>	<b>(N)</b>
<b>D</b> 50 psi (3,5 bar)		<b>N</b> Buna-N	
		<b>E</b> EPDM	
		<b>V</b> Viton	



Port 3      Port 2  
in (mm)

These unbalanced poppet, logic valves are 2-way switching elements that are spring-biased closed. Pressure at either work port 1 or 2 will further bias the valve to the closed position while pressure at port 3 will tend to open it. The force generated at port 3 must be greater than the sum of the forces acting at port 1 and port 2 plus the spring force for the valve to open. NOTE: The pilot area (port 3) is 1.8 times the area at port 1 and 2.25 times the area at port 2.

This valve incorporates a position switch to provide confirmation that the valve is closed.

**TECHNICAL DATA**

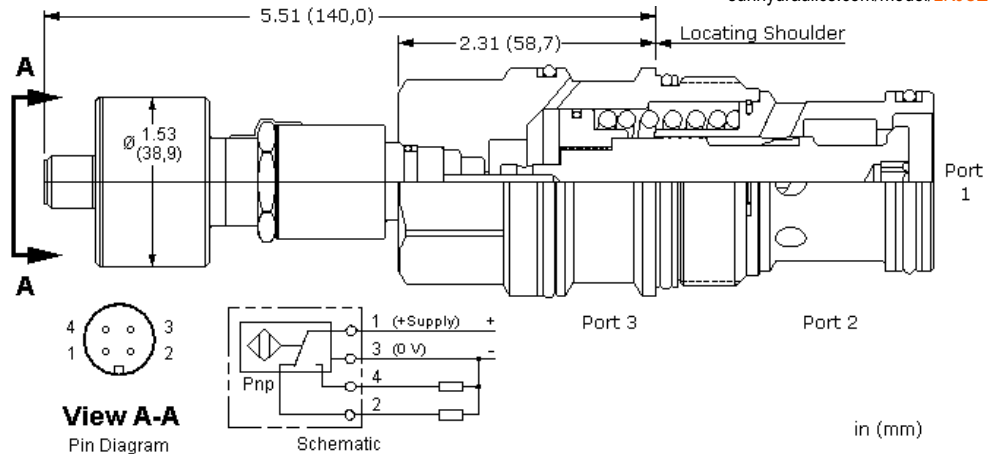
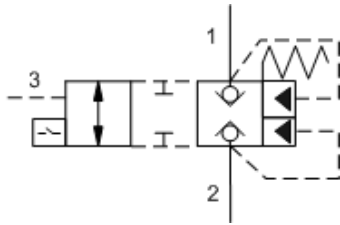
NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	5000 psi
Maximum Valve Leakage at 110 SUS (24 cSt)	1 drops/min.
Pilot Volume Displacement	.15 in <sup>3</sup>
Pilot Passage into Valve	.06 in.
Area Ratio, A3 to A1	1.8:1
Area Ratio, A3 to A2	2.25:1
Transition leakage at 110 SUS (24 cSt)	2 in <sup>3</sup> /min. @ 1000 psi
Seal kit - Cartridge	Buna: 990017007
Seal kit - Cartridge	EPDM: 990017014
Seal kit - Cartridge	Polyurethane: 990017002
Seal kit - Cartridge	Viton: 990017006

**CONFIGURATION OPTIONS**

**Model Code Example: LKHCZDN**

<b>MINIMUM PILOT PRESSURE</b> (D)	<b>SEAL MATERIAL</b> (N)
<b>D</b> 50 psi (3,5 bar)	<b>N</b> Buna-N
	<b>E</b> EPDM
	<b>V</b> Viton



These unbalanced poppet, logic valves are 2-way switching elements that are spring-biased closed. Pressure at either work port 1 or 2 will further bias the valve to the closed position while pressure at port 3 will tend to open it. The force generated at port 3 must be greater than the sum of the forces acting at port 1 and port 2 plus the spring force for the valve to open. NOTE: The pilot area (port 3) is 1.8 times the area at port 1 and 2.25 times the area at port 2.

This valve incorporates a position switch to provide confirmation that the valve is closed.

**TECHNICAL DATA**

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

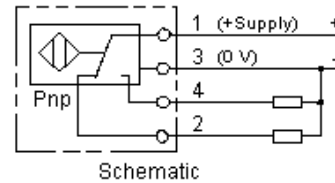
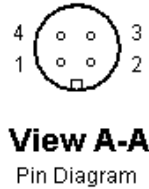
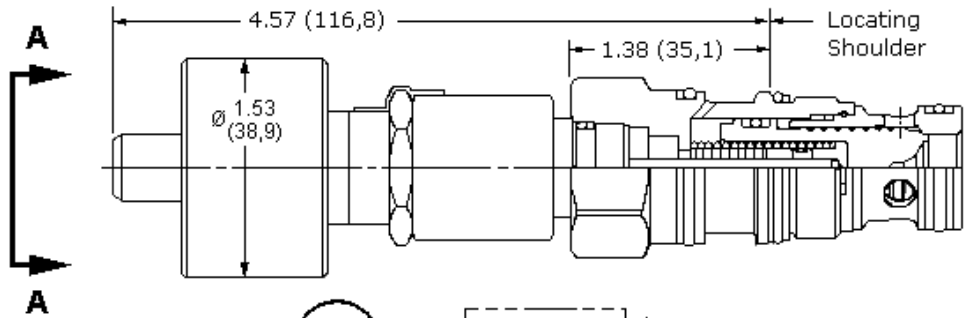
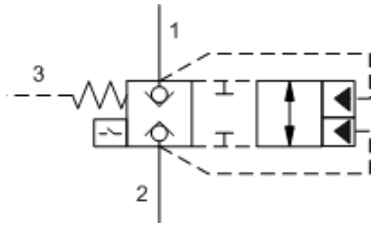
Maximum Operating Pressure	5000 psi
Maximum Valve Leakage at 110 SUS (24 cSt)	1 drops/min.
Pilot Volume Displacement	.30 in <sup>3</sup>
Pilot Passage into Valve	.09 in.
Area Ratio, A3 to A1	1.8:1
Area Ratio, A3 to A2	2.25:1
Transition leakage at 110 SUS (24 cSt)	2 in <sup>3</sup> /min.@1000 psi
Seal kit - Cartridge	Buna: 990019007
Seal kit - Cartridge	Polyurethane: 990019002
Seal kit - Cartridge	Viton: 990019006

**CONFIGURATION OPTIONS**

**Model Code Example: LKJ CZDN**

**MINIMUM PILOT PRESSURE (D) SEAL MATERIAL (N)**

<b>D</b> 50 psi (3,5 bar)	<b>N</b> Buna-N
	<b>V</b> Viton



in (mm)

These unbalanced, pilot-to-close logic valves are 2-way switching elements that are spring biased closed. Pressure at either work port 1 or 2 will oppose the spring and tend to open the valve while pressure at port 3 will tend to close it. The force generated by the pressure at port 3, plus the spring force, must be greater than the sum of the forces generated by the pressures at ports 1 and 2 for the valve to remain closed.

This valve incorporates a position switch to provide confirmation that the valve is closed.

**TECHNICAL DATA**

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

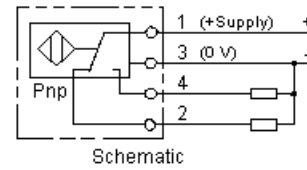
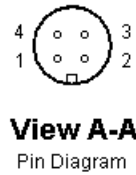
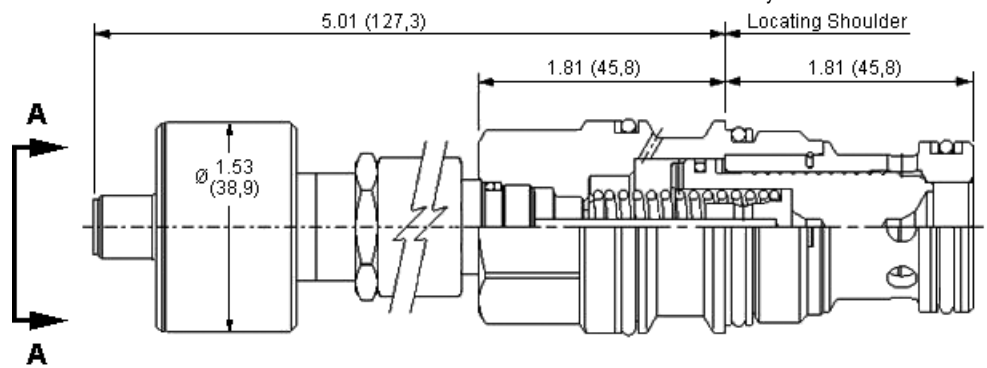
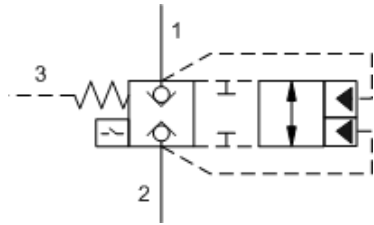
Maximum Operating Pressure	5000 psi
Maximum Valve Leakage at 110 SUS (24 cSt)	1 drops/min.
Pilot Volume Displacement	.07 in <sup>3</sup>
Pilot Passage into Valve	.035 in.
Area Ratio, A3 to A1	1.8:1
Area Ratio, A3 to A2	2.25:1
Transition leakage at 110 SUS (24 cSt)	2 in <sup>3</sup> /min. @1000 psi
Seal kit - Cartridge	Buna: 990202007
Seal kit - Cartridge	Polyurethane: 990002002
Seal kit - Cartridge	Viton: 990202006

**CONFIGURATION OPTIONS**

**Model Code Example: LOFCZDN**

**NOMINAL CONTROL PRESSURE (D) SEAL MATERIAL (N)**

**D** 50 psi (3,5 bar)      **N** Buna-N  
V Viton



in (mm)

These unbalanced, pilot-to-close logic valves are 2-way switching elements that are spring biased closed. Pressure at either work port 1 or 2 will oppose the spring and tend to open the valve while pressure at port 3 will tend to close it. The force generated by the pressure at port 3, plus the spring force, must be greater than the sum of the forces generated by the pressures at ports 1 and 2 for the valve to remain closed.

This valve incorporates a position switch to provide confirmation that the valve is closed.

**TECHNICAL DATA**

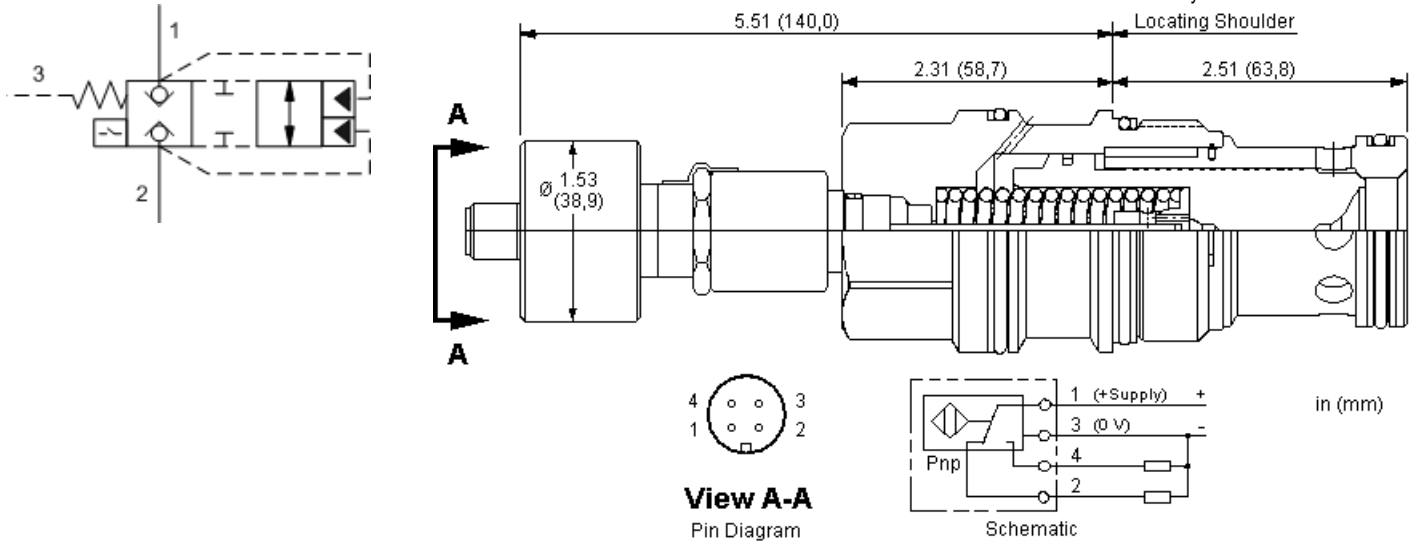
NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	5000 psi
Maximum Valve Leakage at 110 SUS (24 cSt)	1 drops/min.
Pilot Volume Displacement	.25 in <sup>3</sup>
Pilot Passage into Valve	.06 in.
Area Ratio, A3 to A1	1.8:1
Area Ratio, A3 to A2	2.25:1
Transition leakage at 110 SUS (24 cSt)	2 in <sup>3</sup> /min.@1000 psi
Seal kit - Cartridge	Buna: 990017007
Seal kit - Cartridge	Polyurethane: 990017002
Seal kit - Cartridge	Viton: 990017006

**CONFIGURATION OPTIONS**

**Model Code Example: LOHCZDN**

<b>CRACKING PRESSURE</b>	<b>(D)</b>	<b>SEAL MATERIAL</b>	<b>(N)</b>
<b>D</b> 50 psi (3,5 bar)		<b>N</b> Buna-N	
		<b>V</b> Viton	



These unbalanced, pilot-to-close logic valves are 2-way switching elements that are spring biased closed. Pressure at either work port 1 or 2 will oppose the spring and tend to open the valve while pressure at port 3 will tend to close it. The force generated by the pressure at port 3, plus the spring force, must be greater than the sum of the forces generated by the pressures at ports 1 and 2 for the valve to remain closed.

This valve incorporates a position switch to provide confirmation that the valve is closed.

**TECHNICAL DATA**

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

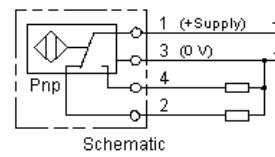
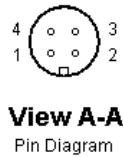
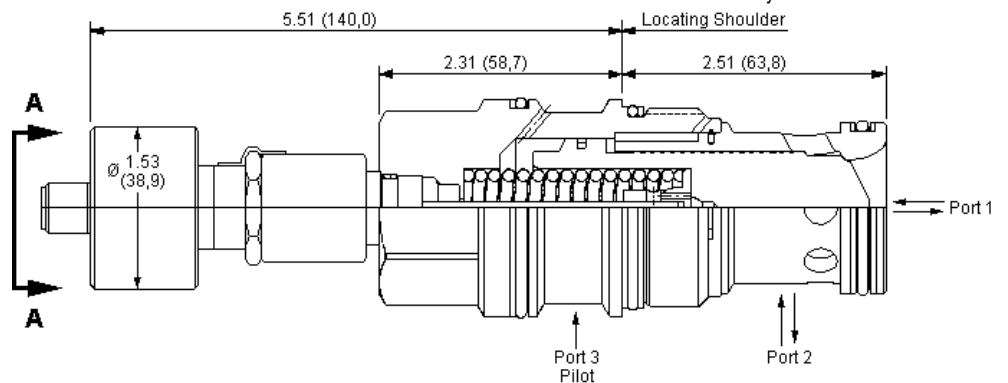
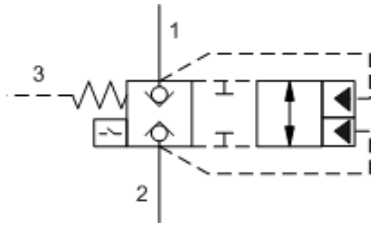
Maximum Operating Pressure	5000 psi
Maximum Valve Leakage at 110 SUS (24 cSt)	1 drops/min.
Pilot Volume Displacement	.42 in <sup>3</sup>
Pilot Passage into Valve	.09 in.
Area Ratio, A3 to A1	1.8:1
Area Ratio, A3 to A2	2.25:1
Transition leakage at 110 SUS (24 cSt)	2 in <sup>3</sup> /min.@1000 psi
Seal kit - Cartridge	Buna: 990019007
Seal kit - Cartridge	Polyurethane: 990019002
Seal kit - Cartridge	Viton: 990019006

**CONFIGURATION OPTIONS**

Model Code Example: LOJ CZDN

<b>CRACKING PRESSURE</b>	<b>(D)</b>	<b>SEAL MATERIAL</b>	<b>(N)</b>
<b>D</b> 50 psi (3,5 bar)		<b>N</b> Buna-N	
		<b>V</b> Viton	





in (mm)

These unbalanced, pilot-to-close logic valves are 2-way switching elements that are spring biased closed. Pressure at either work port 1 or 2 will oppose the spring and tend to open the valve while pressure at port 3 will tend to close it. The force generated by the pressure at port 3, plus the spring force, must be greater than the sum of the forces generated by the pressures at ports 1 and 2 for the valve to remain closed.

This valve incorporates a position switch to provide confirmation that the valve is closed.

**TECHNICAL DATA**

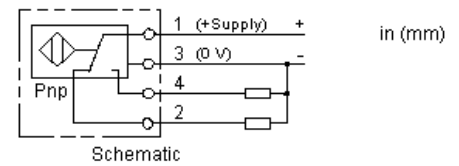
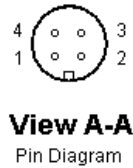
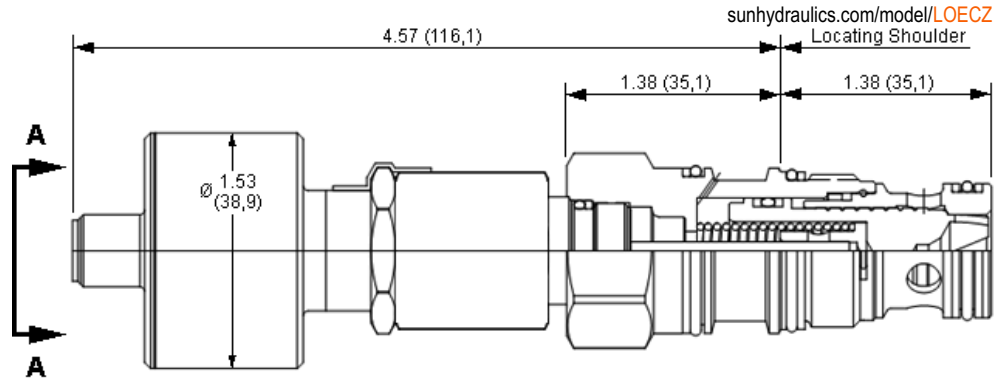
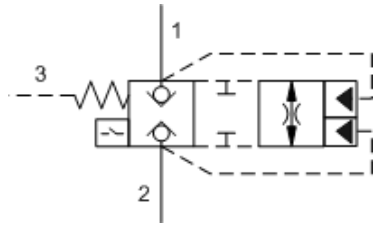
NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	5000 psi
Maximum Valve Leakage at 110 SUS (24 cSt)	1 drops/min.
Pilot Volume Displacement	.47 in <sup>3</sup>
Pilot Passage into Valve	.09 in.
Area Ratio, A3 to A1	1.8:1
Area Ratio, A3 to A2	2.25:1
Transition leakage at 110 SUS (24 cSt)	2 in <sup>3</sup> /min.@1000 psi
Seal kit - Cartridge	Buna: 990019007
Seal kit - Cartridge	Polyurethane: 990019002
Seal kit - Cartridge	Viton: 990019006

**CONFIGURATION OPTIONS**

**Model Code Example: LOK CZDN**

<b>CRACKING PRESSURE</b>	<b>(D)</b>	<b>SEAL MATERIAL</b>	<b>(N)</b>
<b>D</b> 50 psi (3,5 bar)		<b>N</b> Buna-N	
		<b>V</b> Viton	



These unbalanced, pilot-to-close logic valves are 2-way switching elements that are spring biased closed. Pressure at either work port 1 or 2 will oppose the spring and tend to open the valve while pressure at port 3 will tend to close it. The force generated by the pressure at port 3, plus the spring force, must be greater than the sum of the forces generated by the pressures at ports 1 and 2 for the valve to remain closed.

This valve incorporates a position switch to provide confirmation that the valve is closed.

**TECHNICAL DATA**

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

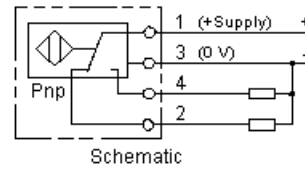
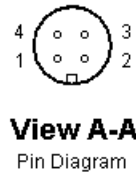
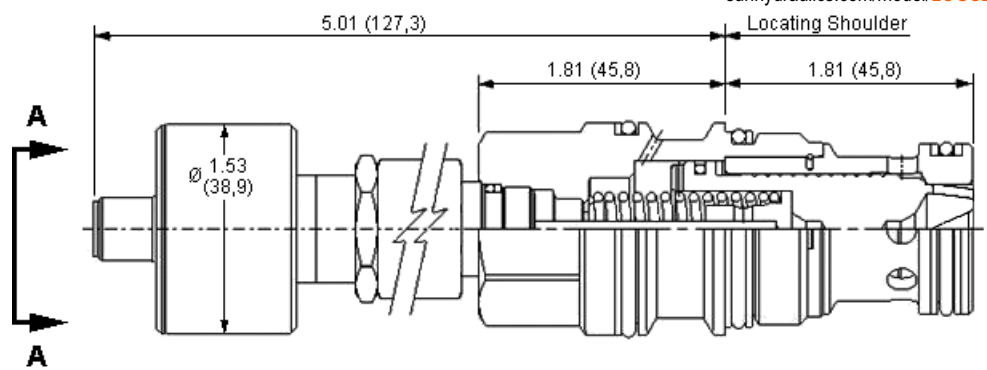
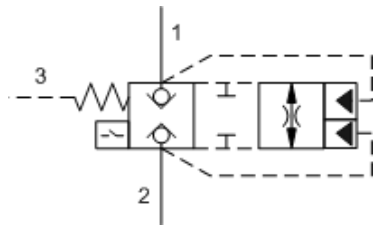
Maximum Operating Pressure	5000 psi
Maximum Valve Leakage at 110 SUS (24 cSt)	1 drops/min.
Pilot Volume Displacement	.07 in <sup>3</sup>
Pilot Passage into Valve	.035 in.
Area Ratio, A3 to A1	1.8:1
Area Ratio, A3 to A2	2.25:1
Transition leakage at 110 SUS (24 cSt)	2 in <sup>3</sup> /min.@1000 psi
Seal kit - Cartridge	Buna: 990202007
Seal kit - Cartridge	Polyurethane: 990002002
Seal kit - Cartridge	Viton: 990202006

**CONFIGURATION OPTIONS**

**Model Code Example: LOECZDN**

**NOMINAL CONTROL PRESSURE (D) SEAL MATERIAL (N)**

<b>D</b> 50 psi (3,5 bar)	<b>N</b> Buna-N
	<b>V</b> Viton



in (mm)

These unbalanced, pilot-to-close logic valves are 2-way switching elements that are spring biased closed. Pressure at either work port 1 or 2 will oppose the spring and tend to open the valve while pressure at port 3 will tend to close it. The force generated by the pressure at port 3, plus the spring force, must be greater than the sum of the forces generated by the pressures at ports 1 and 2 for the valve to remain closed.

This valve incorporates a position switch to provide confirmation that the valve is closed.

**TECHNICAL DATA**

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

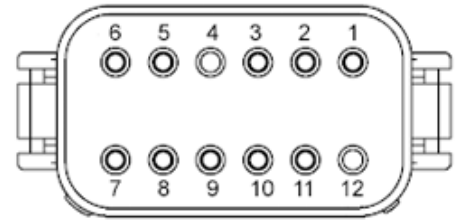
Maximum Operating Pressure	5000 psi
Maximum Valve Leakage at 110 SUS (24 cSt)	1 drops/min.
Pilot Volume Displacement	.25 in <sup>3</sup>
Pilot Passage into Valve	.06 in.
Area Ratio, A3 to A1	1.8:1
Area Ratio, A3 to A2	2.25:1
Transition leakage at 110 SUS (24 cSt)	2 in <sup>3</sup> /min.@1000 psi
Seal kit - Cartridge	Buna: 990017007
Seal kit - Cartridge	Polyurethane: 990017002
Seal kit - Cartridge	Viton: 990017006

**CONFIGURATION OPTIONS**

**Model Code Example: LOGCZDN**

NOMINAL CONTROL PRESSURE (D) SEAL MATERIAL (N)

<b>D</b> 50 psi (3,5 bar)	<b>N</b> Buna-N
	V Viton



**WIRING DIAGRAM**

Terminal	Function
1	CAN_LO
2	CAN_HI
3	GND (Output & 5Vref)
4	No Connection
5	GND (Output & 5Vref)
6	PWM Output, Coil A

Terminal	Function
7	Batt GND
8	+VBatt
9	Enable
10	+5Vref
11	Universal Input 1
12	No Connection

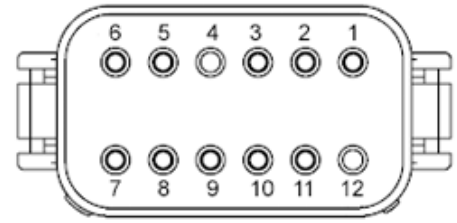
This single-output, 12 Pin Deutsch cable assembly is for use with Sun's XMD-01 electro-hydraulic driver.

**TECHNICAL DATA**

Connector	Molex 93445-6212, Keying Option A, Grey
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**USED WITH**

991713030    991713060    XMD-01



**WIRING DIAGRAM**

Terminal	Function
1	CAN_LO
2	CAN_HI
3	GND (Output & 5Vref)
4	No Connection
5	GND (Output & 5Vref)
6	PWM Output, Coil A

Terminal	Function
7	Batt GND
8	+VBatt
9	Enable
10	+5Vref
11	Universal Input 1
12	No Connection

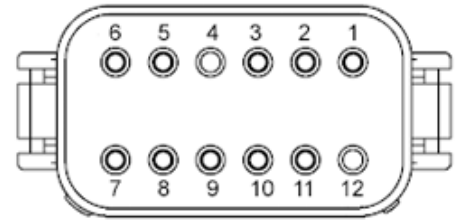
This single-output, 12 Pin Deutsch cable assembly is for use with Sun's XMD-01 electro-hydraulic driver.

**TECHNICAL DATA**

Connector	Molex 93445-6212, Keying Option A, Grey
-----------	---

**USED WITH**

991713030    991713060    XMD-01



**WIRING DIAGRAM**

Terminal	Function
1	CAN_LO
2	CAN_HI
3	GND (Output & 5Vref)
4	PWM Output, Coil B
5	GND (Output & 5Vref)
6	PWM Output, Coil A

Terminal	Function
7	Batt GND
8	+VBatt
9	Enable
10	+5Vref
11	Universal Input 1
12	Universal Input 2

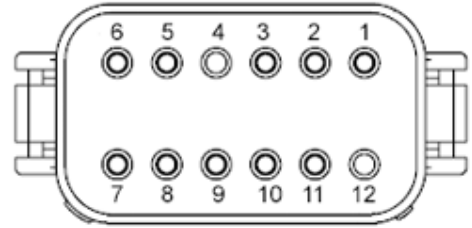
This double-output, 12 Pin Deutsch cable assembly is for use with Sun's XMD-02 electro-hydraulic driver.

**TECHNICAL DATA**

Connector	Molex 93445-6212, Keying Option A, Grey
-----------	---

**USED WITH**

991713030    991713060    XMD-02



**WIRING DIAGRAM**

Terminal	Function
1	CAN_LO
2	CAN_HI
3	GND (Output & 5Vref)
4	PWM Output, Coil B
5	GND (Output & 5Vref)
6	PWM Output, Coil A

Terminal	Function
7	Batt GND
8	+VBatt
9	Enable
10	+5Vref
11	Universal Input 1
12	Universal Input 2

This double-output, 12 Pin Deutsch cable assembly is for use with Sun's XMD-02 electro-hydraulic driver.

**TECHNICAL DATA**

Connector	Molex 93445-6212, Keying Option A, Grey
-----------	---

**USED WITH**

991713030    991713060    XMD-02



Deutsch cable assembly for use with Sun's XMD Series electro-hydraulic drivers.

**TECHNICAL DATA**

Connector	Molex 93445-1101, Black
-----------	-------------------------

**USED WITH**

991711300    991711600    991712300    991712600    XMD-01    XMD-02





Deutsch cable assembly for use with Sun's XMD Series electro-hydraulic drivers.

### TECHNICAL DATA

Connector	Molex 93445-1101, Black
-----------	-------------------------

### USED WITH

XMD-01      XMD-02



This adapter cable is used to convert Sun's FLeX Series coil with Deutsch connector to Metri-Pack Series 150-2M.

**TECHNICAL DATA**

Length	7.50 in.
--------	----------



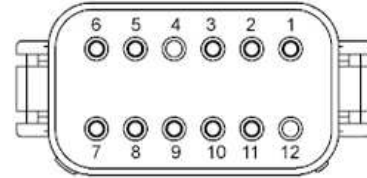
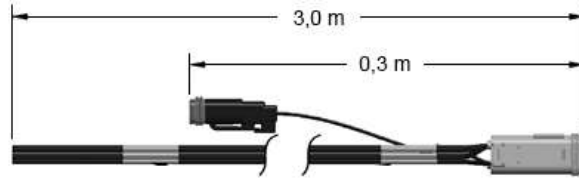
This adapter cable is used to convert Sun's FLeX Series coil with Deutsch connector to AMP Junior Timer.

#### **TECHNICAL DATA**



This adapter cable is used to convert Sun's FLeX Series coil with Deutsch connector to twin leads.

#### **TECHNICAL DATA**



WIRING DIAGRAM

Terminal	Function
1	CAN_LO
2	CAN_HI
3	GND (Output & 5Vref)
4	No Connection
5	GND (Output & 5Vref)
6	PWM Output, Coil A

Terminal	Function
7	Batt GND
8	+VBatt
9	Enable
10	+5Vref
11	Universal Input 1
12	No Connection

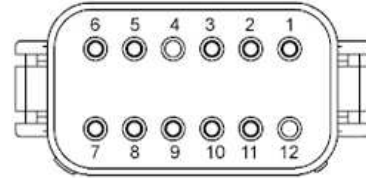
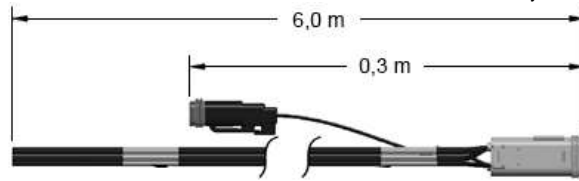
This single-output, 12 Pin Deutsch cable assembly is for use with Sun's XMD-01 electro-hydraulic driver. It comes equipped with a 2-pin Deutsch lead that connects directly to the FLeX or 770 Series Deutsch coils when combined with the coil clip accessory.

**TECHNICAL DATA**

Connector	Molex 93445-6212, Keying Option A, Grey
-----------	---

**USED WITH**

740912	740912D	740912L	740912LD	740914	740914D	740914L	740914LD	740924	740924D
740924L	740924LD	740928	740928D	740928L	740928LD	770912	770914	770914N	770924
770924N	770928	991713030	991713060	991740001	991740002	XMD-01	XMD-02		



WIRING DIAGRAM

Terminal	Function
1	CAN_LO
2	CAN_HI
3	GND (Output & 5Vref)
4	No Connection
5	GND (Output & 5Vref)
6	PWM Output, Coil A

Terminal	Function
7	Batt GND
8	+VBatt
9	Enable
10	+5Vref
11	Universal Input 1
12	No Connection

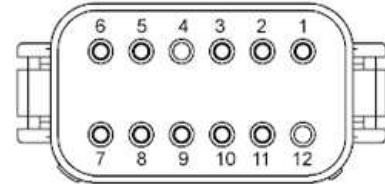
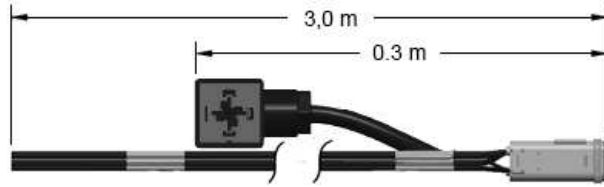
This single-output, 12 Pin Deutsch cable assembly is for use with Sun's XMD-01 electro-hydraulic driver. It comes equipped with a 2-pin Deutsch lead that connects directly to the FLeX or 770 Series Deutsch coils when combined with the coil clip accessory.

**TECHNICAL DATA**

Connector	Molex 93445-6212, Keying Option A, Grey
-----------	---

**USED WITH**

740912	740912D	740912L	740912LD	740914	740914D	740914L	740914LD	740924	740924D
740924L	740924LD	740928	740928D	740928L	740928LD	770912	770914	770914N	770924
770924N	770928	991713030	991713060	991740001	991740002	XMD-01	XMD-02		



WIRING DIAGRAM

Terminal	Function
1	CAN_LO
2	CAN_HI
3	GND (Output & 5Vref)
4	No Connection
5	GND (Output & 5Vref)
6	PWM Output, Coil A

Terminal	Function
7	Batt GND
8	+VBatt
9	Enable
10	+5Vref
11	Universal Input 1
12	No Connection

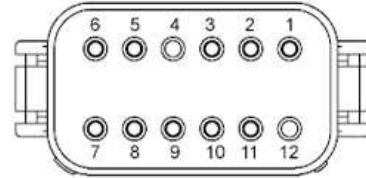
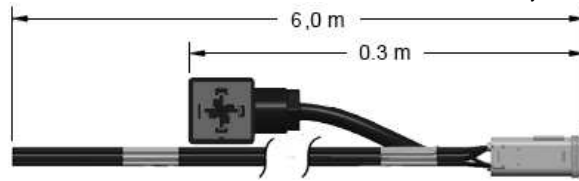
This single-output, 12 Pin Deutsch cable assembly is for use with Sun's XMD-01 electro-hydraulic driver. It comes equipped with a ISO/DIN 43650, Form A overmolded connector that connects directly to the FLeX or 770 Series VDC ISO/DIN 43650 coils when combined with the coil clip accessory.

TECHNICAL DATA

Connector	Molex 93445-6212, Keying Option A, Grey
-----------	---

USED WITH

740212	740212D	740212L	740212LD	740214	740214D	740214L	740214LD	740224	740224D
740224L	740224LD	740228	740228D	740228L	740228LD	770212	770214	770224	770228



WIRING DIAGRAM

Terminal	Function
1	CAN_LO
2	CAN_HI
3	GND (Output & 5Vref)
4	No Connection
5	GND (Output & 5Vref)
6	PWM Output, Coil A

Terminal	Function
7	Batt GND
8	+VBatt
9	Enable
10	+5Vref
11	Universal Input 1
12	No Connection

This single-output, 12 Pin Deutsch cable assembly is for use with Sun's XMD-01 electro-hydraulic driver. It comes equipped with a ISO/DIN 43650, Form A overmolded connector that connects directly to the FLeX or 770 Series VDC ISO/DIN 43650 coils when combined with the coil clip accessory.

**TECHNICAL DATA**

Connector	Molex 93445-6212, Keying Option A, Grey
-----------	---

**USED WITH**

740212	740212D	740212L	740212LD	740214	740214D	740214L	740214LD	740224	740224D
740224L	740224LD	740228	740228D	740228L	740228LD	770212	770214	770224	770228





This Deutsch 12 pin connector kit is for use with Sun's XMD series electro-hydraulic drivers. Assembly is required.

**TECHNICAL DATA**

Socket	0462-201-16141, HD30 Series, 16 to 18 AWG, terminal size 16, Nickel
Wedge lock	W12S, DT Series, 12 pin
Crimp tool	HDT-48-00
Connector	DT06-12SA, DT Series, 12 pin, contact size 16, gray

**USED WITH**

XMD-01      XMD-02



This Deutsch 2 pin connector kit is for use with Sun's 2 pin Deutsch coils. Assembly is required.

**TECHNICAL DATA**

Socket	0462-201-16141, HD30 Series, 16 to 18 AWG, terminal size 16, Nickel
Wedge lock	W2S, DT Series 2 pin
Crimp tool	HDT-48-00
Connector	DT06-2S, DT Series, 2 pin, contact size 16, gray

**USED WITH**

740912	740912D	740912L	740912LD	740914	740914D	740914L	740914LD	740924	740924D
740924L	740924LD	740928	740928D	740928L	740928LD	770912	770912N	770914	770914N
770924	770924N	770928	780912N	780924N					



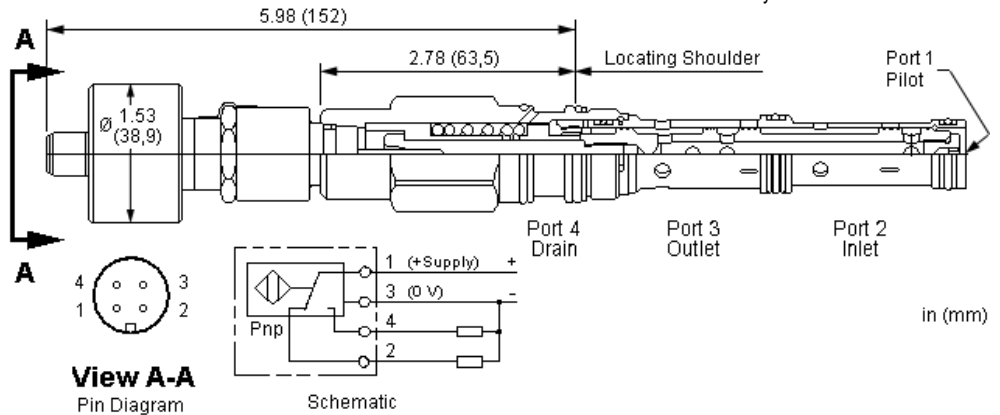
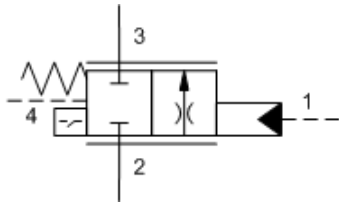
This Deutsch 2 pin connector kit is for use with Sun's 2 pin Deutsch coils. Assembly is required.

**TECHNICAL DATA**

Socket	0462-201-16141, HD30 Series, 16 to 18 AWG, terminal size 16, Nickel
Wedge lock	W2S, DT Series 2 pin
Crimp tool	HDT-48-00
Connector	DT06-2S, DT Series, 2 pin, contact size 16, black

**USED WITH**

740912	740912D	740912L	740912LD	740914	740914D	740914L	740914LD	740924	740924D
740924L	740924LD	740928	740928D	740928L	740928LD	770912	770912N	770914	770914N
770924	770924N	770928	780912N	780924N					



This valve is a 2-way, 2-position proportional throttle. Ports 2 and 3 are normally closed. Pilot pressure at port 1 creates a metering orifice between port 2 and 3 that is proportional to the pressure at 1. The metering passage is self-compensating.

This valve uses a dual-path design. Ports 2 and 3 incorporate a double-port area.

This valve incorporates a position switch to provide confirmation that the valve is closed.

**TECHNICAL DATA**

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

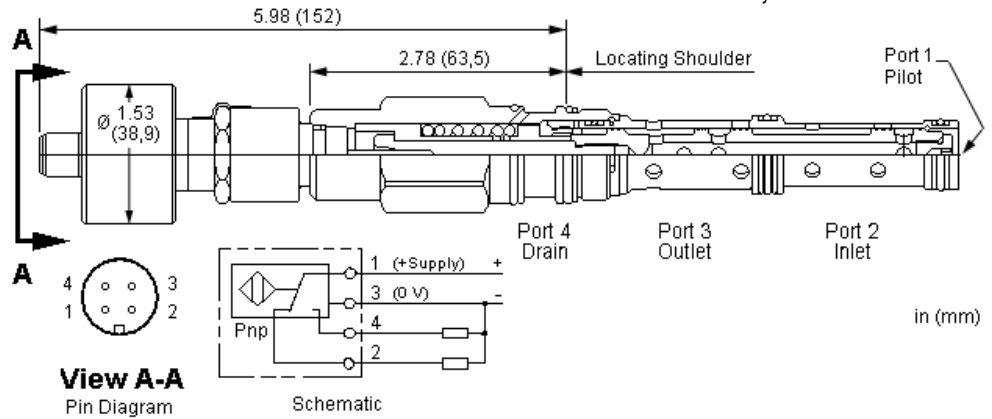
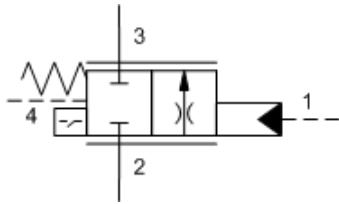
Pilot Pressure Required for Full Shift at Rated Flow	290 - 340 psi
Maximum Operating Pressure	5000 psi
Maximum Valve Leakage at 110 SUS (24 cSt)	5 in <sup>3</sup> /min.@1000 psi
Pilot Volume Displacement	.05 in <sup>3</sup>
Seal kit - Cartridge	Buna: 990152007
Seal kit - Cartridge	Viton: 990152006

**NOTES** When installed in Sun's standard T-52A line mount manifold, plug unused ports and expect higher pressure drops.

**CONFIGURATION OPTIONS**

Model Code Example: FTCAZCN

<b>SPOOL CONFIGURATION</b>	<b>(C)</b>	<b>SEAL MATERIAL</b>	<b>(N)</b>
<b>C</b> Normally Closed		<b>N</b> Buna-N	
		<b>V</b> Viton	



This valve is a 2-way, 2-position proportional throttle. Ports 2 and 3 are normally closed. Pilot pressure at port 1 creates a metering orifice between port 2 and 3 that is proportional to the pressure at 1. The metering passage is self-compensating.

This valve uses a dual-path design. Ports 2 and 3 incorporate a double-port area.

This valve incorporates a position switch to provide confirmation that the valve is closed.

**TECHNICAL DATA**

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

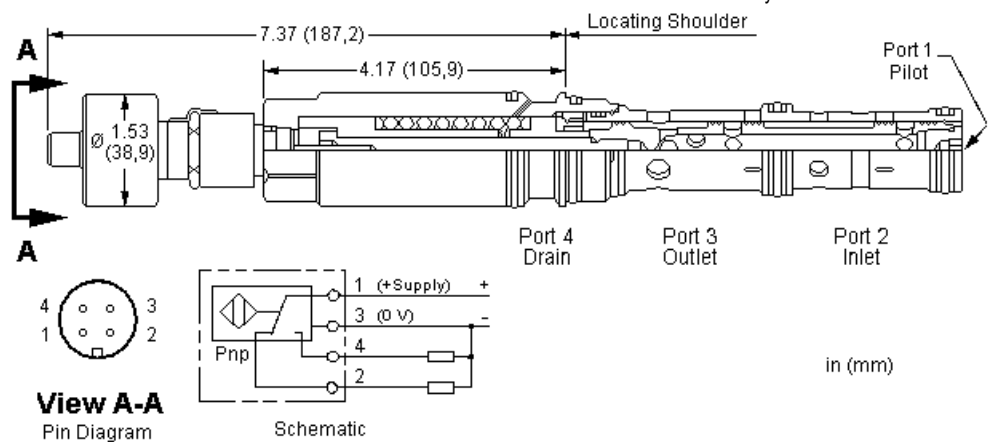
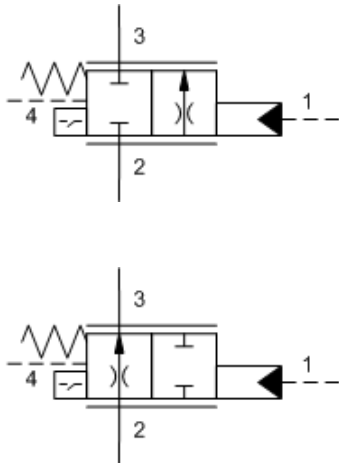
Pilot Pressure Required for Full Shift at Rated Flow	290 - 340 psi
Maximum Operating Pressure	5000 psi
Maximum Valve Leakage at 110 SUS (24 cSt)	5 in <sup>3</sup> /min.@1000 psi
Pilot Volume Displacement	.05 in <sup>3</sup>
Seal kit - Cartridge	Buna: 990152007
Seal kit - Cartridge	Viton: 990152006

**NOTES** When installed in Sun's standard T-52A line mount manifold, plug unused ports and expect higher pressure drops.

**CONFIGURATION OPTIONS**

Model Code Example: FTDAZCN

<b>SPOOL CONFIGURATION</b>	<b>(C)</b>	<b>SEAL MATERIAL</b>	<b>(N)</b>
<b>C</b> Normally Closed		<b>N</b> Buna-N	
		<b>V</b> Viton	



This valve is a 2-way, 2-position proportional throttle. Pilot pressure at port 1 creates a metering orifice between port 2 and 3 that is proportional to the pressure at 1. The metering passage is self-compensating.

This valve uses a dual-path design, Ports 2 and 3 incorporate a double-port area.

This valve incorporates a position switch to provide position confirmation.

