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Cavity Information

Series	Ports	Cavities
Series Z Cartridges 3/8-24 UNF Cartridge Thread 5 mm Valve Hex Size 11 - 14 Nm Valve Installation Torque	3-Port	T-382A
Series P Cartridges 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
Series 0 Cartridges 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
Series 0C Cartridges 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
Series 1 Cartridges 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
Series 1C Cartridges 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
Series 2 Cartridges 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
Series 3 Cartridges 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
Series 4 Cartridges 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

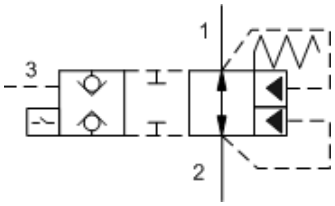
USED WITH

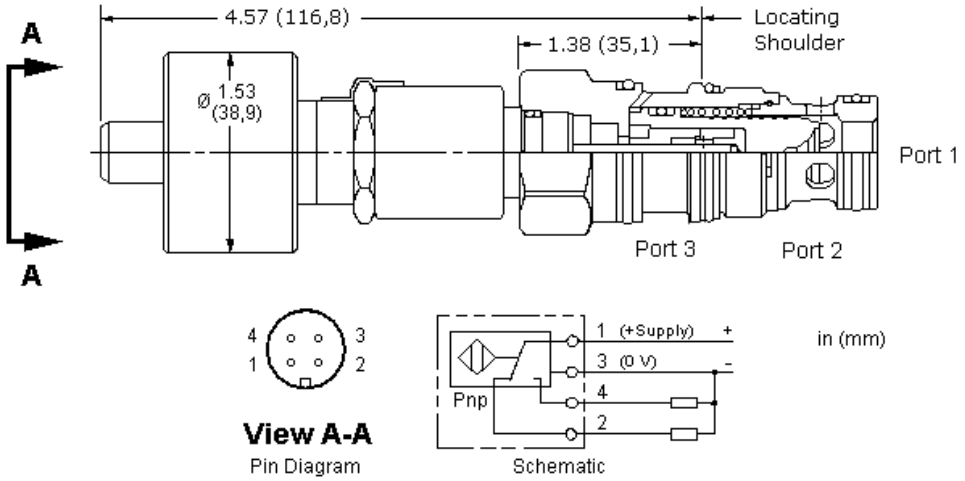
XMD-01 XMD-02

Pilot-to-close, spring-biased open, unbalanced poppet logic element with position switch

SERIES 2 / CAPACITY: 50 gpm / CAVITY: T-2A

sunhydraulics.com/model/LOFOZ





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^3
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

CRACKING PRESSURE (D)

D 50 psi (3,5 bar)

SEAL MATERIAL (N)

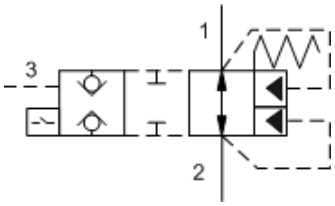
N Buna-N

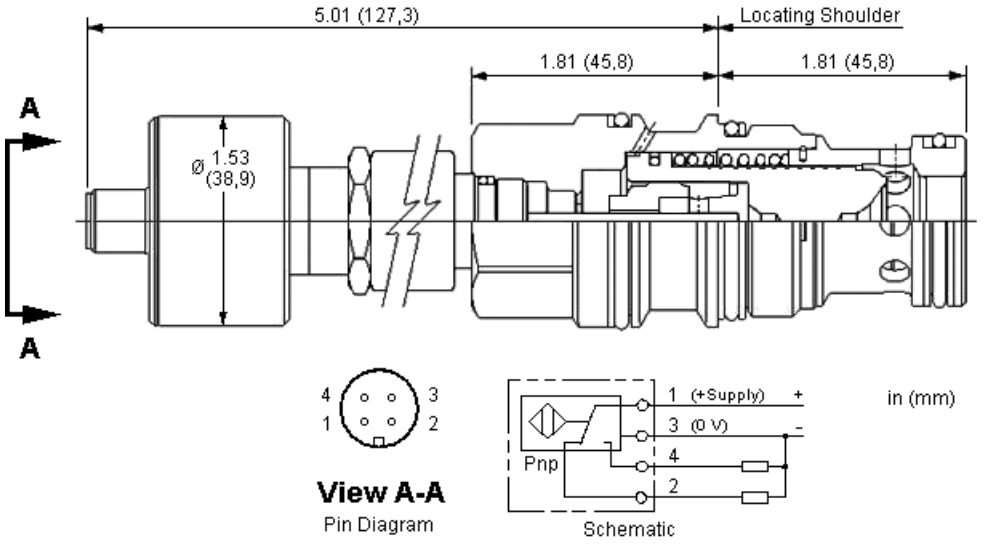
V Viton

Pilot-to-close, spring-biased open, unbalanced poppet logic element with position switch

SERIES 3 / CAPACITY: 100 gpm / CAVITY: T-17A

sunhydraulics.com/model/LOHOZ





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 in³
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