**TECHNICAL DATA**

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

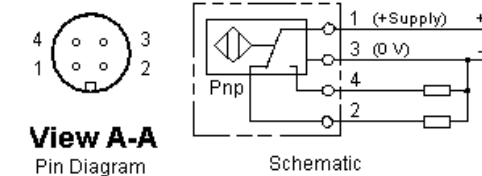
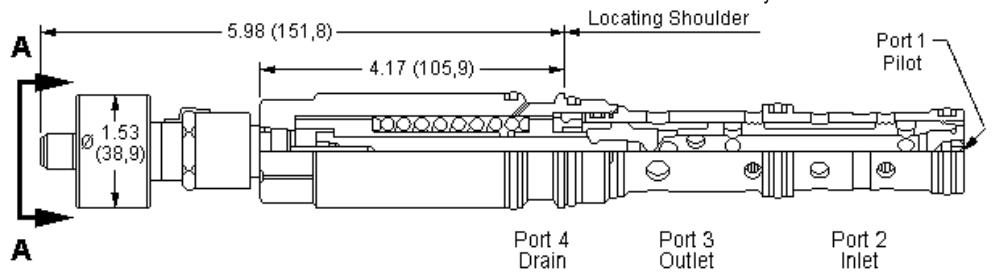
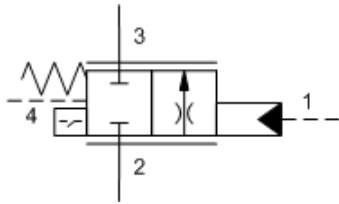
Pilot Pressure Required for Full Shift at Rated Flow	290 - 340 psi
Maximum Operating Pressure	5000 psi
Maximum Valve Leakage at 110 SUS (24 cSt)	10 in <sup>3</sup> /min.@1000 psi
Pilot Volume Displacement	.10 in <sup>3</sup>
Seal kit - Cartridge	Buna: 990053007
Seal kit - Cartridge	Viton: 990053006

**NOTES** When installed in Sun's standard T-53A line mount manifold, plug unused ports and expect higher pressure drops.

**CONFIGURATION OPTIONS**

Model Code Example: **FTEAZCN**

<b>SPOOL CONFIGURATION</b>	<b>(C)</b>	<b>SEAL MATERIAL</b>	<b>(N)</b>
<b>C</b> Normally Closed		<b>N</b> Buna-N	
<b>H</b> Normally Open		<b>V</b> Viton	



in (mm)

This valve is a 2-way, 2-position proportional throttle. Ports 2 and 3 are normally closed. Pilot pressure at port 1 creates a metering orifice between port 2 and 3 that is proportional to the pressure at 1. The metering passage is self-compensating.

This valve uses a dual-path design. Ports 2 and 3 incorporate a double-port area.

This valve incorporates a position switch to provide confirmation that the valve is closed.

**TECHNICAL DATA**

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Pilot Pressure Required for Full Shift at Rated Flow	290 - 340 psi
Maximum Operating Pressure	5000 psi
Maximum Valve Leakage at 110 SUS (24 cSt)	10 in <sup>3</sup> /min.@1000 psi
Pilot Volume Displacement	.10 in <sup>3</sup>
Seal kit - Cartridge	Buna: 990053007
Seal kit - Cartridge	Viton: 990053006

**NOTES** When installed in Sun's standard T-53A line mount manifold, plug unused ports and expect higher pressure drops.

**CONFIGURATION OPTIONS**

**Model Code Example: FTFAZCN**

<b>SPOOL CONFIGURATION</b>	<b>(C)</b>	<b>SEAL MATERIAL</b>	<b>(N)</b>
<b>C</b> Normally Closed		<b>N</b> Buna-N	
		<b>V</b> Viton	



Sun's Infrared Cable Adapter provides a convenient interface between Sun's 790 Series Embedded Digital Proportional Valve Amplifier and the Hand Held Programmer or a Windows Based PC. Included with the Cable Adaptor is a USB memory key containing Sun's Amplifier Set Up Software.

**TECHNICAL DATA**

Supply Voltage	HHP or PC port powered
Operating Temperature Range	-4 - 140 °F
Cable Length	6 ft

**USED WITH**

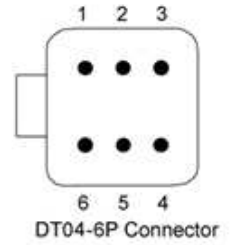
7902B12A    7902B12V    7902B24A    7902B24V    7902C12V    7902C24V    7902D12A    7902D24A    7902D24V    7902E12V  
 7902E24V    7902F12V    7902F24V    7904A12A    7904A12V    7904A24A    7904A24V    7904E12V    7904E24V    7904F12V  
 7904F24V





Wiring Diagram

Color	Terminal	Function
Brown	1	+V Supply
Black	2	Command Input
Blue	3	Supply Common
Red	4	+5 V Ref
Green/Yellow	5	Command Common
White	6	Enable
Bare		Shield Drain



Deutsch Cable Assembly for use with Sun's 790 series embedded amplifier equipped with a Deutsch DT06-6S connector.

**TECHNICAL DATA**

Connector	Deutsch DT06-6S (mates with DT04-6P)
Cable Length	10 ft

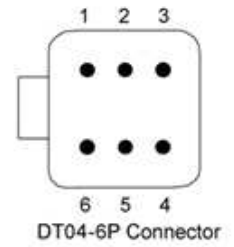
**USED WITH**

7904A12A    7904A12V    7904A24A    7904A24V    7904E12V    7904E24V    7904F12V    7904F24V



Wiring Diagram

Color	Terminal	Function
Brown	1	+V Supply
Black	2	Command Input
Blue	3	Supply Common
Red	4	+5 V Ref
Green/Yellow	5	Command Common
White	6	Enable
Bare		Shield Drain



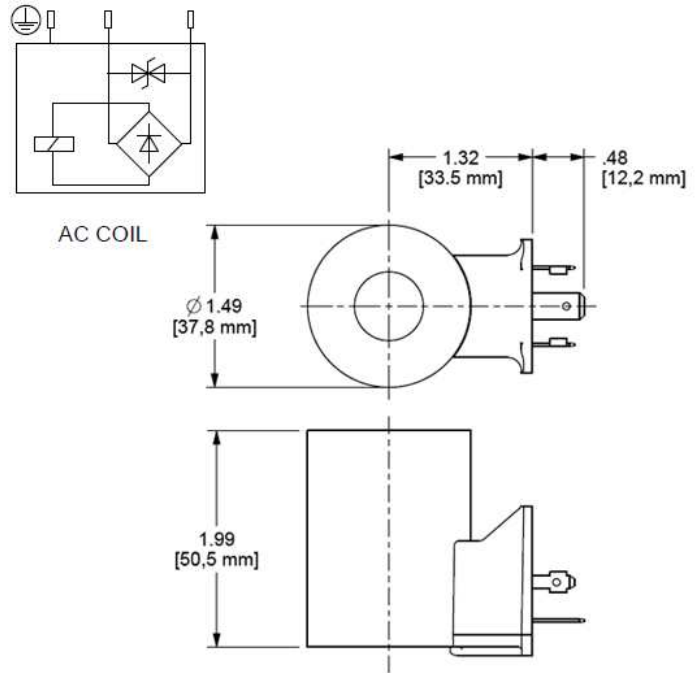
Deutsch Cable Assembly for use with Sun's 790 series embedded amplifier equipped with a Deutsch DT06-6S connector.

**TECHNICAL DATA**

Connector	Deutsch DT06-6S (mates with DT04-6P)
Cable Length	20 ft

**USED WITH**

7904A12A    7904A12V    7904A24A    7904A24V    7904E12V    7904E24V    7904F12V    7904F24V

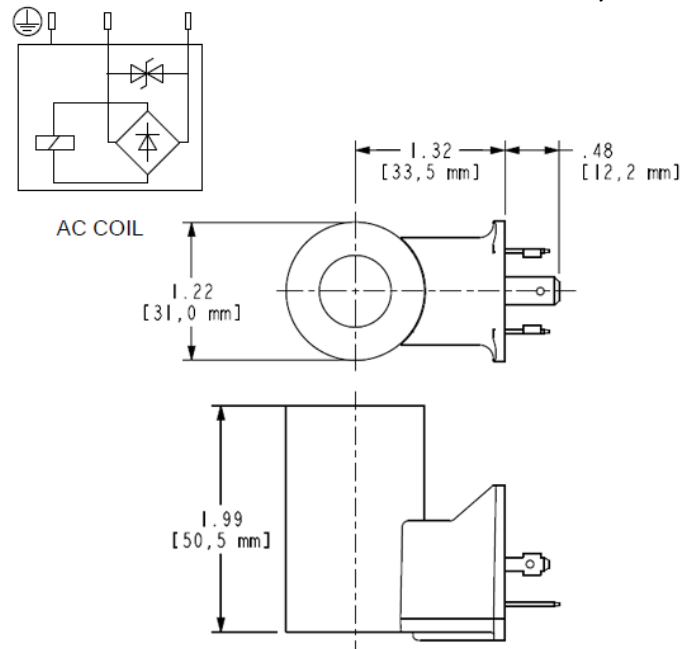


### TECHNICAL DATA

Operating Temperature Range	-40 to 230 °F
Arc Suppression (TVS)	Included
Power Consumption (cold) - at rated voltage	25 Watts
Maximum Ambient Temperature	122 °F
Voltage/Frequency	115 VAC 50/60 Hz
Operating Voltage Range	+10%/-15%
Duty Cycle Rating	100 %
Connector	ISO4400 - EN/DIN175301-803, Form A (ISO/DIN 43650) 3-pin
Coil Nut Torque	4.5 lbf in.

### USED WITH

DBAF	DBAFS	DFBF	DFBG	DFCI	DFCJ	DFDI	DFDJ	DFEI	DFEJ
DFFI	DFFJ	DLDF	DLDFS	DMBF	DNBF	DTAF	DTAFS	DTBF	DTCF
DTDF	DTDFS	DWBF	DWDF	FREP	PRDF	PRDG	RVCK	RVCL	RVCM
RVCN									

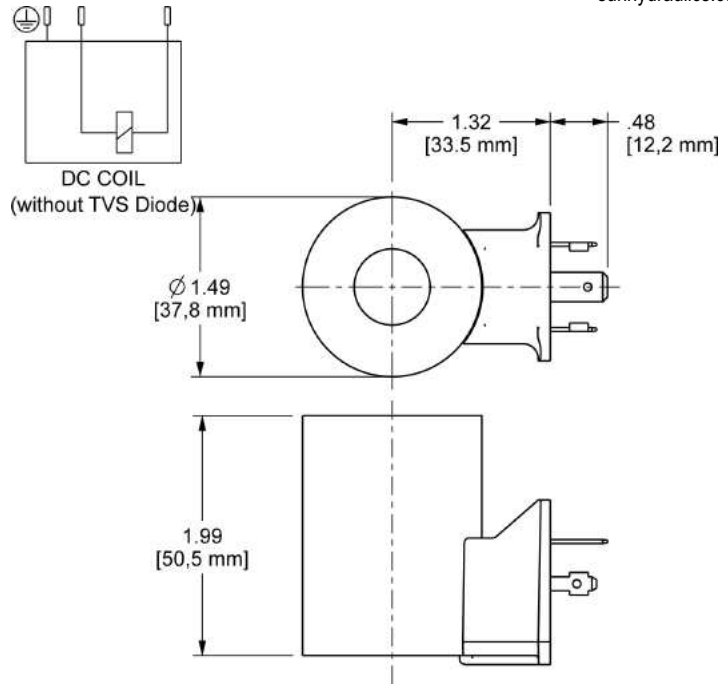


### TECHNICAL DATA

Operating Temperature Range	-40 to 230 °F
Arc Suppression (TVS)	Included
Power Consumption (cold) - at rated voltage	17 Watts
Maximum Ambient Temperature	212 °F
Voltage/Frequency	115 VAC 50/60 Hz
Operating Voltage Range	+10%/-15%
Duty Cycle Rating	100 %
Connector	ISO4400 - EN/DIN175301-803, Form A (ISO/DIN 43650) 3-pin
Coil Nut Torque	4.5 lbf in.

### USED WITH

DBAF DBAFS DFBD DFBE DMBD DNBD DTAF DTAFS DTBF

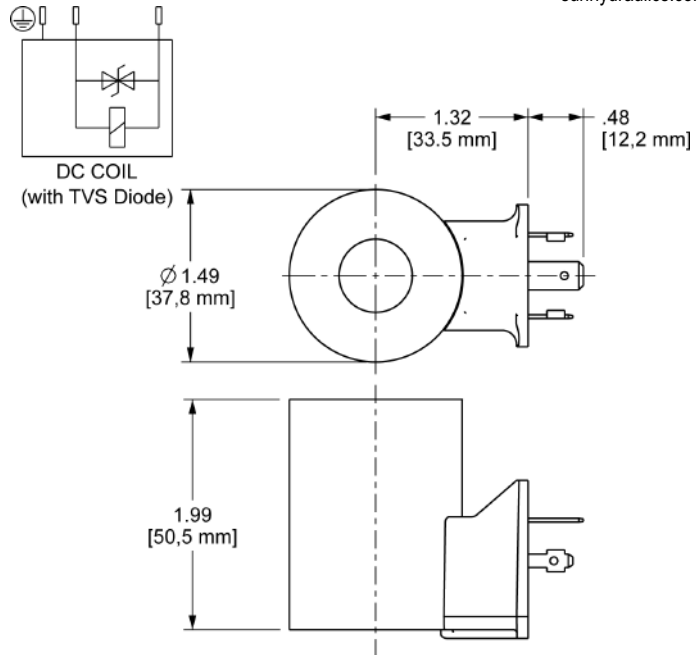


### TECHNICAL DATA

Operating Temperature Range	-40 to 230 °F
Arc Suppression (TVS)	None
Power Consumption (cold) - at rated voltage	25 Watts
Maximum Ambient Temperature	122 °F
Voltage/Frequency	12 VDC
Operating Voltage Range	+10%/-15%
Duty Cycle Rating	100 %
Connector	ISO4400 - EN/DIN175301-803, Form A (ISO/DIN 43650) 3-pin
Coil Nut Torque	4.5 lbf in.

### USED WITH

DBAF	DBAFS	DFBF	DFBG	DFCI	DFCJ	DFDI	DFDJ	DFEI	DFEJ
DFFI	DFFJ	DLDF	DLDFS	DMBF	DNBF	DTAF	DTAFS	DTBF	DTCF
DTDF	DTDFS	DWBF	DWDF	FDEP	FMDF	FMDG	FPBF	FPBG	FPBI
FPBJ	FPBU	FREP	PRDF	PRDG	RPEI	RVCK	RVCL	RVCM	RVCN
991711300	991711600	991712300	991712600	991713030	991713060	991740001	XMD-01	XMD-02	

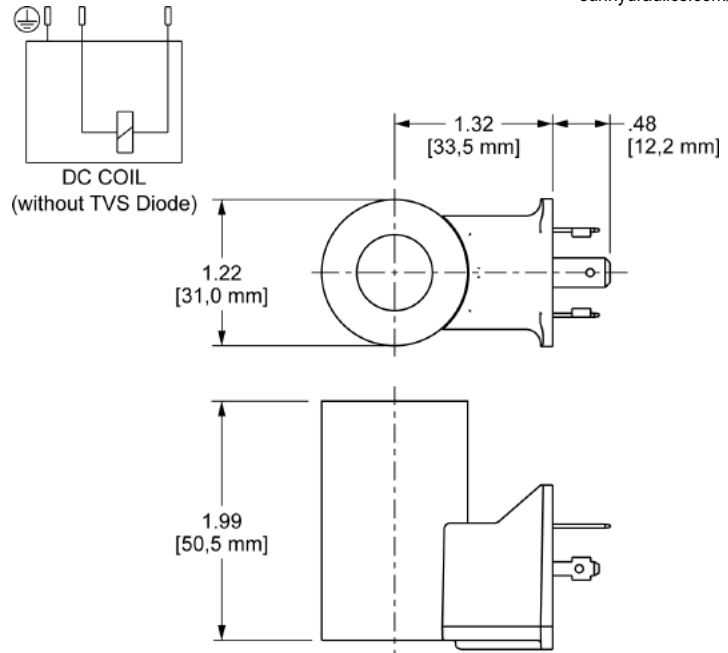


**TECHNICAL DATA**

Operating Temperature Range	-40 to 230 °F
Arc Suppression (TVS)	Included
Power Consumption (cold) - at rated voltage	25 Watts
Maximum Ambient Temperature	122 °F
Voltage/Frequency	12 VDC
Operating Voltage Range	+10%/-15%
Duty Cycle Rating	100 %
Connector	ISO4400 - EN/DIN175301-803, Form A (ISO/DIN 43650) 3-pin
Coil Nut Torque	4.5 lbf in.

**USED WITH**

DBAF	DBAFS	DFBF	DFBG	DFCI	DFCJ	DFDI	DFDJ	DFEI	DFEJ
DFFI	DFFJ	DLDF	DLDFS	DMBF	DNBF	DTAF	DTAFS	DTBF	DTCF
DTDF	DTDFS	DWBF	DWDF	FDEP	FMDF	FMDG	FPBF	FPBG	FPBI
FPBJ	FPBU	FREP	PRDF	PRDG	RPEI	RVCK	RVCL	RVCM	RVCN
991711300	991711600	991712300	991712600	991713030	991713060	991740001	XMD-01	XMD-02	

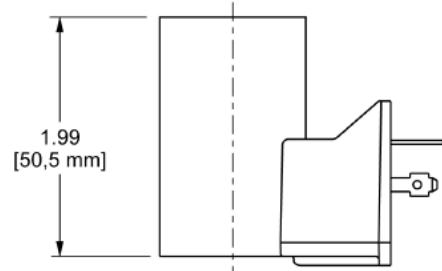
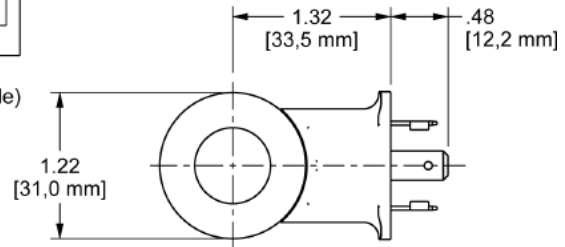
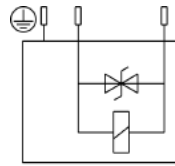


**TECHNICAL DATA**

Operating Temperature Range	-40 to 230 °F
Arc Suppression (TVS)	None
Power Consumption (cold) - at rated voltage	17 Watts
Maximum Ambient Temperature	212 °F
Voltage/Frequency	12 VDC
Operating Voltage Range	+10%/-15%
Duty Cycle Rating	100 %
Connector	ISO4400 - EN/DIN175301-803, Form A (ISO/DIN 43650) 3-pin
Coil Nut Torque	4.5 lbf in.

**USED WITH**

DBAF	DBAFS	DFBD	DFBE	DMBD	DNBD	DTAF	DTAFS	DTBF	FPBD
FPBE	FPBM	FPBN	RPEI	991711300	991712300	991712600	991713030	991713060	991740002
XMD-01	XMD-02								



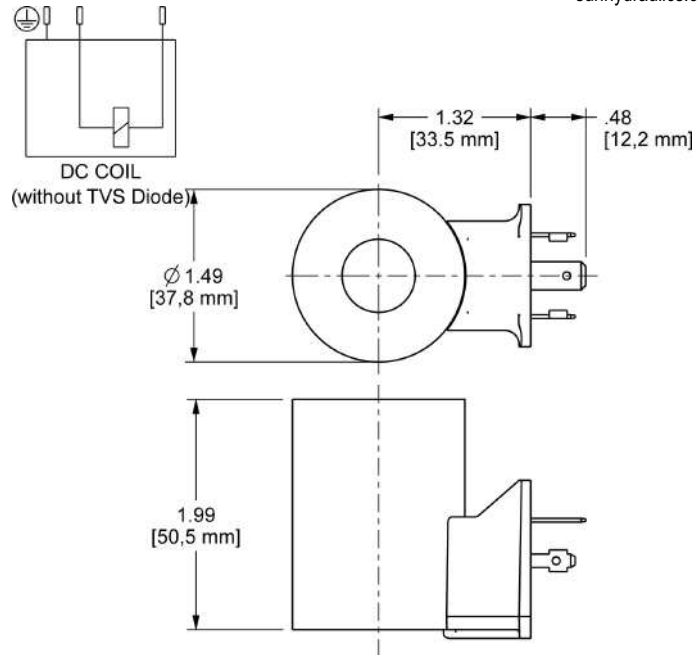
### TECHNICAL DATA

Operating Temperature Range	-40 to 230 °F
Arc Suppression (TVS)	Included
Power Consumption (cold) - at rated voltage	17 Watts
Maximum Ambient Temperature	212 °F
Voltage/Frequency	12 VDC
Operating Voltage Range	+10%/-15%
Duty Cycle Rating	100 %
Connector	ISO4400 - EN/DIN175301-803, Form A (ISO/DIN 43650) 3-pin
Coil Nut Torque	4.5 lbf in.

### USED WITH

DBAF	DBAFS	DFBD	DFBE	DMBD	DNBD	DTAF	DTAFS	DTBF	FPBD
FPBE	FPBM	FPBN	RPEI	991711300	991711600	991712300	991712600	991713030	991713060
991740002	XMD-01	XMD-02							



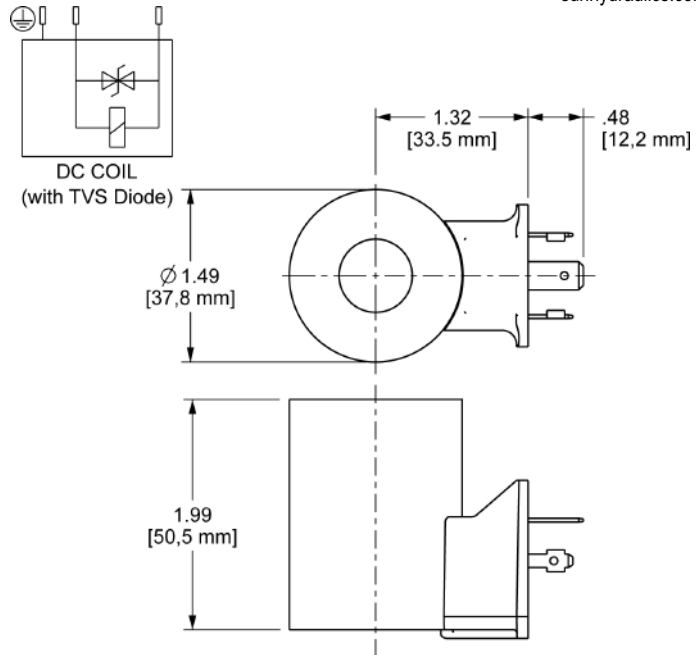


### TECHNICAL DATA

Operating Temperature Range	-40 to 230 °F
Arc Suppression (TVS)	None
Power Consumption (cold) - at rated voltage	25 Watts
Maximum Ambient Temperature	122 °F
Voltage/Frequency	14 VDC
Operating Voltage Range	+10%/-15%
Duty Cycle Rating	100 %
Connector	ISO4400 - EN/DIN175301-803, Form A (ISO/DIN 43650) 3-pin
Coil Nut Torque	4.5 lbf in.

### USED WITH

DBAF	DBAFS	DFBF	DFBG	DFCI	DFCJ	DFDI	DFDJ	DFEI	DFEJ
DFFI	DFFJ	DLDF	DLDFS	DMBF	DNBF	DTAF	DTAFS	DTBF	DTCF
DTDF	DTDFS	DWBF	DWDF	FDEP	FMDF	FMDG	FPBF	FPBG	FPBI
FPBJ	FPBU	FREP	PRDF	PRDG	RPEI	RVCK	RVCL	RVCM	RVCN
991711300	991711600	991712300	991712600	991713030	991713060	991740001	XMD-01	XMD-02	

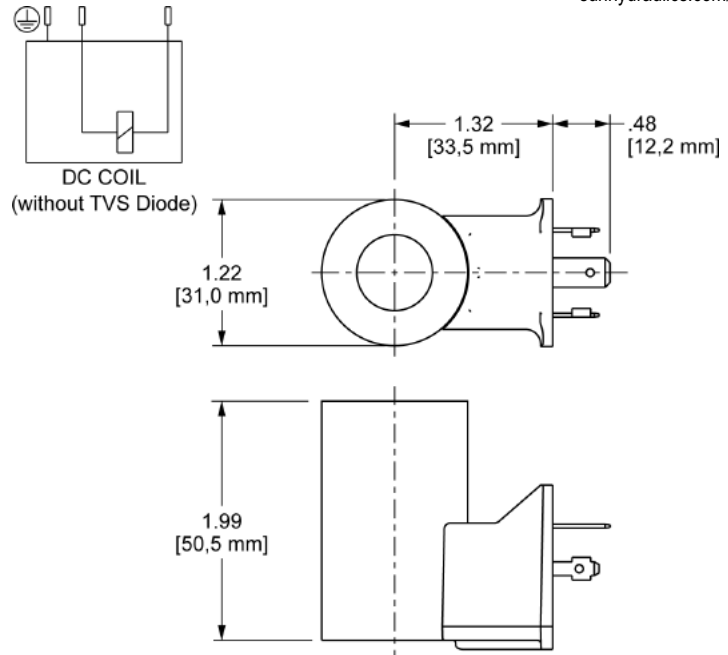


**TECHNICAL DATA**

Operating Temperature Range	-40 to 230 °F
Arc Suppression (TVS)	Included
Power Consumption (cold) - at rated voltage	25 Watts
Maximum Ambient Temperature	122 °F
Voltage/Frequency	14 VDC
Operating Voltage Range	+10%/-15%
Duty Cycle Rating	100 %
Connector	ISO4400 - EN/DIN175301-803, Form A (ISO/DIN 43650) 3-pin
Coil Nut Torque	4.5 lbf in.

**USED WITH**

DBAF	DBAFS	DFBF	DFBG	DFCI	DFCJ	DFDI	DFDJ	DFEI	DFEJ
DFFI	DFFJ	DLDF	DLDFS	DMBF	DNBF	DTAF	DTAFS	DTBF	DTCF
DTDF	DTDFS	DWBF	DWDF	FDEP	FMDF	FMDG	FPBF	FPBG	FPBI
FPBJ	FPBU	FREP	PRDF	PRDG	RPEI	RVCK	RVCL	RVCM	RVCN
991711300	991711600	991712300	991712600	991713030	991713060	991740001	XMD-01	XMD-02	

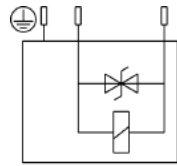


**TECHNICAL DATA**

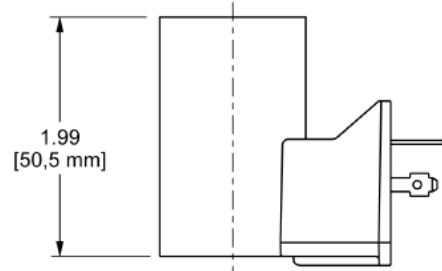
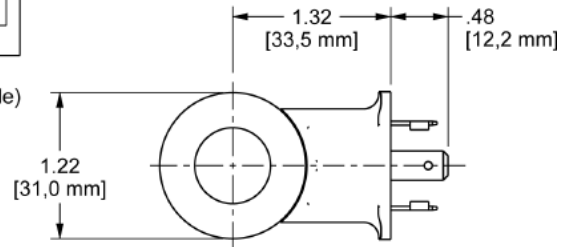
Operating Temperature Range	-40 to 230 °F
Arc Suppression (TVS)	None
Power Consumption (cold) - at rated voltage	17 Watts
Maximum Ambient Temperature	212 °F
Voltage/Frequency	14 VDC
Operating Voltage Range	+10%/-15%
Duty Cycle Rating	100 %
Connector	ISO4400 - EN/DIN175301-803, Form A (ISO/DIN 43650) 3-pin
Coil Nut Torque	4.5 lbf in.

**USED WITH**

DBAF	DBAFS	DFBD	DFBE	DMBD	DNBD	DTAF	DTAFS	DTBF	FDEP
FPBD	FPBE	FPBM	FPBN	RPEI	991711300	991711600	991712300	991712600	991713030
991713060	991740002	XMD-01	XMD-02						



DC COIL  
(with TVS Diode)

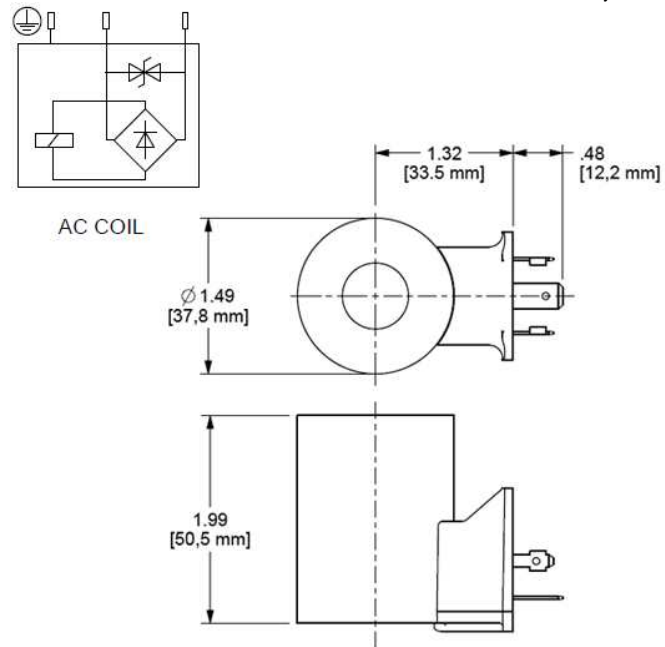


### TECHNICAL DATA

Operating Temperature Range	-40 to 230 °F
Arc Suppression (TVS)	Included
Power Consumption (cold) - at rated voltage	17 Watts
Maximum Ambient Temperature	212 °F
Voltage/Frequency	14 VDC
Operating Voltage Range	+10%/-15%
Duty Cycle Rating	100 %
Connector	ISO4400 - EN/DIN175301-803, Form A (ISO/DIN 43650) 3-pin
Coil Nut Torque	4.5 lbf in.

### USED WITH

DBAF	DBAFS	DFBD	DFBE	DMBD	DNBD	DTAF	DTAFS	DTBF	FPBD
FPBE	FPBM	FPBN	RPEI	991711300	991711600	991712300	991712600	991713030	991713060
991740002	XMD-01	XMD-02							

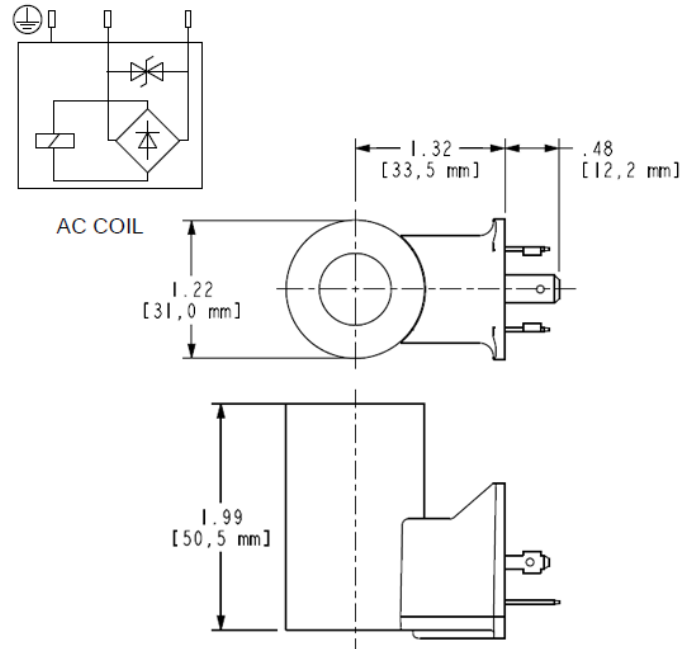


### TECHNICAL DATA

Operating Temperature Range	-40 to 230 °F
Arc Suppression (TVS)	Included
Power Consumption (cold) - at rated voltage	25 Watts
Maximum Ambient Temperature	122 °F
Voltage/Frequency	230 VAC 50/60 Hz
Operating Voltage Range	+10%/-15%
Duty Cycle Rating	100 %
Connector	ISO4400 - EN/DIN175301-803, Form A (ISO/DIN 43650) 3-pin
Coil Nut Torque	4.5 lbf in.

### USED WITH

DBAF	DBAFS	DFBF	DFBG	DFCI	DFCJ	DFDI	DFDJ	DFEI	DFEJ
DFFI	DFFJ	DLDF	DLDFS	DMBF	DNBF	DTAF	DTAFS	DTBF	DTCF
DTDF	DTDFS	DWBF	DWDF	FREP	PRDF	PRDG	RVCK	RVCL	RVCM
RVCN									

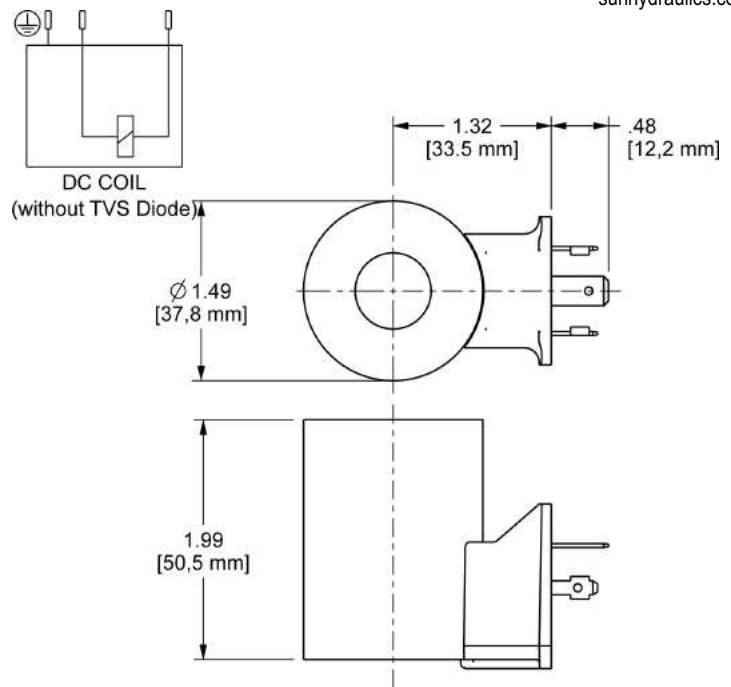


**TECHNICAL DATA**

Operating Temperature Range	-40 to 230 °F
Arc Suppression (TVS)	Included
Power Consumption (cold) - at rated voltage	17 Watts
Maximum Ambient Temperature	212 °F
Voltage/Frequency	230 VAC 50/60 Hz
Operating Voltage Range	+10%/-15%
Duty Cycle Rating	100 %
Connector	ISO4400 - EN/DIN175301-803, Form A (ISO/DIN 43650) 3-pin
Coil Nut Torque	4.5 lbf in.

**USED WITH**

DBAF 991711600    DBAFS 991712300    DFBD 991712600    DFBE 991713030    DMBD 991713060    DNBD 991740002    DTAF XMD-01    DTAFS XMD-02    DTBF    991711300

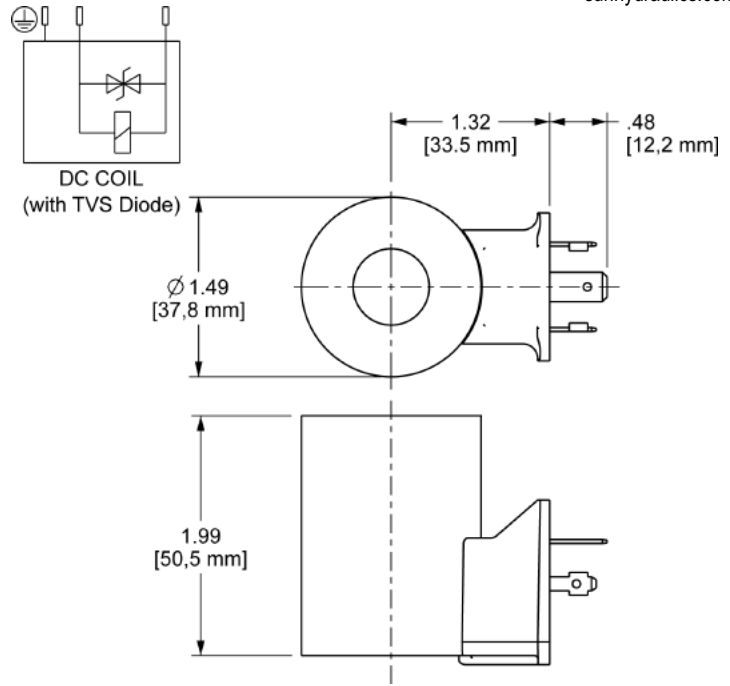


### TECHNICAL DATA

Operating Temperature Range	-40 to 230 °F
Arc Suppression (TVS)	None
Power Consumption (cold) - at rated voltage	25 Watts
Maximum Ambient Temperature	122 °F
Voltage/Frequency	24 VDC
Operating Voltage Range	+10%/-15%
Duty Cycle Rating	100 %
Connector	ISO4400 - EN/DIN175301-803, Form A (ISO/DIN 43650) 3-pin
Coil Nut Torque	4.5 lbf in.

### USED WITH

DBAF	DBAFS	DFBF	DFBG	DFCI	DFCJ	DFDI	DFDJ	DFEI	DFEJ
DFFI	DFFJ	DLDF	DLDFS	DMBF	DNBF	DTAF	DTAFS	DTBF	DTCF
DTDF	DTDFS	DWBF	DWDF	FDEP	FMDF	FMDG	FPBF	FPBG	FPBI
FPBJ	FPBU	FREP	PRDF	PRDG	RPEI	RVCK	RVCL	RVCM	RVCN
991711300	991711600	991712300	991712600	991713030	991713060	991740001	XMD-01	XMD-02	



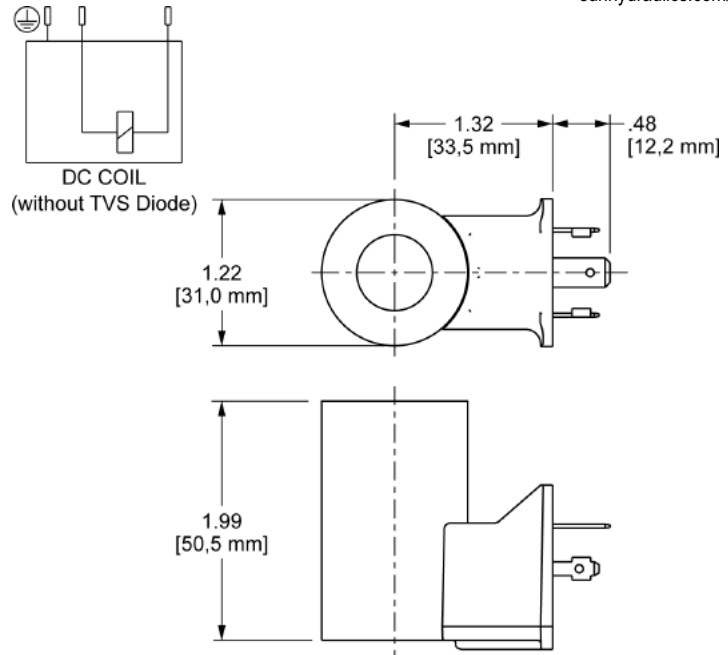
### TECHNICAL DATA

Operating Temperature Range	-40 to 230 °F
Arc Suppression (TVS)	Included
Power Consumption (cold) - at rated voltage	25 Watts
Maximum Ambient Temperature	122 °F
Voltage/Frequency	24 VDC
Operating Voltage Range	+10%/-15%
Duty Cycle Rating	100 %
Connector	ISO4400 - EN/DIN175301-803, Form A (ISO/DIN 43650) 3-pin
Coil Nut Torque	4.5 lbf in.

### USED WITH

DBAF	DBAFS	DFBF	DFBG	DFCI	DFCJ	DFDI	DFDJ	DFEI	DFEJ
DFFI	DFFJ	DLDF	DLDFS	DMBF	DNBF	DTAF	DTAFS	DTBF	DTCF
DTDF	DTDFS	DWBF	DWDF	FDEP	FMDF	FMDG	FPBF	FPBG	FPBI
FPBJ	FPBU	FREP	PRDF	PRDG	RPEI	RVCK	RVCL	RVCM	RVCN
991711300	991711600	991712300	991712600	991713030	991713060	991740001	XMD-01	XMD-02	



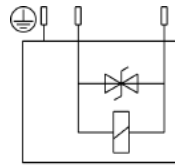


**TECHNICAL DATA**

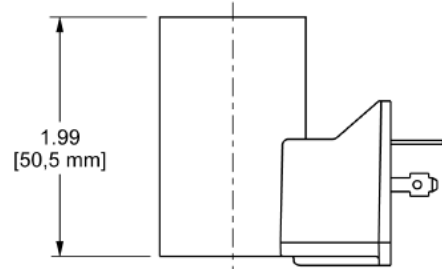
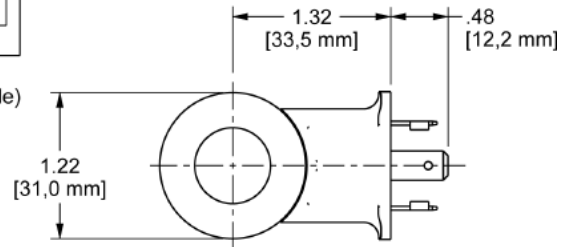
Operating Temperature Range	-40 to 230 °F
Arc Suppression (TVS)	None
Power Consumption (cold) - at rated voltage	17 Watts
Maximum Ambient Temperature	212 °F
Voltage/Frequency	24 VDC
Operating Voltage Range	+10%/-15%
Duty Cycle Rating	100 %
Connector	ISO4400 - EN/DIN175301-803, Form A (ISO/DIN 43650) 3-pin
Coil Nut Torque	4.5 lbf in.

**USED WITH**

DBAF	DBAFS	DFBD	DFBE	DMBD	DNBD	DTAF	DTAFS	DTBF	FPBD
FPBE	FPBM	FPBN	RPEI	991711300	991711600	991712300	991712600	991713030	991713060
991740002	XMD-01	XMD-02							



DC COIL  
(with TVS Diode)

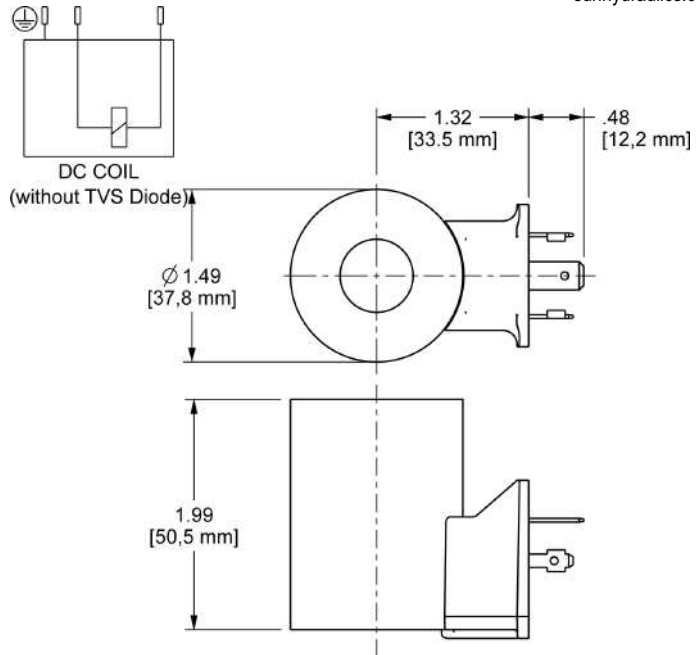


### TECHNICAL DATA

Operating Temperature Range	-40 to 230 °F
Arc Suppression (TVS)	Included
Power Consumption (cold) - at rated voltage	17 Watts
Maximum Ambient Temperature	212 °F
Voltage/Frequency	24 VDC
Operating Voltage Range	+10%/-15%
Duty Cycle Rating	100 %
Connector	ISO4400 - EN/DIN175301-803, Form A (ISO/DIN 43650) 3-pin
Coil Nut Torque	4.5 lbf in.

### USED WITH

DBAF	DBAFS	DFBD	DFBE	DMBD	DNBD	DTAF	DTAFS	DTBF	FPBD
FPBE	FPBM	FPBN	RPEI	991711300	991711600	991712300	991712600	991713030	991713060
991740002	XMD-01	XMD-02							

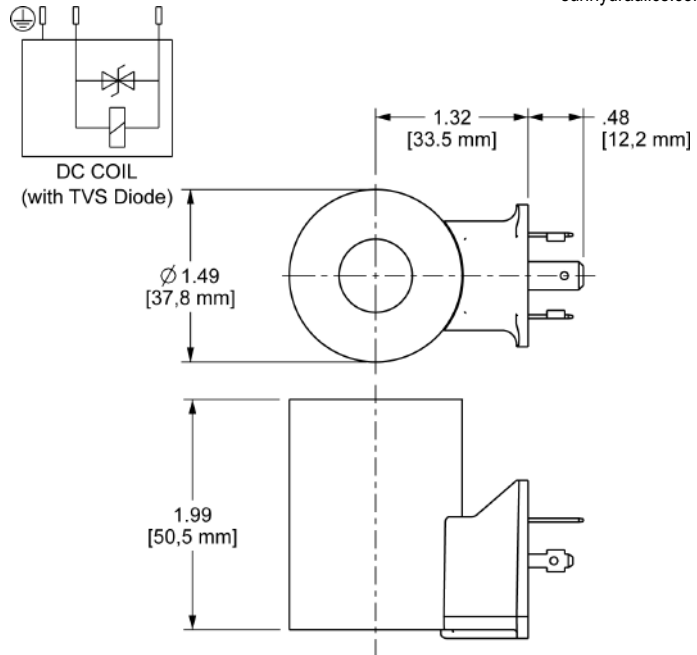


### TECHNICAL DATA

Operating Temperature Range	-40 to 230 °F
Arc Suppression (TVS)	None
Power Consumption (cold) - at rated voltage	25 Watts
Maximum Ambient Temperature	122 °F
Voltage/Frequency	28 VDC
Operating Voltage Range	+10%/-15%
Duty Cycle Rating	100 %
Connector	ISO4400 - EN/DIN175301-803, Form A (ISO/DIN 43650) 3-pin
Coil Nut Torque	4.5 lbf in.

### USED WITH

DBAF	DBAFS	DFBF	DFBG	DFCI	DFCJ	DFDI	DFDJ	DFEI	DFEJ
DFFI	DFFJ	DLDF	DLDFS	DMBF	DNBF	DTAF	DTAFS	DTBF	DTCF
DTDF	DTDFS	DWBF	DWDF	FDEP	F MDF	FMDG	FPBF	FPBG	FPBI
FPBJ	FPBU	FREP	PRDF	PRDG	RPEI	RVCK	RVCL	RVCM	RVCN
991711300	991711600	991712300	991712600	991713030	991713060	991740001	XMD-01	XMD-02	

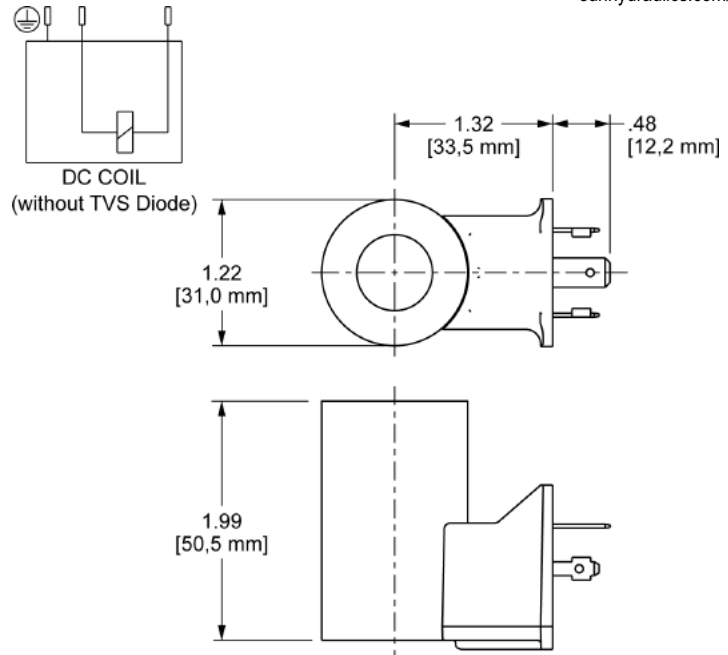


**TECHNICAL DATA**

Operating Temperature Range	-40 to 230 °F
Arc Suppression (TVS)	Included
Power Consumption (cold) - at rated voltage	25 Watts
Maximum Ambient Temperature	122 °F
Voltage/Frequency	28 VDC
Duty Cycle Rating	100 %
Connector	ISO4400 - EN/DIN175301-803, Form A (ISO/DIN 43650) 3-pin
Coil Nut Torque	4.5 lbf in.

**USED WITH**

DBAF	DBAFS	DFBF	DFBG	DFCI	DFCJ	DFDI	DFDJ	DFEI	DFEJ
DFFI	DFFJ	DLDF	DLDFS	DMBF	DNBF	DTAF	DTAFS	DTBF	DTCF
DTDF	DTDFS	DWBF	DWDF	FDEP	FMDf	FMDG	FPBF	FPBG	FPBI
FPBJ	FPBU	FREP	PRDF	PRDG	RPEI	RVCK	RVCL	RVCM	RVCN
991711300	991711600	991712300	991712600	991713030	991713060	991740001	XMD-01	XMD-02	

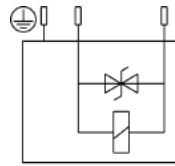


**TECHNICAL DATA**

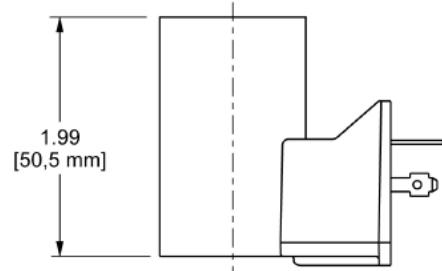
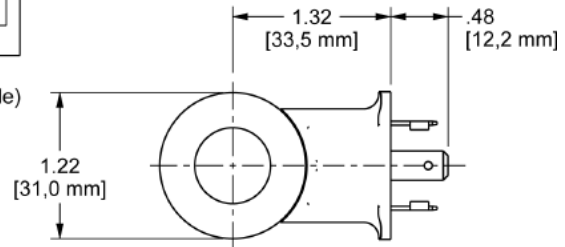
Operating Temperature Range	-40 to 230 °F
Arc Suppression (TVS)	None
Power Consumption (cold) - at rated voltage	17 Watts
Maximum Ambient Temperature	212 °F
Voltage/Frequency	28 VDC
Operating Voltage Range	+10%/-15%
Duty Cycle Rating	100 %
Connector	ISO4400 - EN/DIN175301-803, Form A (ISO/DIN 43650) 3-pin
Coil Nut Torque	4.5 lbf in.

**USED WITH**

DBAF	DBAFS	DFBD	DFBE	DMBD	DNBD	DTAF	DTAFS	DTBF	FPBD
FPBE	FPBM	FPBN	RPEI	991711300	991711600	991712300	991712600	991713030	991713060
991740002	XMD-01	XMD-02							



DC COIL  
(with TVS Diode)

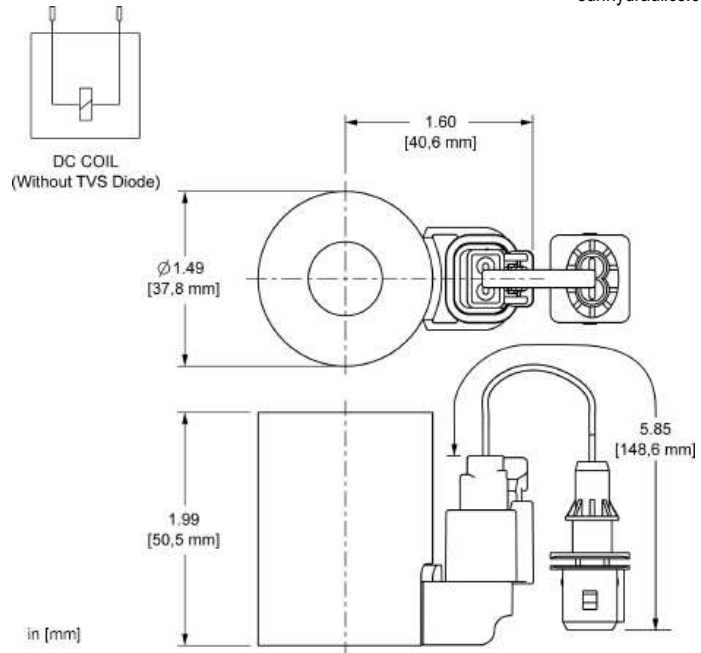


### TECHNICAL DATA

Operating Temperature Range	-40 to 230 °F
Arc Suppression (TVS)	Included
Power Consumption (cold) - at rated voltage	17 Watts
Maximum Ambient Temperature	212 °F
Voltage/Frequency	28 VDC
Operating Voltage Range	+10%/-15%
Duty Cycle Rating	100 %
Connector	ISO4400 - EN/DIN175301-803, Form A (ISO/DIN 43650) 3-pin
Coil Nut Torque	4.5 lbf in.

### USED WITH

DBAF	DBAFS	DFBD	DFBE	DMBD	DNBD	DTAF	DTAFS	DTBF	FPBD
FPBE	FPBM	FPBN	RPEI	991711300	991711600	991712300	991712600	991713030	991713060
991740002	XMD-01	XMD-02							



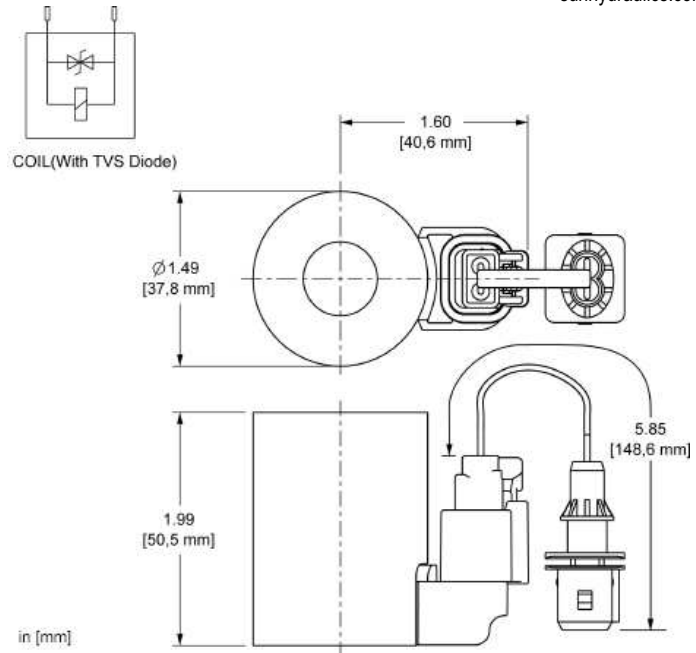
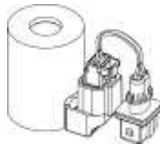
This 740 Series Coil configuration uses a connector adapter kit to provide the required termination.

**TECHNICAL DATA**

Operating Temperature Range	-40 to 230 °F
Arc Suppression (TVS)	None
Power Consumption (cold) - at rated voltage	25 Watts
Maximum Ambient Temperature	122 °F
Voltage/Frequency	12 VDC
Operating Voltage Range	+10%/-15%
Duty Cycle Rating	100 %
Connector	AMP Junior Timer
Connector Environment Rating	IP67
Coil Nut Torque	4.5 lbf in.

**USED WITH**

DBAF	DBAFS	DFBF	DFBG	DFCI	DFCJ	DFDI	DFDJ	DFEI	DFEJ
DFFI	DFFJ	DLDF	DLDFS	DMBF	DNBF	DTAF	DTAFS	DTBF	DTCF
DTDF	DTDFS	DWBF	DWDF	FDEP	FMDF	FMDG	FPBF	FPBG	FPBI
FPBJ	FPBU	FREP	PRDF	PRDG	RPEI	RVCK	RVCL	RVCM	RVCN



This 740 Series Coil configuration uses a connector adapter kit to provide the required termination.

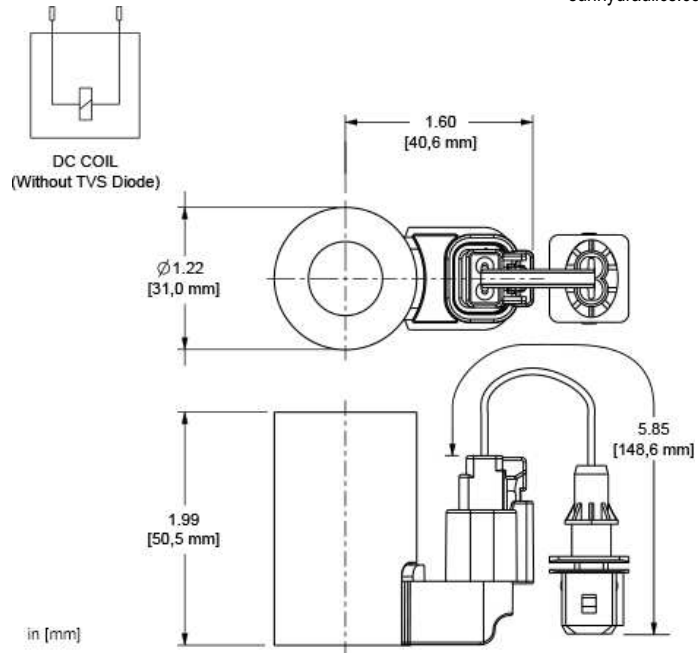
### TECHNICAL DATA

Operating Temperature Range	-40 to 230 °F
Arc Suppression (TVS)	Included
Power Consumption (cold) - at rated voltage	25 Watts
Maximum Ambient Temperature	122 °F
Voltage/Frequency	12 VDC
Operating Voltage Range	+10%/-15%
Duty Cycle Rating	100 %
Connector	AMP Junior Timer
Connector Environment Rating	IP67
Coil Nut Torque	4.5 lbf in.

### USED WITH

DBAF	DBAFS	DFBF	DFBG	DFCI	DFCJ	DFDI	DFDJ	DFEI	DFEJ
DFFI	DFFJ	DLDF	DLDFS	DMBF	DNBF	DTAF	DTAFS	DTBF	DTCF
DTDF	DTDFS	DWBF	DWDF	FDEP	FMDF	FMDG	FPBF	FPBG	FPBI
FPBJ	FPBU	FREP	PRDF	PRDG	RPEI	RVCK	RVCL	RVCM	RVCN





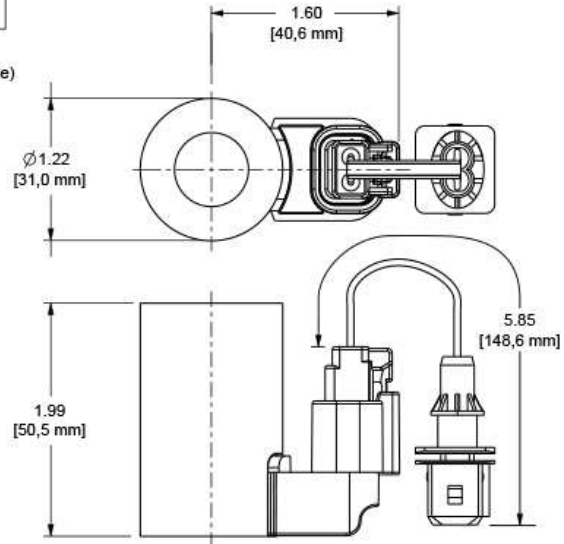
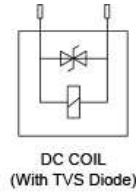
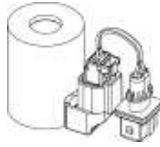
This 740 Series Coil configuration uses a connector adapter kit to provide the required termination.

### TECHNICAL DATA

Operating Temperature Range	-40 to 230 °F
Arc Suppression (TVS)	None
Power Consumption (cold) - at rated voltage	17 Watts
Maximum Ambient Temperature	212 °F
Voltage/Frequency	12 VDC
Operating Voltage Range	+10%/-15%
Duty Cycle Rating	100 %
Connector	AMP Junior Timer
Connector Environment Rating	IP67
Coil Nut Torque	4.5 lbf in.

### USED WITH

DBAF DBAFS DFBD DMBD DNBD DTAF DTAFS DTBF FPBD FPBE  
FPBM RPEI



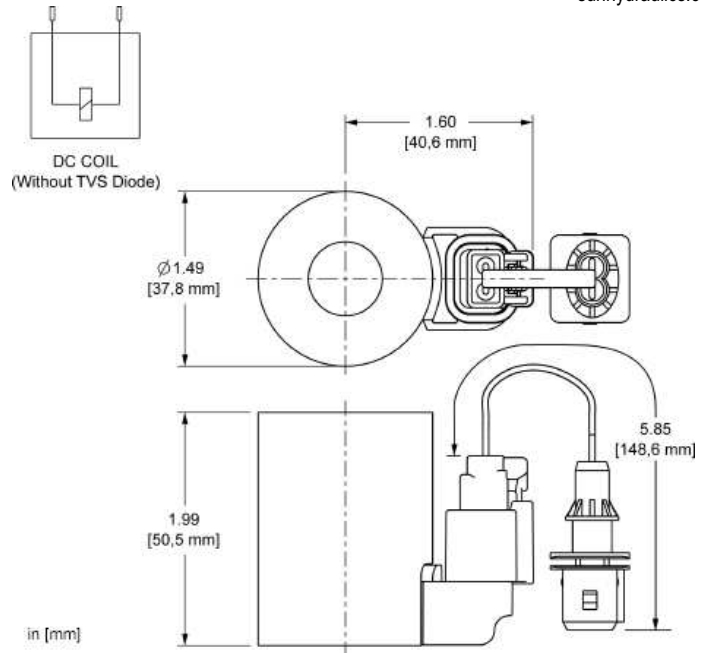
This 740 Series Coil configuration uses a connector adapter kit to provide the required termination.

**TECHNICAL DATA**

Operating Temperature Range	-40 to 230 °F
Arc Suppression (TVS)	Included
Power Consumption (cold) - at rated voltage	17 Watts
Maximum Ambient Temperature	212 °F
Voltage/Frequency	12 VDC
Operating Voltage Range	+10%/-15%
Duty Cycle Rating	100 %
Connector	AMP Junior Timer
Connector Environment Rating	IP67
Coil Nut Torque	4.5 lbf in.

**USED WITH**

DBAF DBAFS DFBD DMBD DNBD DTAF DTAFS DTBF FPBD FPBE  
 FPBM RPEI



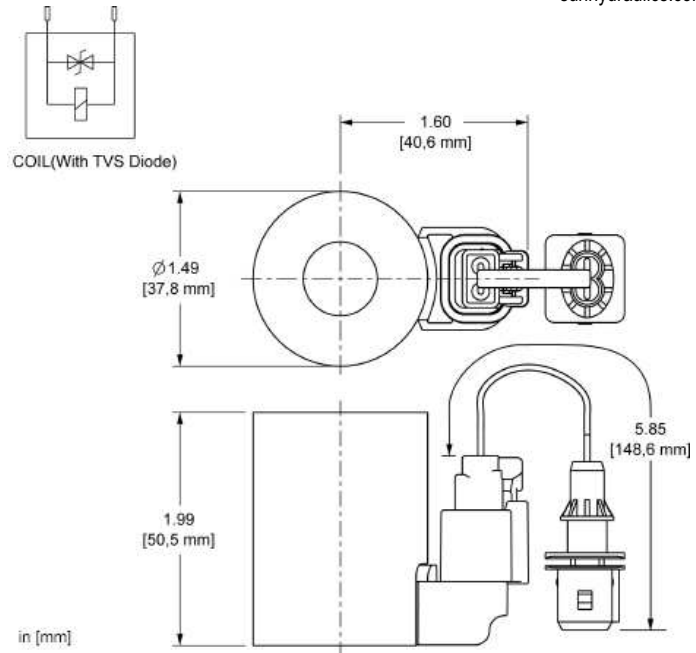
This 740 Series Coil configuration uses a connector adapter kit to provide the required termination.

### TECHNICAL DATA

Operating Temperature Range	-40 to 230 °F
Arc Suppression (TVS)	None
Power Consumption (cold) - at rated voltage	25 Watts
Maximum Ambient Temperature	122 °F
Voltage/Frequency	14 VDC
Operating Voltage Range	+10%/-15%
Duty Cycle Rating	100 %
Connector	AMP Junior Timer
Coil Nut Torque	4.5 lbf in.

### USED WITH

DBAF	DBAFS	DFBF	DFBG	DFCI	DFCJ	DFDI	DFDJ	DFEI	DFEJ
DFFI	DFFJ	DLDF	DLDFS	DMBF	DNBF	DTAF	DTAFS	DTBF	DTCF
DTDF	DTDFS	DWBF	DWDF	FDEP	FMDF	FMDG	FPBF	FPBG	FPBI
FPBJ	FPBU	FREP	PRDF	PRDG	RPEI	RVCK	RVCL	RVCM	RVCN



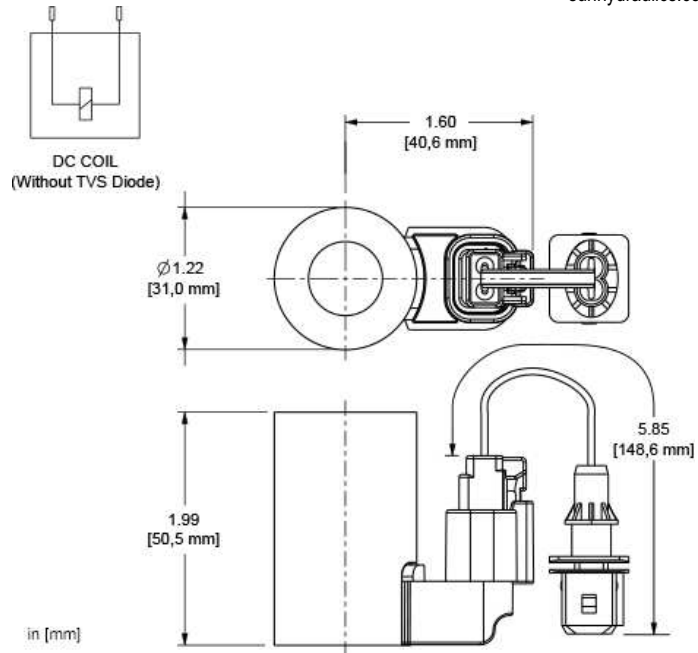
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**TECHNICAL DATA**

Operating Temperature Range	-40 to 230 °F
Arc Suppression (TVS)	Included
Power Consumption (cold) - at rated voltage	25 Watts
Maximum Ambient Temperature	122 °F
Voltage/Frequency	14 VDC
Operating Voltage Range	+10%/-15%
Duty Cycle Rating	100 %
Connector	AMP Junior Timer
Coil Nut Torque	4.5 lbf in.

**USED WITH**

- |      |       |      |       |      |      |      |       |      |      |
|------|-------|------|-------|------|------|------|-------|------|------|
| DBAF | DBAFS | DFBF | DFBG  | DFCI | DFCJ | DFDI | DFDJ  | DFEI | DFEJ |
| DFFI | DFFJ  | DLDF | DLDFS | DMBF | DNBF | DTAF | DTAFS | DTBF | DTCF |
| DTDF | DTDFS | DWBF | DWDF  | FDEP | FMDG | FMDG | FPBF  | FPBG | FPBI |
| FPBJ | FPBU  | FREP | PRDF  | PRDG | RPEI | RVCK | RVCL  | RVCM | RVCN |



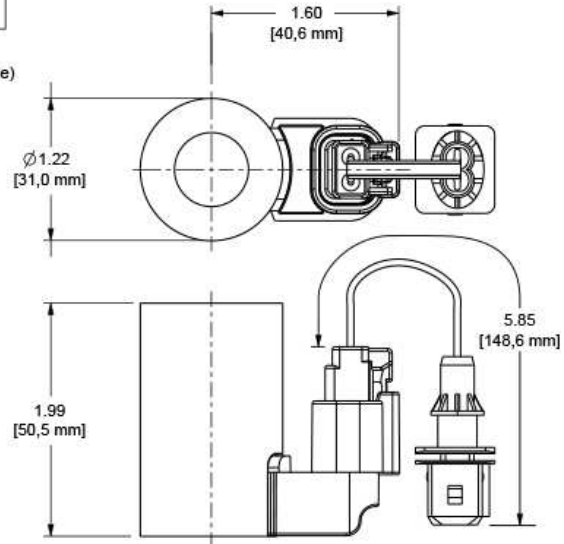
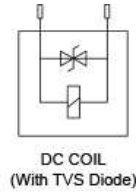
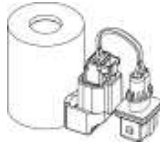
This 740 Series Coil configuration uses a connector adapter kit to provide the required termination.

### TECHNICAL DATA

Operating Temperature Range	-40 to 230 °F
Arc Suppression (TVS)	None
Power Consumption (cold) - at rated voltage	17 Watts
Maximum Ambient Temperature	212 °F
Voltage/Frequency	14 VDC
Operating Voltage Range	+10%/-15%
Duty Cycle Rating	100 %
Connector	AMP Junior Timer
Coil Nut Torque	4.5 lbf in.

### USED WITH

DBAF DBAFS DFBD DFBE DMBD DNBD DTAF DTAFS DTBF FPBD  
FPBE FPBM FPBN RPEI



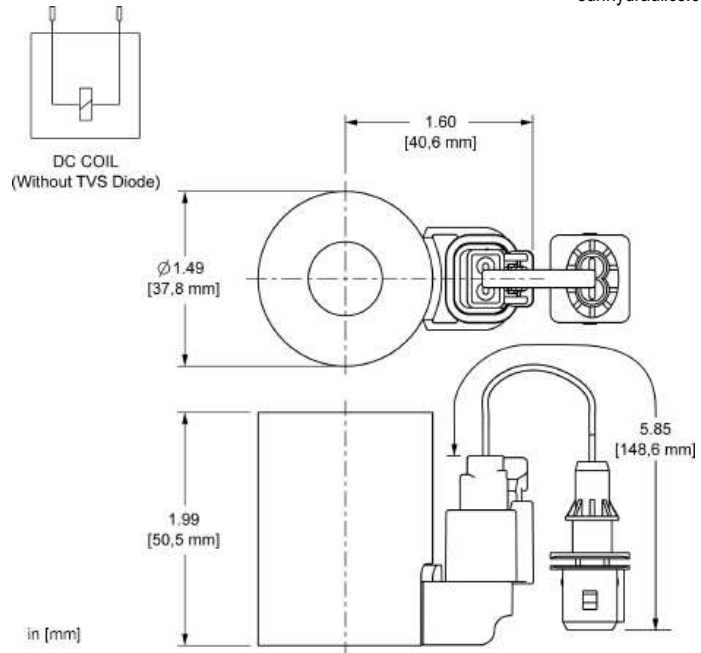
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**TECHNICAL DATA**

Operating Temperature Range	-40 to 230 °F
Arc Suppression (TVS)	Included
Power Consumption (cold) - at rated voltage	17 Watts
Maximum Ambient Temperature	212 °F
Voltage/Frequency	14 VDC
Operating Voltage Range	+10%/-15%
Duty Cycle Rating	100 %
Connector	AMP Junior Timer
Coil Nut Torque	4.5 lbf in.

**USED WITH**

DBAF DBAFS DFBD DFBE DMBD DNBD DTAF DTAFS DTBF FPBD  
 FPBE FPBM FPBN RPEI



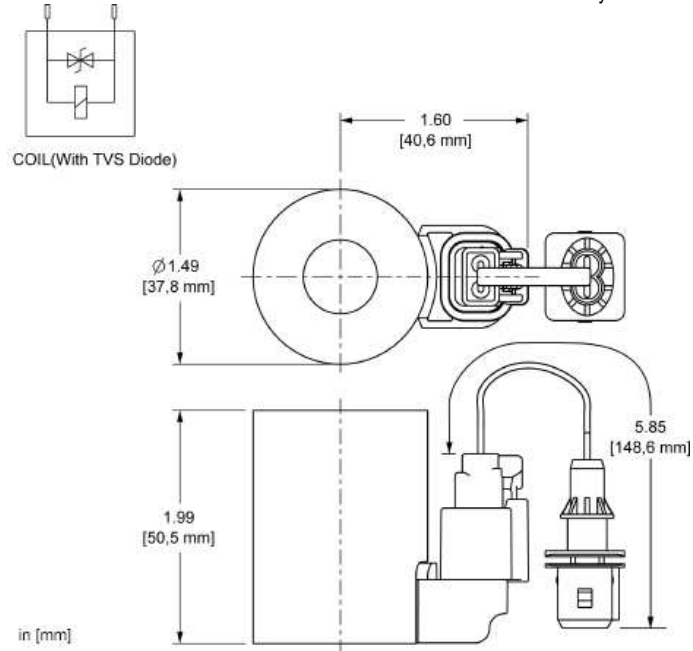
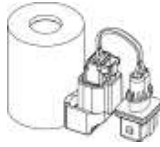
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Voltage/Frequency	24 VDC
Operating Voltage Range	+10%/-15%
Duty Cycle Rating	100 %
Connector	AMP Junior Timer
Coil Nut Torque	4.5 lbf in.

### USED WITH

DBAF	DBAFS	DFBF	DFBG	DFCI	DFCJ	DFDI	DFDJ	DFEI	DFEJ
DFFI	DFFJ	DLDF	DLDFS	DMBF	DNBF	DTAF	DTAFS	DTBF	DTCF
DTDF	DTDFS	DWBF	DWDF	FDEP	FMDF	FMDG	FPBF	FPBG	FPBI
FPBJ	FPBU	FREP	PRDF	PRDG	RPEI	RVCK	RVCL	RVCM	RVCN



This 740 Series Coil configuration uses a connector adapter kit to provide the required termination.

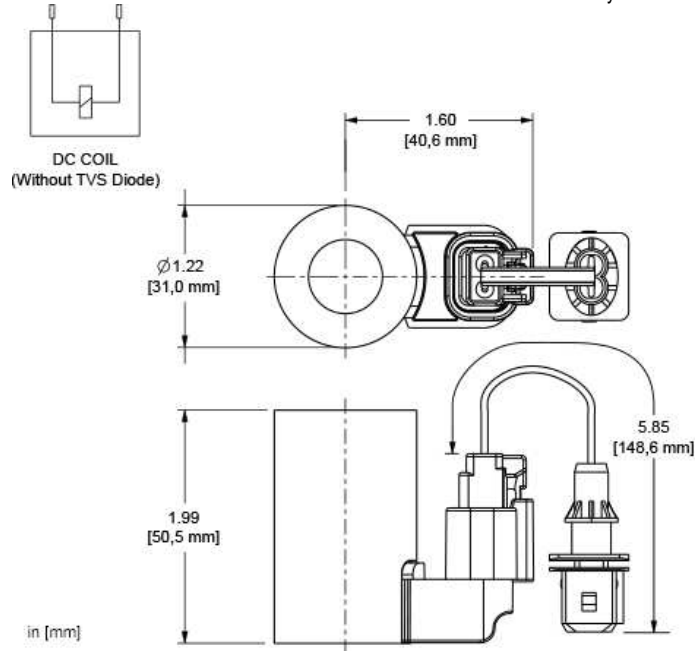
**TECHNICAL DATA**

Operating Temperature Range	-40 to 230 °F
Arc Suppression (TVS)	Included
Power Consumption (cold) - at rated voltage	25 Watts
Maximum Ambient Temperature	122 °F
Voltage/Frequency	24 VDC
Operating Voltage Range	+10%/-15%
Duty Cycle Rating	100 %
Connector	AMP Junior Timer
Coil Nut Torque	4.5 lbf in.

**USED WITH**

- |      |       |      |       |      |      |      |       |      |      |
|------|-------|------|-------|------|------|------|-------|------|------|
| DBAF | DBAFS | DFBF | DFBG  | DFCI | DFCJ | DFDI | DFDJ  | DFEI | DFEJ |
| DFFI | DFFJ  | DLDF | DLDFS | DMBF | DNBF | DTAF | DTAFS | DTBF | DTCF |
| DTDF | DTDFS | DWBF | DWDF  | FDEP | FMDG | FMDG | FPBF  | FPBG | FPBI |
| FPBJ | FPBU  | FREP | PRDF  | PRDG | RPEI | RVCK | RVCL  | RVCM | RVCN |





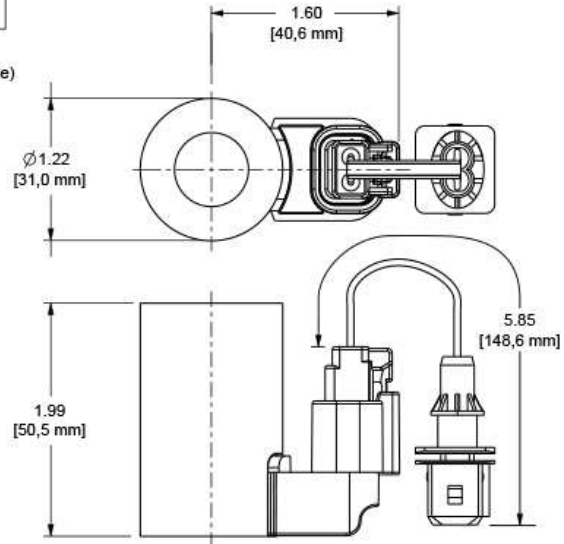
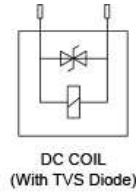
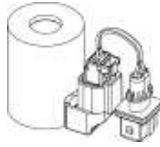
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**TECHNICAL DATA**

Operating Temperature Range	-40 to 230 °F
Arc Suppression (TVS)	None
Power Consumption (cold) - at rated voltage	17 Watts
Maximum Ambient Temperature	212 °F
Voltage/Frequency	24 VDC
Operating Voltage Range	+10%/-15%
Duty Cycle Rating	100 %
Connector	AMP Junior Timer
Coil Nut Torque	4.5 lbf in.

**USED WITH**

- DBAF    DBAFS    DFBD    DFBE    DMBD    DNBD    DTAF    DTAFS    DTBF    FPBD  
 FPBE    FPBM    FPBN    RPEI



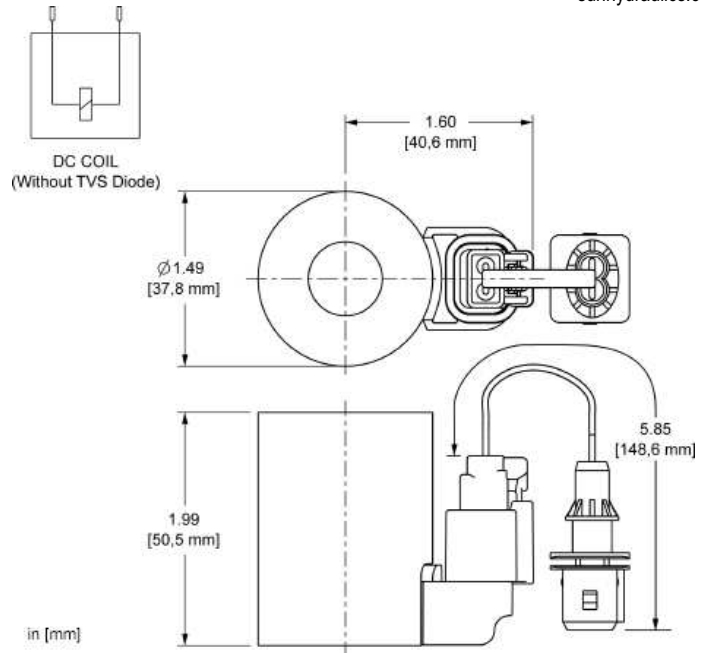
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### TECHNICAL DATA

Operating Temperature Range	-40 to 230 °F
Arc Suppression (TVS)	Included
Power Consumption (cold) - at rated voltage	17 Watts
Maximum Ambient Temperature	212 °F
Voltage/Frequency	24 VDC
Operating Voltage Range	+10%/-15%
Duty Cycle Rating	100 %
Connector	AMP Junior Timer
Coil Nut Torque	4.5 lbf in.

### USED WITH

DBAF DBAFS DFBD DFBE DMBD DNBD DTAF DTAFS DTBF FPBD  
FPBE FPBM FPBN RPEI



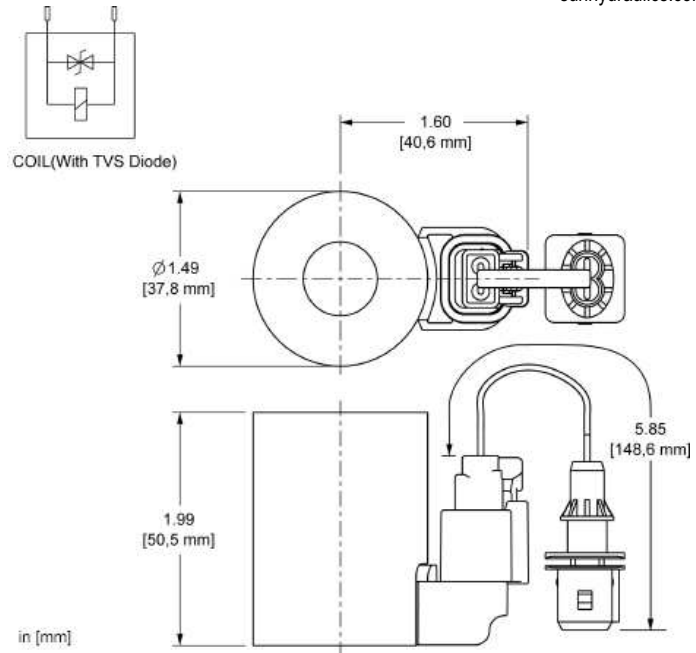
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### TECHNICAL DATA

Operating Temperature Range	-40 to 230 °F
Arc Suppression (TVS)	None
Power Consumption (cold) - at rated voltage	25 Watts
Maximum Ambient Temperature	122 °F
Voltage/Frequency	28 VDC
Operating Voltage Range	+10%/-15%
Duty Cycle Rating	100 %
Connector	AMP Junior Timer
Coil Nut Torque	4.5 lbf in.

### USED WITH

DBAF	DBAFS	DFBF	DFBG	DFCI	DFCJ	DFDI	DFDJ	DFEI	DFEJ
DFFI	DFFJ	DLDF	DLDFS	DMBF	DNBF	DTAF	DTAFS	DTBF	DTCF
DTDF	DTDFS	DWBF	DWDF	FDEP	FMDF	FMDG	FPBF	FPBG	FPBI
FPBJ	FPBU	FREP	PRDF	PRDG	RPEI	RVCK	RVCL	RVCM	RVCN



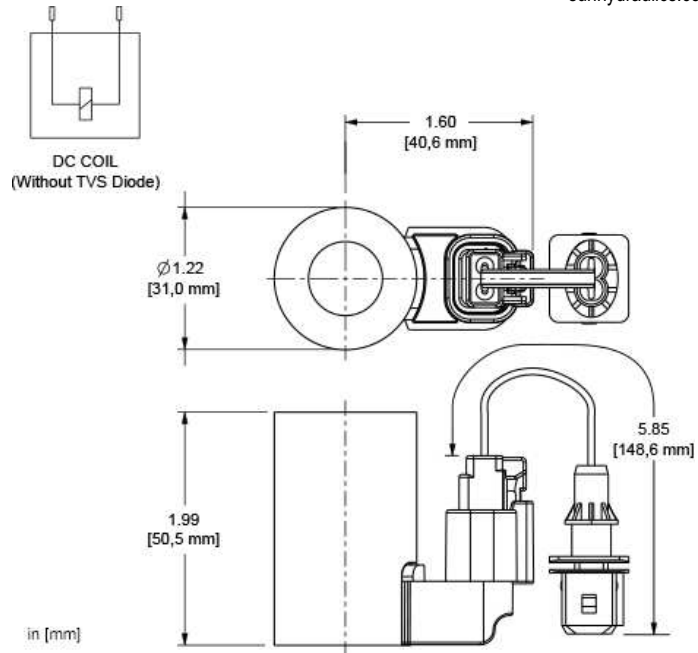
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Operating Temperature Range	-40 to 230 °F
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Power Consumption (cold) - at rated voltage	25 Watts
Maximum Ambient Temperature	122 °F
Voltage/Frequency	28 VDC
Operating Voltage Range	+10%/-15%
Duty Cycle Rating	100 %
Connector	AMP Junior Timer
Coil Nut Torque	4.5 lbf in.

### USED WITH

DBAF	DBAFS	DFBF	DFBG	DFCI	DFDI	DFDJ	DFEI	DFEJ	DFFI
DFFJ	DLDF	DLDFS	DMBF	DNBF	DTAF	DTAFS	DTBF	DTCF	DTDF
DTDFS	DWBF	DWDF	FDEP	FMDF	FMDG	FPBF	FPBG	FPBI	FPBJ
FPBU	FREP	PRDF	PRDG	RPEI	RVCK	RVCL	RVCM	RVCN	



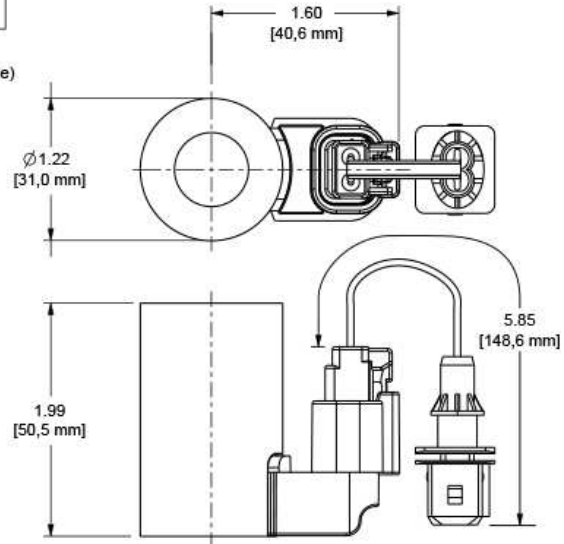
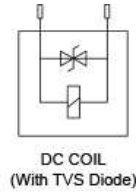
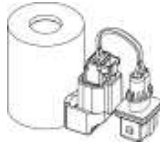
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Duty Cycle Rating	100 %
Connector	AMP Junior Timer
Coil Nut Torque	4.5 lbf in.

### USED WITH

DBAF DBAFS DFBD DFBE DMBD DNBD DTAF DTAFS DTBF FPBD  
FPBE FPBM FPBN RPEI



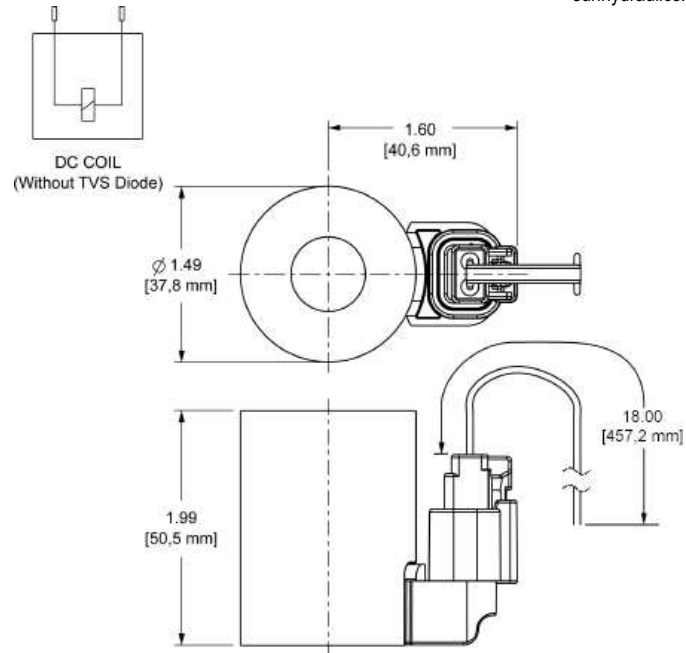
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### TECHNICAL DATA

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Duty Cycle Rating	100 %
Connector	AMP Junior Timer
Coil Nut Torque	4.5 lbf in.

### USED WITH

DBAF    DFBD    DFBE    DMBD    DNBD    DTAF    DTAFS    DTBF    FPBD    FPBE  
 FPBM    FPBN    RPEI



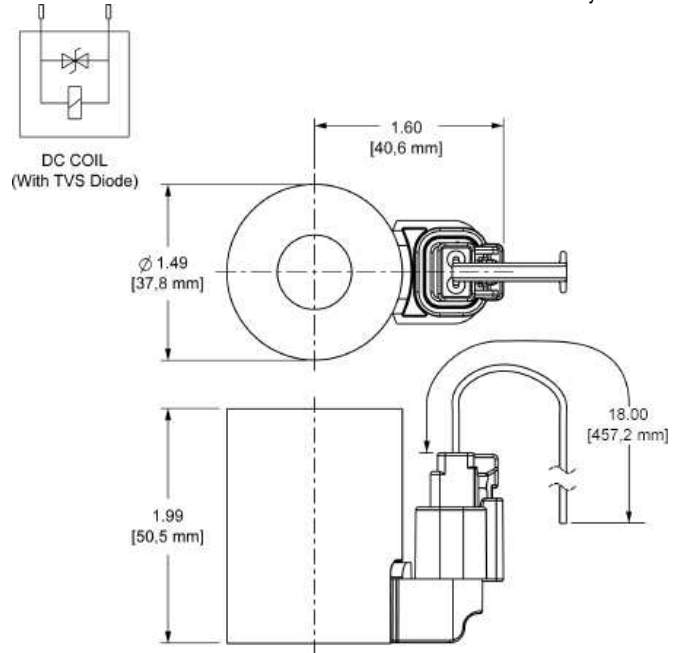
This 740 Series Coil configuration uses a connector adapter kit to provide the required termination.

**TECHNICAL DATA**

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Power Consumption (cold) - at rated voltage	25 Watts
Maximum Ambient Temperature	122 °F
Voltage/Frequency	12 VDC
Operating Voltage Range	+10%/-15%
Duty Cycle Rating	100 %
Connector	Twin lead 18 AWG x 18 in. (460 mm)
Coil Nut Torque	4.5 lbf in.