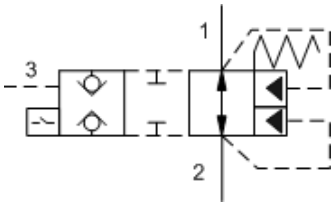
CRACKING PRESSURE	(D)
D 50 psi (3,5 bar)	

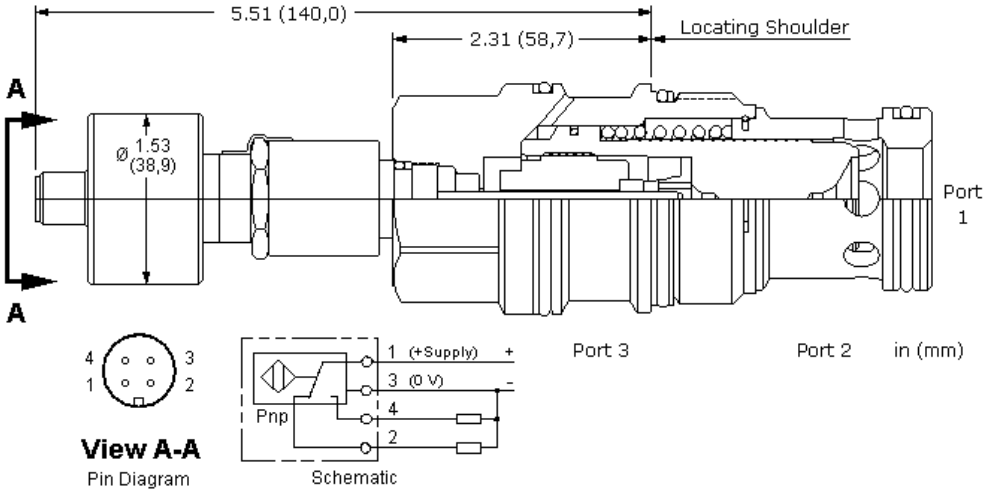
SEAL MATERIAL	(N)
N Buna-N	
V Viton	

Pilot-to-close, spring-biased open, unbalanced poppet logic element with position switch

SERIES 4 / CAPACITY: 200 gpm / CAVITY: T-19A

sunhydraulics.com/model/LOJOZ





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 in³
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

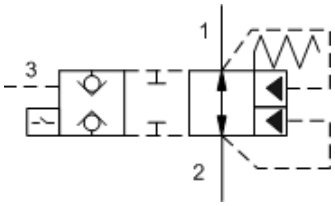
CRACKING PRESSURE	(D)
D 50 psi (3,5 bar)	

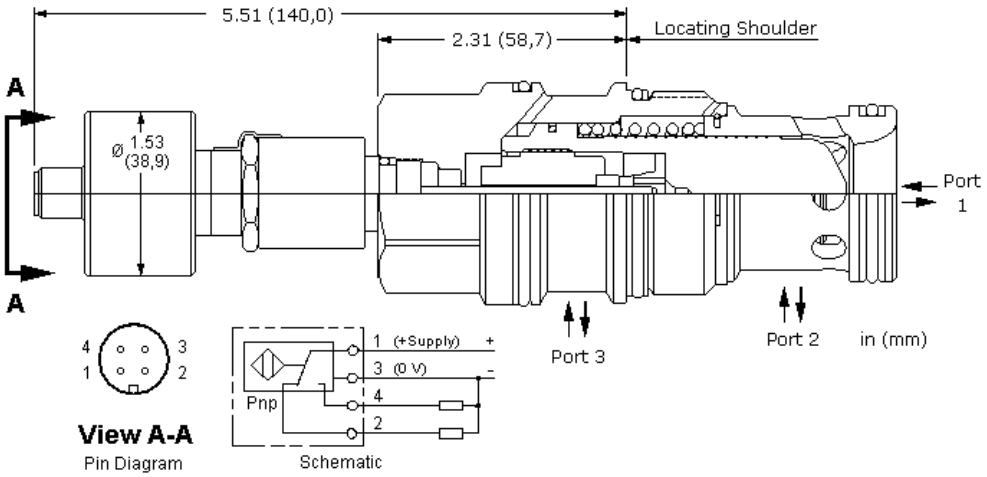
SEAL MATERIAL	(N)
N Buna-N	
V Viton	

Pilot-to-close, spring-biased open, unbalanced poppet logic element with position switch

SERIES 4 / CAPACITY: 300 gpm / CAVITY: T-19AU

sunhydraulics.com/model/LOKOZ





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^3
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

CRACKING PRESSURE (D)

D 50 psi (3,5 bar)

SEAL MATERIAL (N)