**USED WITH**

- |      |       |      |       |      |      |      |       |      |      |
|------|-------|------|-------|------|------|------|-------|------|------|
| DBAF | DBAFS | DFBF | DFBG  | DFCI | DFCJ | DFDI | DFDJ  | DFEI | DFEJ |
| DFFI | DFFJ  | DLDF | DLDFS | DMBF | DNBF | DTAF | DTAFS | DTBF | DTCF |
| DTDF | DTDFS | DWBF | DWDF  | FDEP | FMDF | FMDG | FPBF  | FPBG | FPBI |
| FPBJ | FPBU  | FREP | PRDF  | PRDG | RPEI | RVCK | RVCL  | RVCM | RVCN |



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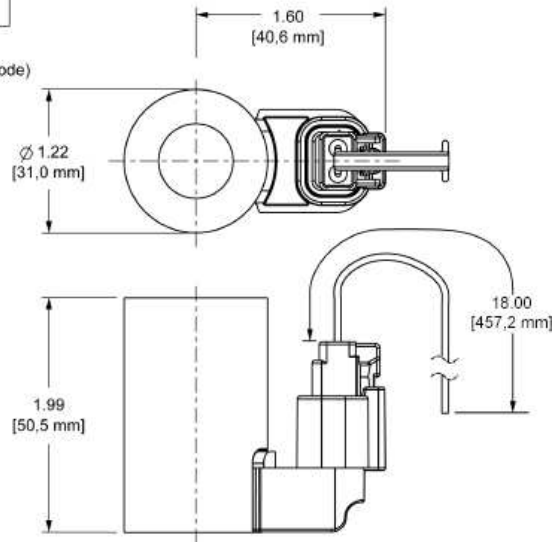
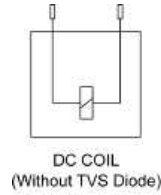
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### USED WITH

DBAF	DBAFS	DFBF	DFBG	DFCI	DFCJ	DFDI	DFDJ	DFEI	DFEJ
DFFI	DFFJ	DLDF	DLDFS	DMBF	DNBF	DTAF	DTAFS	DTBF	DTCF
DTDF	DTDFS	DWBF	DWDF	FDEP	FMDF	FMDG	FPBF	FPBG	FPBI
FPBJ	FPBU	FREP	PRDF	PRDG	RPEI	RVCK	RVCL	RVCM	RVCN





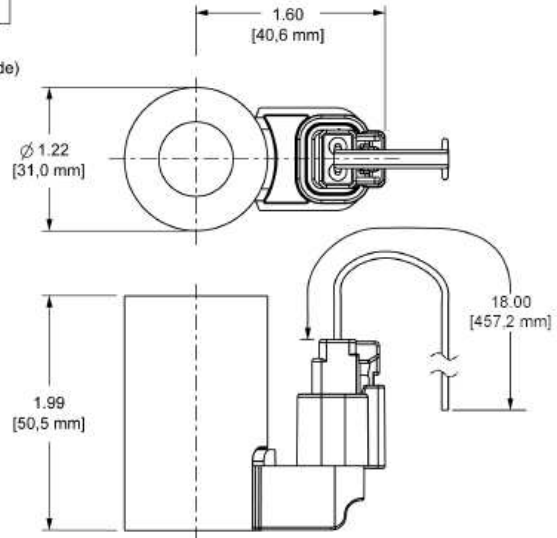
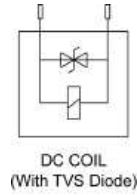
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Coil Nut Torque	4.5 lbf in.

**USED WITH**

- DBAF DBAFS DFBD DFBE DMBD DNBD DTAF DTAFS DTBF FPBD  
FPBE FPBM FPBN RPEI



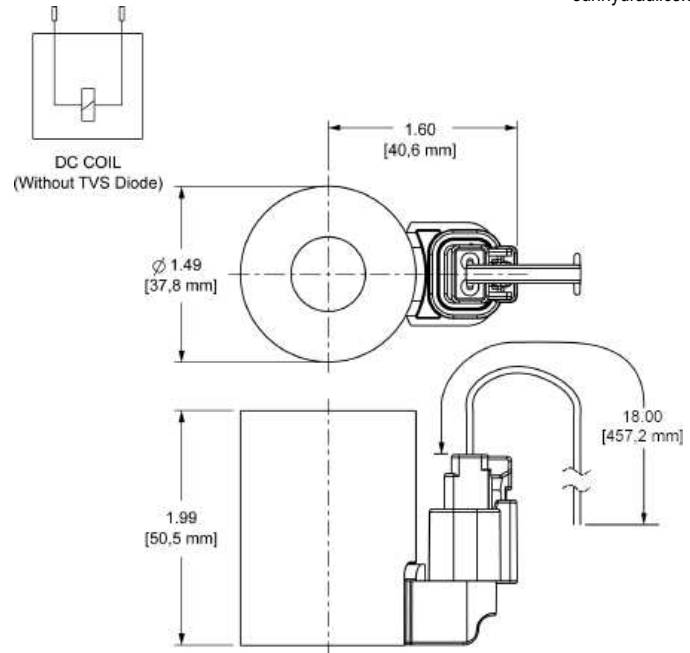
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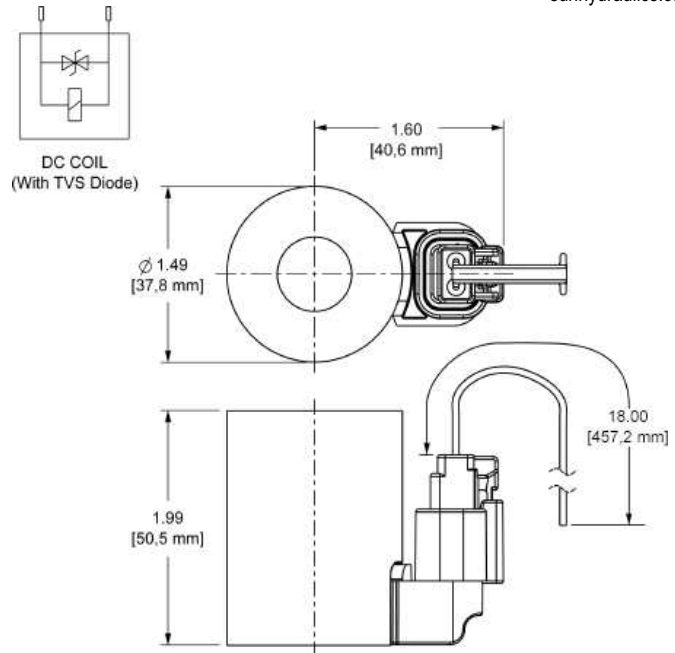
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**USED WITH**

- |      |       |      |       |      |      |      |       |      |      |
|------|-------|------|-------|------|------|------|-------|------|------|
| DBAF | DBAFS | DFBF | DFBG  | DFCI | DFCJ | DFDI | DFDJ  | DFEI | DFEJ |
| DFFI | DFFJ  | DLDF | DLDFS | DMBF | DNBF | DTAF | DTAFS | DTBF | DTCF |
| DTDF | DTDFS | DWBF | DWDF  | FDEP | FMDF | FMDG | FPBF  | FPBG | FPBI |
| FPBJ | FPBU  | FREP | PRDF  | PRDG | RPEI | RVCK | RVCL  | RVCM | RVCN |



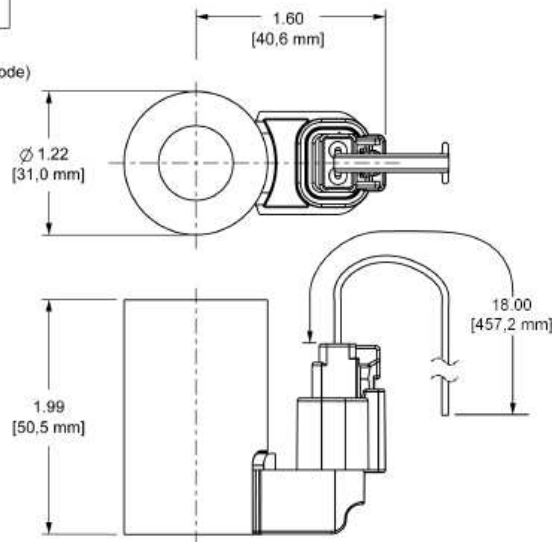
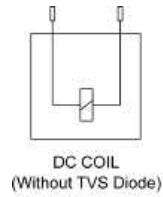
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DBAF	DBAFS	DFBF	DFBG	DFCI	DFCJ	DFDI	DFDJ	DFEI	DFEJ
DFFI	DFFJ	DLDF	DLDFS	DMBF	DNBF	DTAF	DTAFS	DTBF	DTCF
DTDF	DTDFS	DWBF	DWDF	FDEP	FMDF	FMDG	FPBF	FPBG	FPBI
FPBJ	FPBU	FREP	PRDF	PRDG	RPEI	RVCK	RVCL	RVCM	RVCN



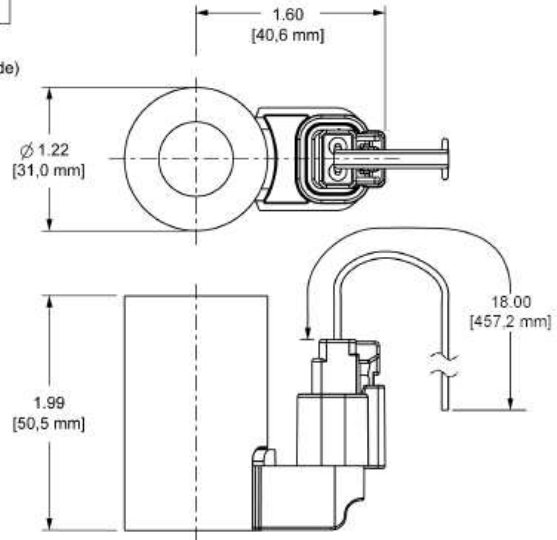
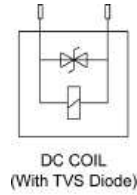
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Duty Cycle Rating	100 %
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Coil Nut Torque	4.5 lbf in.

### USED WITH

DBAF DBAFS DFBD DFBE DMBD DNBD DTAF DTAFS DTBF FPBD  
FPBE FPBM FPBN RPEI



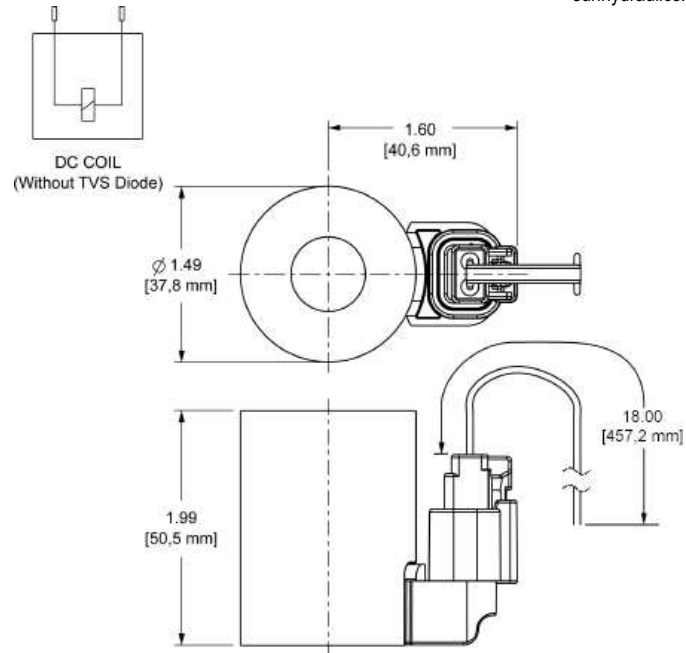
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**TECHNICAL DATA**

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Coil Nut Torque	4.5 lbf in.

**USED WITH**

DBAF DBAFS DFBD DFBE DMBD DNBD DTAF DTAFS DTBF FPBD  
FPBE FPBM FPBN RPEI



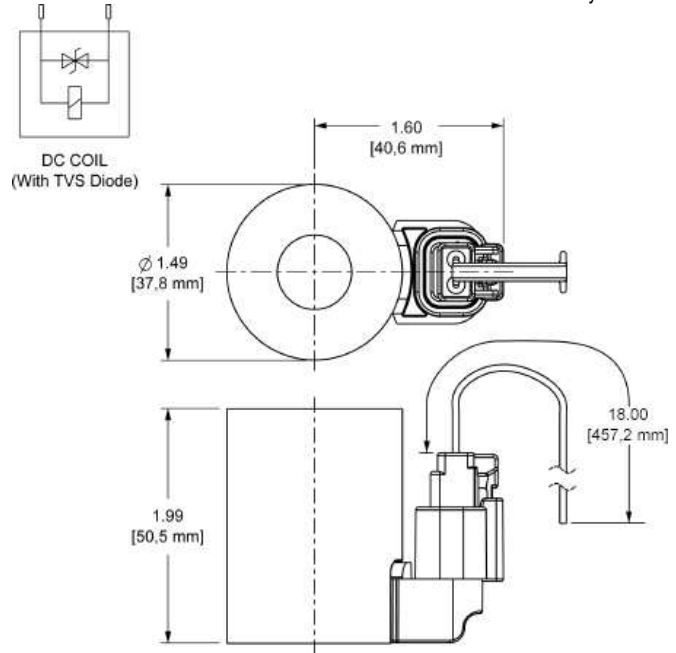
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Coil Nut Torque	4.5 lbf in.

### USED WITH

DBAF	DBAFS	DFBF	DFBG	DFCI	DFCJ	DFDI	DFDJ	DFEI	DFEJ
DFFI	DFFJ	DLDF	DLDFS	DMBF	DNBF	DTAF	DTAFS	DTBF	DTCF
DTDF	DTDFS	DWBF	DWDF	FDEP	FMDF	FMDG	FPBF	FPBG	FPBI
FPBJ	FPBU	FREP	PRDF	PRDG	RPEI	RVCK	RVCL	RVCM	RVCN



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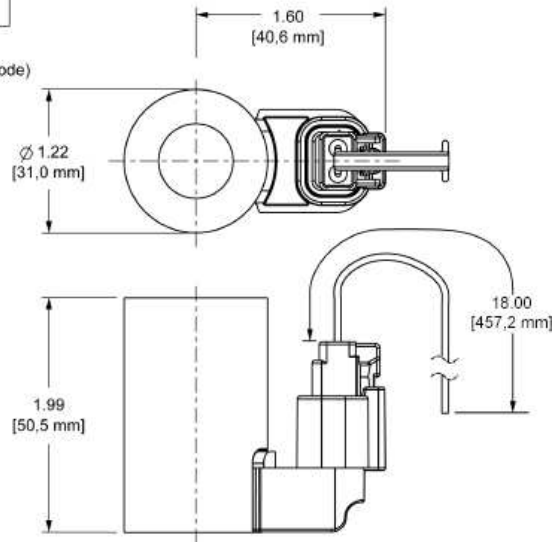
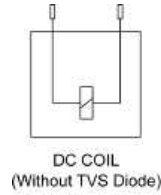
**TECHNICAL DATA**

Operating Temperature Range	-40 to 230 °F
Arc Suppression (TVS)	Included
Power Consumption (cold) - at rated voltage	25 Watts
Maximum Ambient Temperature	122 °F
Voltage/Frequency	24 VDC
Operating Voltage Range	+10%/-15%
Duty Cycle Rating	100 %
Connector	Twin lead 18 AWG x 18 in. (460 mm)
Coil Nut Torque	4.5 lbf in.

**USED WITH**

DBAF	DBAFS	DFBF	DFBG	DFCI	DFCJ	DFDI	DFDJ	DFEI	DFEJ
DFFI	DFFJ	DLDF	DLDFS	DMBF	DNBF	DTAF	DTAFS	DTBF	DTCF
DTDF	DTDFS	DWBF	DWDF	FDEP	FMDG	FPBF	FPBG	FPBI	FPBI
FPBJ	FPBU	FREP	PRDF	PRDG	RPEI	RVCK	RVCL	RVCM	RVCN



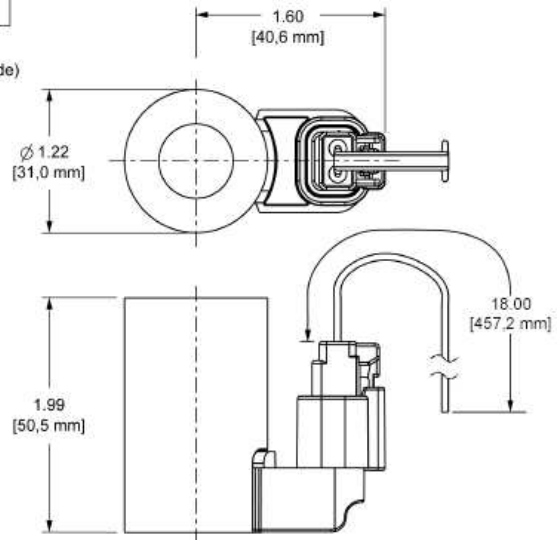
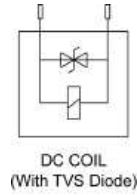


### TECHNICAL DATA

Operating Temperature Range	-40 to 230 °F
Arc Suppression (TVS)	None
Power Consumption (cold) - at rated voltage	17 Watts
Maximum Ambient Temperature	212 °F
Voltage/Frequency	24 VDC
Operating Voltage Range	+10%/-15%
Duty Cycle Rating	100 %
Connector	Twin lead 18 AWG x 18 in. (460 mm)
Coil Nut Torque	4.5 lbf in.

### USED WITH

DBAF DBAFS DFBD DFBE DMBD DNBD DTAF DTAFS DTBF FPBD  
FPBE FPBM FPBN RPEI



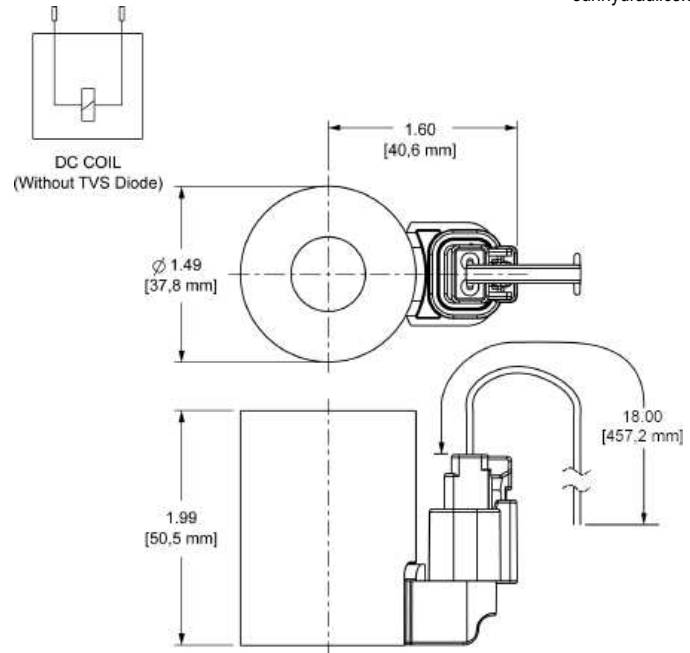
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Arc Suppression (TVS)	Included
Power Consumption (cold) - at rated voltage	17 Watts
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DBAF DBAFS DFBD DFBE DMBD DNBD DTAF DTAFS DTBF FPBD  
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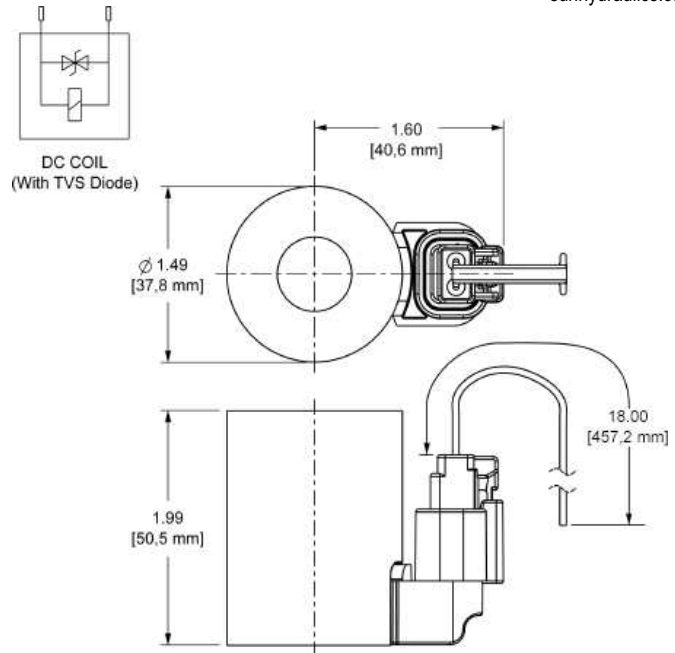
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**TECHNICAL DATA**

Operating Temperature Range	-40 to 230 °F
Arc Suppression (TVS)	None
Power Consumption (cold) - at rated voltage	25 Watts
Maximum Ambient Temperature	122 °F
Voltage/Frequency	28 VDC
Operating Voltage Range	+10%/-15%
Duty Cycle Rating	100 %
Connector	Twin lead 18 AWG x 18 in. (460 mm)
Coil Nut Torque	4.5 lbf in.

**USED WITH**

- |      |       |      |       |      |      |      |       |      |      |
|------|-------|------|-------|------|------|------|-------|------|------|
| DBAF | DBAFS | DFBF | DFBG  | DFCI | DFCJ | DFDI | DFDJ  | DFEI | DFEJ |
| DFFI | DFFJ  | DLDF | DLDFS | DMBF | DNBF | DTAF | DTAFS | DTBF | DTCF |
| DTDF | DTDFS | DWBF | DWDF  | FDEP | FMDF | FMDG | FPBF  | FPBG | FPBI |
| FPBJ | FPBU  | FREP | PRDF  | PRDG | RPEI | RVCK | RVCL  | RVCM | RVCN |



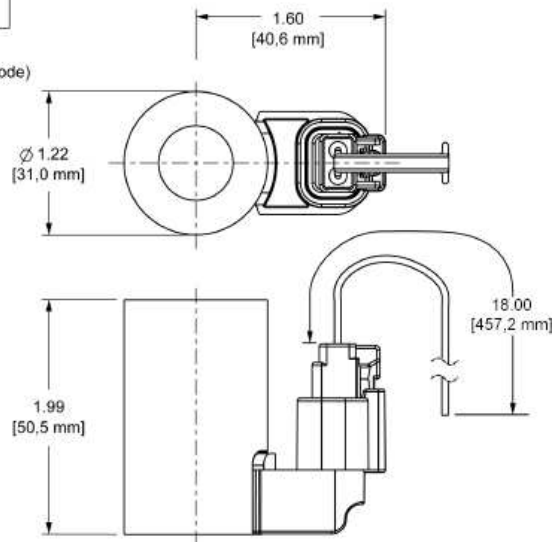
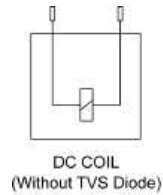
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DBAF	DBAFS	DFBF	DFBG	DFCI	DFCJ	DFDI	DFDJ	DFEI	DFEJ
DFFI	DFFJ	DLDF	DLDFS	DMBF	DNBF	DTAF	DTAFS	DTBF	DTCF
DTDF	DTDFS	DWBF	DWDF	FDEP	FMDF	FMDG	FPBF	FPBG	FPBI
FPBJ	FPBU	PRDF	PRDG	RPEI	RVCK	RVCL	RVCM	RVCN	



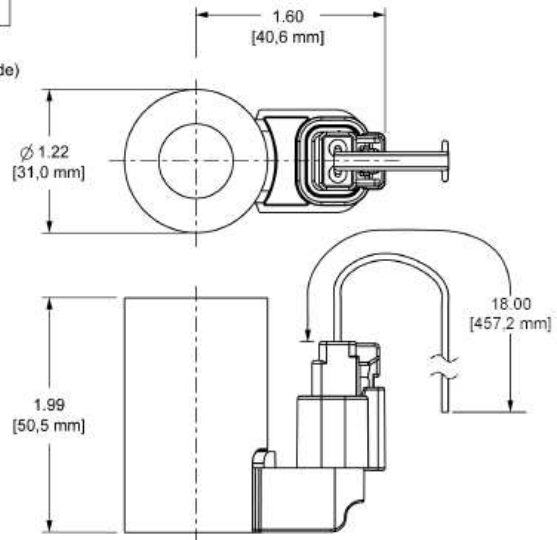
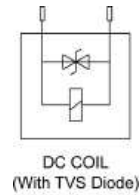
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Duty Cycle Rating	100 %
Connector	Twin lead 18 AWG x 18 in. (460 mm)
Coil Nut Torque	4.5 lbf in.

### USED WITH

DBAF DBAFS DFBD DFBE DMBD DNBD DTAF DTAFS DTBF FPBD  
FPBE FPBM FPBN RPEI



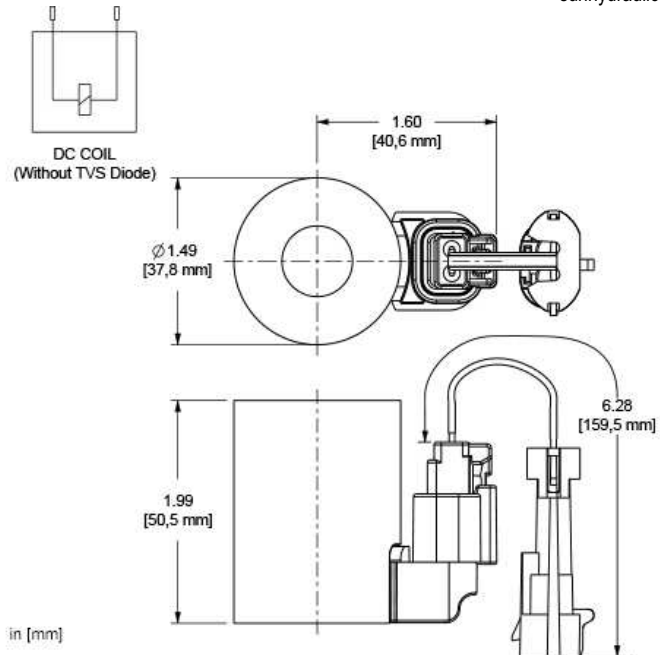
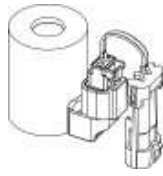
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FPBE FPBM FPBN RPEI



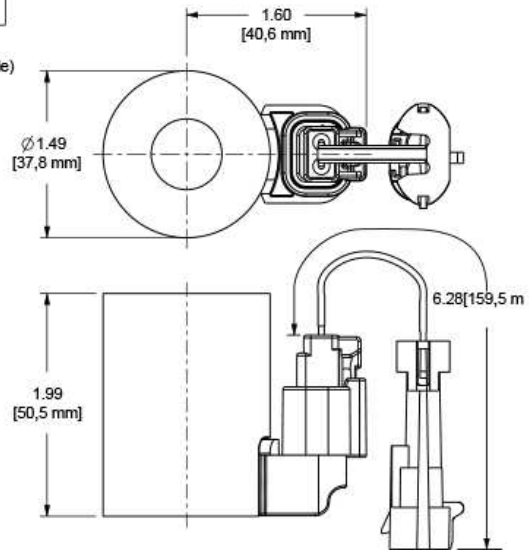
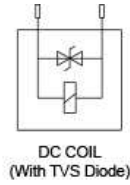
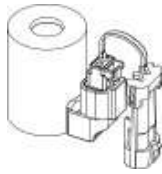
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Operating Voltage Range	+10%/-15%
Duty Cycle Rating	100 %
Connector	Metripack Series 150-2M
Coil Nut Torque	4.5 lbf in.

### USED WITH

DBAF	DFBF	DFBG	DFCI	DFCJ	DFDI	DFDJ	DFEI	DFEJ	DFFI
DFFJ	DLDF	DLDFS	DMBF	DNBF	DTAF	DTAFS	DTBF	DTCF	DTDF
DTDFS	DWBF	DWDF	FDEP	FMDF	FMDG	FPBF	FPBG	FPBI	FPBJ
FPBU	FREP	PRDF	PRDG	RPEI	RVCK	RVCL	RVCM	RVCN	



This 740 Series Coil configuration uses a connector adapter kit to provide the required termination.

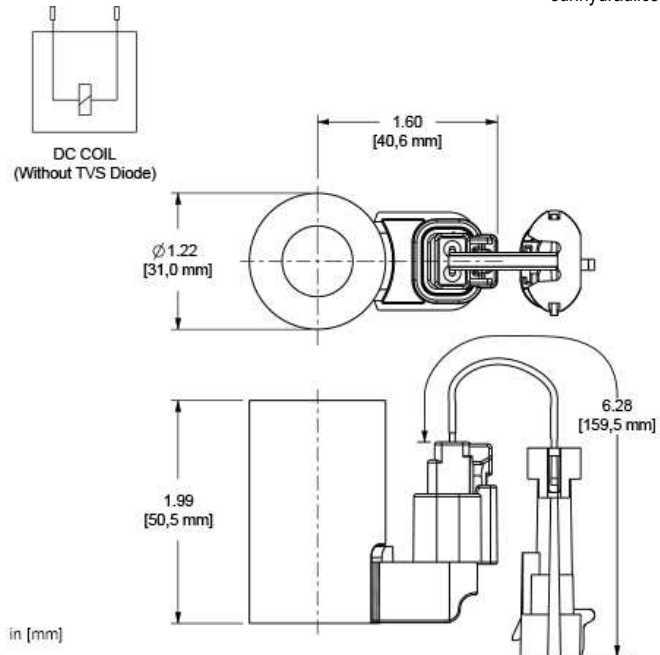
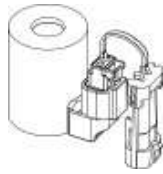
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Operating Voltage Range	+10%/-15%
Duty Cycle Rating	100 %
Connector	Metripack Series 150-2M
Coil Nut Torque	4.5 lbf in.

**USED WITH**

- |       |      |       |      |      |      |       |      |      |      |
|-------|------|-------|------|------|------|-------|------|------|------|
| DBAF  | DFBF | DFBG  | DFCI | DFCJ | DFDI | DFDJ  | DFEI | DFEJ | DFFI |
| DFFJ  | DLDF | DLDFS | DMBF | DNBF | DTAF | DTAFS | DTBF | DTCF | DTDF |
| DTDFS | DWBF | DWDF  | FDEP | FMDF | FMDG | FPBF  | FPBG | FPBI | FPBJ |
| FPBU  | FREP | PRDF  | PRDG | RPEI | RVCK | RVCL  | RVCM | RVCN |      |





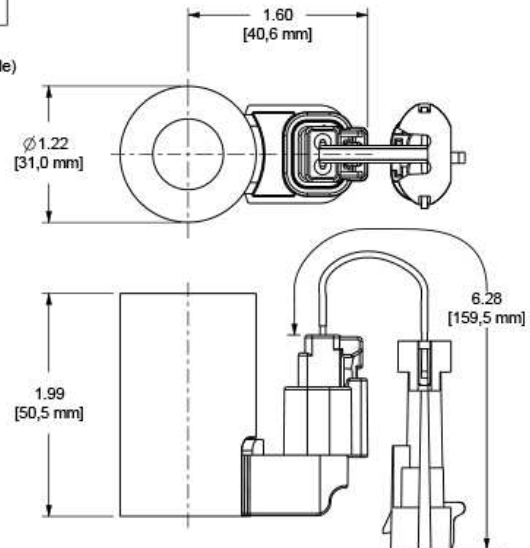
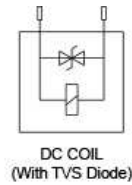
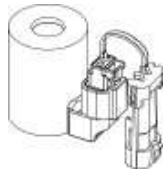
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Operating Voltage Range	+10%/-15%
Duty Cycle Rating	100 %
Connector	Metripack Series 150-2M
Coil Nut Torque	4.5 lbf in.

### USED WITH

DBAF    DFBD    DFBE    DMBD    DNBD    DTAF    DTAFS    DTBF    FPBD    FPBE  
 FPBM    FPBN    RPEI



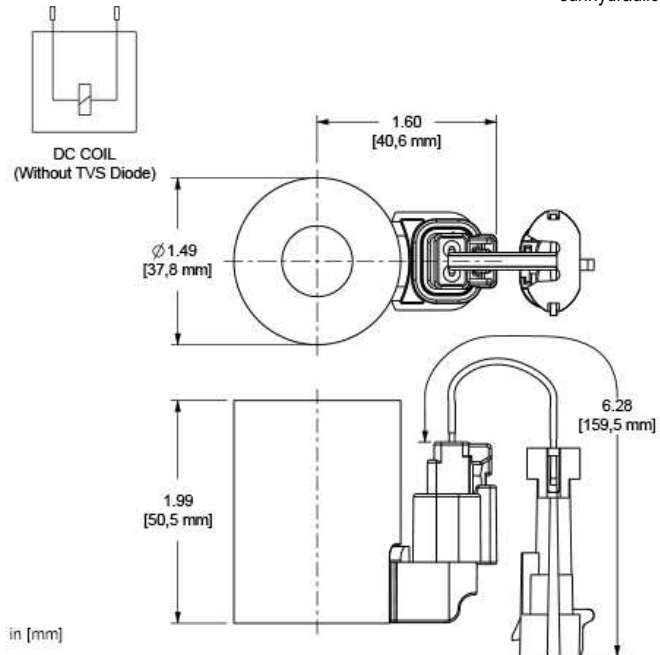
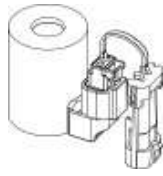
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Duty Cycle Rating	100 %
Connector	Metripack Series 150-2M
Coil Nut Torque	4.5 lbf in.

### USED WITH

DBAF    DFBD    DFBE    DMBD    DNBD    DTAF    DTAFS    DTBF    FPBD    FPBE  
 FPBM    FPBN    RPEI



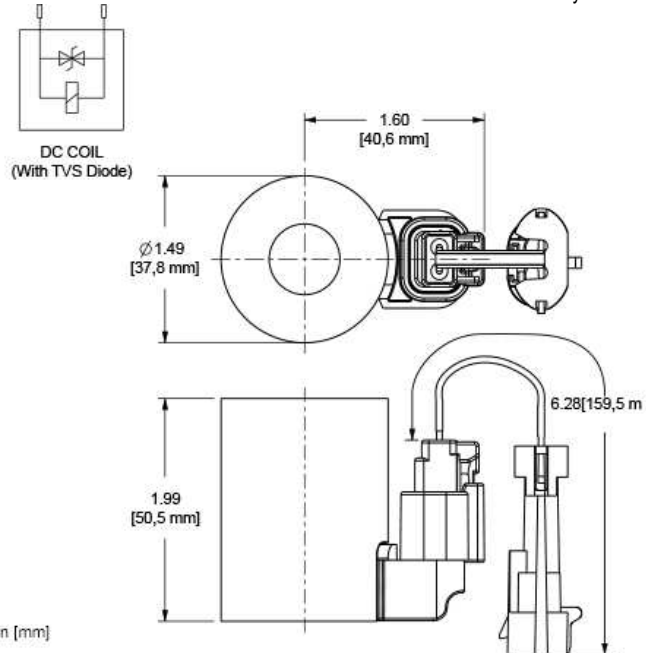
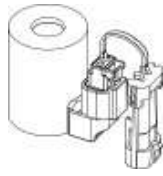
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### TECHNICAL DATA

Operating Temperature Range	-40 to 230 °F
Arc Suppression (TVS)	None
Power Consumption (cold) - at rated voltage	25 Watts
Maximum Ambient Temperature	122 °F
Voltage/Frequency	14 VDC
Operating Voltage Range	+10%/-15%
Duty Cycle Rating	100 %
Connector	Metripack Series 150-2M
Coil Nut Torque	4.5 lbf in.

### USED WITH

DBAF	DFBF	DFBG	DFCI	DFCJ	DFDI	DFDJ	DFEI	DFEJ	DFFI
DFFJ	DLDF	DLDFS	DMBF	DNBF	DTAF	DTAFS	DTBF	DTCF	DTDF
DTDFS	DWBF	DWDF	FDEP	FMDF	FMDG	FPBF	FPBG	FPBI	FPBJ
FPBU	FREP	PRDF	PRDG	RPEI	RVCK	RVCL	RVCM	RVCN	



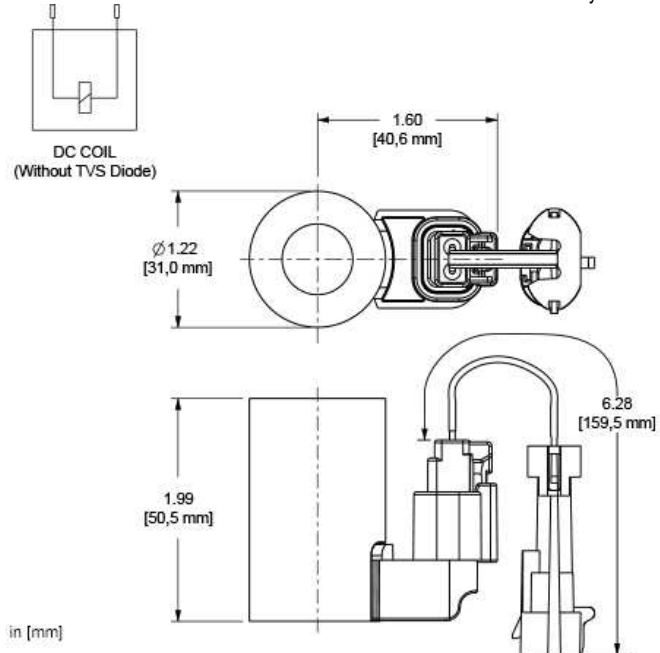
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Coil Nut Torque	4.5 lbf in.

### USED WITH

DBAF	DFBF	DFBG	DFCI	DFCJ	DFDI	DFDJ	DFEI	DFEJ	DFFI
DFFJ	DLDF	DLDFS	DMBF	DNBF	DTAF	DTAFS	DTBF	DTCF	DTDF
DTDFS	DWBF	DWDF	FDEP	FMDF	FMDG	FPBF	FPBG	FPBI	FPBJ
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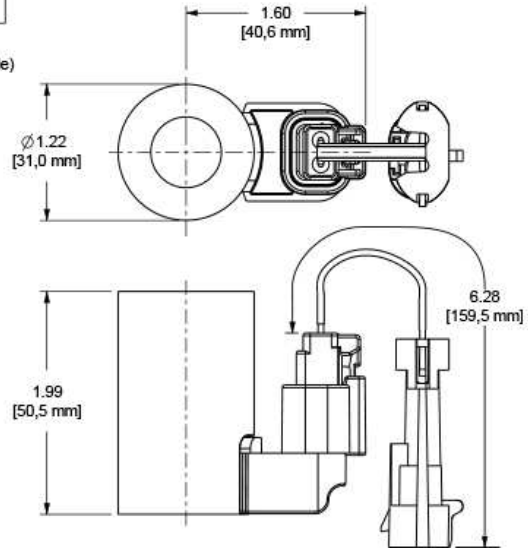
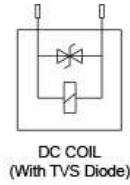
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Coil Nut Torque	4.5 lbf in.

### USED WITH

DBAF    DFBD    DFBE    DMBD    DNBD    DTAF    DTAFS    DTBF    FPBD    FPBE  
 FPBM    FPBN    RPEI



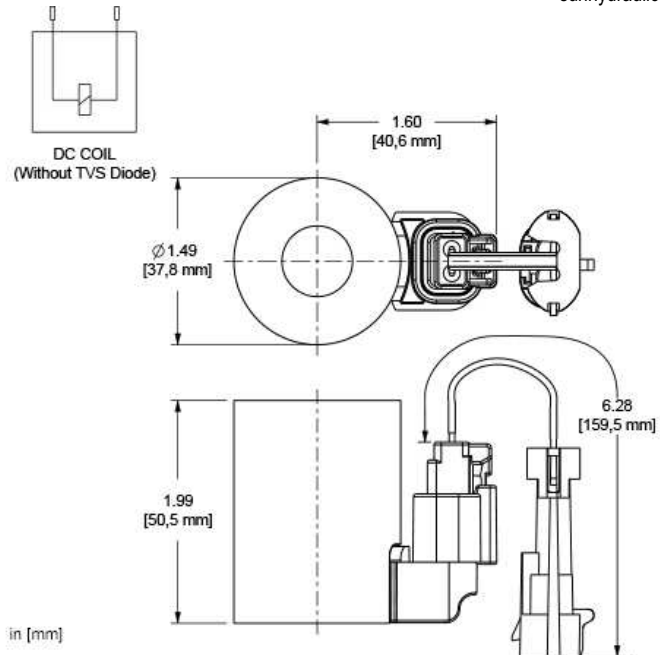
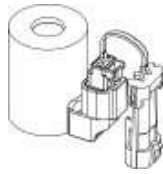
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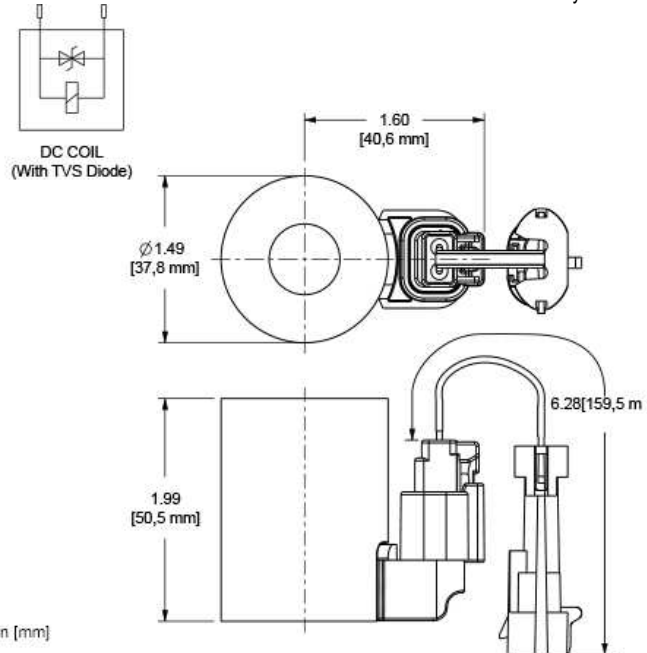
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DFFJ	DLDF	DLDFS	DMBF	DNBF	DTAF	DTAFS	DTBF	DTCF	DTDF
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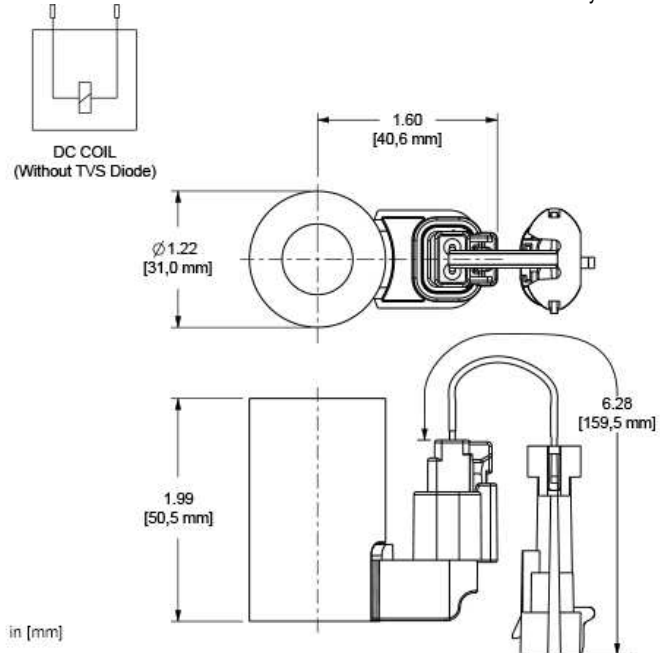
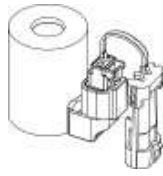
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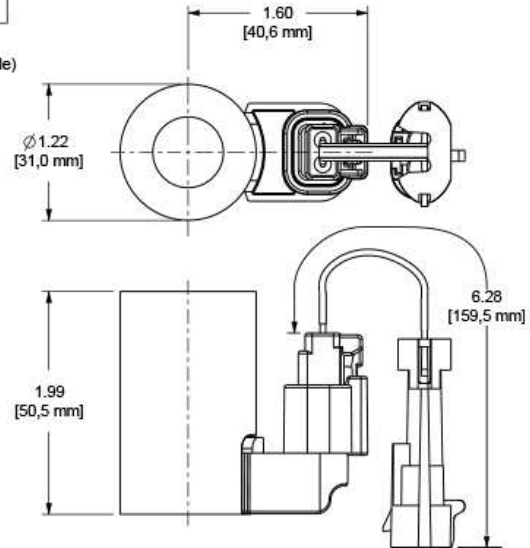
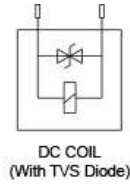
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Coil Nut Torque	4.5 lbf in.

### USED WITH

DBAF    DFBD    DFBE    DMBD    DNBD    DTAF    DTAFS    DTBF    FPBD    FPBE  
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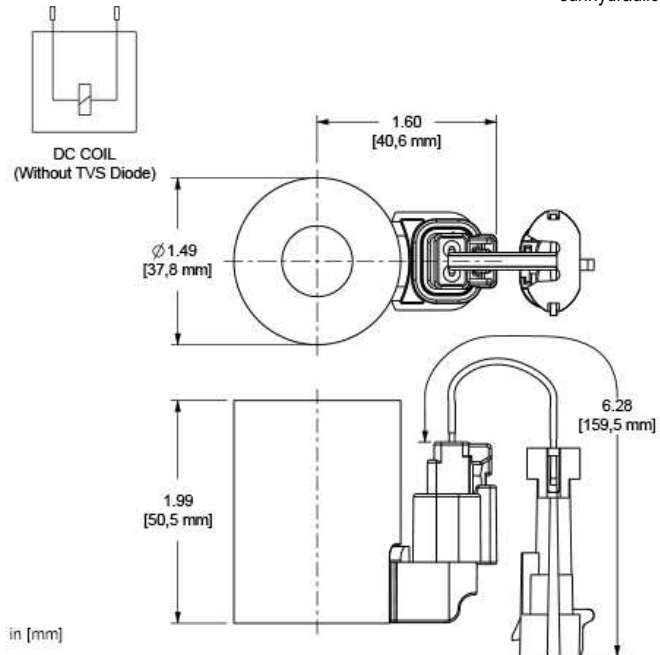
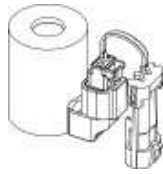
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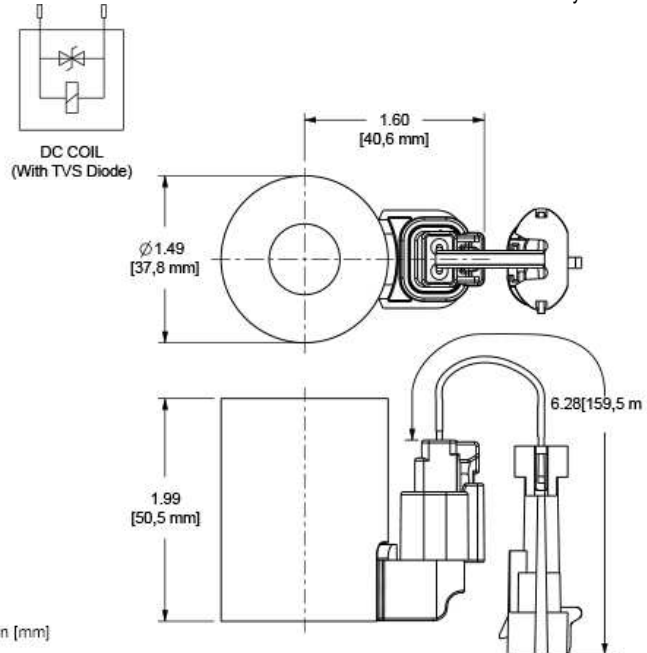
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DBAF	DFBF	DFBG	DFCI	DFCJ	DFDI	DFDJ	DFEI	DFEJ	DFFI
DFFJ	DLDF	DLDFS	DMBF	DTAF	DTAFS	DTBF	DTCF	DTDF	DTDFS
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FREP	PRDF	PRDG	RPEI	RVCK	RVCL	RVCM	RVCN		



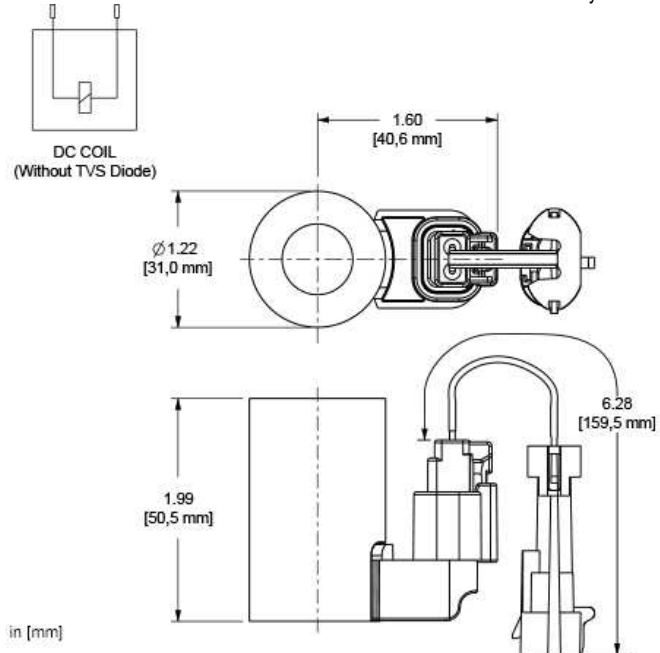
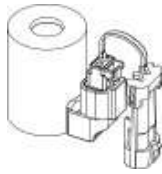
This 740 Series Coil configuration uses a connector adapter kit to provide the required termination.

### TECHNICAL DATA

Operating Temperature Range	-40 to 230 °F
Arc Suppression (TVS)	Included
Power Consumption (cold) - at rated voltage	25 Watts
Maximum Ambient Temperature	122 °F
Voltage/Frequency	28 VDC
Operating Voltage Range	+10%/-15%
Duty Cycle Rating	100 %
Connector	Metripack Series 150-2M
Coil Nut Torque	4.5 lbf in.

### USED WITH

DBAF	DFBF	DFBG	DFCI	DFCJ	DFDI	DFDJ	DFEI	DFEJ	DFFI
DFFJ	DLDF	DMBF	DTAF	DTAFS	DTBF	DTCF	DTDF	DTDFS	DWBF
DWDF	FDEP	FMDF	FMDG	FPBF	FPBG	FPBI	FPBJ	FPBU	FREP
PRDF	PRDG	RPEI	RVCK	RVCL	RVCM	RVCN			



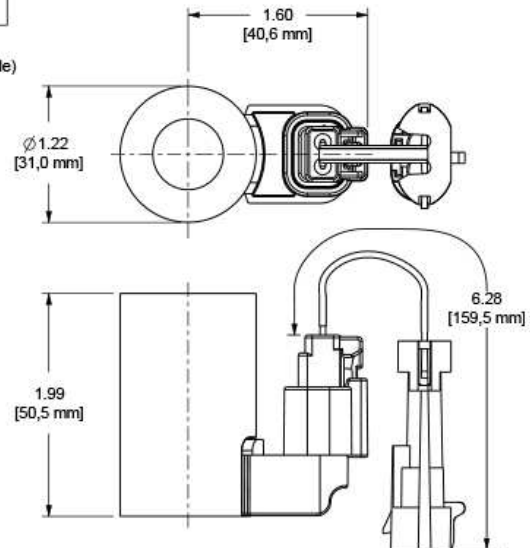
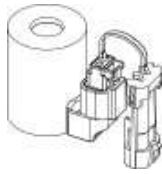
This 740 Series Coil configuration uses a connector adapter kit to provide the required termination.

**TECHNICAL DATA**

Operating Temperature Range	-40 to 230 °F
Arc Suppression (TVS)	None
Power Consumption (cold) - at rated voltage	17 Watts
Maximum Ambient Temperature	212 °F
Voltage/Frequency	28 VDC
Operating Voltage Range	+10%/-15%
Duty Cycle Rating	100 %
Connector	Metripack Series 150-2M
Coil Nut Torque	4.5 lbf in.

**USED WITH**

- DBAF    DFBD    DFBE    DMBD    DNBD    DTAF    DTAFS    DTBF    FPBD    FPBE  
 FPBM    FPBN    RPEI



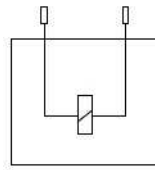
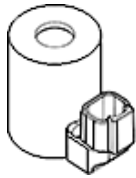
This 740 Series Coil configuration uses a connector adapter kit to provide the required termination.

### TECHNICAL DATA

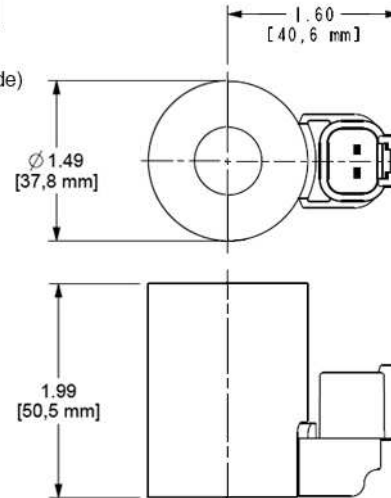
Operating Temperature Range	-40 to 230 °F
Arc Suppression (TVS)	Included
Power Consumption (cold) - at rated voltage	17 Watts
Maximum Ambient Temperature	212 °F
Voltage/Frequency	28 VDC
Operating Voltage Range	+10%/-15%
Duty Cycle Rating	100 %
Connector	Metripack Series 150-2M
Coil Nut Torque	4.5 lbf in.

### USED WITH

DBAF    DFBD    DFBE    DMBD    DNBD    DTAF    DTAFS    DTBF    FPBD    FPBE  
 FPBM    FPBN    RPEI



DC COIL  
(without TVS Diode)

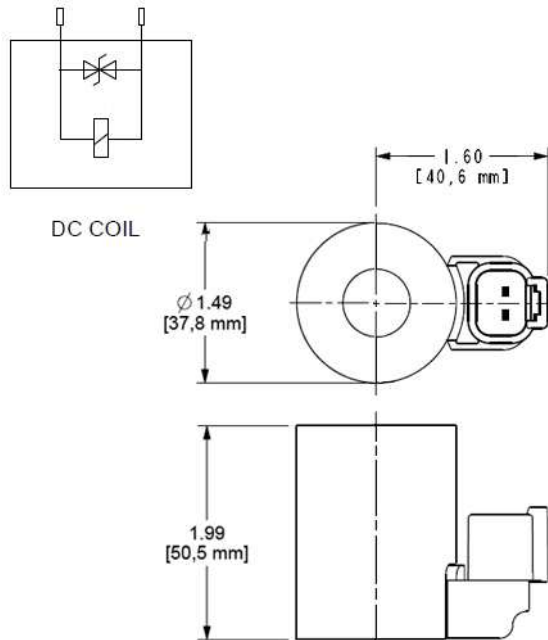
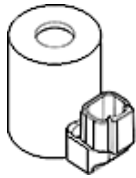


### TECHNICAL DATA

Operating Temperature Range	-40 to 230 °F
Arc Suppression (TVS)	None
Power Consumption (cold) - at rated voltage	25 Watts
Maximum Ambient Temperature	122 °F
Voltage/Frequency	12 VDC
Operating Voltage Range	+10%/-15%
Duty Cycle Rating	100 %
Connector	Deutsch DT04-2P
Coil Nut Torque	4.5 lbf in.

### USED WITH

DBAF	DBAFS	DFBF	DFBG	DFCI	DFCJ	DFDI	DFDJ	DFEI	DFEJ
DFFI	DFFJ	DLDF	DLDFS	DMBF	DNBF	DTAF	DTAFS	DTBF	DTCF
DTDF	DTDFS	DWBF	DWDF	FDEP	F MDF	FMDG	FPBF	FPBG	FPBI
FPBJ	FPBU	FREP	PRDF	PRDG	RPEI	RVCK	RVCL	RVCM	RVCN
991711300	991711600	991712300	991712600	991713030	991713060	991717	991718	991719	991723001
991723002	991740001	XMD-01	XMD-02						



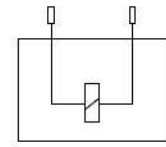
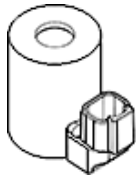
### TECHNICAL DATA

Operating Temperature Range	-40 to 230 °F
Arc Suppression (TVS)	Included
Power Consumption (cold) - at rated voltage	25 Watts
Maximum Ambient Temperature	122 °F
Voltage/Frequency	12 VDC
Operating Voltage Range	+10%/-15%
Duty Cycle Rating	100 %
Connector	Deutsch DT04-2P
Coil Nut Torque	4.5 lbf in.

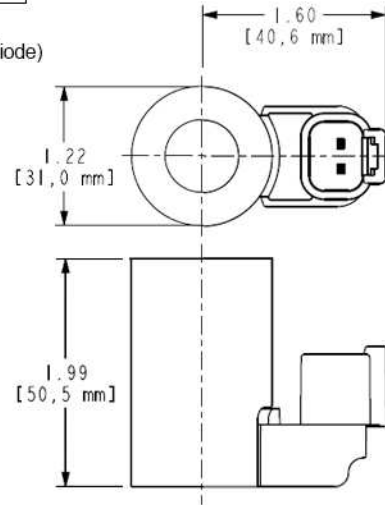
### USED WITH

DBAF	DBAFS	DFBF	DFBG	DFCI	DFCJ	DFDI	DFDJ	DFEI	DFEJ
DFFI	DFFJ	DLDF	DLDFS	DMBF	DNBF	DTAF	DTAFS	DTBF	DTCF
DTDF	DTDFS	DWBF	DWDF	FDEP	FMDF	FMDG	FPBF	FPBG	FPBI
FPBJ	FPBU	FREP	PRDF	PRDG	RPEI	RVCK	RVCL	RVCM	RVCN
991711300	991711600	991712300	991712600	991713030	991713060	991717	991718	991719	991723001
991723002	991740001	XMD-01	XMD-02						





DC COIL  
(without TVS Diode)

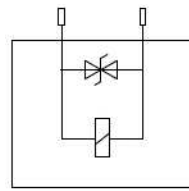
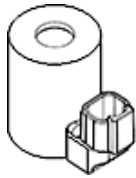


**TECHNICAL DATA**

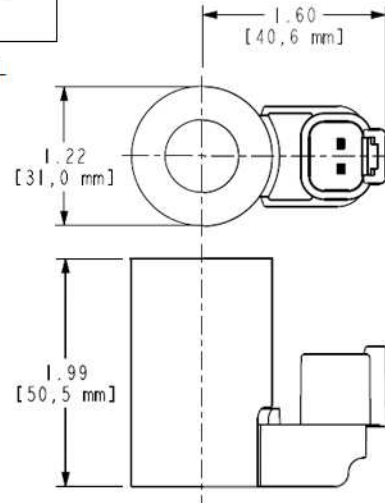
Operating Temperature Range	-40 to 230 °F
Arc Suppression (TVS)	None
Power Consumption (cold) - at rated voltage	17 Watts
Maximum Ambient Temperature	212 °F
Voltage/Frequency	12 VDC
Operating Voltage Range	+10%/-15%
Duty Cycle Rating	100 %
Connector	Deutsch DT04-2P
Coil Nut Torque	4.5 lbf in.

**USED WITH**

DBAF	DBAFS	DFBD	DFBE	DMBD	DNBD	DTAF	DTAFS	DTBF	FPBD
FPBE	FPBM	FPBN	RPEI	991711300	991711600	991712300	991712600	991713030	991713060
991717	991718	991719	991723001	991723002	991740002	XMD-01	XMD-02		



DC COIL

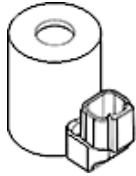


**TECHNICAL DATA**

Operating Temperature Range	-40 to 230 °F
Arc Suppression (TVS)	Included
Power Consumption (cold) - at rated voltage	17 Watts
Maximum Ambient Temperature	212 °F
Voltage/Frequency	12 VDC
Operating Voltage Range	+10%/-15%
Duty Cycle Rating	100 %
Connector	Deutsch DT04-2P
Coil Nut Torque	4.5 lbf in.

**USED WITH**

DBAF	DBAFS	DFBD	DFBE	DMBD	DNBD	DTAF	DTAFS	DTBF	FPBD
FPBE	FPBM	FPBN	RPEI	991711300	991711600	991712300	991712600	991713030	991713060
991717	991718	991719	991723001	991723002	991740002	XMD-01	XMD-02		

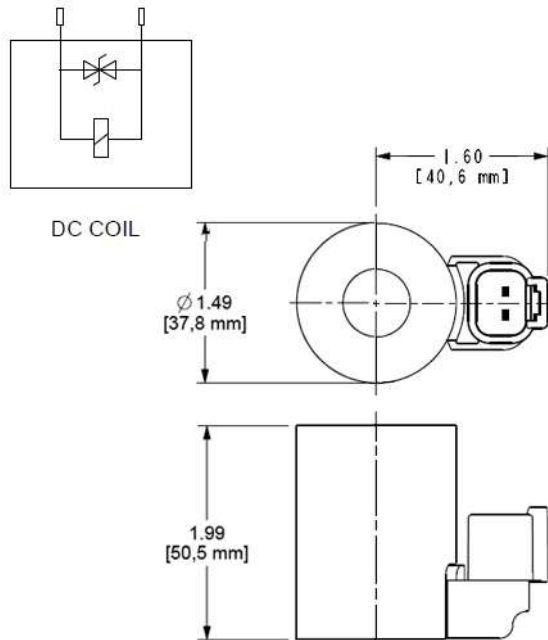
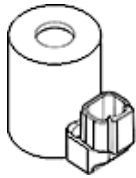


### TECHNICAL DATA

Operating Temperature Range	-40 to 230 °F
Arc Suppression (TVS)	None
Power Consumption (cold) - at rated voltage	25 Watts
Maximum Ambient Temperature	122 °F
Voltage/Frequency	14 VDC
Operating Voltage Range	+10%/-15%
Duty Cycle Rating	100 %
Connector	Deutsch DT04-2P
Coil Nut Torque	4.5 lbf in.

### USED WITH

DBAF	DBAFS	DFBF	DFBG	DFCI	DFCJ	DFDI	DFDJ	D FEI	D FEJ
DFFI	DFFJ	DLDF	DLDFS	D MBF	D NBF	D TAF	D TAFS	D TBF	D TCF
DTDF	DTDFS	D WBF	D WDF	F PBF	F PBG	F PBI	F PBJ	F PBU	F REP
PRDF	PRDG	R VCK	R VCL	R VCM	R VCN	991711300	991711600	991712300	991712600
991713030	991713060	991717	991718	991719	991723001	991723002	991740001	XMD-01	XMD-02

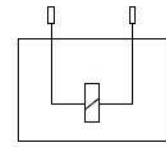
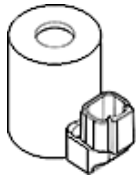


### TECHNICAL DATA

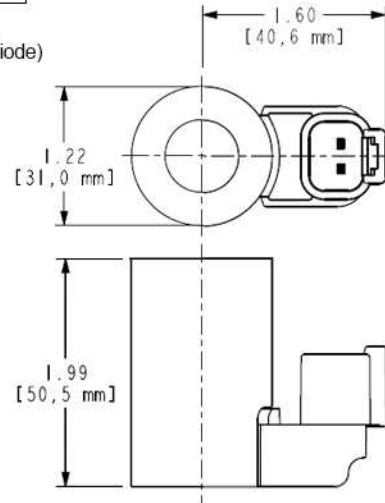
Operating Temperature Range	-40 to 230 °F
Arc Suppression (TVS)	Included
Power Consumption (cold) - at rated voltage	25 Watts
Maximum Ambient Temperature	122 °F
Voltage/Frequency	14 VDC
Operating Voltage Range	+10%/-15%
Duty Cycle Rating	100 %
Connector	Deutsch DT04-2P
Coil Nut Torque	4.5 lbf in.

### USED WITH

DBAF	DBAFS	DFBF	DFBG	DFCI	DFCJ	DFDI	DFDJ	DFEI	DFEJ
DFFI	DFFJ	DLDF	DLDFS	DMBF	DNBF	DTAF	DTAFS	DTBF	DTCF
DTDF	DTDFS	DWBF	DWDF	FPBF	FPBG	FPBI	FPBJ	FPBU	FREP
PRDF	PRDG	RVCK	RVCL	RVCM	RVCN	991711300	991711600	991712300	991712600
991713030	991713060	991717	991718	991719	991723001	991723002	991740001	XMD-01	XMD-02



DC COIL  
(without TVS Diode)

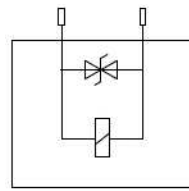
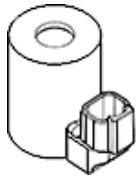


### TECHNICAL DATA

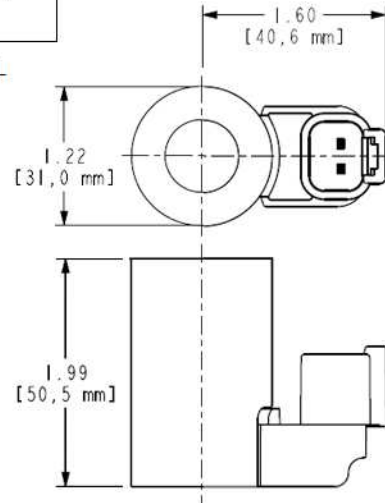
Operating Temperature Range	-40 to 230 °F
Arc Suppression (TVS)	None
Power Consumption (cold) - at rated voltage	17 Watts
Maximum Ambient Temperature	212 °F
Voltage/Frequency	14 VDC
Operating Voltage Range	+10%/-15%
Duty Cycle Rating	100 %
Connector	Deutsch DT04-2P
Coil Nut Torque	4.5 lbf in.

### USED WITH

DBAF	DBAFS	DFBD	DFBE	DFDJ	DMBD	DNBD	DTAF	DTAFS	DTBF
FPBD	FPBE	FPBM	FPBN	RPEI	991711300	991711600	991712300	991712600	991713030
991713060	991717	991718	991719	991723001	991723002	991740002	XMD-01	XMD-02	



DC COIL

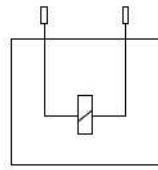
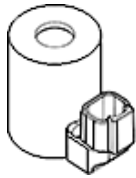


**TECHNICAL DATA**

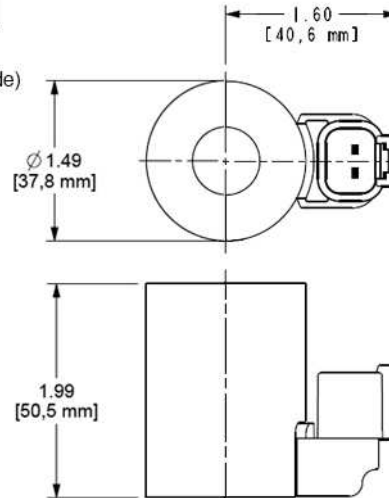
Operating Temperature Range	-40 to 230 °F
Arc Suppression (TVS)	Included
Power Consumption (cold) - at rated voltage	17 Watts
Maximum Ambient Temperature	212 °F
Voltage/Frequency	14 VDC
Operating Voltage Range	+10%/-15%
Duty Cycle Rating	100 %
Connector	Deutsch DT04-2P
Coil Nut Torque	4.5 lbf in.

**USED WITH**

DBAF	DBAFS	DFBD	DFBE	DMBD	DNBD	DTAF	DTAFS	DTBF	FPBD
FPBE	FPBM	FPBN	RPEI	991711300	991711600	991712300	991712600	991713030	991713060
991717	991718	991719	991723001	991723002	991740002	XMD-01	XMD-02		



DC COIL  
(without TVS Diode)

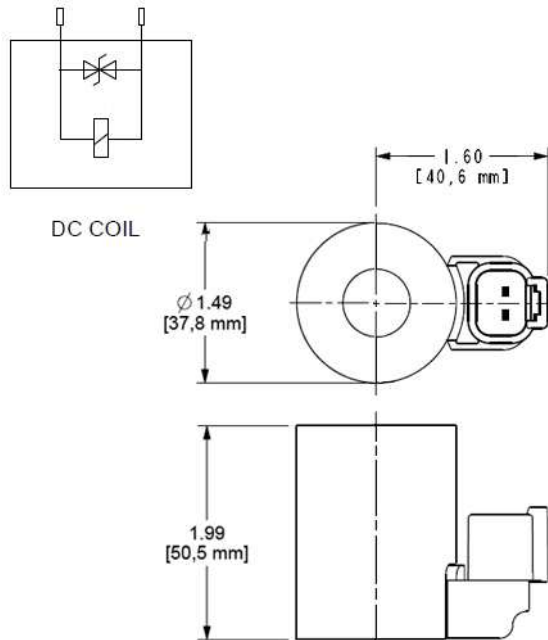
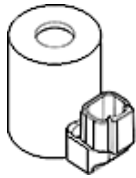


### TECHNICAL DATA

Operating Temperature Range	-40 to 230 °F
Arc Suppression (TVS)	None
Power Consumption (cold) - at rated voltage	25 Watts
Maximum Ambient Temperature	122 °F
Voltage/Frequency	24 VDC
Operating Voltage Range	+10%/-15%
Duty Cycle Rating	100 %
Connector	Deutsch DT04-2P
Coil Nut Torque	4.5 lbf in.

### USED WITH

DBAF	DBAFS	DFBF	DFBG	DFCI	DFCJ	DFDI	DFDJ	DFEI	DFEJ
DFFI	DFFJ	DLDF	DLDFS	DMBF	DNBF	DTAF	DTAFS	DTBF	DTCF
DTDF	DTDFS	DWBF	DWDF	FDEP	FMDF	FMDG	FPBF	FPBG	FPBI
FPBJ	FPBU	FREP	PRDF	PRDG	RPEI	RVCK	RVCL	RVCM	RVCN
991711300	991711600	991712300	991712600	991713030	991713060	991717	991718	991719	991723001
991723002	991740001	XMD-01	XMD-02						



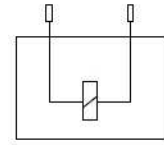
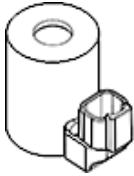
### TECHNICAL DATA

Operating Temperature Range	-40 to 230 °F
Arc Suppression (TVS)	Included
Power Consumption (cold) - at rated voltage	25 Watts
Maximum Ambient Temperature	122 °F
Voltage/Frequency	24 VDC
Operating Voltage Range	+10%/-15%
Duty Cycle Rating	100 %
Connector	Deutsch DT04-2P
Coil Nut Torque	4.5 lbf in.

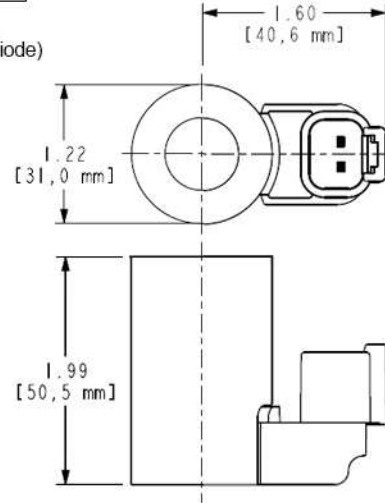
### USED WITH

DBAF	DBAFS	DFBF	DFBG	DFCI	DFCJ	DFDI	DFDJ	DFEI	DFEJ
DFFI	DFFJ	DLDF	DLDFS	DMBF	DNBF	DTAF	DTAFS	DTBF	DTCF
DTDF	DTDFS	DWBF	DWDF	FDEP	FMDF	FMDG	FPBF	FPBG	FPBI
FPBJ	FPBU	FREP	PRDF	PRDG	RPEI	RVCK	RVCL	RVCM	RVCN
991711300	991711600	991712300	991712600	991713030	991713060	991717	991718	991719	991723001
991723002	991740001	XMD-01	XMD-02						





DC COIL  
(without TVS Diode)

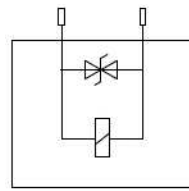
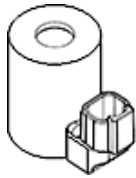


**TECHNICAL DATA**

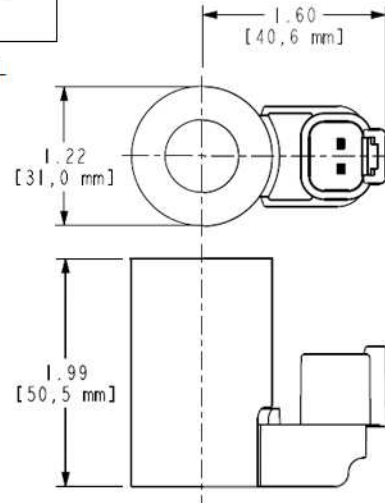
Operating Temperature Range	-40 to 230 °F
Arc Suppression (TVS)	None
Power Consumption (cold) - at rated voltage	17 Watts
Maximum Ambient Temperature	212 °F
Voltage/Frequency	24 VDC
Operating Voltage Range	+10%/-15%
Duty Cycle Rating	100 %
Connector	Deutsch DT04-2P
Coil Nut Torque	4.5 lbf in.

**USED WITH**

DBAF	DBAFS	DFBD	DFBE	DMBD	DNBD	DTAF	DTAFS	DTBF	FPBD
FPBE	FPBM	FPBN	RPEI	991711300	991711600	991712300	991712600	991713030	991713060
991717	991718	991719	991723001	991723002	991740002	XMD-01	XMD-02		



DC COIL

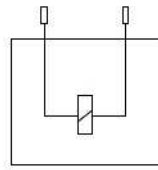
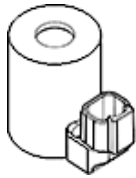


**TECHNICAL DATA**

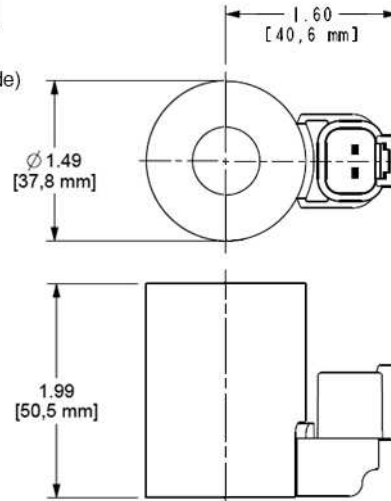
Operating Temperature Range	-40 to 230 °F
Arc Suppression (TVS)	Included
Power Consumption (cold) - at rated voltage	17 Watts
Maximum Ambient Temperature	212 °F
Voltage/Frequency	24 VDC
Operating Voltage Range	+10%/-15%
Duty Cycle Rating	100 %
Connector	Deutsch DT04-2P
Coil Nut Torque	4.5 lbf in.

**USED WITH**

DBAF	DBAFS	DFBD	DFBE	DMBD	DNBD	DTAF	DTAFS	DTBF	FPBD
FPBE	FPBM	FPBN	RPEI	991711300	991711600	991712300	991712600	991713030	991713060
991717	991718	991719	991723001	991723002	991740002	XMD-01	XMD-02		



DC COIL  
(without TVS Diode)

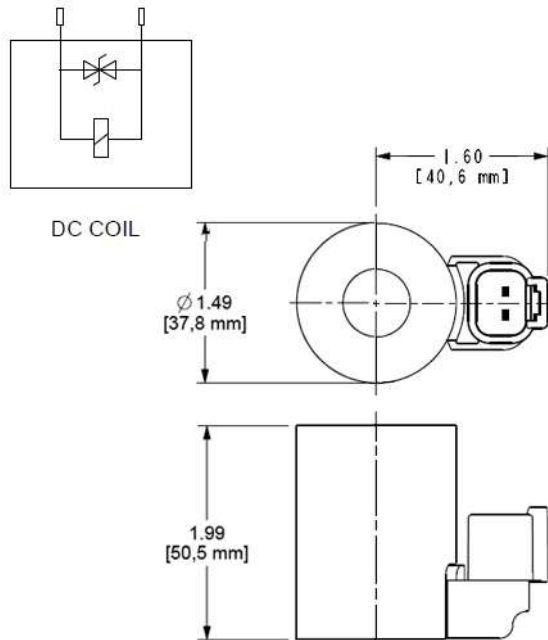
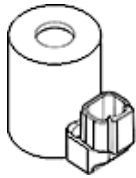


### TECHNICAL DATA

Operating Temperature Range	-40 to 230 °F
Arc Suppression (TVS)	None
Power Consumption (cold) - at rated voltage	25 Watts
Maximum Ambient Temperature	122 °F
Maximum Current - FLeX Valves (100% Duty Cycle at Maximum Ambient Temperature)	500 mA
Maximum Current - Non-FLeX Valves (100% Duty Cycle at Maximum Ambient Temperature)	560 mA
Voltage/Frequency	28 VDC
Operating Voltage Range	+10%/-15%
Duty Cycle Rating	100 %
Connector	Deutsch DT04-2P
Coil Nut Torque	4.5 lbf in.

### USED WITH

DBAF	DBAFS	DFBF	DFBG	DFCI	DFCJ	DFDI	DFDJ	DFEI	DFEJ
DFFI	DFFJ	DLDF	DLDFS	DMBF	DNBF	DTAF	DTAFS	DTBF	DTCF
DTDF	DTDFS	DWBF	DWDF	FDEP	FMDF	FMDG	FPBF	FPBG	FPBI
FPBJ	FPBU	FREP	PRDF	PRDG	RPEI	RVCK	RVCL	RVCM	RVCN
991711300	991711600	991712300	991712600	991713030	991713060	991717	991718	991719	991723001
991723002	991740001	XMD-01	XMD-02						

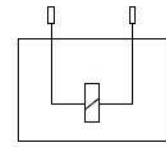
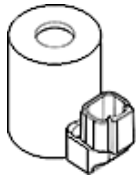


### TECHNICAL DATA

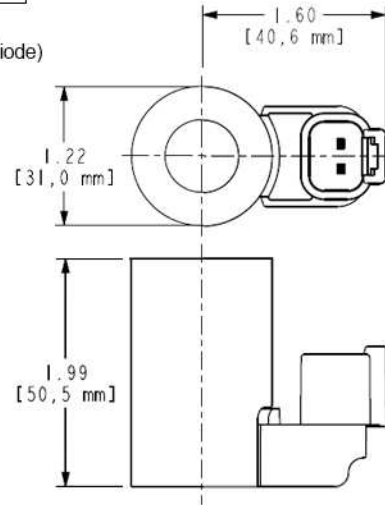
Operating Temperature Range	-40 to 230 °F
Arc Suppression (TVS)	Included
Power Consumption (cold) - at rated voltage	25 Watts
Maximum Ambient Temperature	122 °F
Voltage/Frequency	28 VDC
Operating Voltage Range	+10%/-15%
Duty Cycle Rating	100 %
Connector	Deutsch DT04-2P
Coil Nut Torque	4.5 lbf in.

### USED WITH

DBAF	DBAFS	DFBF	DFBG	DFCI	DFCJ	DFDI	DFDJ	DFEI	DFEJ
DFFI	DFFJ	DLDF	DLDFS	DMBF	DNBF	DTAF	DTAFS	DTBF	DTCF
DTDF	DTDFS	DWBF	DWDF	FDEP	FMDF	FMDG	FPBF	FPBG	FPBI
FPBJ	FPBU	FREP	PRDF	PRDG	RPEI	RVCK	RVCL	RVCM	RVCN
991711300	991711600	991712300	991712600	991713030	991713060	991717	991718	991719	991723001
991723002	991740001	XMD-01	XMD-02						



DC COIL  
(without TVS Diode)

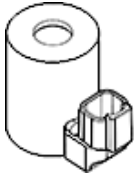


**TECHNICAL DATA**

Operating Temperature Range	-40 to 230 °F
Arc Suppression (TVS)	None
Power Consumption (cold) - at rated voltage	17 Watts
Maximum Ambient Temperature	212 °F
Voltage/Frequency	28 VDC
Operating Voltage Range	+10%/-15%
Duty Cycle Rating	100 %
Connector	Deutsch DT04-2P
Coil Nut Torque	4.5 lbf in.

**USED WITH**

DBAF	DBAFS	DFBD	DFBE	DMBD	DNBD	DTAF	DTAFS	DTBF	FPBD
FPBE	FPBM	FPBN	RPEI	991711300	991711600	991712300	991712600	991713030	991713060
991717	991718	991719	991723001	991723002	991740002	XMD-01	XMD-02		

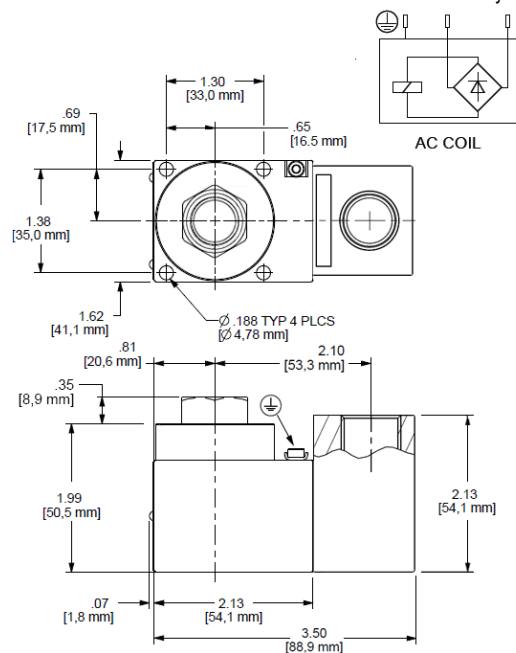
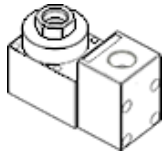


### TECHNICAL DATA

Operating Temperature Range	-40 to 230 °F
Arc Suppression (TVS)	Included
Power Consumption (cold) - at rated voltage	17 Watts
Maximum Ambient Temperature	212 °F
Voltage/Frequency	28 VDC
Operating Voltage Range	+10%/-15%
Duty Cycle Rating	100 %
Connector	Deutsch DT04-2P
Coil Nut Torque	4.5 lbf in.

### USED WITH

DBAF	DFBD	DFBE	DMBD	DNBD	DTAF	DTAFS	DTBF	FPBD	FPBE
FPBM	FPBN	RPEI	991711300	991711600	991712300	991712600	991713030	991713060	991717
991718	991719	991723001	991723002	991740002	XMD-01	XMD-02			



Model 747 Series hazardous location coils are designed for Sun's FLeX Series switching and proportional solenoid valves and for newer Sun valves that use the 16-mm actuator tubes. All models include ATEX, IECEx, and NEC, CEC/CSA certifications.

### TECHNICAL DATA

Operating Temperature Range	-40 to 158 °F
Diametric Coil Clearance Requirement	2.36 in.
Power Consumption at 68°F (20°C) cold - at rated voltage	30 watts
Voltage/Frequency	115 VAC 50/60 Hz (-15%/+0%)
Duty Cycle Rating	100 %
Connector	M20 x 1.5 female connector
Coil Nut Torque	4.5 lbf in.

### NOTES

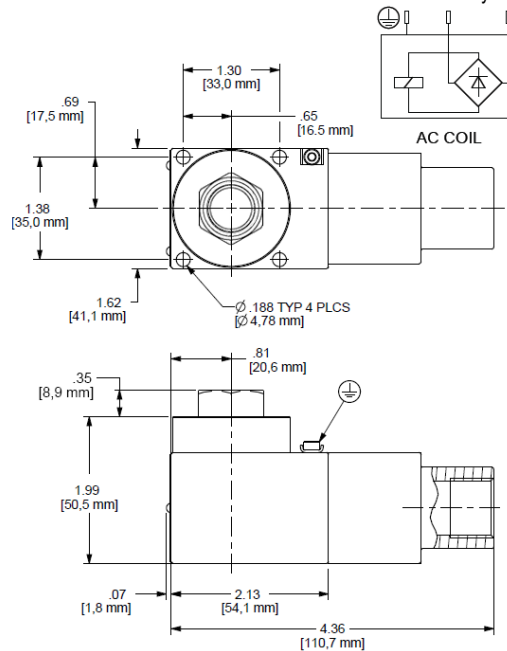
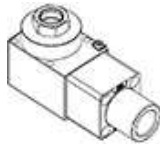
- 1. Mount coil onto spool (tube) body.
- 2. A cable entry hole is provided to accommodate any suitable certified flameproof cable entry device. Cable entry temperature may exceed 70° C (158° F).
- 3. Remove terminal box cover and connect electrical supply and earth to terminal block. Conductors according to Note 4. Note: coil is polarity insensitive. The center terminal is the internal ground. Replace cover and secure with the four screws (M4 x .7). Torque to min 1.92
- 4. Connect external ground. North American applications: external earth (ground) connections. Use where local codes or authorities permit or require external earth (ground) connections. Torque to 1.25 ft-lbs (1.7 N-m).
- 5. When installing with multiple coils, the coils must be spaced a minimum of 0.875" (22.23 mm) apart to ensure adequate heat dissipation.
- 6. Sun's 747 Series hazardous location coil requires more clearance than the FLeX 740 series coil. Sun manifolds with more than one cavity may not allow enough clearance for these coils. An additional 2.00" (50,8 mm) beyond the valve extension is needed for coil installation
- 7. For installation in above-ground electrical systems in explosive atmospheres, procedures for all applicable codes must be observed. All work must be carried out by an electrician with adequate qualifications for hazardous locations.
- 8. A common practice to protect the internal bridge rectifier from unknown incoming voltage conditions is to install a TVS diode. For the 115-Vac coil, diode part number, 1.5KE250CA is recommended; for the 230-Vac coil, diode part number 1.5KE400CA is recommended. Depending on the application, diodes higher than 1500 W are recommended.

### USED WITH

DBAF	DBAFS	DFBD	DFBE	DFBF	DFBG	DFCI	DFCJ	DFDI	DFDJ
DFEI	DFEJ	DFFI	DFFJ	DLDF	DLDFS	DMBD	DMBF	DNBD	DNBF

DTAF	DTAFS	DTBF	DTCF	DTDF	DTDFS	DWBF	DWDF	FDEP	F MDF
FMDG	FREP	PRDF	PRDG	RPEI	RVCK	RVCL	RVCM	RVCN	





Model 747 Series hazardous location coils are designed for Sun's FLeX Series switching and proportional solenoid valves and for newer Sun valves that use the 16-mm actuator tubes. All models include ATEX, IECEx, and NEC, CEC/CSA certifications.

### TECHNICAL DATA

Operating Temperature Range	-40 to 158 °F
Diametric Coil Clearance Requirement	2.36 in.
Power Consumption at 68°F (20°C) cold - at rated voltage	30 watts
Voltage/Frequency	115 VAC 50/60 Hz (-15%/+0%)
Duty Cycle Rating	100 %
Connector	M20 x 1.5 female connector
Coil Nut Torque	4.5 lbf in.

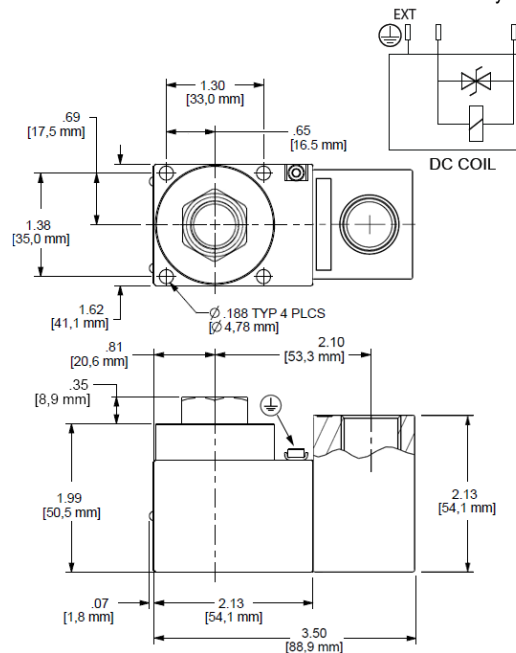
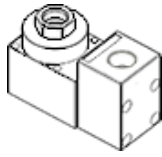
### NOTES

- 1. Mount coil onto spool (tube) body.
- 2. A cable entry hole is provided to accommodate any suitable certified flameproof cable entry device. Cable entry temperature may exceed 70° C (158° F).
- 3. Remove terminal box cover and connect electrical supply and earth to terminal block. Conductors according to Note 4. Note: coil is polarity insensitive. The center terminal is the internal ground. Replace cover and secure with the four screws (M4 x .7). Torque to min 1.92
- 4. Connect external ground. North American applications: external earth (ground) connections. Use where local codes or authorities permit or require external earth (ground) connections. Torque to 1.25 ft-lbs (1.7 N-m).
- 5. When installing with multiple coils, the coils must be spaced a minimum of 0.875" (22.23 mm) apart to ensure adequate heat dissipation.
- 6. A common practice to protect the internal bridge rectifier from unknown incoming voltage conditions is to install a TVS diode. For the 115-Vac coil, diode part number, 1.5KE250CA is recommended; for the 230-Vac coil, diode part number 1.5KE400CA is recommended. Depending on the application, diodes higher than 1500 W are recommended.
- 7. For installation in above-ground electrical systems in explosive atmospheres, procedures for all applicable codes must be observed. All work must be carried out by an electrician with adequate qualifications for hazardous locations.
- 8. Sun's 747 Series hazardous location coil requires more clearance than the FLeX 740 series coil. Sun manifolds with more than one cavity may not allow enough clearance for these coils. An additional 2.00" (50,8 mm) beyond the valve extension is needed for coil installation

### USED WITH

DBAF	DBAFS	DFBD	DFBE	DFBF	DFBG	DICI	DFCJ	DFDI	DFDJ
DFEI	DFEJ	DFFI	DFFJ	DLDF	DLDFS	DMBD	DMBF	DNBD	DNBF

DTAF	DTAFS	DTBF	DTCF	DTDF	DTDFS	DWBF	DWDF	FDEP	F MDF
FMDG	FREP	PRDF	PRDG	RPEI	RVCK	RVCL	RVCM	RVCN	



Model 747 Series hazardous location coils are designed for Sun's FLeX Series switching and proportional solenoid valves and for newer Sun valves that use the 16-mm actuator tubes. All models include ATEX, IECEx, and NEC, CEC/CSA certifications.

### TECHNICAL DATA

Operating Temperature Range	-40 to 158 °F
Diametric Coil Clearance Requirement	2.36 in.
Power Consumption at 68°F (20°C) cold - at rated voltage	30 watts
Voltage/Frequency	12 VDC (-15%/+0%)
Duty Cycle Rating	100 %
Connector	M20 x 1.5 female connector
Coil Nut Torque	4.5 lbf in.