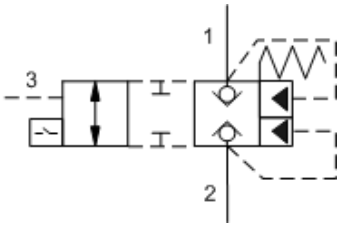
N Buna-N

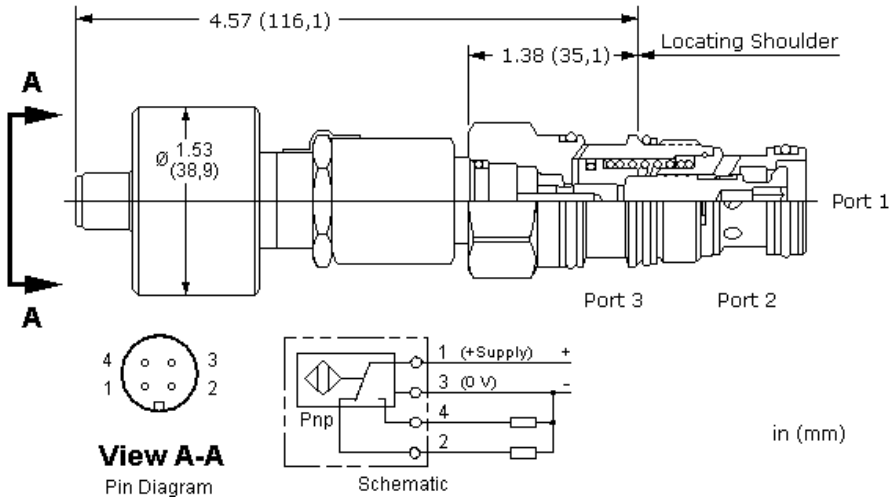
V Viton

Pilot-to-open, spring-biased closed, unbalanced poppet logic element with position switch

SERIES 2 / CAPACITY: 20 gpm / CAVITY: T-2A

sunhydraulics.com/model/LKFCZ





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

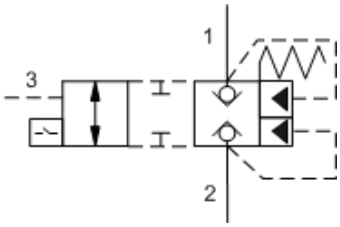
NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	5000 psi
Maximum Valve Leakage at 110 SUS (24 cSt)	1 drops/min.
Pilot Volume Displacement	.06 in³
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 in³/min.@1000 psi
Seal kit - Cartridge	Buna: 990202007
Seal kit - Cartridge	EPDM: 990202014
Seal kit - Cartridge	Polyurethane: 990002002
Seal kit - Cartridge	Viton: 990202006

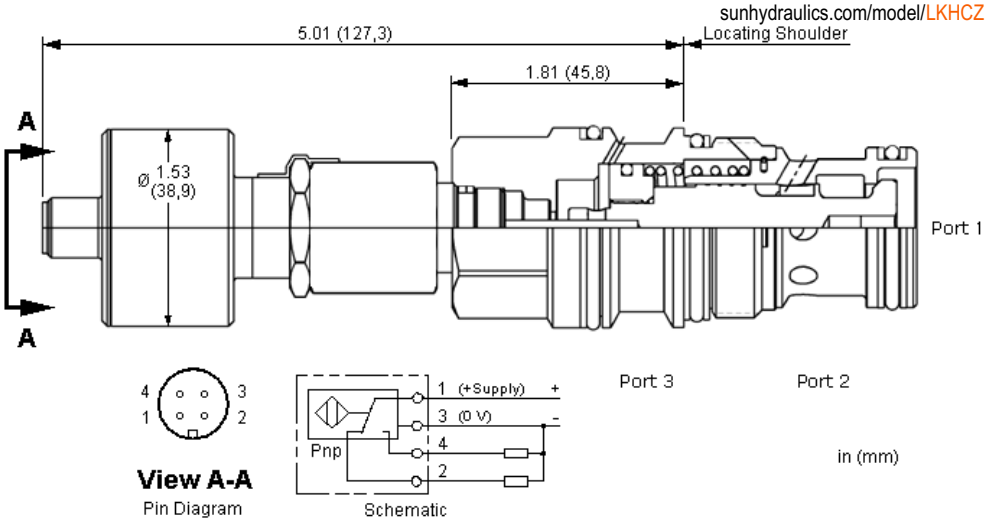
CONFIGURATION OPTIONS

Model Code Example: LKFCZDN

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



sunhydraulics.com/model/LKHCZ



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^3
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^3/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

MINIMUM PILOT PRESSURE (D)

D 50 psi (3,5 bar)

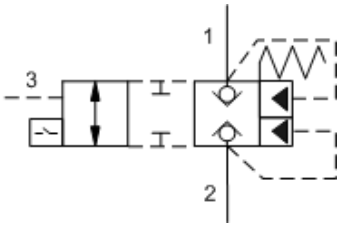
SEAL MATERIAL (N)