### NOTES

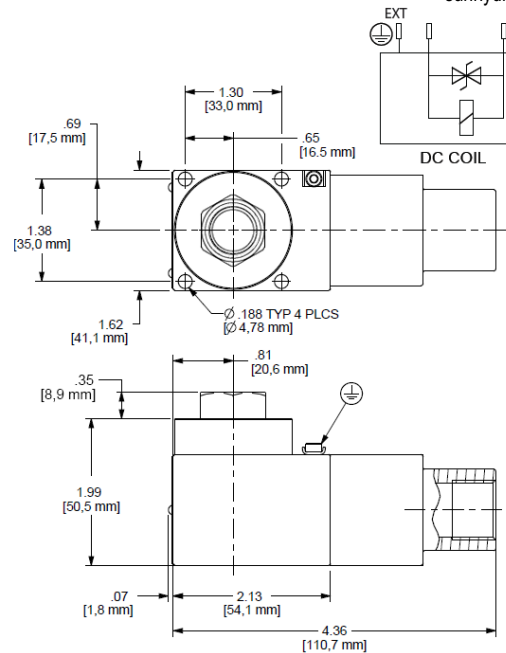
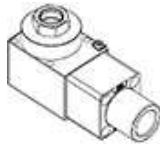
- 1. Mount coil onto spool (tube) body.
- 2. A cable entry hole is provided to accommodate any suitable certified flameproof cable entry device. Cable entry temperature may exceed 70° C (158° F).
- 3. Remove terminal box cover and connect electrical supply and earth to terminal block. Conductors according to Note 4. Note: coil is polarity insensitive. The center terminal is the internal ground. Replace cover and secure with the four screws (M4 x .7). Torque to min 1.92
- 4. Connect external ground. North American applications: external earth (ground) connections. Use where local codes or authorities permit or require external earth (ground) connections. Torque to 1.25 ft-lbs (1.7 N-m).
- 5. When installing with multiple coils, the coils must be spaced a minimum of 0.875" (22.23 mm) apart to ensure adequate heat dissipation.
- For installation in above-ground electrical systems in explosive atmospheres, procedures for all applicable codes must be observed. All work must be carried out by an electrician with adequate qualifications for hazardous locations.
- Sun's 747 Series hazardous location coil requires more clearance than the FLeX 740 series coil. Sun manifolds with more than one cavity may not allow enough clearance for these coils. An additional 2.00" (50,8 mm) beyond the valve extension is needed for coil installation

### INCLUDED COMPONENTS

Part	Description	Quantity
375-048-H00	Nut	1
500-101-016	O-Ring	1
747-JM12BDF	Coil Accessory - Explosion Proof	1

## USED WITH

DBAF	DBAFS	DFBD	DFBE	DFBF	DFBG	DFCI	DFCJ	DFDI	DFDJ
DFEI	DFEJ	DFFI	DFFJ	DLDF	DLDFS	DMBD	DMBF	DNBD	DNBF
DTAF	DTAFS	DTBF	DTCF	DTDF	DTDFS	DWBF	DWDF	FDEP	FMDF
FMDG	FPBF	FPBG	FPBI	FPBJ	FPBU	FREP	PRDF	PRDG	RPEI
RVCK	RVCL	RVCM	RVCN	991711300	991711600	991712300	991712600	XMD-01	XMD-02



Model 747 Series hazardous location coils are designed for Sun's FLEx Series switching and proportional solenoid valves and for newer Sun valves that use the 16-mm actuator tubes. All models include ATEX, IECEx, and NEC, CEC/CSA certifications.

**TECHNICAL DATA**

Operating Temperature Range	-40 to 158 °F
Diametric Coil Clearance Requirement	2.36 in.
Power Consumption at 68°F (20°C) cold - at rated voltage	30 watts
Voltage/Frequency	12 VDC (-15%/+0%)
Duty Cycle Rating	100 %
Connector	M20 x 1.5 female connector
Coil Nut Torque	4.5 lbf in.

**NOTES**

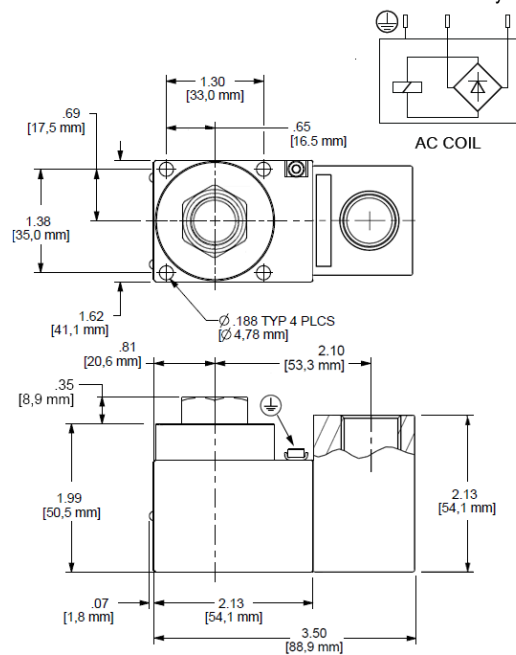
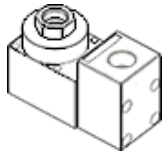
- 1. Mount coil onto spool (tube) body.
- 2. A cable entry hole is provided to accommodate any suitable certified flameproof cable entry device. Cable entry temperature may exceed 70° C (158° F).
- 3. Remove terminal box cover and connect electrical supply and earth to terminal block. Conductors according to Note 4. Note: coil is polarity insensitive. The center terminal is the internal ground. Replace cover and secure with the four screws (M4 x ,7). Torque to min 1.92
- 4. Connect external ground. North American applications: external earth (ground) connections. Use where local codes or authorities permit or require external earth (ground) connections. Torque to 1.25 ft-lbs (1.7 N-m).
- 5. When installing with multiple coils, the coils must be spaced a minimum of 0.875" (22.23 mm) apart to ensure adequate heat dissipation.
- For proportional valve applications, the maximum current of 590mA has been established so a proportional valve can function optimally under a variety of ambient temperatures.
- For installation in above-ground electrical systems in explosive atmospheres, procedures for all applicable codes must be observed. All work must be carried out by an electrician with adequate qualifications for hazardous locations.

**INCLUDED COMPONENTS**

Part	Description	Quantity
375-048-H00	Nut	1
500-101-016	O-Ring	1
747-JM12CDF	Coil Accessory - Explosion Proof	1

## USED WITH

DBAF	DBAFS	DFBD	DFBE	DFBF	DFBG	DFCI	DFCJ	DFDI	DFDJ
DFEI	DFEJ	DFFI	DFFJ	DLDF	DLDFS	DMBD	DMBF	DNBD	DNBF
DTAF	DTAFS	DTBF	DTCF	DTDF	DTDFS	DWBF	DWDF	FDEP	FMDF
FMDG	FPBF	FPBG	FPBI	FPBJ	FPBU	FREP	PRDF	PRDG	RPEI
RVCK	RVCL	RVCM	RVCN	991711300	991711600	991712300	991712600	XMD-01	XMD-02



Model 747 Series hazardous location coils are designed for Sun's FLeX Series switching and proportional solenoid valves and for newer Sun valves that use the 16-mm actuator tubes. All models include ATEX, IECEx, and NEC, CEC/CSA certifications.

### TECHNICAL DATA

Operating Temperature Range	-40 to 158 °F
Diametric Coil Clearance Requirement	2.36 in.
Power Consumption at 68°F (20°C) cold - at rated voltage	30 watts
Voltage/Frequency	230 VAC 50/60 Hz (-15%/+0%)
Duty Cycle Rating	100 %
Connector	M20 x 1.5 female connector
Coil Nut Torque	4.5 lbf in.

### NOTES

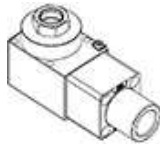
- 1. Mount coil onto spool (tube) body.
- 2. A cable entry hole is provided to accommodate any suitable certified flameproof cable entry device. Cable entry temperature may exceed 70° C (158° F).
- 3. Remove terminal box cover and connect electrical supply and earth to terminal block. Conductors according to Note 4. Note: coil is polarity insensitive. The center terminal is the internal ground. Replace cover and secure with the four screws (M4 x .7). Torque to min 1.92
- 4. Connect external ground. North American applications: external earth (ground) connections. Use where local codes or authorities permit or require external earth (ground) connections. Torque to 1.25 ft-lbs (1.7 N-m).
- 5. When installing with multiple coils, the coils must be spaced a minimum of 0.875" (22.23 mm) apart to ensure adequate heat dissipation.
- 6. A common practice to protect the internal bridge rectifier from unknown incoming voltage conditions is to install a TVS diode. For the 115-Vac coil, diode part number, 1.5KE250CA is recommended; for the 230-Vac coil, diode part number 1.5KE400CA is recommended. Depending on the application, diodes higher than 1500 W are recommended.
- 7. For installation in above-ground electrical systems in explosive atmospheres, procedures for all applicable codes must be observed. All work must be carried out by an electrician with adequate qualifications for hazardous locations.
- 8. Sun's 747 Series hazardous location coil requires more clearance than the FLeX 740 series coil. Sun manifolds with more than one cavity may not allow enough clearance for these coils. An additional 2.00" (50,8 mm) beyond the valve extension is needed for coil installation

### USED WITH

DBAF DBAFS DFBD DFBE DFBF DFBG DFCI DFCJ DFDI DFDJ  
DFEI DFEJ DFFI DFFJ DLDF DLDFS DMBD DMBF DNBD DNBF

DTAF	DTAFS	DTBF	DTCF	DTDF	DTDFS	DWBF	DWDF	FDEP	FMDF
FMDG	FREP	PRDF	PRDG	RPEI	RVCK	RVCL	RVCM	RVCN	





Model 747 Series hazardous location coils are designed for Sun's FLeX Series switching and proportional solenoid valves and for newer Sun valves that use the 16-mm actuator tubes. All models include ATEX, IECEx, and NEC, CEC/CSA certifications.

### TECHNICAL DATA

Operating Temperature Range	-40 to 158 °F
Diametric Coil Clearance Requirement	2.36 in.
Power Consumption at 68°F (20°C) cold - at rated voltage	30 watts
Voltage/Frequency	230 VAC 50/60 Hz (-15%/+0%)
Duty Cycle Rating	100 %
Connector	M20 x 1.5 female connector
Coil Nut Torque	4.5 lbf in.

### NOTES

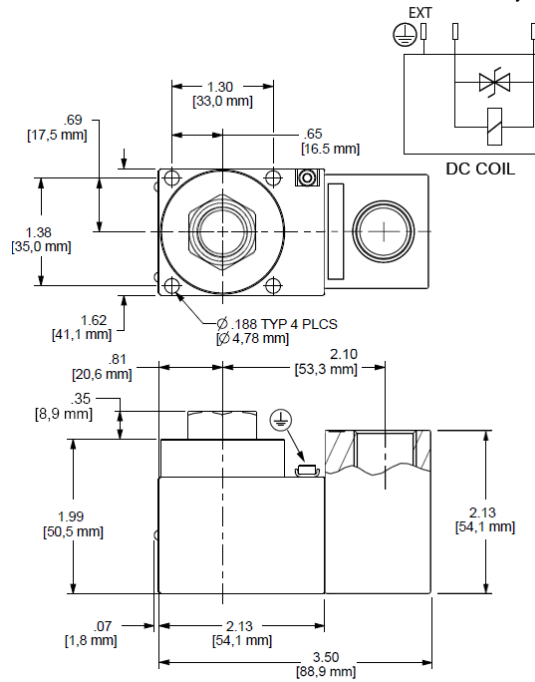
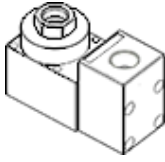
- 1. Mount coil onto spool (tube) body.
- 2. A cable entry hole is provided to accommodate any suitable certified flameproof cable entry device. Cable entry temperature may exceed 70° C (158° F).
- 3. Remove terminal box cover and connect electrical supply and earth to terminal block. Conductors according to Note 4. Note: coil is polarity insensitive. The center terminal is the internal ground. Replace cover and secure with the four screws (M4 x ,7). Torque to min 1.92
- 4. Connect external ground. North American applications: external earth (ground) connections. Use where local codes or authorities permit or require external earth (ground) connections. Torque to 1.25 ft-lbs (1.7 N-m).
- 5. When installing with multiple coils, the coils must be spaced a minimum of 0.875" (22.23 mm) apart to ensure adequate heat dissipation.
- For installation in above-ground electrical systems in explosive atmospheres, procedures for all applicable codes must be observed. All work must be carried out by an electrician with adequate qualifications for hazardous locations.
- Sun's 747 Series hazardous location coil requires more clearance than the FLeX 740 series coil. Sun manifolds with more than one cavity may not allow enough clearance for these coils. An additional 2.00" (50,8 mm) beyond the valve extension is needed for coil installation

### INCLUDED COMPONENTS

Part	Description	Quantity
375-048-H00	Nut	1
500-101-016	O-Ring	1
747-JM23CDF	Coil Accessory - Explosion Proof	1

### USED WITH

DBAF	DBAFS	DFBD	DFBE	DFBF	DFBG	DFCI	DFCJ	DFDI	DFDJ
DFEI	DFEJ	DFFI	DFFJ	DLDF	DLDFS	DMBD	DMBF	DNBD	DNBF
DTAF	DTAFS	DTBF	DTCF	DTDF	DTDFS	DWBF	DWDF	FDEP	FMDF
FMDG	FREP	PRDF	PRDG	RPEI	RVCK	RVCL	RVCM	RVCN	



Model 747 Series hazardous location coils are designed for Sun's FLeX Series switching and proportional solenoid valves and for newer Sun valves that use the 16-mm actuator tubes. All models include ATEX, IECEx, and NEC, CEC/CSA certifications.

### TECHNICAL DATA

Operating Temperature Range	-40 to 158 °F
Diametric Coil Clearance Requirement	2.36 in.
Power Consumption at 68°F (20°C) cold - at rated voltage	30 watts
Voltage/Frequency	24 VDC (-15%/+0%)
Duty Cycle Rating	100 %
Connector	M20 x 1.5 female connector
Coil Nut Torque	4.5 lbf in.

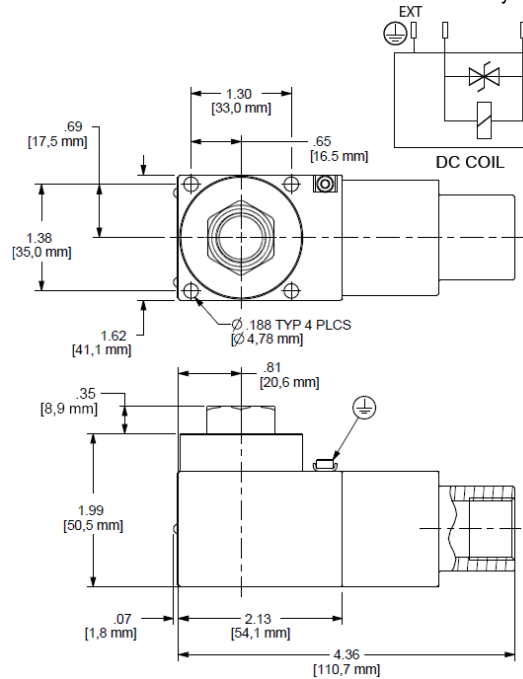
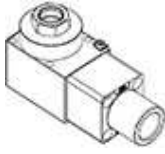
### NOTES

- 1. Mount coil onto spool (tube) body.
- 2. A cable entry hole is provided to accommodate any suitable certified flameproof cable entry device. Cable entry temperature may exceed 70° C (158° F).
- 3. Remove terminal box cover and connect electrical supply and earth to terminal block. Conductors according to Note 4. Note: coil is polarity insensitive. The center terminal is the internal ground. Replace cover and secure with the four screws (M4 x ,7). Torque to min 1.92
- 4. Connect external ground. North American applications: external earth (ground) connections. Use where local codes or authorities permit or require external earth (ground) connections. Torque to 1.25 ft-lbs (1.7 N-m).
- 5. When installing with multiple coils, the coils must be spaced a minimum of 0.875" (22.23 mm) apart to ensure adequate heat dissipation.
- For installation in above-ground electrical systems in explosive atmospheres, procedures for all applicable codes must be observed. All work must be carried out by an electrician with adequate qualifications for hazardous locations.
- Sun's 747 Series hazardous location coil requires more clearance than the FLeX 740 series coil. Sun manifolds with more than one cavity may not allow enough clearance for these coils. An additional 2.00" (50,8 mm) beyond the valve extension is needed for coil installation

### USED WITH

DBAF	DBAFS	DFBD	DFBE	DFBF	DFBG	DFCI	DFCJ	DFDI	DFDJ
DFEI	DFEJ	DFFI	DFFJ	DLDF	DLDFS	DMBD	DMBF	DNBD	DNBF
DTAF	DTAFS	DTBF	DTCF	DTDF	DTDFS	DWBF	DWDF	FDEP	FDMF

FMDG	FPBF	FPBG	FPBI	FPBJ	FPBU	FREP	PRDF	PRDG	RPEI
RVCK	RVCL	RVCM	RVCN	991711300	991711600	991712300	991712600	XMD-01	XMD-02



Model 747 Series hazardous location coils are designed for Sun's FLeX Series switching and proportional solenoid valves and for newer Sun valves that use the 16-mm actuator tubes. All models include ATEX, IECEx, and NEC, CEC/CSA certifications.

### TECHNICAL DATA

Operating Temperature Range	-40 to 158 °F
Diametric Coil Clearance Requirement	2.36 in.
Power Consumption at 68°F (20°C) cold - at rated voltage	30 watts
Voltage/Frequency	24 VDC (-15%/+0%)
Duty Cycle Rating	100 %
Connector	M20 x 1.5 female connector
Coil Nut Torque	4.5 lbf in.

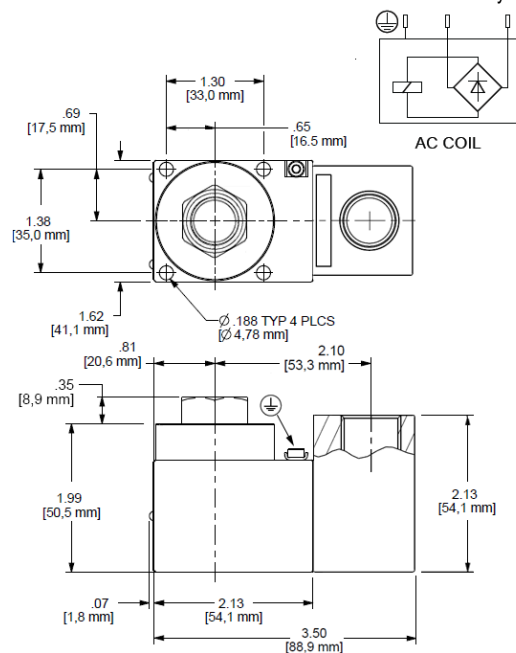
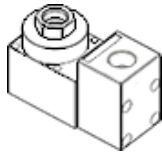
### NOTES

- 1. Mount coil onto spool (tube) body.
- 2. A cable entry hole is provided to accommodate any suitable certified flameproof cable entry device. Cable entry temperature may exceed 70° C (158° F).
- 3. Remove terminal box cover and connect electrical supply and earth to terminal block. Conductors according to Note 4. Note: coil is polarity insensitive. The center terminal is the internal ground. Replace cover and secure with the four screws (M4 x .7). Torque to min 1.92
- 4. Connect external ground. North American applications: external earth (ground) connections. Use where local codes or authorities permit or require external earth (ground) connections. Torque to 1.25 ft-lbs (1.7 N-m).
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### USED WITH

DBAF	DBAFS	DFBD	DFBE	DFBF	DFBG	DFCI	DFCJ	DFDI	DFDJ
DFEI	DFEJ	DFFI	DFFJ	DLDF	DLDFS	DMBD	DMBF	DNBD	DNBF
DTAF	DTAFS	DTBF	DTCF	DTDF	DTDFS	DWBF	DWDF	FDEP	FDMF

FMDG	FPBF	FPBG	FPBI	FPBJ	FPBU	FREP	PRDF	PRDG	RPEI
RVCK	RVCL	RVCM	RVCN	991711300	991711600	991712300	991712600	XMD-01	XMD-02



Model 747 Series hazardous location coils are designed for Sun's FLeX Series switching and proportional solenoid valves and for newer Sun valves that use the 16-mm actuator tubes. All models include ATEX, IECEx, and NEC, CEC/CSA certifications.

### TECHNICAL DATA

Operating Temperature Range	-40 to 158 °F
Diametric Coil Clearance Requirement	2.36 in.
Power Consumption at 68°F (20°C) cold - at rated voltage	30 watts
Voltage/Frequency	115 VAC 50/60 Hz (-15%/+0%)
Duty Cycle Rating	100 %
Connector	1/2" NPT female connector
Coil Nut Torque	4.5 lbf in.

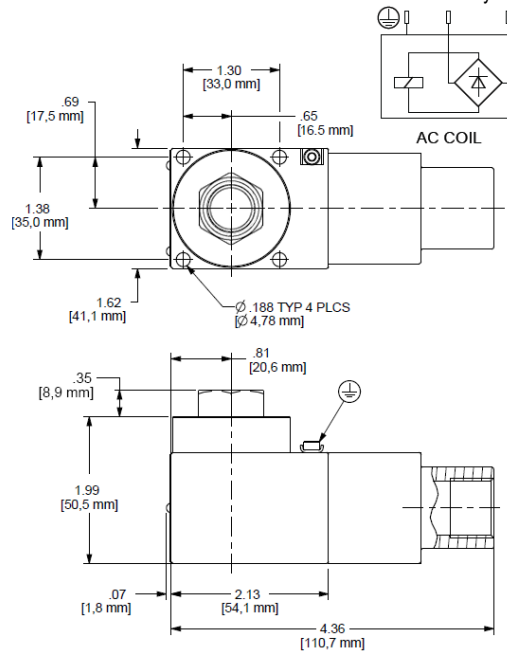
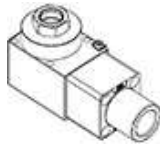
### NOTES

- 1. Mount coil onto spool (tube) body.
- 2. A cable entry hole is provided to accommodate any suitable certified flameproof cable entry device. Cable entry temperature may exceed 70° C (158° F).
- 3. Remove terminal box cover and connect electrical supply and earth to terminal block. Conductors according to Note 4. Note: coil is polarity insensitive. The center terminal is the internal ground. Replace cover and secure with the four screws (M4 x .7). Torque to min 1.92
- 4. Connect external ground. North American applications: external earth (ground) connections. Use where local codes or authorities permit or require external earth (ground) connections. Torque to 1.25 ft-lbs (1.7 N-m).
- 5. When installing with multiple coils, the coils must be spaced a minimum of 0.875" (22.23 mm) apart to ensure adequate heat dissipation.
- 6. A common practice to protect the internal bridge rectifier from unknown incoming voltage conditions is to install a TVS diode. For the 115-Vac coil, diode part number, 1.5KE250CA is recommended; for the 230-Vac coil, diode part number 1.5KE400CA is recommended. Depending on the application, diodes higher than 1500 W are recommended.
- 7. For installation in above-ground electrical systems in explosive atmospheres, procedures for all applicable codes must be observed. All work must be carried out by an electrician with adequate qualifications for hazardous locations.
- 8. Sun's 747 Series hazardous location coil requires more clearance than the FLeX 740 series coil. Sun manifolds with more than one cavity may not allow enough clearance for these coils. An additional 2.00" (50,8 mm) beyond the valve extension is needed for coil installation

### USED WITH

DBAF DBAFS DFBD DFBE DFBF DFBG DFCI DFCJ DFDI DFDJ  
DFEI DFEJ DFFI DFFJ DLDF DLDFS DMBD DMBF DNBD DNBF

DTAF	DTAFS	DTBF	DTCF	DTDF	DTDFS	DWBF	DWDF	FDEP	FMDF
FMDG	FREP	PRDF	PRDG	RPEI	RVCK	RVCL	RVCM	RVCN	



Model 747 Series hazardous location coils are designed for Sun's FLEx Series switching and proportional solenoid valves and for newer Sun valves that use the 16-mm actuator tubes. All models include ATEX, IECEx, and NEC, CEC/CSA certifications.

### TECHNICAL DATA

Operating Temperature Range	-40 to 158 °F
Diametric Coil Clearance Requirement	2.36 in.
Power Consumption at 68°F (20°C) cold - at rated voltage	30 watts
Voltage/Frequency	115 VAC 50/60 Hz (-15%/+0%)
Duty Cycle Rating	100 %
Connector	1/2" NPT female connector
Coil Nut Torque	4.5 lbf in.

### NOTES

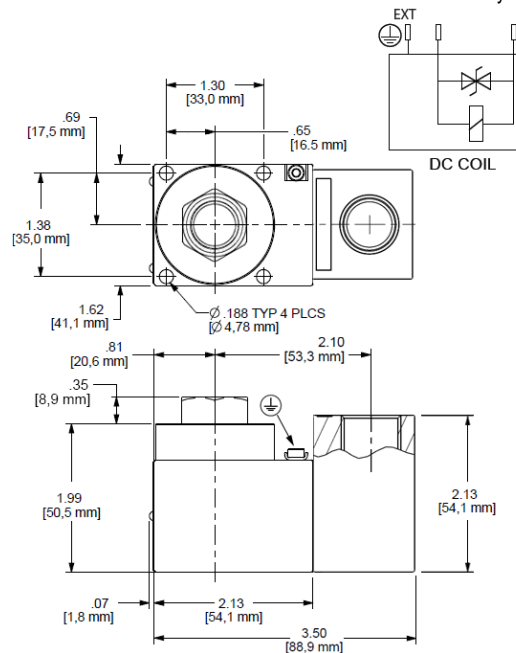
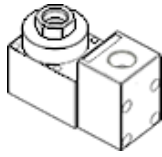
- 1. Mount coil onto spool (tube) body.
- 2. A cable entry hole is provided to accommodate any suitable certified flameproof cable entry device. Cable entry temperature may exceed 70° C (158° F).
- 3. Remove terminal box cover and connect electrical supply and earth to terminal block. Conductors according to Note 4. Note: coil is polarity insensitive. The center terminal is the internal ground. Replace cover and secure with the four screws (M4 x .7). Torque to min 1.92
- 4. Connect external ground. North American applications: external earth (ground) connections. Use where local codes or authorities permit or require external earth (ground) connections. Torque to 1.25 ft-lbs (1.7 N-m).
- 5. When installing with multiple coils, the coils must be spaced a minimum of 0.875" (22.23 mm) apart to ensure adequate heat dissipation.
- 6. A common practice to protect the internal bridge rectifier from unknown incoming voltage conditions is to install a TVS diode. For the 115-Vac coil, diode part number, 1.5KE250CA is recommended; for the 230-Vac coil, diode part number 1.5KE400CA is recommended. Depending on the application, diodes higher than 1500 W are recommended.
- 7. For installation in above-ground electrical systems in explosive atmospheres, procedures for all applicable codes must be observed. All work must be carried out by an electrician with adequate qualifications for hazardous locations.
- 8. Sun's 747 Series hazardous location coil requires more clearance than the FLEx 740 series coil. Sun manifolds with more than one cavity may not allow enough clearance for these coils. An additional 2.00" (50,8 mm) beyond the valve extension is needed for coil installation

### USED WITH

DBAF DBAFS DFBD DFBE DFBF DFBG DFCI DFCJ DFDI DFDJ  
DFEI DFEJ DFFI DFFJ DLDF DLDFS DMBD DMBF DNBD DNBF



DTAF	DTAFS	DTBF	DTCF	DTDF	DTDFS	DWBF	DWDF	FDEP	FMDF
FMDG	FREP	PRDF	PRDG	RPEI	RVCK	RVCL	RVCM	RVCN	



Model 747 Series hazardous location coils are designed for Sun's FLeX Series switching and proportional solenoid valves and for newer Sun valves that use the 16-mm actuator tubes. All models include ATEX, IECEx, and NEC, CEC/CSA certifications.

### TECHNICAL DATA

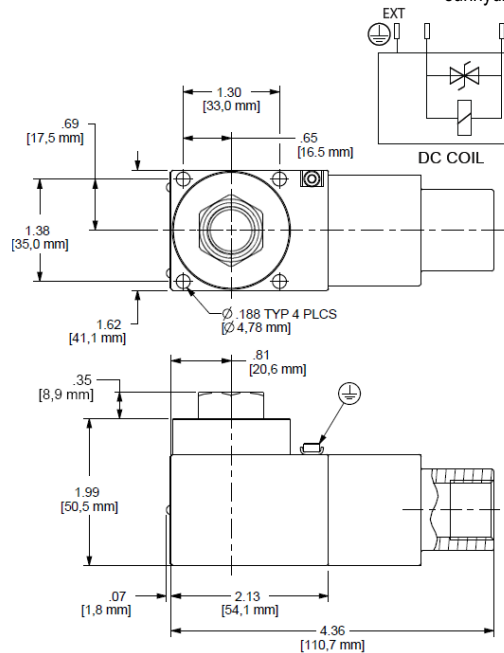
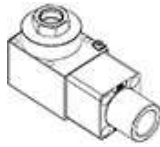
Operating Temperature Range	-40 to 158 °F
Diametric Coil Clearance Requirement	2.36 in.
Power Consumption at 68°F (20°C) cold - at rated voltage	30 watts
Voltage/Frequency	12 VDC (-15%/+0%)
Duty Cycle Rating	100 %
Connector	1/2" NPT female connector
Coil Nut Torque	4.5 lbf in.

### NOTES

- 1. Mount coil onto spool (tube) body.
- 2. A cable entry hole is provided to accommodate any suitable certified flameproof cable entry device. Cable entry temperature may exceed 70° C (158° F).
- 3. Remove terminal box cover and connect electrical supply and earth to terminal block. Conductors according to Note 4. Note: coil is polarity insensitive. The center terminal is the internal ground. Replace cover and secure with the four screws (M4 x .7). Torque to min 1.92
- 4. Connect external ground. North American applications: external earth (ground) connections. Use where local codes or authorities permit or require external earth (ground) connections. Torque to 1.25 ft-lbs (1.7 N-m).
- 5. When installing with multiple coils, the coils must be spaced a minimum of 0.875" (22.23 mm) apart to ensure adequate heat dissipation.
- For installation in above-ground electrical systems in explosive atmospheres, procedures for all applicable codes must be observed. All work must be carried out by an electrician with adequate qualifications for hazardous locations.
- Sun's 747 Series hazardous location coil requires more clearance than the FLeX 740 series coil. Sun manifolds with more than one cavity may not allow enough clearance for these coils. An additional 2.00" (50,8 mm) beyond the valve extension is needed for coil installation

### USED WITH

DBAF	DBAFS	DFBD	DFBE	DFBF	DFBG	DFCI	DFCJ	DFDI	DFDJ
DFEI	DFEJ	DFFI	DFFJ	DLDF	DLDFS	DMBD	DMBF	DNBD	DNBF
DTAF	DTAFS	DTBF	DTCF	DTDF	DTDFS	DWBF	DWDF	FDEP	FMDF
FMDG	FPBF	FPBG	FPBI	FPBJ	FPBU	FREP	PRDF	PRDG	RPEI
RVCK	RVCL	RVCM	RVCN	991711300	991711600	991712300	991712600	XMD-01	XMD-02



Model 747 Series hazardous location coils are designed for Sun's FLeX Series switching and proportional solenoid valves and for newer Sun valves that use the 16-mm actuator tubes. All models include ATEX, IECEx, and NEC, CEC/CSA certifications.

**TECHNICAL DATA**

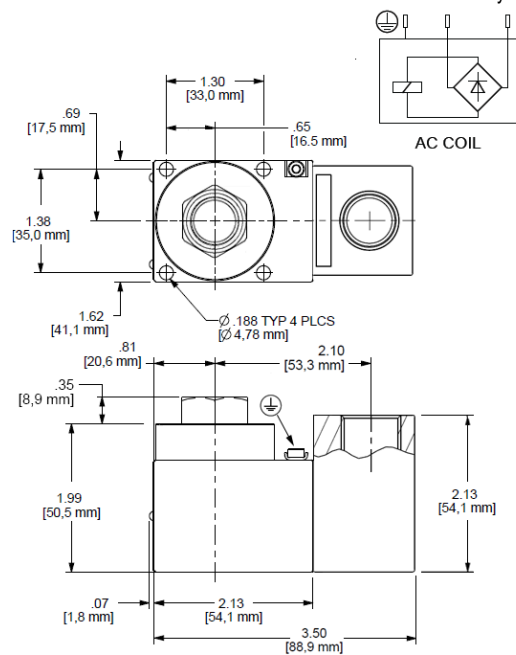
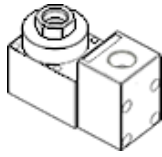
Operating Temperature Range	-40 to 158 °F
Diametric Coil Clearance Requirement	2.36 in.
Power Consumption at 68°F (20°C) cold - at rated voltage	30 watts
Voltage/Frequency	12 VDC (-15%/+0%)
Duty Cycle Rating	100 %
Connector	1/2" NPT female connector
Coil Nut Torque	4.5 lbf in.

**NOTES**

- 1. Mount coil onto spool (tube) body.
- 2. A cable entry hole is provided to accommodate any suitable certified flameproof cable entry device. Cable entry temperature may exceed 70° C (158° F).
- 3. Remove terminal box cover and connect electrical supply and earth to terminal block. Conductors according to Note 4. Note: coil is polarity insensitive. The center terminal is the internal ground. Replace cover and secure with the four screws (M4 x ,7). Torque to min 1.92
- 4. Connect external ground. North American applications: external earth (ground) connections. Use where local codes or authorities permit or require external earth (ground) connections. Torque to 1.25 ft-lbs (1.7 N-m).
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- For installation in above-ground electrical systems in explosive atmospheres, procedures for all applicable codes must be observed. All work must be carried out by an electrician with adequate qualifications for hazardous locations.
- Sun's 747 Series hazardous location coil requires more clearance than the FLeX 740 series coil. Sun manifolds with more than one cavity may not allow enough clearance for these coils. An additional 2.00" (50,8 mm) beyond the valve extension is needed for coil installation

**USED WITH**

DBAF	DBAFS	DFBD	DFBE	DFBF	DFBG	DFCI	DFCJ	DFDI	DFDJ
DFEI	DFEJ	DFFI	DFFJ	DLDF	DLDFS	DMBD	DMBF	DNBD	DNBF
DTAF	DTAFS	DTBF	DTCF	DTDF	DTDFS	DWBF	DWDF	FDEP	FMDF
FMDG	FPBF	FPBG	FPBI	FPBJ	FPBU	FREP	PRDF	PRDG	RPEI
RVCK	RVCL	RVCM	RVCN	991711300	991711600	991712300	991712600	XMD-01	XMD-02



Model 747 Series hazardous location coils are designed for Sun's FLeX Series switching and proportional solenoid valves and for newer Sun valves that use the 16-mm actuator tubes. All models include ATEX, IECEx, and NEC, CEC/CSA certifications.

### TECHNICAL DATA

Operating Temperature Range	-40 to 158 °F
Diametric Coil Clearance Requirement	2.36 in.
Power Consumption at 68°F (20°C) cold - at rated voltage	30 watts
Voltage/Frequency	230 VAC 50/60 Hz (-15%/+0%)
Duty Cycle Rating	100 %
Connector	1/2" NPT female connector
Coil Nut Torque	4.5 lbf in.

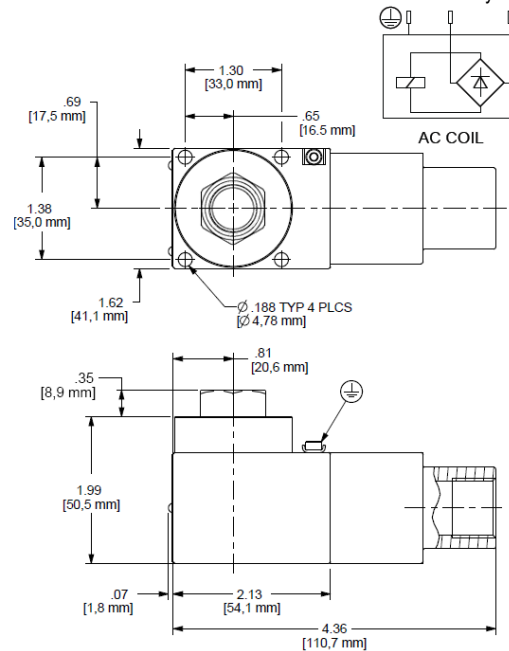
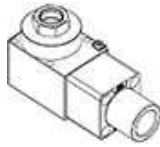
### NOTES

- 1. Mount coil onto spool (tube) body.
- 2. A cable entry hole is provided to accommodate any suitable certified flameproof cable entry device. Cable entry temperature may exceed 70° C (158° F).
- 3. Remove terminal box cover and connect electrical supply and earth to terminal block. Conductors according to Note 4. Note: coil is polarity insensitive. The center terminal is the internal ground. Replace cover and secure with the four screws (M4 x .7). Torque to min 1.92
- 4. Connect external ground. North American applications: external earth (ground) connections. Use where local codes or authorities permit or require external earth (ground) connections. Torque to 1.25 ft-lbs (1.7 N-m).
- 5. When installing with multiple coils, the coils must be spaced a minimum of 0.875" (22.23 mm) apart to ensure adequate heat dissipation.
- 6. A common practice to protect the internal bridge rectifier from unknown incoming voltage conditions is to install a TVS diode. For the 115-Vac coil, diode part number, 1.5KE250CA is recommended; for the 230-Vac coil, diode part number 1.5KE400CA is recommended. Depending on the application, diodes higher than 1500 W are recommended.
- 7. For installation in above-ground electrical systems in explosive atmospheres, procedures for all applicable codes must be observed. All work must be carried out by an electrician with adequate qualifications for hazardous locations.
- 8. Sun's 747 Series hazardous location coil requires more clearance than the FLeX 740 series coil. Sun manifolds with more than one cavity may not allow enough clearance for these coils. An additional 2.00" (50,8 mm) beyond the valve extension is needed for coil installation

### USED WITH

DBAF DBAFS DFBD DFBE DFBF DFBG DFCI DFCJ DFDI DFDJ  
DFEI DFEJ DFFI DFFJ DLDF DLDFS DMBD DMBF DNBD DNBF

DTAF	DTAFS	DTBF	DTCF	DTDF	DTDFS	DWBF	DWDF	FDEP	FMDF
FMDG	FREP	PRDF	PRDG	RPEI	RVCK	RVCL	RVCM	RVCN	



Model 747 Series hazardous location coils are designed for Sun's FLeX Series switching and proportional solenoid valves and for newer Sun valves that use the 16-mm actuator tubes. All models include ATEX, IECEx, and NEC, CEC/CSA certifications.

### TECHNICAL DATA

Operating Temperature Range	-40 to 158 °F
Diametric Coil Clearance Requirement	2.36 in.
Power Consumption at 68°F (20°C) cold - at rated voltage	30 watts
Voltage/Frequency	230 VAC 50/60 Hz (-15%/+0%)
Duty Cycle Rating	100 %
Connector	1/2" NPT female connector
Coil Nut Torque	4.5 lbf in.

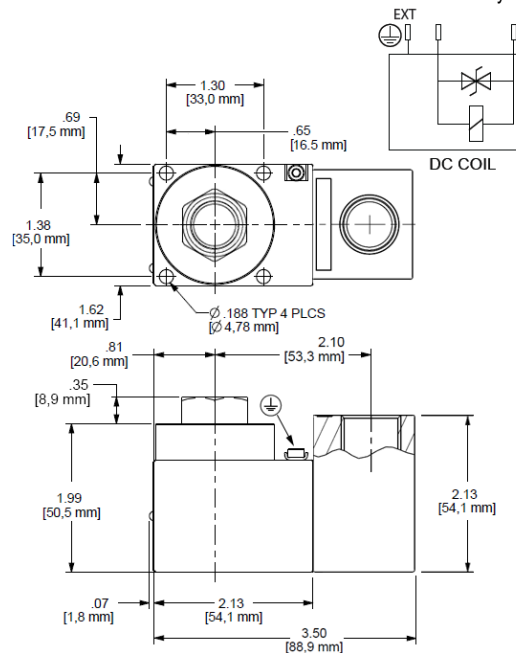
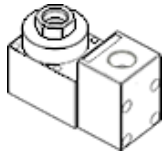
### NOTES

- 1. Mount coil onto spool (tube) body.
- 2. A cable entry hole is provided to accommodate any suitable certified flameproof cable entry device. Cable entry temperature may exceed 70° C (158° F).
- 3. Remove terminal box cover and connect electrical supply and earth to terminal block. Conductors according to Note 4. Note: coil is polarity insensitive. The center terminal is the internal ground. Replace cover and secure with the four screws (M4 x .7). Torque to min 1.92
- 4. Connect external ground. North American applications: external earth (ground) connections. Use where local codes or authorities permit or require external earth (ground) connections. Torque to 1.25 ft-lbs (1.7 N-m).
- 5. When installing with multiple coils, the coils must be spaced a minimum of 0.875" (22.23 mm) apart to ensure adequate heat dissipation.
- 6. A common practice to protect the internal bridge rectifier from unknown incoming voltage conditions is to install a TVS diode. For the 115-Vac coil, diode part number, 1.5KE250CA is recommended; for the 230-Vac coil, diode part number 1.5KE400CA is recommended. Depending on the application, diodes higher than 1500 W are recommended.
- 7. For installation in above-ground electrical systems in explosive atmospheres, procedures for all applicable codes must be observed. All work must be carried out by an electrician with adequate qualifications for hazardous locations.
- 8. Sun's 747 Series hazardous location coil requires more clearance than the FLeX 740 series coil. Sun manifolds with more than one cavity may not allow enough clearance for these coils. An additional 2.00" (50,8 mm) beyond the valve extension is needed for coil installation

### USED WITH

DBAF DBAFS DFBD DFBE DFBF DFBG DFCI DFCJ DFDI DFDJ  
DFEI DFEJ DFFI DFFJ DLDF DLDFS DMBD DMBF DNBD DNBF

DTAF FPBF	DTAFS FREP	DTBF PRDF	DTCF PRDG	DTDF RPEI	DTDFS RVCK	DWBF RVCL	DWDF RVCM	FDEP RVCN	FMDG
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Model 747 Series hazardous location coils are designed for Sun's FLeX Series switching and proportional solenoid valves and for newer Sun valves that use the 16-mm actuator tubes. All models include ATEX, IECEx, and NEC, CEC/CSA certifications.

### TECHNICAL DATA

Operating Temperature Range	-40 to 158 °F
Diametric Coil Clearance Requirement	2.36 in.
Power Consumption at 68°F (20°C) cold - at rated voltage	30 watts
Voltage/Frequency	24 VDC (-15%/+0%)
Duty Cycle Rating	100 %
Connector	1/2" NPT female connector
Coil Nut Torque	4.5 lbf in.

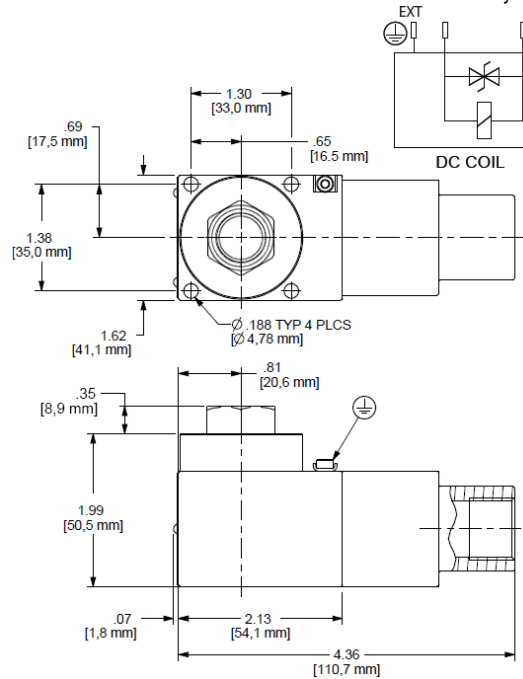
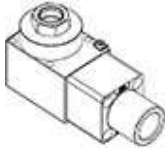
### NOTES

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- 2. A cable entry hole is provided to accommodate any suitable certified flameproof cable entry device. Cable entry temperature may exceed 70° C (158° F).
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- 4. Connect external ground. North American applications: external earth (ground) connections. Use where local codes or authorities permit or require external earth (ground) connections. Torque to 1.25 ft-lbs (1.7 N-m).
- 5. When installing with multiple coils, the coils must be spaced a minimum of 0.875" (22.23 mm) apart to ensure adequate heat dissipation.
- For installation in above-ground electrical systems in explosive atmospheres, procedures for all applicable codes must be observed. All work must be carried out by an electrician with adequate qualifications for hazardous locations.
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### USED WITH

DBAF	DBAFS	DFBD	DFBE	DFBF	DFBG	DFCI	DFCJ	DFDI	DFDJ
DFEI	DFEJ	DFFI	DFFJ	DLDF	DLDFS	DMBD	DMBF	DNBD	DNBF
DTAF	DTAFS	DTBF	DTCF	DTDF	DTDFS	DWBF	DWDF	FDEP	FMDF
FMDG	FPBF	FPBG	FPBI	FPBJ	FPBU	FREP	PRDF	PRDG	RPEI
RVCK	RVCL	RVCM	RVCN	991711300	991711600	991712300	991712600	XMD-01	XMD-02





Model 747 Series hazardous location coils are designed for Sun's FLeX Series switching and proportional solenoid valves and for newer Sun valves that use the 16-mm actuator tubes. All models include ATEX, IECEx, and NEC, CEC/CSA certifications.

### TECHNICAL DATA

Operating Temperature Range	-40 to 158 °F
Diametric Coil Clearance Requirement	2.36 in.
Power Consumption at 68°F (20°C) cold - at rated voltage	30 watts
Voltage/Frequency	24 VDC (-15%/+0%)
Duty Cycle Rating	100 %
Connector	1/2" NPT female connector
Coil Nut Torque	4.5 lbf in.