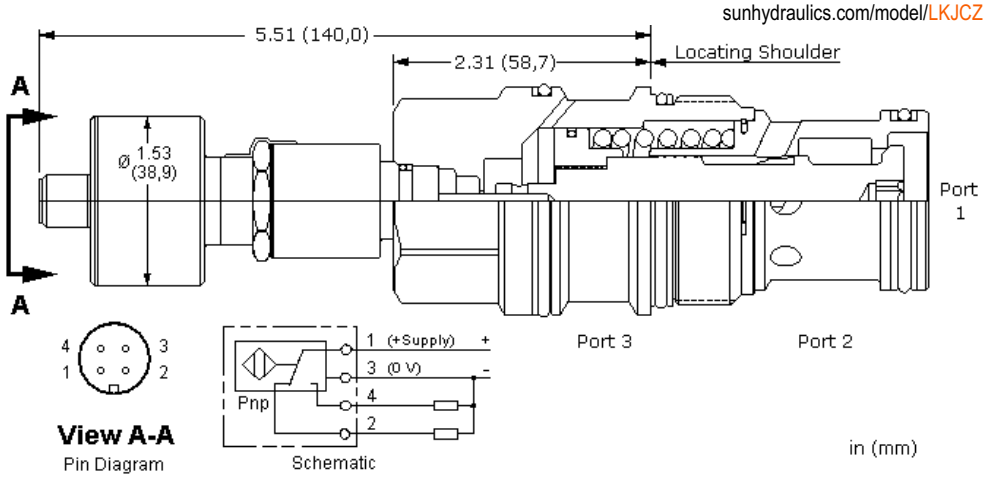
N Buna-N
E EPDM
V Viton

Pilot-to-open, spring-biased closed, unbalanced poppet logic element with position switch

SERIES 4 / CAPACITY: 80 gpm / CAVITY: T-19A

sunhydraulics.com/model/LKJCZ





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 in³
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 in³/min.@1000 psi
Seal kit - Cartridge	Buna: 990019007
Seal kit - Cartridge	Polyurethane: 990019002
Seal kit - Cartridge	Viton: 990019006

CONFIGURATION OPTIONS

Model Code Example: LKJCZDN

MINIMUM PILOT PRESSURE (D)

D 50 psi (3,5 bar)

SEAL MATERIAL (N)

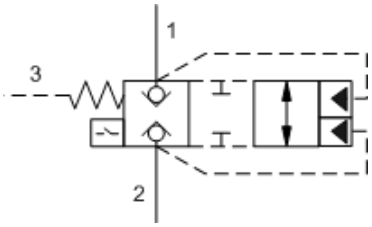
N Buna-N

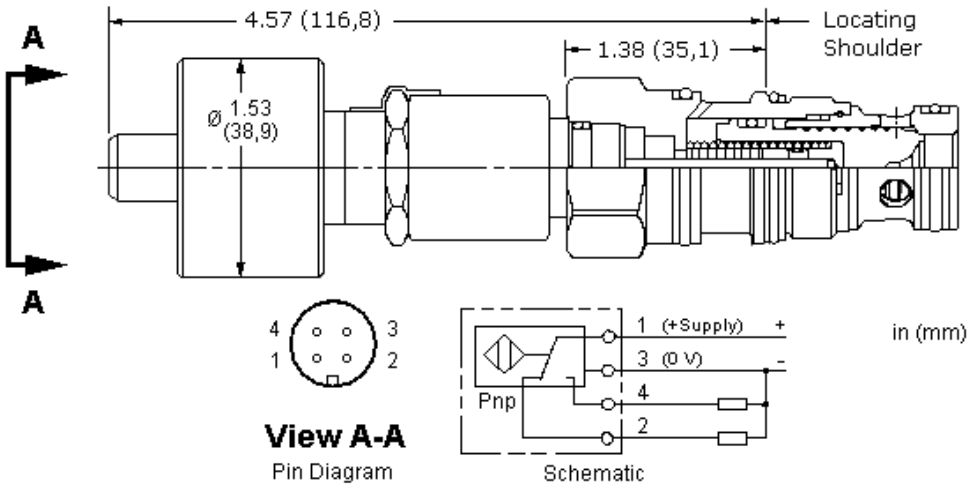
V Viton

Pilot-to-close, spring-biased closed, unbalanced poppet logic element with position switch

SERIES 2 / CAPACITY: 50 gpm / CAVITY: T-2A

sunhydraulics.com/model/LOFCZ





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 in³
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 in³/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)

D 50 psi (3,5 bar)

SEAL MATERIAL (N)