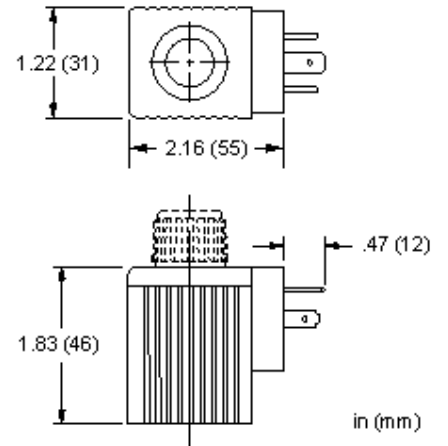
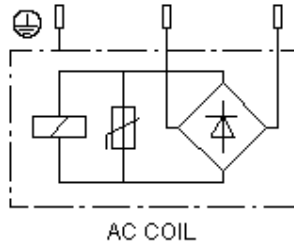
### NOTES

- 1. Mount coil onto spool (tube) body.
- 2. A cable entry hole is provided to accommodate any suitable certified flameproof cable entry device. Cable entry temperature may exceed 70° C (158° F).
- 3. Remove terminal box cover and connect electrical supply and earth to terminal block. Conductors according to Note 4. Note: coil is polarity insensitive. The center terminal is the internal ground. Replace cover and secure with the four screws (M4 x ,7). Torque to min 1.92
- 4. Connect external ground. North American applications: external earth (ground) connections. Use where local codes or authorities permit or require external earth (ground) connections. Torque to 1.25 ft-lbs (1.7 N-m).
- 5. When installing with multiple coils, the coils must be spaced a minimum of 0.875" (22.23 mm) apart to ensure adequate heat dissipation.
- For installation in above-ground electrical systems in explosive atmospheres, procedures for all applicable codes must be observed. All work must be carried out by an electrician with adequate qualifications for hazardous locations.
- Sun's 747 Series hazardous location coil requires more clearance than the FLeX 740 series coil. Sun manifolds with more than one cavity may not allow enough clearance for these coils. An additional 2.00" (50,8 mm) beyond the valve extension is needed for coil installation

### USED WITH

DBAF	DBAFS	DFBD	DFBE	DFBF	DFBG	DFCI	DFCJ	DFDI	DFDJ
DFEI	DFEJ	DFFI	DFFJ	DLDF	DLDFS	DMBD	DMBF	DNBD	DNBF
DTAF	DTAFS	DTBF	DTCF	DTDF	DTDFS	DWBF	DWDF	FDEP	FDMF

FMDG	FPBF	FPBG	FPBI	FPBJ	FPBU	FREP	PRDF	PRDG	RPEI
RVCK	RVCL	RVCM	RVCN	991711300	991711600	991712300	991712600	XMD-01	XMD-02

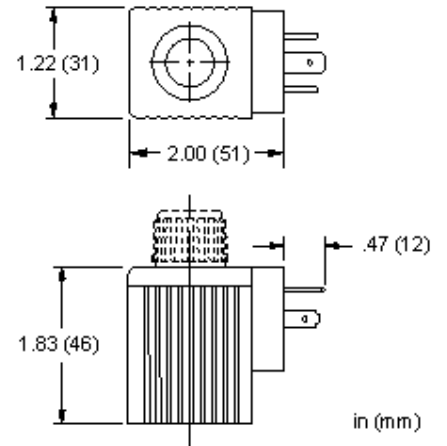
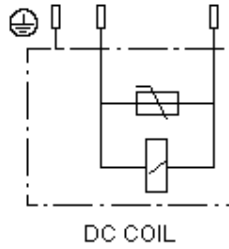


### TECHNICAL DATA

Maximum Coil Temperature at 68°F (20°C) Ambient	218°F (105°C)
Arc Suppression (TVS)	Included
Power Consumption (cold) - at rated voltage	12 watts
Voltage/Frequency	115 VAC 50/60 Hz
Operating Voltage Range	+/- 20% nominal
Duty Cycle Rating	100 %
Connector	ISO4400 - EN/DIN175301-803, Form A (ISO/DIN 43650) 3-pin
Connector Environment Rating	IP65
Coil Nut Torque	4.5 lbf in.

### USED WITH

DAAA      DACC      DBAA

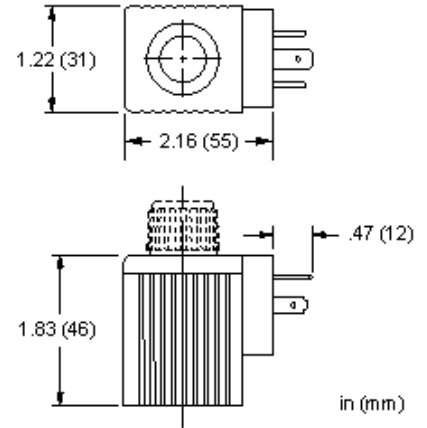
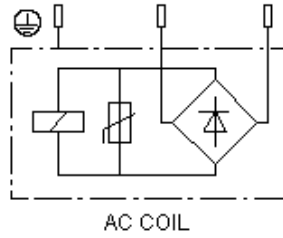


### TECHNICAL DATA

Maximum Coil Temperature at 68°F (20°C) Ambient	218°F (105°C)
Arc Suppression (TVS)	Included
Power Consumption (cold) - at rated voltage	12 watts
Voltage/Frequency	12 VDC
Operating Voltage Range	+/- 20% nominal
Duty Cycle Rating	100 %
Connector	ISO4400 - EN/DIN175301-803, Form A (ISO/DIN 43650) 3-pin
Connector Environment Rating	IP65
Coil Nut Torque	4.5 lbf in.

### USED WITH

DAAA      DACC      DBAA

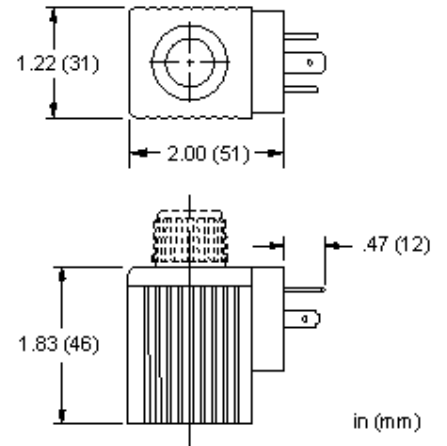
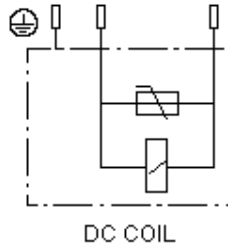


**TECHNICAL DATA**

Title	ISO/DIN 43650 Connector
Maximum Coil Temperature at 68°F (20°C) Ambient	218°F (105°C)
Arc Suppression (TVS)	Included
Power Consumption (cold) - at rated voltage	12 watts
Voltage/Frequency	230 VAC 50/60 Hz
Operating Voltage Range	+/- 20% nominal
Duty Cycle Rating	100 %
Connector	ISO4400 - EN/DIN175301-803, Form A (ISO/DIN 43650) 3-pin
Connector Environment Rating	IP65
Coil Nut Torque	4.5 lbf in.

**USED WITH**

DAAA      DACC      DBAA

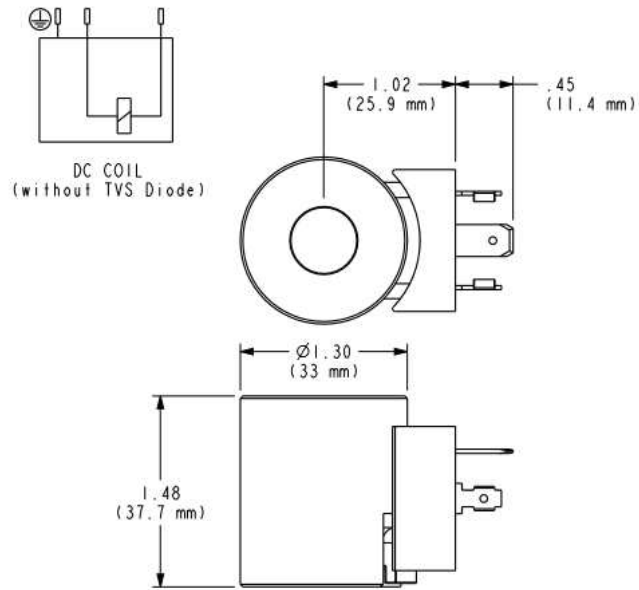


### TECHNICAL DATA

Maximum Coil Temperature at 68°F (20°C) Ambient	218°F (105°C)
Arc Suppression (TVS)	Included
Power Consumption (cold) - at rated voltage	12 watts
Voltage/Frequency	24 VDC
Operating Voltage Range	+/- 20% nominal
Duty Cycle Rating	100 %
Connector	ISO4400 - EN/DIN175301-803, Form A (ISO/DIN 43650) 3-pin
Connector Environment Rating	IP65
Coil Nut Torque	4.5 lbf in.

### USED WITH

DAAA      DACC      DBAA

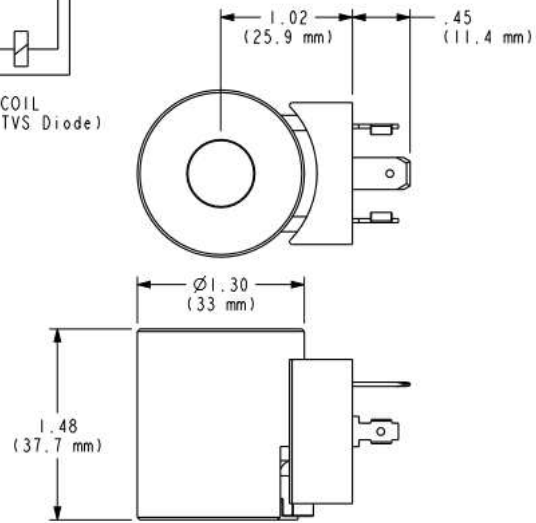
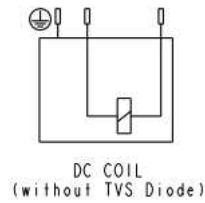


### TECHNICAL DATA

Operating Temperature Range	-4 to 215 °F
Arc Suppression (TVS)	None
Power Consumption (cold) - at rated voltage	20.5 Watts
Maximum Ambient Temperature	104 °F
Voltage/Frequency	12 VDC
Operating Voltage Range	+/- 10% nominal
Duty Cycle Rating	100 %
Connector	ISO4400 - EN/DIN175301-803, Form A (ISO/DIN 43650) 3-pin
Coil Nut Torque	44 lbf in.

### USED WITH

DNTC



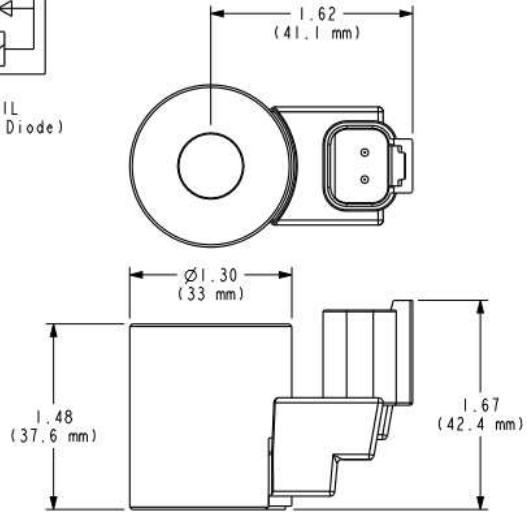
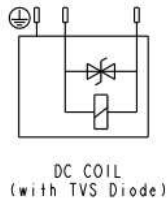
### TECHNICAL DATA

Operating Temperature Range	-4 to 215 °F
Arc Suppression (TVS)	None
Power Consumption (cold) - at rated voltage	20.5 Watts
Maximum Ambient Temperature	104 °F
Voltage/Frequency	24 VDC
Operating Voltage Range	+/- 10% nominal
Duty Cycle Rating	100 %
Connector	ISO4400 - EN/DIN175301-803, Form A (ISO/DIN 43650) 3-pin
Coil Nut Torque	44 lbf in.

### USED WITH

DNTC



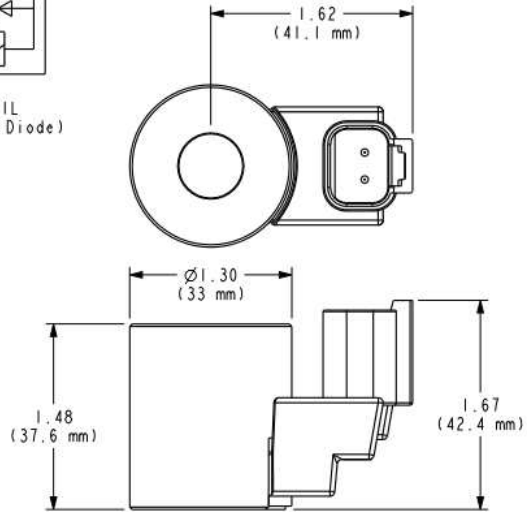
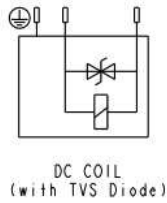
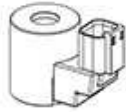


### TECHNICAL DATA

Operating Temperature Range	-4 to 215 °F
Arc Suppression (TVS)	Included
Power Consumption (cold) - at rated voltage	20.5 Watts
Maximum Ambient Temperature	104 °F
Voltage/Frequency	12 VDC
Operating Voltage Range	+/- 10% nominal
Duty Cycle Rating	100 %
Connector	Deutsch DT04-2P
Coil Nut Torque	44 lbf in.

### USED WITH

DMTA      DNTC      PRTS

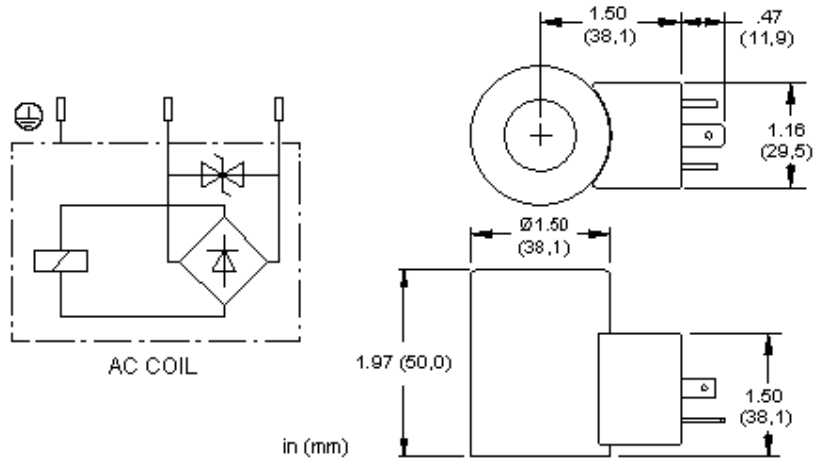
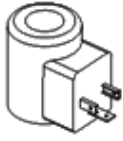


### TECHNICAL DATA

Operating Temperature Range	-4 to 215 °F
Arc Suppression (TVS)	Included
Power Consumption (cold) - at rated voltage	20.5 Watts
Maximum Ambient Temperature	104 °F
Voltage/Frequency	24 VDC
Operating Voltage Range	+/- 10% nominal
Duty Cycle Rating	100 %
Connector	Deutsch DT04-2P
Coil Nut Torque	44 lbf in.

### USED WITH

DMTA      DNTC      PRTS

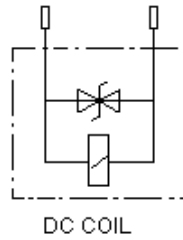
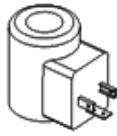


**TECHNICAL DATA**

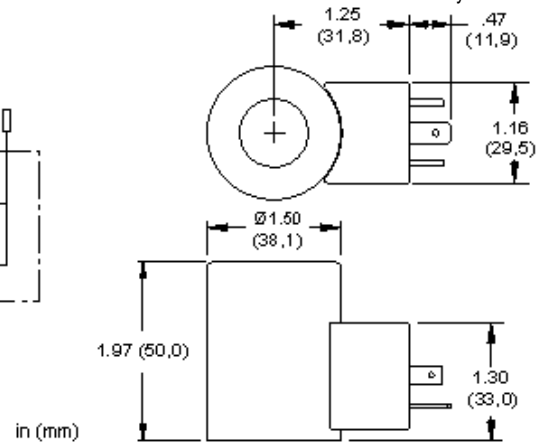
Maximum Coil Temperature at 68°F (20°C) Ambient	218°F (105°C)
Arc Suppression (TVS)	Included
Power Consumption (cold) - at rated voltage	22 watts
Maximum Ambient Temperature	122 °F
Voltage/Frequency	115 VAC 50/60 Hz
Operating Voltage Range	+/- 10% nominal
Duty Cycle Rating	100 %
Connector	ISO4400 - EN/DIN175301-803, Form A (ISO/DIN 43650) 3-pin
Connector Environment Rating	IP65/IP67
Coil Nut Torque	4.5 lbf in.

**USED WITH**

- |      |       |      |       |       |      |       |       |       |       |
|------|-------|------|-------|-------|------|-------|-------|-------|-------|
| DAAL | DAALS | DBAL | DBALS | DFCA  | DFCB | DFDA  | DFDB  | DFEA  | DFEB  |
| DFFA | DFFB  | DLDA | DLDAS | DLDAZ | DMDA | DMDAS | DMDAZ | DNCA  | DNCAZ |
| DNDA | DNDAS | DNDC | DNDY  | DNDYS | DTCA | DTCAZ | DTDA  | DTDAS | DWDA  |
| HDDA |       |      |       |       |      |       |       |       |       |



DC COIL

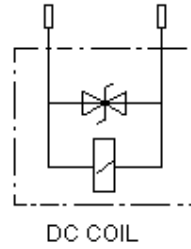
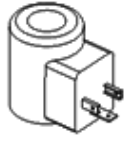


### TECHNICAL DATA

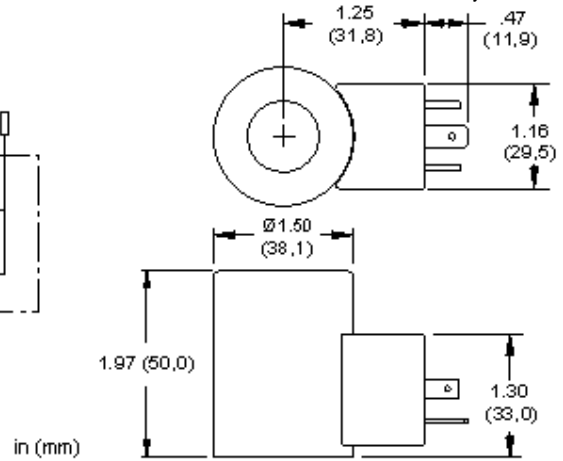
Maximum Coil Temperature at 68°F (20°C) Ambient	218°F (105°C)
Arc Suppression (TVS)	Included
Power Consumption (cold) - at rated voltage	22 watts
Maximum Ambient Temperature	122 °F
Voltage/Frequency	12 VDC
Operating Voltage Range	+/- 10% nominal
Duty Cycle Rating	100 %
Connector	ISO4400 - EN/DIN175301-803, Form A (ISO/DIN 43650) 3-pin
Connector Environment Rating	IP65/IP67
Coil Nut Torque	4.5 lbf in.

### USED WITH

DMDA	DMDAS	DNCA	DNDA	DNDAS	DNDC	DNDY	DNDYS	FMDA	FMDB
FPCC	FPCH	FPFK	FPHK	HDDA	PRDM	PRDN	PSDL	PSDP	RBAN
RBAP									



DC COIL

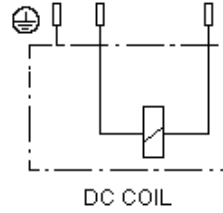
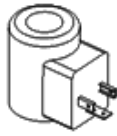


### TECHNICAL DATA

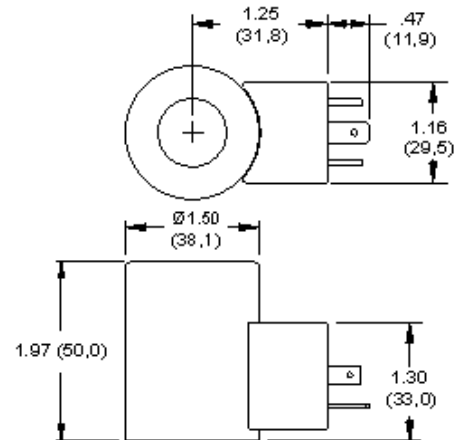
Maximum Coil Temperature at 68°F (20°C) Ambient	218°F (105°C)
Arc Suppression (TVS)	Included
Power Consumption (cold) - at rated voltage	22 watts
Maximum Ambient Temperature	122 °F
Voltage/Frequency	14 VDC
Operating Voltage Range	+/- 10% nominal
Duty Cycle Rating	100 %
Connector	ISO4400 - EN/DIN175301-803, Form A (ISO/DIN 43650) 3-pin
Connector Environment Rating	IP65/IP67
Coil Nut Torque	4.5 lbf in.

### USED WITH

DMDA    DMDAS    DNCA    DNDA    DNDAS    DNDC    DNDY    DNDYS    FPCC    FPCH  
 FPFK    FPHK



in (mm)

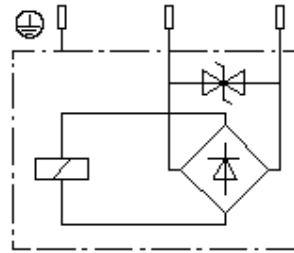
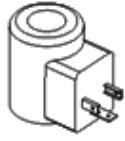


### TECHNICAL DATA

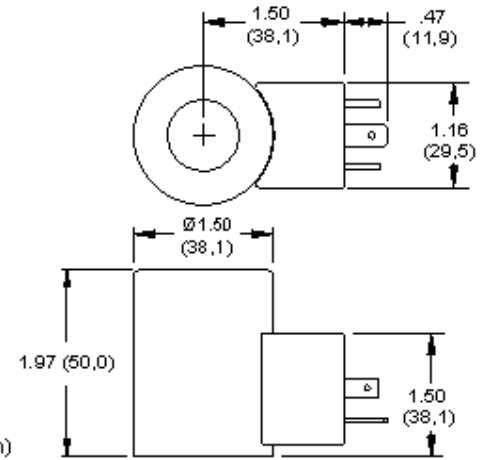
Maximum Coil Temperature at 68°F (20°C) Ambient	218°F (105°C)
Arc Suppression (TVS)	None
Power Consumption (cold) - at rated voltage	22 watts
Maximum Ambient Temperature	122 °F
Voltage/Frequency	14 VDC
Operating Voltage Range	+/- 10% nominal
Duty Cycle Rating	100 %
Connector	ISO4400 - EN/DIN175301-803, Form A (ISO/DIN 43650) 3-pin
Connector Environment Rating	IP65/IP67
Coil Nut Torque	4.5 lbf in.

### USED WITH

DMDA    DMDAS    DNCA    DNDA    DNDAS    DNDC    DNDY    DNDYS    FMDA    FMDB  
 FPCC    FPCH    FPFK    FPHK    HDDA    PRDM    PRDN    PSDL    PSDP    RBAN  
 RBAP



AC COIL



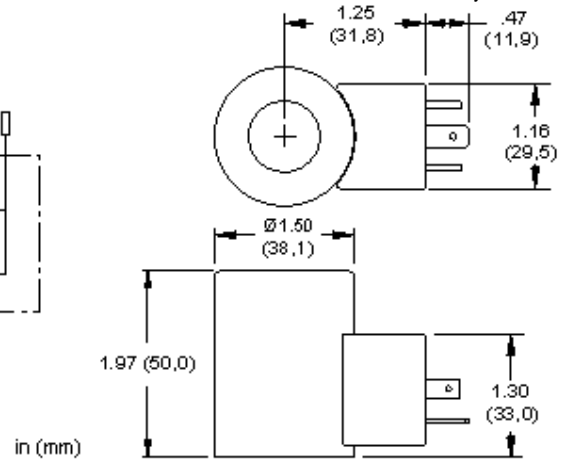
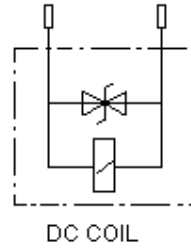
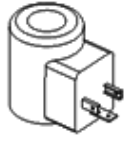
in (mm)

### TECHNICAL DATA

Maximum Coil Temperature at 68°F (20°C) Ambient	218°F (105°C)
Arc Suppression (TVS)	Included
Power Consumption (cold) - at rated voltage	22 watts
Maximum Ambient Temperature	122 °F
Voltage/Frequency	230 VAC 50/60 Hz
Operating Voltage Range	+/- 10% nominal
Duty Cycle Rating	100 %
Connector	ISO4400 - EN/DIN175301-803, Form A (ISO/DIN 43650) 3-pin
Connector Environment Rating	IP65/IP67
Coil Nut Torque	4.5 lbf in.

### USED WITH

- |      |       |      |       |       |      |       |       |       |       |
|------|-------|------|-------|-------|------|-------|-------|-------|-------|
| DAAL | DAALS | DBAL | DBALS | DFCA  | DFCB | DFDA  | DFDB  | DFEA  | DFEB  |
| DFFA | DFFB  | DLDA | DLDAS | DLDAZ | DMDA | DMDAS | DMDAZ | DNCA  | DNCAZ |
| DNDA | DNDAS | DNDC | DNDY  | DNDYS | DTCA | DTCAZ | DTDA  | DTDAS | DWDA  |
| HDDA |       |      |       |       |      |       |       |       |       |



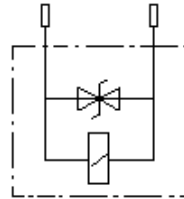
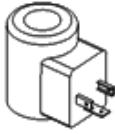
### TECHNICAL DATA

Maximum Coil Temperature at 68°F (20°C) Ambient	218°F (105°C)
Arc Suppression (TVS)	Included
Power Consumption (cold) - at rated voltage	22 watts
Maximum Ambient Temperature	122 °F
Voltage/Frequency	24 VDC
Operating Voltage Range	+/- 10% nominal
Duty Cycle Rating	100 %
Connector	ISO4400 - EN/DIN175301-803, Form A (ISO/DIN 43650) 3-pin
Connector Environment Rating	IP65/IP67
Coil Nut Torque	4.5 lbf in.

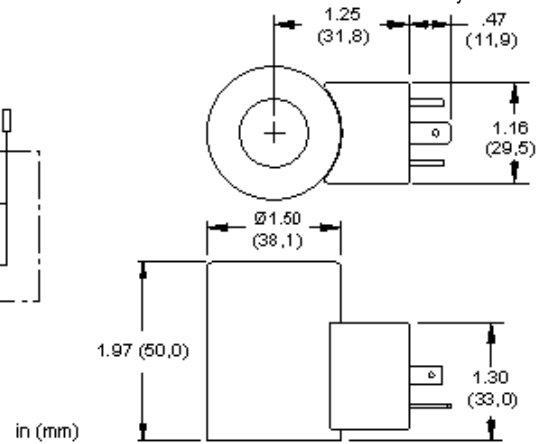
### USED WITH

DMDA    DMDAS    DNCA    DNDA    DNDAS    DNDC    DNDY    DNDYS    FMDA    FMDB  
 FPCC    FPCH    FPFK    FPHK    HDDA    PRDM    PRDN    PSDL    PSDP    RBAN  
 RBAP





DC COIL

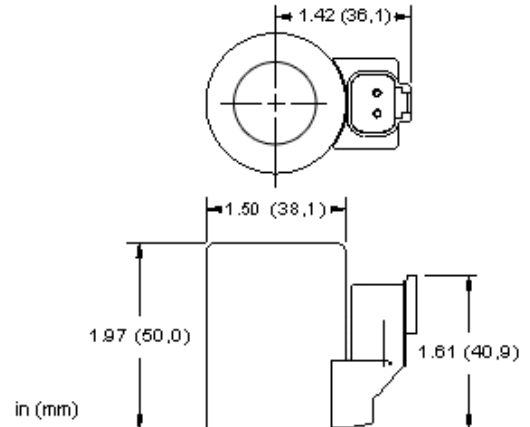
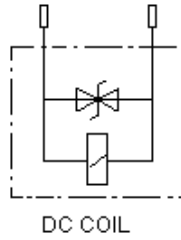
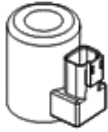


### TECHNICAL DATA

Maximum Coil Temperature at 68°F (20°C) Ambient	218°F (105°C)
Arc Suppression (TVS)	Included
Power Consumption (cold) - at rated voltage	22 watts
Maximum Ambient Temperature	122 °F
Voltage/Frequency	28 VDC
Operating Voltage Range	+/- 10% nominal
Duty Cycle Rating	100 %
Connector	ISO4400 - EN/DIN175301-803, Form A (ISO/DIN 43650) 3-pin
Connector Environment Rating	IP65/IP67
Coil Nut Torque	4.5 lbf in.

### USED WITH

DMDA DMDAS DNCA DNDA DNDAS DNDC DNDY DNDYS FMDA

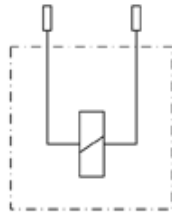
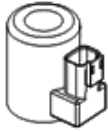


### TECHNICAL DATA

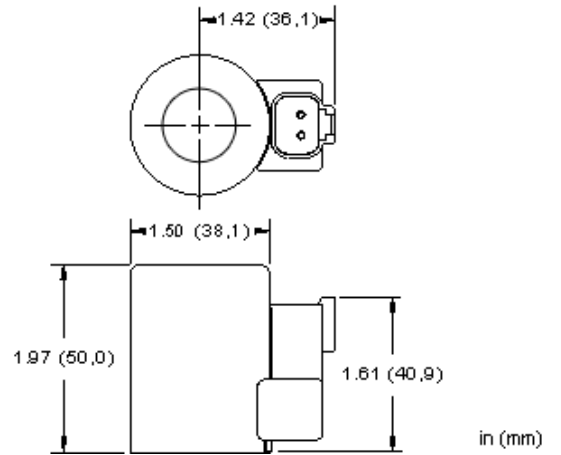
Maximum Coil Temperature at 68°F (20°C) Ambient	218°F (105°C)
Arc Suppression (TVS)	Included
Power Consumption (cold) - at rated voltage	22 watts
Maximum Ambient Temperature	122 °F
Voltage/Frequency	12 VDC
Operating Voltage Range	+/- 10% nominal
Duty Cycle Rating	100 %
Connector	Deutsch DT04-2P
Connector Environment Rating	IP69K
Coil Nut Torque	4.5 lbf in.

### USED WITH

DMDA	DMDAS	DNCA	DNDA	DNDAS	DNDC	DNDY	DNDYS	FMDA	FMDB
FPCC	FPCH	FPFK	FPHK	HDDA	PRDM	PRDN	PSDL	PSDP	RBAN
RBAP	991723001	991723002							



DC Coil – No Diode

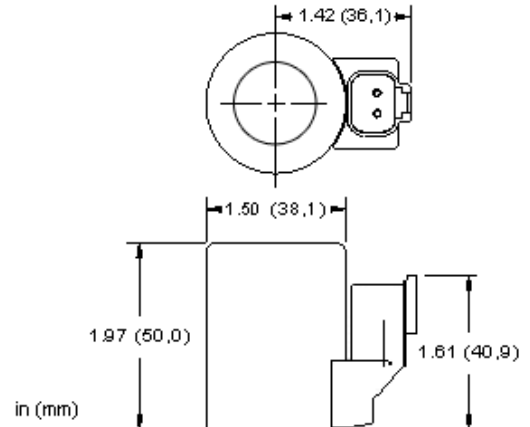
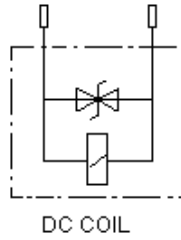
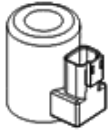


**TECHNICAL DATA**

Maximum Coil Temperature at 68°F (20°C) Ambient	218°F (105°C)
Arc Suppression (TVS)	None
Power Consumption (cold) - at rated voltage	22 watts
Maximum Ambient Temperature	122 °F
Voltage/Frequency	12 VDC
Operating Voltage Range	+/- 10% nominal
Duty Cycle Rating	100 %
Connector	Deutsch DT04-2P
Connector Environment Rating	IP69K
Coil Nut Torque	4.5 lbf in.

**USED WITH**

DMDA	DMDAS	DNCA	DNDA	DNDAS	DNDC	DNDY	DNDYS	FMDA	FMDB
FPCC	FPCH	FPFK	FPHK	HDDA	PRDM	PRDN	PSDL	PSDP	RBAN
RBAP	991723001	991723002							

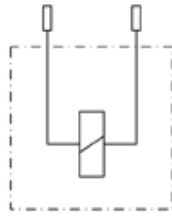
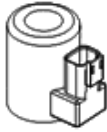


### TECHNICAL DATA

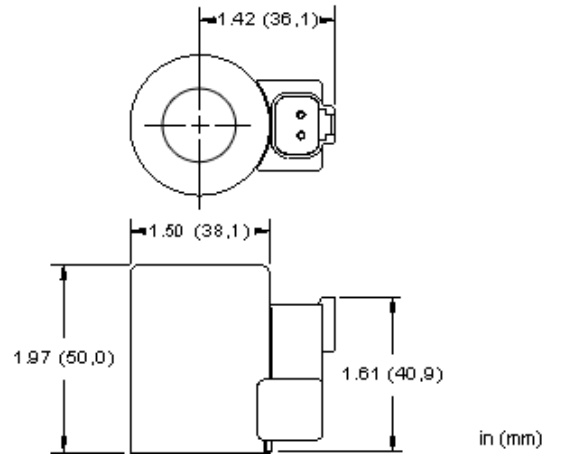
Maximum Coil Temperature at 68°F (20°C) Ambient	218°F (105°C)
Arc Suppression (TVS)	Included
Power Consumption (cold) - at rated voltage	22 watts
Maximum Ambient Temperature	122 °F
Voltage/Frequency	14 VDC
Operating Voltage Range	+/- 10% nominal
Duty Cycle Rating	100 %
Connector	Deutsch DT04-2P
Connector Environment Rating	IP69K
Coil Nut Torque	4.5 lbf in.

### USED WITH

DMDA      DMDAS      DNCA      DNDA      DNDAS      DNDC      DNDY      DNDYS      FMDB      FPCC  
 FPHK      RBAP      991723001      991723002



DC Coil – No Diode

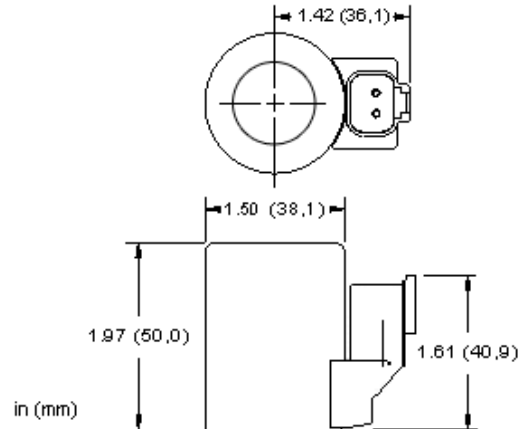
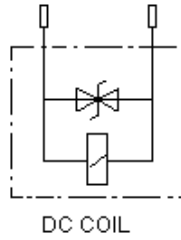
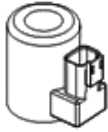


**TECHNICAL DATA**

Maximum Coil Temperature at 68°F (20°C) Ambient	218°F (105°C)
Arc Suppression (TVS)	None
Power Consumption (cold) - at rated voltage	22 watts
Maximum Ambient Temperature	122 °F
Voltage/Frequency	14 VDC
Operating Voltage Range	+/- 10% nominal
Connector	Deutsch DT04-2P
Coil Nut Torque	4.5 lbf in.

**USED WITH**

DMDA      DMDAS      DNCA      DNDA      DNDAS      DNDC      DNDY      DNDYS      FMDB      FPCC  
 FPHK      RBAP      991723001      991723002

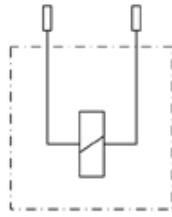
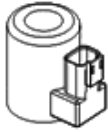


**TECHNICAL DATA**

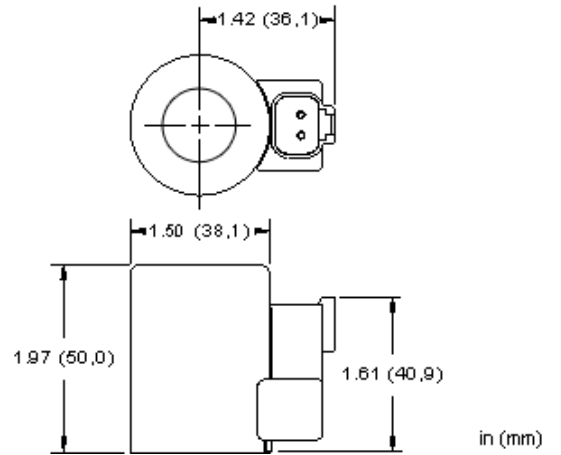
Maximum Coil Temperature at 68°F (20°C) Ambient	218°F (105°C)
Arc Suppression (TVS)	Included
Power Consumption (cold) - at rated voltage	22 watts
Maximum Ambient Temperature	122 °F
Voltage/Frequency	24 VDC
Operating Voltage Range	+/- 10% nominal
Duty Cycle Rating	100 %
Connector	Deutsch DT04-2P
Connector Environment Rating	IP69K
Coil Nut Torque	4.5 lbf in.

**USED WITH**

DMDA	DMDAS	DNCA	DNDA	DNDAS	DNDC	DNDY	DNDYS	FMDA	FMDB
FPCC	FPCH	FPFK	FPHK	HDDA	PRDM	PRDN	PSDL	PSDP	RBAN
RBAP	991723001	991723002							



DC Coil – No Diode

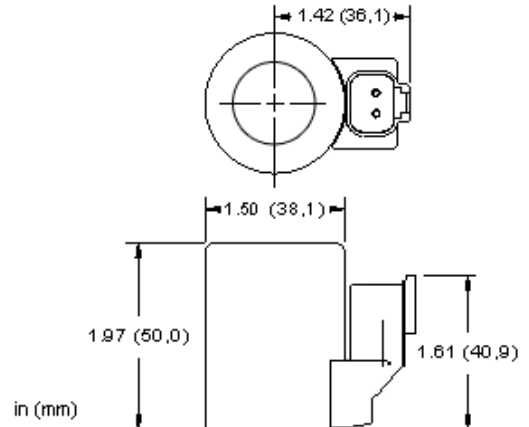
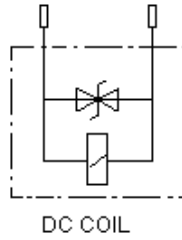
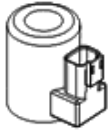


**TECHNICAL DATA**

Maximum Coil Temperature at 68°F (20°C) Ambient	218°F (105°C)
Arc Suppression (TVS)	None
Power Consumption (cold) - at rated voltage	22 watts
Maximum Ambient Temperature	122 °F
Voltage/Frequency	24 VDC
Operating Voltage Range	+/- 10% nominal
Duty Cycle Rating	100 %
Connector	Deutsch DT04-2P
Connector Environment Rating	IP69K
Coil Nut Torque	4.5 lbf in.

**USED WITH**

DMDA	DMDAS	DNCA	DNDA	DNDAS	DNDC	DNDY	DNDYS	FMDA	FMDB
FPCC	FPCH	FPFK	FPHK	HDDA	PRDM	PRDN	PSDL	PSDP	RBAN
RBAP	991723001	991723002							



### TECHNICAL DATA

Maximum Coil Temperature at 68°F (20°C) Ambient	218°F (105°C)
Arc Suppression (TVS)	Included
Power Consumption (cold) - at rated voltage	22 watts
Maximum Ambient Temperature	122 °F
Voltage/Frequency	28 VDC
Operating Voltage Range	+/- 10% nominal
Duty Cycle Rating	100 %
Connector	Deutsch DT04-2P
Connector Environment Rating	IP69K
Coil Nut Torque	4.5 lbf in.

### USED WITH

DMDA  
991723002

DMDAS

DNCA

DNDA

DNDAS

DNDC

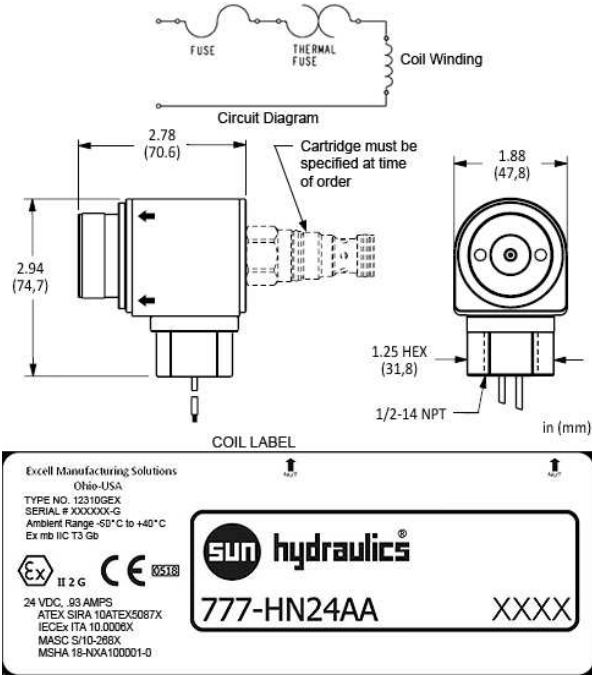
DN DY

DNDYS

FMDA

991723001





Sun offers explosion proof coils for use in hazardous environments. Certification requires the explosion proof coil to be sold as a complete cartridge/coil assembly. Coil cannot be purchased separately. For ordering information, please see the coil option section on the applicable cartridge product page.

### TECHNICAL DATA

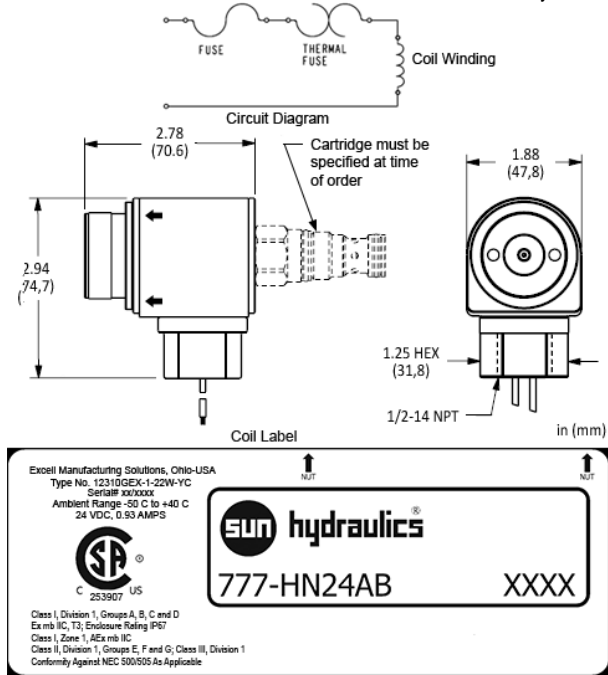
Ambient Temperature Range	-58 to 104 °F
Power Consumption (cold) - at rated voltage	22 watts
Nominal Current	0.93 amps at 68°F (20°C), 24 VDC
Diametric Coil Clearance Requirement	2.125 in.
Voltage/Frequency	24 VDC
Operating Voltage Range	+/- 10% nominal
Current Fuse (non-resettable)	3 amps
Thermal Fuse (non-resettable)	378 °F
Duty Cycle Rating	100 %
Connector	Twin lead 18 AWG X 10 ft. (3 m), 1/2-14 NPT female conduit connector
Connector Environment Rating	IP67
Lead Wire Rating	AWM styles 3289 150°C - 3271 125°C, 600V VW-1 LL30433 CSA CL1251 125°C or CL1503 150°C, XLPE 600V 18 AWG
Coil Nut Torque	6 - 7 lbf ft

### NOTES

- Coil/cartridge assembly can be mounted in any position, however, coil orientation on cartridge assembly is critical. Arrows on coil label must face towards coil nut.
- Coil cannot be purchased separately and must be configured along with the cartridge valve. Please see the applicable cartridge product page for ordering information.
- Sun's explosion proof coil requires more clearance than 770 series coil. Sun manifolds with more than one cavity may not allow enough clearance for explosion proof coils.
- For proportional valve applications, the maximum current of 590mA has been established so a proportional valve can function optimally under a variety of ambient temperatures.

## USED WITH

DAAL	DAALS	DBAL	DBALS	DFCA	DFCB	DFDA	DFDB	DFEA	DFEB
DFFA	DFFB	DLDA	DLDAS	DMDA	DMDAS	DNCA	DNDA	DNDAS	DNDC
DNDY	DNDYS	DTCA	DTDA	DTDAS	DWDA	FMDA	FMDB	FPCC	FPCH
FPFK	FPHK	HDDA	PRDL	PRDM	PRDN	PRDP	PSDL	PSDP	RBAN



Sun offers explosion proof coils for use in hazardous environments. Certification requires the explosion proof coil to be sold as a complete cartridge/coil assembly. Coil cannot be purchased separately. For ordering information, please see the coil option section on the applicable cartridge product page.