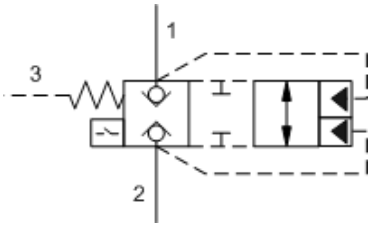
N Buna-N

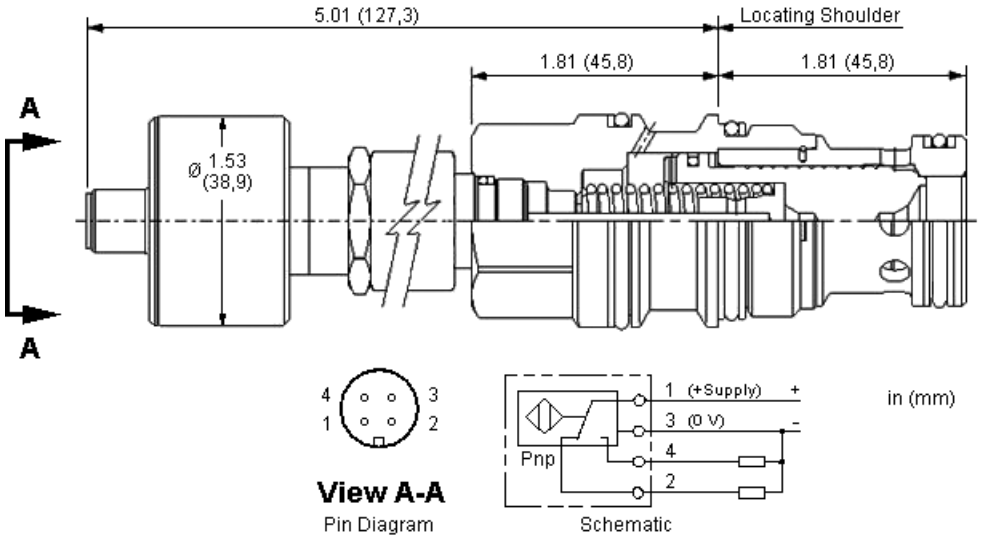
V Viton

Pilot-to-close, spring-biased closed, unbalanced poppet logic element with position switch

SERIES 3 / CAPACITY: 100 gpm / CAVITY: T-17A

sunhydraulics.com/model/LOHCZ





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 in³
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 in³/min.@1000 psi
Seal kit - Cartridge	Buna: 990017007
Seal kit - Cartridge	Polyurethane: 990017002
Seal kit - Cartridge	Viton: 990017006

CONFIGURATION OPTIONS

Model Code Example: LOHCZDN

CRACKING PRESSURE (D)

D 50 psi (3,5 bar)

SEAL MATERIAL (N)

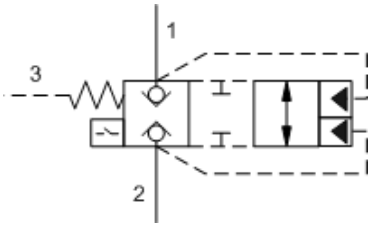
N Buna-N

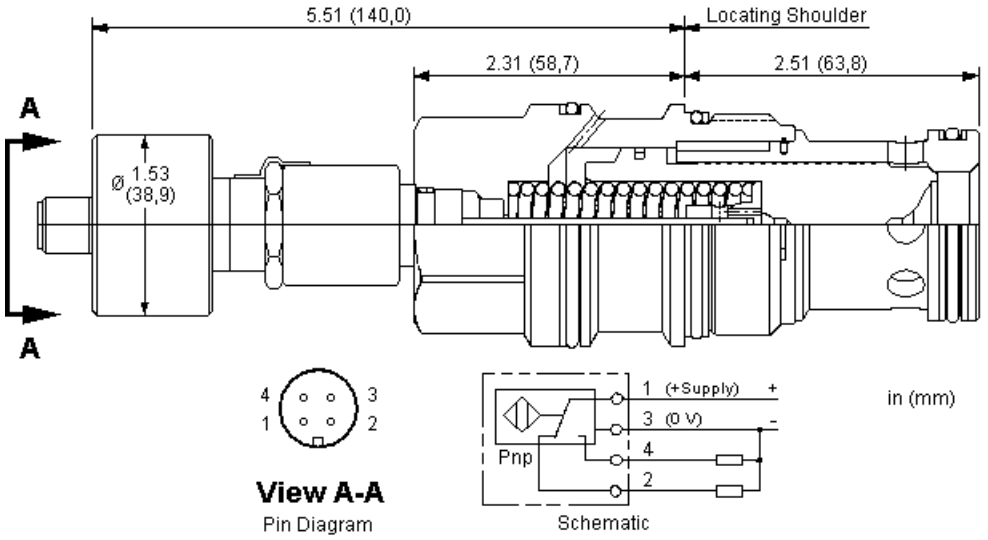
V Viton

Pilot-to-close, spring-biased closed, unbalanced poppet logic element with position switch

SERIES 4 / CAPACITY: 200 gpm / CAVITY: T-19A

sunhydraulics.com/model/LOJCZ





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 in³
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 in³/min.@1000 psi
Seal kit - Cartridge	Buna: 990019007
Seal kit - Cartridge	Polyurethane: 990019002
Seal kit - Cartridge	Viton: 990019006

CONFIGURATION OPTIONS

Model Code Example: LOJCZDN

CRACKING PRESSURE (D)

D 50 psi (3,5 bar)

SEAL MATERIAL (N)

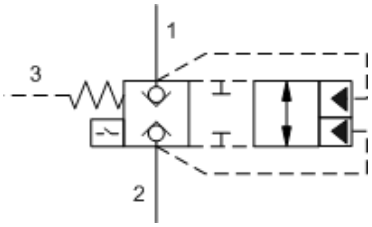
N Buna-N

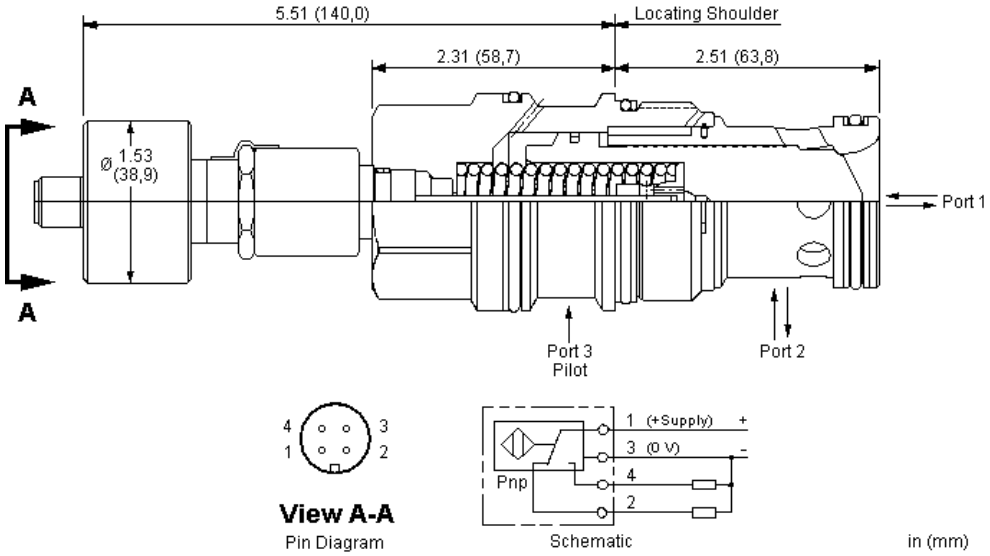
V Viton

Pilot-to-close, spring-biased closed, unbalanced poppet logic element with position switch

SERIES 4 / CAPACITY: 300 gpm / CAVITY: T-19AU

sunhydraulics.com/model/LOKCZ





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 in³
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 in³/min.@1000 psi
Seal kit - Cartridge	Buna: 990019007
Seal kit - Cartridge	Polyurethane: 990019002
Seal kit - Cartridge	Viton: 990019006

CONFIGURATION OPTIONS

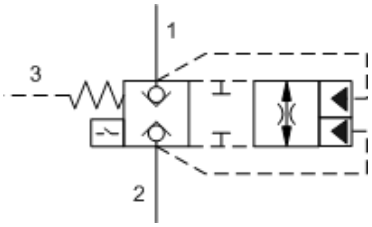
Model Code Example: LOKCZDN

CRACKING PRESSURE	(D)
D 50 psi (3,5 bar)	

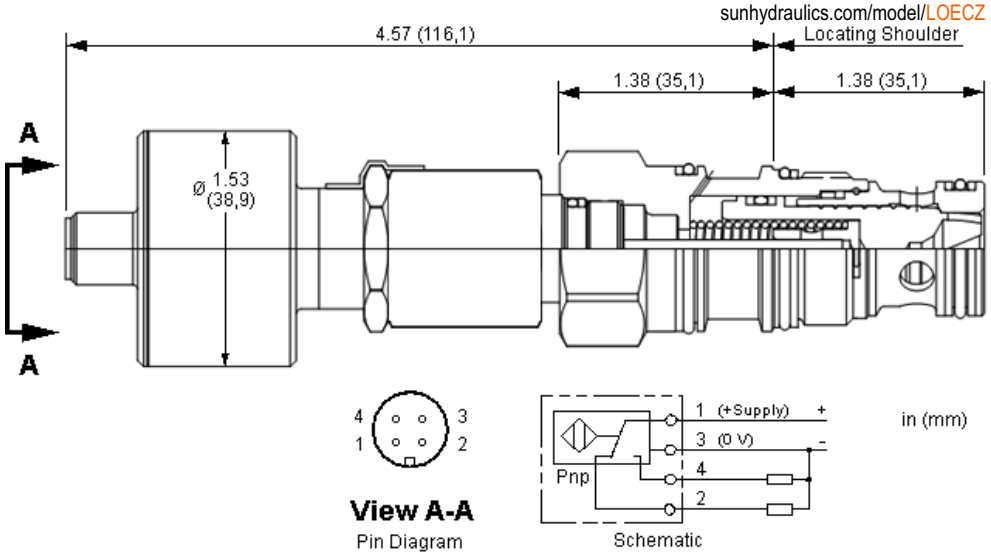
SEAL MATERIAL	(N)
N Buna-N	
V Viton	

Pilot-to-close, spring-biased closed, unbalanced poppet logic element with metering notches and position switch

SERIES 2 / CAPACITY: 12 gpm / CAVITY: T-2A



sunhydraulics.com/model/LOECZ



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^3
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^3/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)

D 50 psi (3,5 bar)

SEAL MATERIAL (N)