### TECHNICAL DATA

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Thermal Fuse (non-resettable)	378 °F
Duty Cycle Rating	100 %
Connector	Twin lead 18 AWG X 10 ft. (3 m), 1/2-14 NPT female conduit connector
Lead Wire Rating	AWM styles 3289 150°C - 3271 125°C, 600V VW-1 LL30433 CSA CL1251 125°C or CL1503 150°C, XLPE 600V 18 AWG
Coil Nut Torque	6 - 7 lbf ft

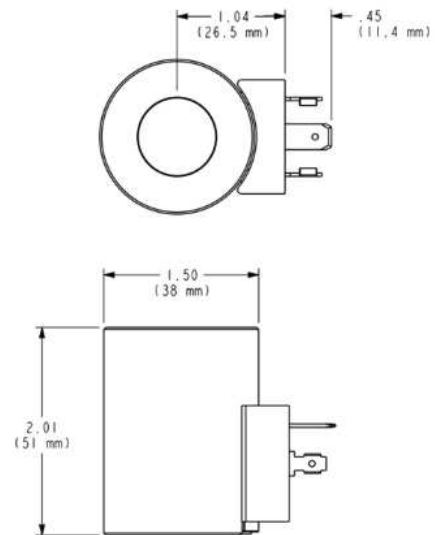
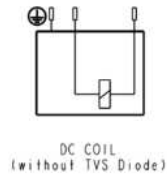
### NOTES

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---

## USED WITH

DAAL	DAALS	DBAL	DBALS	DFCA	DFCB	DFDA	DFDB	DFEA	DFEB
DFFA	DFFB	DLDA	DLDAS	DMDA	DMDAS	DNCA	DNDA	DNDAS	DNDC
DNDY	DNDYS	DTCA	DTDA	DTDAS	DWDA	FMDA	FMDB	FPCC	FPCH
FPHK	FPHK	HDDA	PRDL	PRDM	PRDN	PRDP	PSDL	PSDP	RBAN

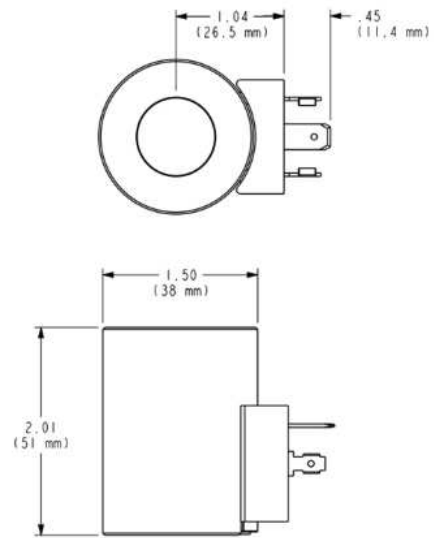
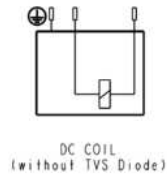


### TECHNICAL DATA

Arc Suppression (TVS)	None
Maximum Ambient Temperature	104 °F
Power Consumption at 68°F (20°C) cold - at rated voltage	36.9 watts
Voltage/Frequency	12 VDC
Operating Voltage Range	+/- 10% nominal
Duty Cycle Rating	100 %
Connector	ISO4400 - EN/DIN175301-803, Form A (ISO/DIN 43650) 3-pin
Coil Nut Torque	3.5 - 3.9 lbf ft

### USED WITH

FNUC

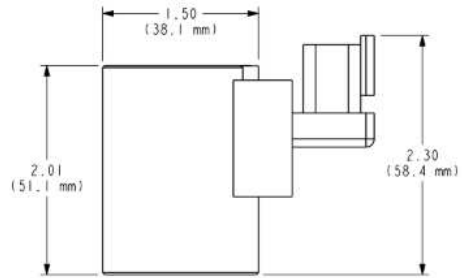
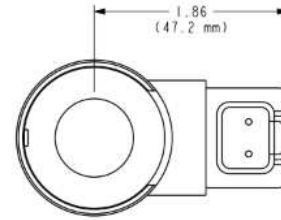
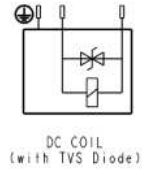


### TECHNICAL DATA

Arc Suppression (TVS)	None
Maximum Ambient Temperature	104 °F
Power Consumption at 68°F (20°C) cold - at rated voltage	39.7 watts
Voltage/Frequency	24 VDC
Operating Voltage Range	+/- 10% nominal
Duty Cycle Rating	100 %
Connector	ISO4400 - EN/DIN175301-803, Form A (ISO/DIN 43650) 3-pin
Coil Nut Torque	3.5 - 3.9 lbf ft

### USED WITH

FNUC

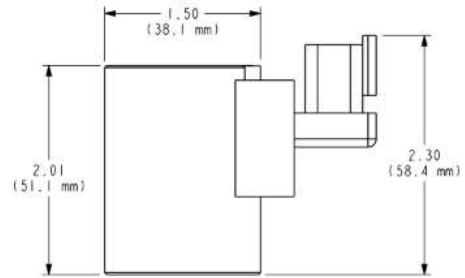
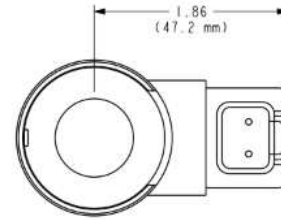
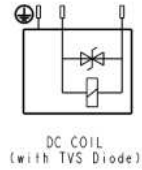


### TECHNICAL DATA

Arc Suppression (TVS)	Included
Maximum Ambient Temperature	104 °F
Power Consumption at 68°F (20°C) cold - at rated voltage	36.9 watts
Voltage/Frequency	12 VDC
Duty Cycle Rating	100 %
Connector	Deutsch DT04-2P
Coil Nut Torque	3.5 - 3.9 lbf ft

### USED WITH

FNUC



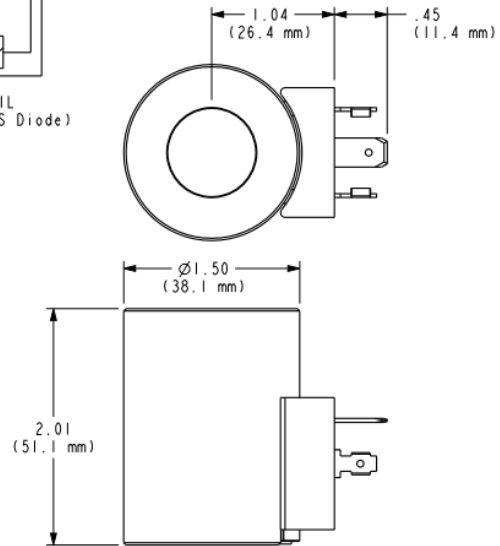
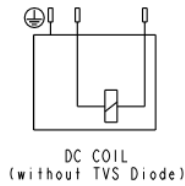
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Arc Suppression (TVS)	Included
Maximum Ambient Temperature	104 °F
Power Consumption at 68°F (20°C) cold - at rated voltage	39.7 watts
Voltage/Frequency	24 VDC
Duty Cycle Rating	100 %
Connector	Deutsch DT04-2P
Coil Nut Torque	3.5 - 3.9 lbf ft

### USED WITH

FNUC



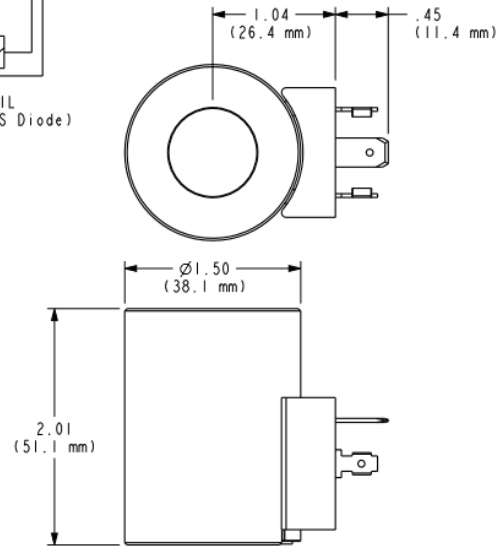
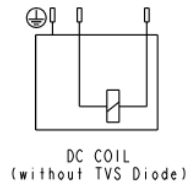


### TECHNICAL DATA

Operating Temperature Range	-4 to 215 °F
Arc Suppression (TVS)	None
Power Consumption (cold) - at rated voltage	24 Watts
Maximum Ambient Temperature	104 °F
Voltage/Frequency	12 VDC
Operating Voltage Range	+/- 10% nominal
Duty Cycle Rating	100 %
Connector	ISO4400 - EN/DIN175301-803, Form A (ISO/DIN 43650) 3-pin
Coil Nut Torque	44 lbf in.

### USED WITH

DNUC

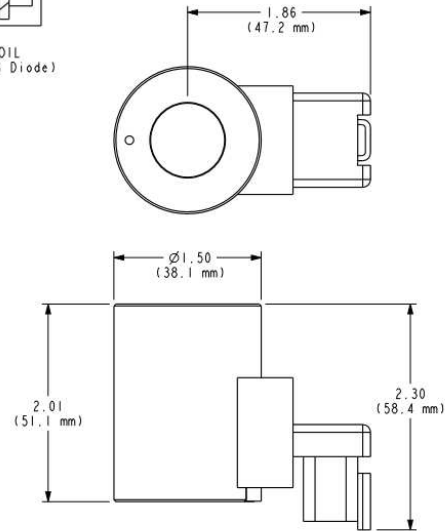
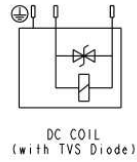
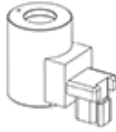


### TECHNICAL DATA

Operating Temperature Range	-4 to 215 °F
Arc Suppression (TVS)	None
Power Consumption (cold) - at rated voltage	24 Watts
Maximum Ambient Temperature	104 °F
Voltage/Frequency	24 VDC
Operating Voltage Range	+/- 10% nominal
Duty Cycle Rating	100 %
Connector	ISO4400 - EN/DIN175301-803, Form A (ISO/DIN 43650) 3-pin
Coil Nut Torque	44 lbf in.

### USED WITH

DNUC

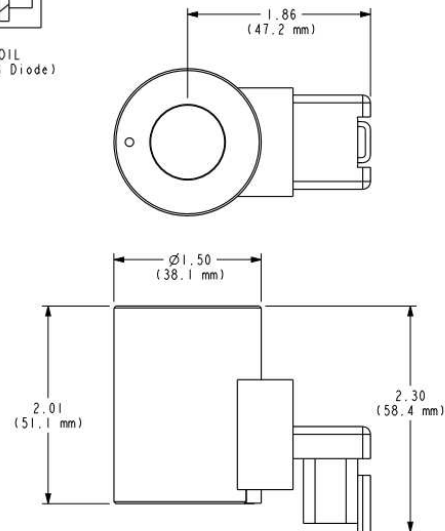
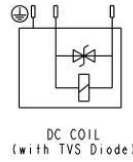
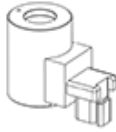


### TECHNICAL DATA

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Voltage/Frequency	12 VDC
Operating Voltage Range	+/- 10% nominal
Duty Cycle Rating	100 %
Connector	Deutsch DT04-2P
Coil Nut Torque	44 lbf in.

### USED WITH

DNUC

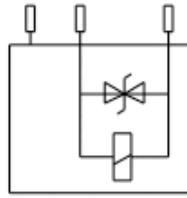


### TECHNICAL DATA

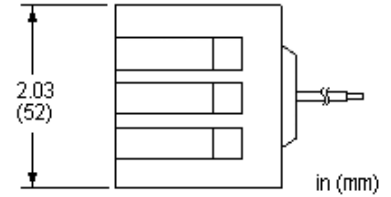
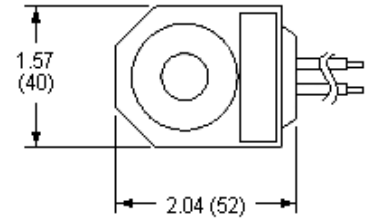
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Power Consumption (cold) - at rated voltage	24 Watts
Maximum Ambient Temperature	104 °F
Voltage/Frequency	24 VDC
Operating Voltage Range	+/- 10% nominal
Duty Cycle Rating	100 %
Connector	Deutsch DT04-2P
Coil Nut Torque	44 lbf in.

### USED WITH

DNUC



DC Coil

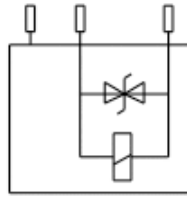


**TECHNICAL DATA**

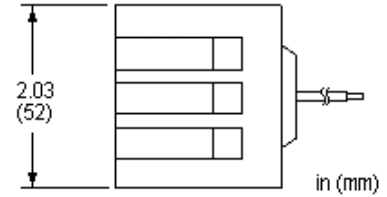
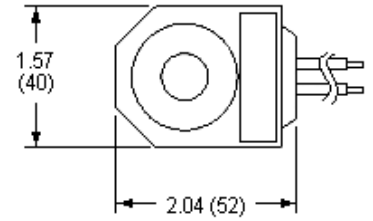
Maximum Coil Temperature at 68°F (20°C) Ambient	221°F (105°C)
Arc Suppression (TVS)	Included
Power Consumption (cold) - at rated voltage	22 watts
Maximum Ambient Temperature	122 °F
Voltage/Frequency	12 VDC
Operating Voltage Range	+/- 10% nominal
Duty Cycle Rating	100 %
Connector	Twin lead 18 AWG x 24 in. (610 mm)
Coil Nut Torque	44 lbf in.

**USED WITH**

DLUT      DMUQ      DMUT      DNUT



DC Coil

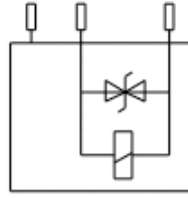


**TECHNICAL DATA**

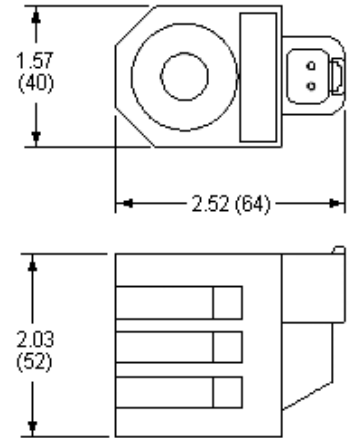
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Coil Nut Torque	44 lbf in.

**USED WITH**

DLUT      DMUQ      DMUT      DNUT



DC Coil

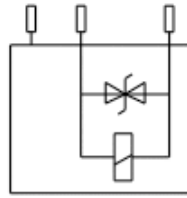


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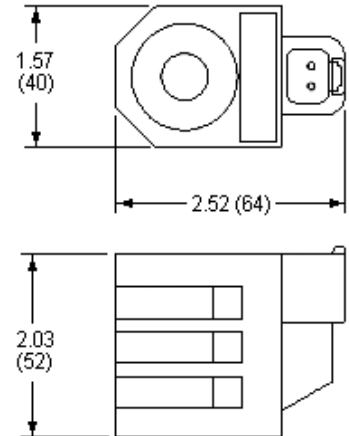
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Maximum Ambient Temperature	122 °F
Voltage/Frequency	12 VDC
Operating Voltage Range	+/- 10% nominal
Duty Cycle Rating	100 %
Connector	Deutsch DT04-2P
Coil Nut Torque	44 lbf in.

**USED WITH**

DLUT      DMUQ      DMUT      DNUT



DC Coil



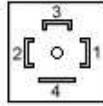
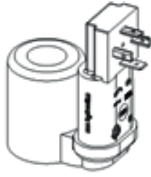
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Coil Nut Torque	44 lbf in.

**USED WITH**

DLUT      DMUQ      DMUT      DNUT





DIN 43650-Form A Connector

Terminal	Function
1	Supply Common
2	+V Supply
3	Command Input
4	790-2B***-Command Common
4	790-2C***-+5V Reference
4	790-2D***-Enable Input



The Embedded Electronics Amplifier is a compact, low profile coil/controller combination for use with proportional solenoid valves. The Amplifier provides current to the coil in proportion to an input signal. Bright LED indicators on the unit provide an overview of the operating status. Setup is accomplished through Sun's Amplifier Set Up Software or the Hand Held Programmer (HHP). There is no cover to remove and no tiny pots to set. Once configured, the settings are stored in permanent memory within the unit.

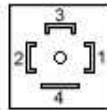
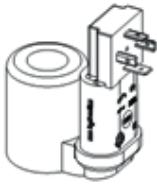
**TECHNICAL DATA**

Supply Voltage	Equals coil voltage within +/-10%
Output Current	1200 mA
Dither Frequency	Off, 80-300 Hz, in 20 Hz increments
Operating Temperature Range	-4 - 158 °F
Analog Input Range	0-10V
Analog Input Impedance	13 Kilo-ohms
Card Function	Ground Option
Voltage/Frequency	12 VDC
Connector	ISO/DIN 43650, Form A, 4-pin
Connector Environment Rating	IP65

**NOTES** A source type input is required. A sinking type analog input will damage the amplifier.

**USED WITH**

- |      |      |      |      |        |        |        |      |      |      |
|------|------|------|------|--------|--------|--------|------|------|------|
| FMDA | FMDB | FPCC | FPCH | FPFK   | FPHK   | PRDL   | PRDM | PRDN | PRDP |
| PSDL | PSDP | RBAN | RBAP | 991700 | 991702 | 991704 |      |      |      |



DIN 43650-Form A Connector

Terminal	Function
1	Supply Common
2	+V Supply
3	Command Input
4	790-2B***-Command Common
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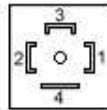
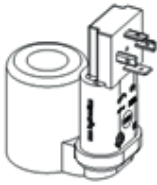
### TECHNICAL DATA

Supply Voltage	Equals coil voltage within +/-10%
Output Current	600 mA
Dither Frequency	Off, 80-300 Hz, in 20 Hz increments
Operating Temperature Range	-4 - 158 °F
Analog Input Range	0-20 mA
Analog Input Impedance	250 ohms
Card Function	Ground Option
Voltage/Frequency	24 VDC
Connector	ISO/DIN 43650, Form A, 4-pin
Connector Environment Rating	IP65

**NOTES** A source type input is required. A sinking type analog input will damage the amplifier.

### USED WITH

FMDA    FMDB    FPCC    FPCH    FPFK    FPHK    PRDL    PRDM    PRDN    PRDP  
 PSDL    PSDP    RBAN    RBAP    991700    991702    991704



DIN 43650-Form A Connector

Terminal	Function
1	Supply Common
2	+V Supply
3	Command Input
4	790-2B***-Command Common
4	790-2C***-+5V Reference
4	790-2D***-Enable Input



The Embedded Electronics Amplifier is a compact, low profile coil/controller combination for use with proportional solenoid valves. The Amplifier provides current to the coil in proportion to an input signal. Bright LED indicators on the unit provide an overview of the operating status. Setup is accomplished through Sun's Amplifier Set Up Software or the Hand Held Programmer (HHP). There is no cover to remove and no tiny pots to set. Once configured, the settings are stored in permanent memory within the unit.

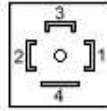
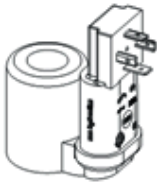
### TECHNICAL DATA

Supply Voltage	Equals coil voltage within +/-10%
Output Current	600 mA
Dither Frequency	Off, 80-300 Hz, in 20 Hz increments
Operating Temperature Range	-4 - 158 °F
Analog Input Range	0-10V
Analog Input Impedance	13 Kilo-ohms
Card Function	Ground Option
Voltage/Frequency	24 VDC
Connector	ISO/DIN 43650, Form A, 4-pin
Connector Environment Rating	IP65

**NOTES** A source type input is required. A sinking type analog input will damage the amplifier.

### USED WITH

FMDA    FMDB    FPCC    FPCH    FPFK    FPHK    PRDL    PRDM    PRDN    PRDP  
 PSDL    PSDP    RBAN    RBAP    991700    991702    991704



DIN 43650-Form A Connector

Terminal	Function
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2	+V Supply
3	Command Input
4	790-2B***-Command Common
4	790-2C***-+5V Reference
4	790-2D***-Enable Input



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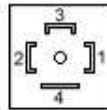
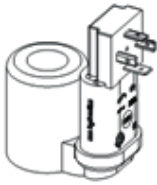
### TECHNICAL DATA

Supply Voltage	Equals coil voltage within +/-10%
Output Current	600 mA
Dither Frequency	Off, 80-300 Hz, in 20 Hz increments
Reference Voltage	+5V at 1mA
Operating Temperature Range	-4 - 158 °F
Analog Input Range	0-10V
Analog Input Impedance	13 Kilo-ohms
Card Function	+5V Reference Option
Voltage/Frequency	24 VDC
Connector	ISO/DIN 43650, Form A, 4-pin
Connector Environment Rating	IP65

**NOTES** A source type input is required. A sinking type analog input will damage the amplifier.

### USED WITH

FMDA	FMDB	FPCC	FPCH	FPFK	FPHK	PRDL	PRDM	PRDN	PRDP
PSDL	PSDP	RBAN	RBAP	991700	991702	991704			



DIN 43650-Form A Connector

Terminal	Function
1	Supply Common
2	+V Supply
3	Command Input
4	790-2B***-Command Common
4	790-2C***-+5V Reference
4	790-2D***-Enable Input



The Embedded Electronics Amplifier is a compact, low profile coil/controller combination for use with proportional solenoid valves. The Amplifier provides current to the coil in proportion to an input signal. Bright LED indicators on the unit provide an overview of the operating status. Setup is accomplished through Sun's Amplifier Set Up Software or the Hand Held Programmer (HHP). There is no cover to remove and no tiny pots to set. Once configured, the settings are stored in permanent memory within the unit.

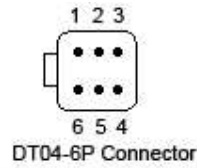
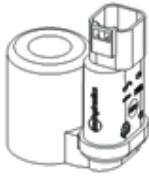
### TECHNICAL DATA

Supply Voltage	Equals coil voltage within +/-10%
Output Current	600 mA
Dither Frequency	Off, 80-300 Hz, in 20 Hz increments
Operating Temperature Range	-4 - 158 °F
Analog Input Range	0-10V
Analog Input Impedance	13 Kilo-ohms
Card Function	Enable Signal Option
Voltage/Frequency	24 VDC
Connector	ISO/DIN 43650, Form A, 4-pin

**NOTES** A source type input is required. A sinking type analog input will damage the amplifier.

### USED WITH

FMDA      FMDB      FPCC      FPCH      FPFK      FPHK      PRDL      PRDM      PRDN      PRDP  
 PSDL      PSDP      RBAN      RBAP      991700      991702      991704



Terminal	Function
1	+V Supply
2	Command Input
3	Supply Common
4	+5 V Reference
5	Command Common
6	Enable



The Embedded Electronics Amplifier is a compact, low profile coil/controller combination for use with proportional solenoid valves. The Amplifier provides current to the coil in proportion to an input signal. Bright LED indicators on the unit provide an overview of the operating status. Setup is accomplished through Sun's Amplifier Set Up Software or the Hand Held Programmer (HHP). There is no cover to remove and no tiny pots to set. Once configured, the settings are stored in permanent memory within the unit.

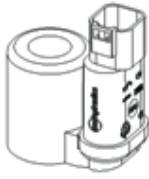
### TECHNICAL DATA

Supply Voltage	Equals coil voltage within +/-10%
Output Current	1200 mA
Dither Frequency	Off, 80-300 Hz, in 20 Hz increments
Reference Voltage	+5V at 1mA
Operating Temperature Range	-20 to 70 °C
Analog Input Range	0-10V
Analog Input Impedance	13 Kilo-ohms
Card Function	All Options
Voltage/Frequency	12 VDC
Connector	Deutsch DT04-6P

**NOTES** A source type input is required. A sinking type analog input will damage the amplifier.

### USED WITH

FMDA    FMDB    FPCC    FPCH    FPFK    FPHK    PRDL    PRDM    PRDN    PRDP  
 PSDL    PSDP    RBAN    RBAP    991700    991702    991704    991706003    991706006



The Embedded Electronics Amplifier is a compact, low profile coil/controller combination for use with proportional solenoid valves. The Amplifier provides current to the coil in proportion to an input signal. Bright LED indicators on the unit provide an overview of the operating status. Setup is accomplished through Sun's Amplifier Set Up Software or the Hand Held Programmer (HHP). There is no cover to remove and no tiny pots to set. Once configured, the settings are stored in permanent memory within the unit.

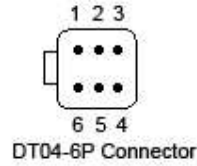
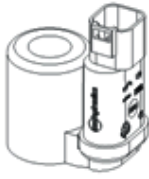
### TECHNICAL DATA

Supply Voltage	Equals coil voltage within +/-10%
Output Current	600 mA
Dither Frequency	Off, 80-300 Hz, in 20 Hz increments
Reference Voltage	+5V at 1mA
Operating Temperature Range	-4 - 158 °F
Analog Input Range	0-20 mA
Analog Input Impedance	250 ohms
Card Function	All Options
Voltage/Frequency	24 VDC
Connector	Deutsch DT04-6P

**NOTES** A source type input is required. A sinking type analog input will damage the amplifier.

### USED WITH

FMDA	FMDB	FPCC	FPCH	FPFK	FPHK	PRDL	PRDM	PRDN	PRDP
PSDL	PSDP	RBAN	RBAP	991700	991702	991704	991706003	991706006	



Terminal	Function
1	+V Supply
2	Command Input
3	Supply Common
4	+5 V Reference
5	Command Common
6	Enable



The Embedded Electronics Amplifier is a compact, low profile coil/controller combination for use with proportional solenoid valves. The Amplifier provides current to the coil in proportion to an input signal. Bright LED indicators on the unit provide an overview of the operating status. Setup is accomplished through Sun's Amplifier Set Up Software or the Hand Held Programmer (HHP). There is no cover to remove and no tiny pots to set. Once configured, the settings are stored in permanent memory within the unit.

### TECHNICAL DATA

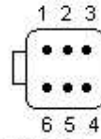
Supply Voltage	Equals coil voltage within +/-10%
Output Current	600 mA
Dither Frequency	Off, 80-300 Hz, in 20 Hz increments
Reference Voltage	+5V at 1mA
Operating Temperature Range	-4 - 158 °F
Analog Input Range	0-10V
Analog Input Impedance	13 Kilo-ohms
Card Function	All Options
Voltage/Frequency	24 VDC
Connector	Deutsch DT04-6P

**NOTES** A source type input is required. A sinking type analog input will damage the amplifier.

### USED WITH

FMDA    FMDB    FPCC    FPCH    FPFK    FPHK    PRDL    PRDM    PRDN    PRDP  
 PSDL    PSDP    RBAN    RBAP    991700    991702    991704    991706003    991706006





DT04-6P Connector

Terminal	Function
1	+ V Supply
2	No Connection
3	Supply Common
4	No Connection
5	No Connection
6	No Connection



The Power Saver is a compact, low profile coil/controller combination for use with switching solenoid valves. The Power Saver controls current to the coil to minimize power consumption. Bright LED indicators on the unit provide an overview of the operating status. Setup is accomplished through Sun's Amplifier Set Up Software or the Hand Held Programmer (HHP). There is no cover to remove and no tiny pots to set. Once configured, the settings are stored in permanent memory within the unit. The Power Saver is intended for use on continuous duty applications (minimum switches between on and off).

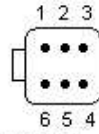
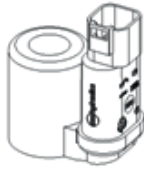
### TECHNICAL DATA

Supply Voltage	Equals coil voltage within +/-10%
Operating Temperature Range	-4 - 158 °F
Analog Input Impedance	13 Kilo-ohms
Card Function	Power Saver
Output Current for 6 seconds (max.)	2000 mA
Output Current for holding (max.)	1600 mA
Voltage/Frequency	12 VDC
Connector	Deutsch DT04-6P

**NOTES** A source type input is required. A sinking type analog input will damage the amplifier.

### USED WITH

DAAL	DAALS	DBAL	DBALS	DFDA	DLDA	DL DAS	DMDA	DMDAS	DNCA
DNDA	DNDAS	DNDC	DNDY	DNDYS	DTCA	DTDA	DWDA	HDDA	991700
991702	991704	991706003	991706006						



DT04-6P Connector

Terminal	Function
1	+ V Supply
2	No Connection
3	Supply Common
4	No Connection
5	No Connection
6	No Connection



The Power Saver is a compact, low profile coil/controller combination for use with switching solenoid valves. The Power Saver controls current to the coil to minimize power consumption. Bright LED indicators on the unit provide an overview of the operating status. Setup is accomplished through Sun's Amplifier Set Up Software or the Hand Held Programmer (HHP). There is no cover to remove and no tiny pots to set. Once configured, the settings are stored in permanent memory within the unit. The Power Saver is intended for use on continuous duty applications (minimum switches between on and off).

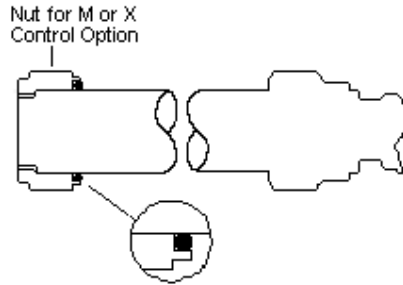
### TECHNICAL DATA

Supply Voltage	Equals coil voltage within +/-10%
Operating Temperature Range	-4 to 158 °F
Analog Input Impedance	13 Kilo-ohms
Card Function	Power Saver
Output Current for 6 seconds (max.)	2000 mA
Output Current for holding (max.)	1600 mA
Voltage/Frequency	24 VDC
Connector	Deutsch DT04-6P

**NOTES** A source type input is required. A sinking type analog input will damage the amplifier.

### USED WITH

DAALS    DBALS    DFDA    DLDAS    DMDA    DMDAS    DNCA    DNDA    DNDAS    DNDC  
 DNDY    DNDYS    DTCA    HDDA    991700    991702    991704    991706003    991706006



Sun coil seal kits for full flow and proportional solenoid operated cartridges contain all replacement seals, a replacement coil nut and installation instructions. Please note: All seals contained in a coil seal kit are constructed of Viton.

**USED WITH**

- |      |      |      |      |      |      |      |      |      |      |
|------|------|------|------|------|------|------|------|------|------|
| DMDA | DNCA | DNDA | DNDC | DNDY | DTCA | FMDA | FMDB | FPCC | FPCH |
| FPFK | FPHK | HDDA | PRDL | PRDM | PRDN | PRDP | PSDL | PSDP | RBAN |
| RBAP |      |      |      |      |      |      |      |      |      |



Sun's Hand Held Programmer (HHP) provides a convenient method to access configuration settings in Sun's 790 Series Embedded Digital Proportional Valve Amplifier. Simply plug the adapter cable into the programmer and connect the infrared-end into the embedded electronics coil and it is ready to use. The programmer is lightweight and compact for easy handling.

**TECHNICAL DATA**

Supply Voltage	9 VDC (requires standard 9 Volt battery/format EN22, 6LR61, 6AM6)
Operating Temperature Range	0 to 70 °C

**USED WITH**

7902B12A	7902B12V	7902B24A	7902B24V	7902C12V	7902C24V	7902D12A	7902D24A	7902D24V	7902E12V
7902E24V	7902F12V	7902F24V	7904A12A	7904A12V	7904A24A	7904A24V	7904E12V	7904E24V	7904F12V
7904F24V	991702	991704							



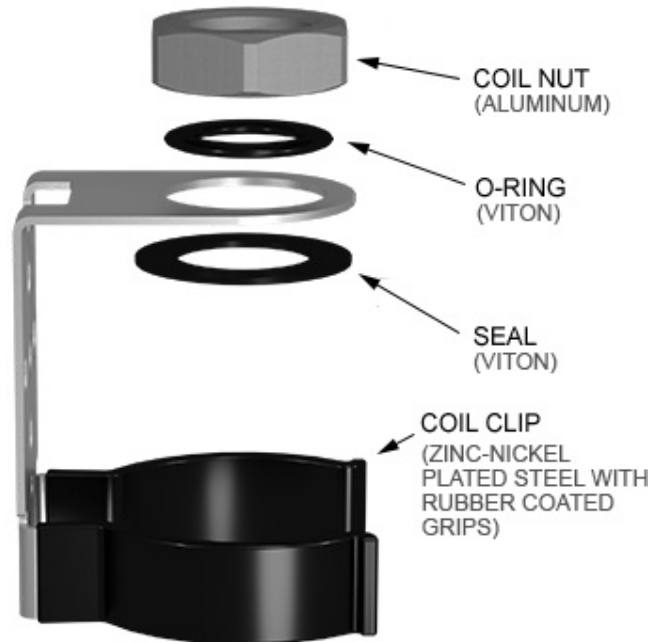
Sun's USB Infrared Cable Adapter provides a convenient interface between Sun's 790 Series Embedded Digital Proportional Valve Amplifier and a Windows based PC. Included with the Cable Adaptor is a USB memory key containing Sun's Amplifier Set Up Software.

**TECHNICAL DATA**

Supply Voltage	USB port powered
Operating Temperature Range	-4 - 140 °F
Cable Length	6 ft

**USED WITH**

- |          |          |          |          |          |          |          |          |          |          |
|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| 7902B12A | 7902B12V | 7902B24A | 7902B24V | 7902C12V | 7902C24V | 7902D12A | 7902D24A | 7902D24V | 7902E12V |
| 7902E24V | 7902F12V | 7902F24V | 7904A12A | 7904A12V | 7904A24A | 7904A24V | 7904E12V | 7904E24V | 7904F12V |
| 7904F24V |          |          |          |          |          |          |          |          |          |



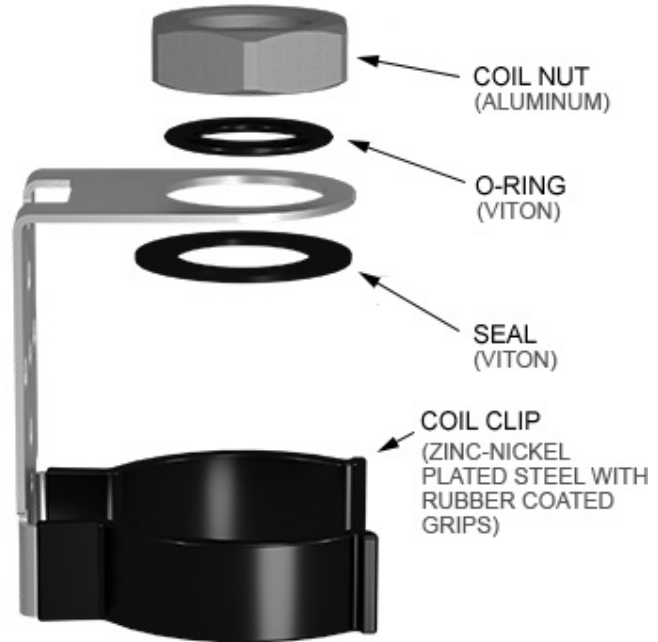
This coil clip kit is designed to attach Sun's XMD Series Driver to the FLeX high-power coil.

**NOTES**

The coil clip included in this kit can also be used to attach to 770 Series coils. For 770 Series coils, the coil nut, o-ring, and seal included in this kit are not needed. Purchase [753073](#) for coil clip by itself.

**USED WITH**

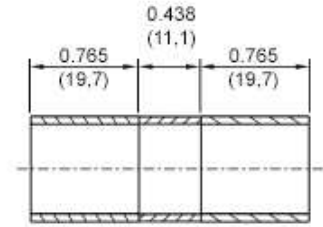
XMD-01      XMD-02



This coil clip kit is designed to attach Sun's XMD Series Driver to the FLeX low-power coil.

**USED WITH**

991711300    991711600    991712300    991712600    991713030    991713060    XMD-01    XMD-02



in (mm)

This kit converts 770-series (19mm) coils to be compatible with 740-series (16mm) coil valves.

**TECHNICAL DATA**

Material	Zinc Nickel Plated Steel
----------	--------------------------





**COIL CLIP**  
(ZINC-NICKEL  
PLATED STEEL WITH  
RUBBER COATED  
GRIPS)

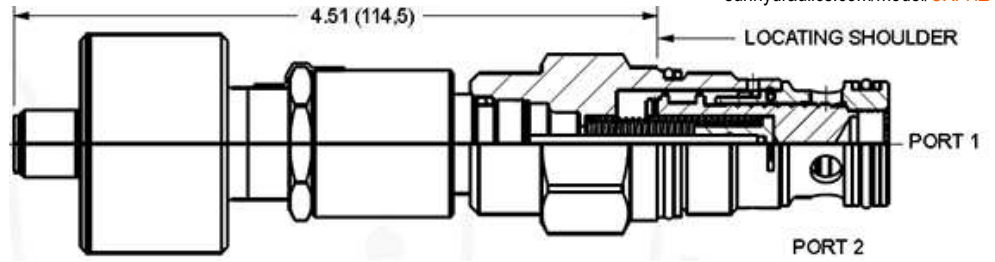
This coil clip is designed to attach Sun's XMD Series Driver to the 770 Series coils. Because it is compatible with the existing 770 series nut, no additional hardware is required.

**NOTES**

This coil clip attaches to both 740 Series high-power and 770 Series coils. For 740 Series high-power coil, purchase kit 991-740-001 which includes required coil nut, o-ring, and seal.

**USED WITH**

770212	770214	770214N	770224	770224N	770228	770714	770724	770912	770914
770914N	770924	770924N	770928						



Free-flow, nose-to-side check valves are on/off circuit components that allow free flow from the inlet (port 1) to the outlet (port 2) and block flow in the opposite direction.

This valve incorporates a position switch to provide confirmation that the valve is in the transition position or seated (closed).

**TECHNICAL DATA**

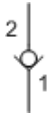
NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	5000 psi
Maximum Valve Leakage at 110 SUS (24 cSt)	1 drops/min.
Transition leakage at 110 SUS (24 cSt)	2 in <sup>3</sup> /min. @1000 psi
Seal kit - Cartridge	Buna: 990203007
Seal kit - Cartridge	Viton: 990203006

**CONFIGURATION OPTIONS**

Model Code Example: **CXFHZCN**

CRACKING PRESSURE	(C)	SEAL MATERIAL	(N)
<b>C</b> 30 psi (2 bar)		<b>N</b> Buna-N	
A 4 psi (0,3 bar)		V Viton	



Free-flow, nose-to-side check valves are on/off circuit components that allow free flow from the inlet (port 1) to the outlet (port 2) and block flow in the opposite direction.

This valve incorporates a position switch to provide confirmation that the valve is in the transition position or seated (closed).

**TECHNICAL DATA**

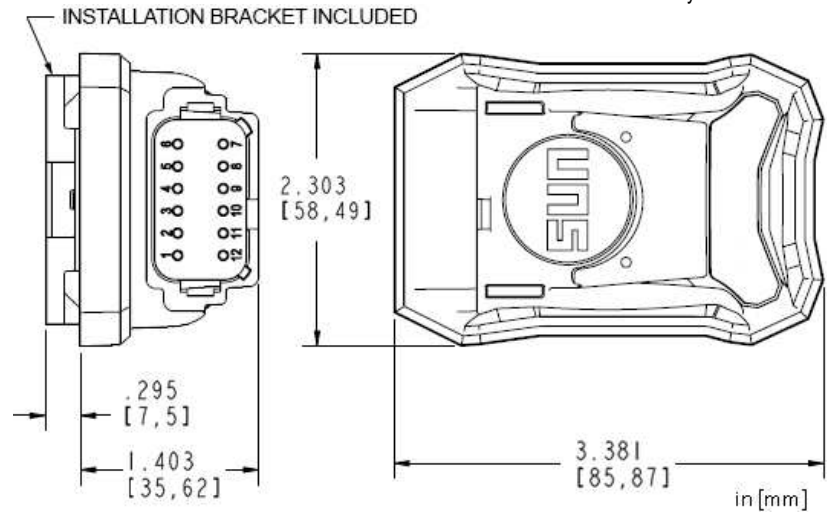
NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	5000 psi
Maximum Valve Leakage at 110 SUS (24 cSt)	1 drops/min.
Transition leakage at 110 SUS (24 cSt)	2 in <sup>3</sup> /min.@1000 psi
Seal kit - Cartridge	Buna: 990016007
Seal kit - Cartridge	Polyurethane: 990016002
Seal kit - Cartridge	Viton: 990016006

**CONFIGURATION OPTIONS**

**Model Code Example: CXHHZCN**

<b>CRACKING PRESSURE</b>	<b>(C)</b>	<b>SEAL MATERIAL</b>	<b>(N)</b>
<b>C</b> 30 psi (2 bar)		<b>N</b> Buna-N	
<b>A</b> 4 psi (0,3 bar)		<b>V</b> Viton	



Terminal	Function
1	CAN_LO
2	CAN_HI
3	GND (Output & 5Vref)
4	No Connection
5	GND (Output & 5Vref)
6	PWM Output, Coil A

Terminal	Function
7	Supply GND
8	Supply PWR
9	Enable
10	+5Vref
11	Universal Input 1
12	No Connection



The XMD module is an electro-hydraulic driver for use with mobile and industrial hydraulic equipment. It is configurable using Sun's free CANpoint XMD Configuration Software and a CAN-to-USB interface cable connected to a computer or via the XMD Mobile app. The XMD driver can control a variety of electrically operated hydraulic actuators used in applications for on- and off-highway equipment including but not limited to agriculture, forestry, construction, marine, earth moving, and material handling. Tuned for optimal flow and pressure control using Sun valves, the XMD driver delivers repeatable and reliable results for your demanding applications.

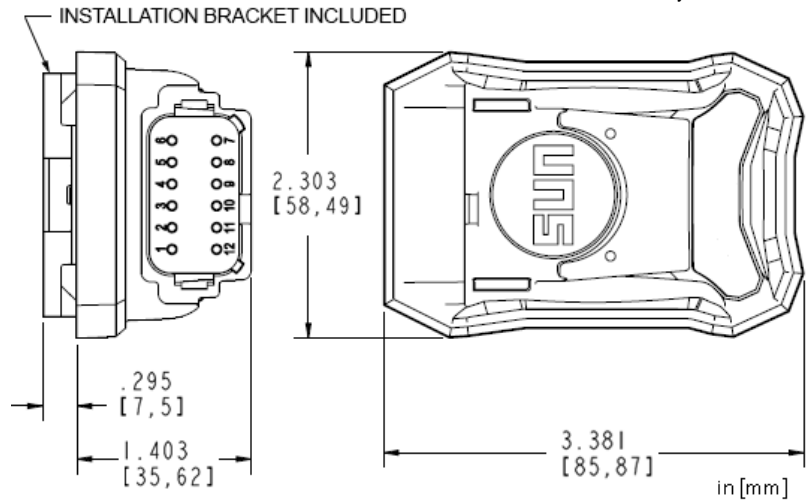
### TECHNICAL DATA

Supply Voltage	9-32 VDC
Number of Outputs	1
Output Current	0 to 3000 mA
Dither Frequency	33-500 Hz
Number of Universal Inputs	1
Input Range	0-5V, 0-10V, 4-20 mA, digital, pulse (60 Hz-10 kHz), PWM (60 Hz-10 kHz), resistive (0-100 kΩ)
Reference Voltage	5 Vdc, ±0.1 Vdc (250 mA max)
Operating Temperature Range	-40 - 85 °C
Vibration	33.3 Hz 6.8g Peak (Spec: S-367 Section 11.0)
Shock	49g Peak (Spec: S-367 Section 12.0)
U.S. Patent #	Pending

**NOTES** Installation bracket and mounting hardware are included. Coil clips for high and low-power FLeX Series coils are sold separately.

### USED WITH

991711300 991711600 991712300 991712600 991713030 991713060 991720300 991720600 991721300 991721600  
991722 991723001 991723002 991728 991740001 991740002 991770001



Terminal	Function
1	CAN_LO
2	CAN_HI
3	GND (Output & 5Vref)
4	PWM Output, Coil B
5	GND (Output & 5Vref)
6	PWM Output, Coil A

Terminal	Function
7	Supply GND
8	Supply PWR
9	Enable
10	+5Vref
11	Universal Input 1
12	Universal Input 2



The XMD module is an electro-hydraulic driver for use with mobile and industrial hydraulic equipment. It is configurable using Sun's free CANpoint XMD Configuration Software and a CAN-to-USB interface cable connected to a computer or via the XMD Mobile app. The XMD driver can control a variety of electrically operated hydraulic actuators used in applications for on- and off-highway equipment including but not limited to agriculture, forestry, construction, marine, earth moving, and material handling. Tuned for optimal flow and pressure control using Sun valves, the XMD driver delivers repeatable and reliable results for your demanding applications.

### TECHNICAL DATA

Supply Voltage	9-32 VDC
Number of Outputs	2
Output Current	0 to 3000 mA
Dither Frequency	33-500 Hz
Number of Universal Inputs	2
Input Range	0-5V, 0-10V, 4-20 mA, digital, pulse (60 Hz-10 kHz), PWM (60 Hz-10 kHz), resistive (0-100 kΩ)
Reference Voltage	5 Vdc, ±0.1 Vdc (250 mA max)
Operating Temperature Range	-40 - 85 °C
Vibration	33.3 Hz 6.8g Peak (Spec: S-367 Section 11.0)
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U.S. Patent #	Pending

### NOTES

Installation bracket and mounting hardware are included. Coil clips for high and low-power FLeX Series coils are sold separately.

### USED WITH

991711300 991711600 991712300 991712600 991713030 991713060 991720300 991720600 991721300 991721600  
991722 991723001 991723002 991728 991740001 991740002 991770001

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