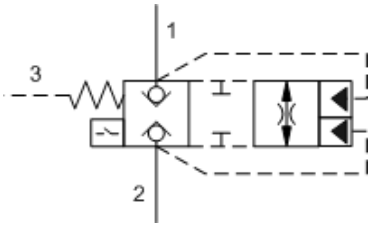
N Buna-N

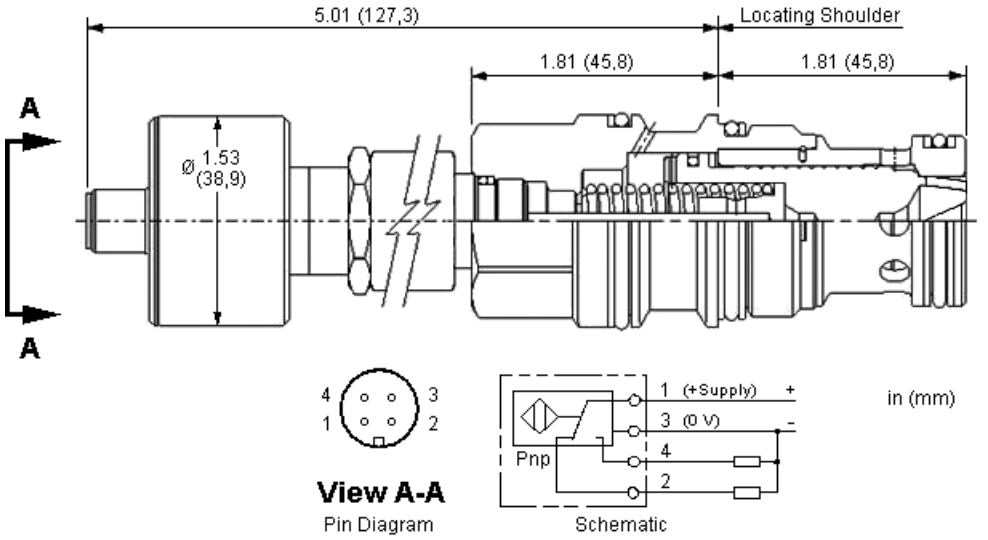
V Viton

Pilot-to-close, spring-biased closed, unbalanced poppet logic element with metering notches and position switch

SERIES 3 / CAPACITY: 40 gpm / CAVITY: T-17A

sunhydraulics.com/model/LOGCZ





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 in³
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 in³/min.@1000 psi
Seal kit - Cartridge	Buna: 990017007
Seal kit - Cartridge	Polyurethane: 990017002
Seal kit - Cartridge	Viton: 990017006

CONFIGURATION OPTIONS

Model Code Example: LOGCZDN

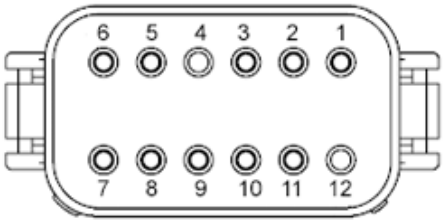
NOMINAL CONTROL PRESSURE (D)

D 50 psi (3,5 bar)

SEAL MATERIAL (N)

N 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

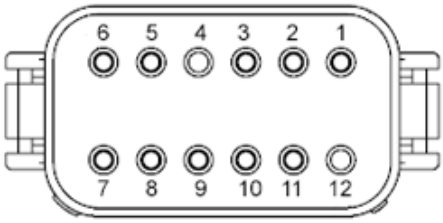
This single-output, 12 Pin Deutsch cable assembly is for use with Sun's XMD-01 electro-hydraulic driver.

TECHNICAL DATA

Connector	Molex 93445-6212, Keying Option A, Grey

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

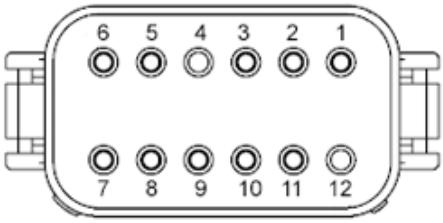
This single-output, 12 Pin Deutsch cable assembly is for use with Sun's XMD-01 electro-hydraulic driver.

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

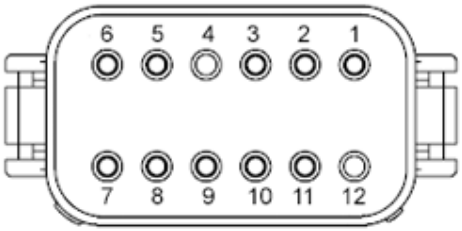
This double-output, 12 Pin Deutsch cable assembly is for use with Sun's XMD-02 electro-hydraulic driver.

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

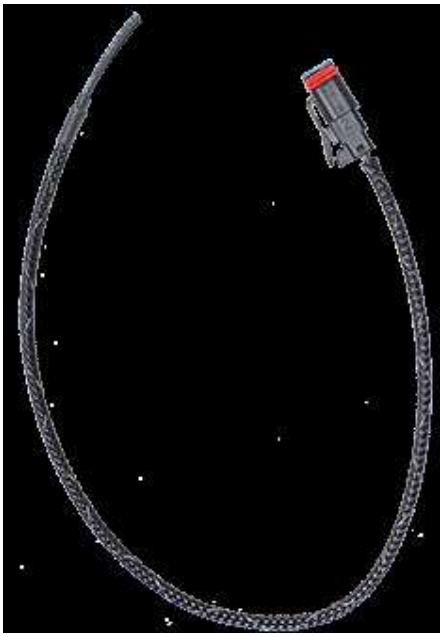
This adapter cable is used to convert Sun's FLeX Series coil with Deutsch connector to Metri-Pack Series 150-2M.

TECHNICAL DATA

Length	7.50 in.

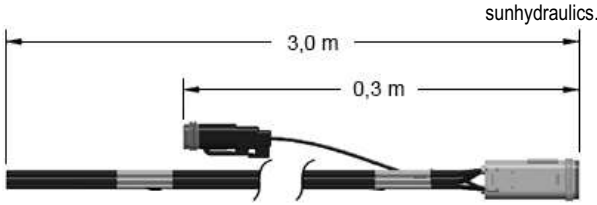
This adapter cable is used to convert Sun's FLeX Series coil with Deutsch connector to AMP Junior Timer.

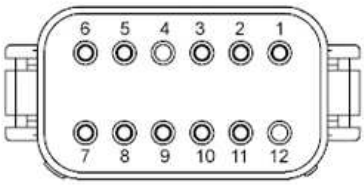
TECHNICAL DATA



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

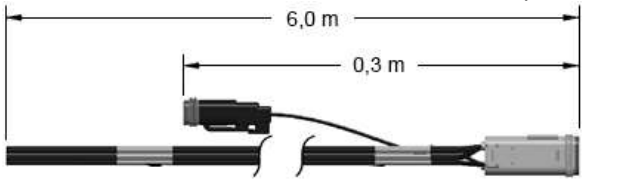
This single-output, 12 Pin Deutsch cable assembly is for use with Sun's XMD-01 electro-hydraulic driver. It comes equipped with a 2-pin Deutsch lead that connects directly to the FLeX or 770 Series Deutsch coils when combined with the coil clip accessory.

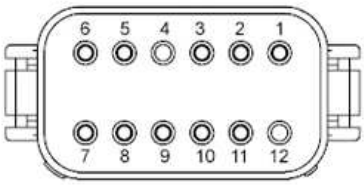
TECHNICAL DATA

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

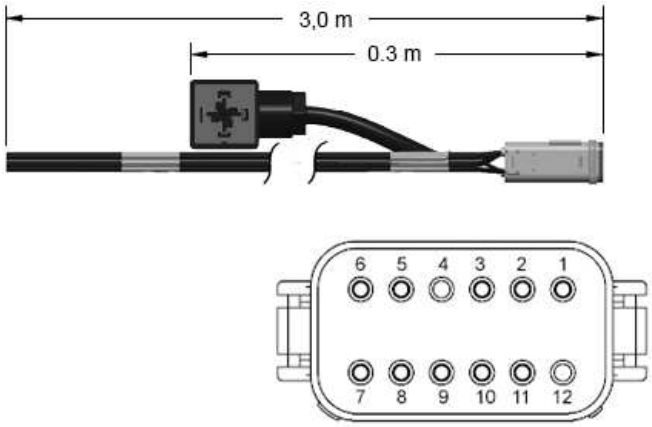
This single-output, 12 Pin Deutsch cable assembly is for use with Sun's XMD-01 electro-hydraulic driver. It comes equipped with a 2-pin Deutsch lead that connects directly to the FLeX or 770 Series Deutsch coils when combined with the coil clip accessory.

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

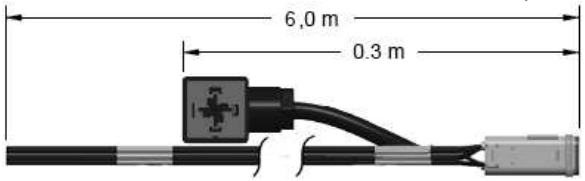
This single-output, 12 Pin Deutsch cable assembly is for use with Sun's XMD-01 electro-hydraulic driver. It comes equipped with a ISO/DIN 43650, Form A overmolded connector that connects directly to the FLeX or 770 Series VDC ISO/DIN 43650 coils when combined with the coil clip accessory.

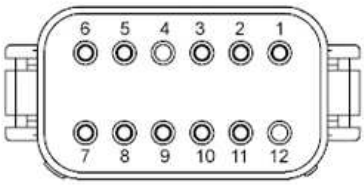
TECHNICAL DATA

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

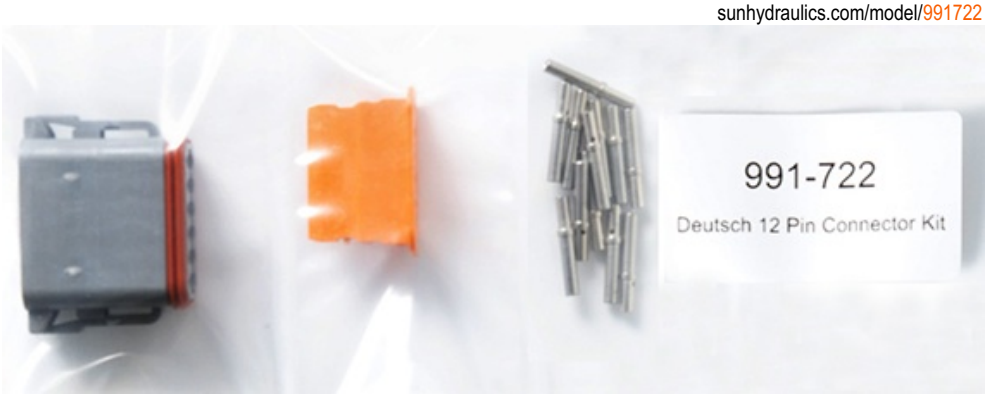
This single-output, 12 Pin Deutsch cable assembly is for use with Sun's XMD-01 electro-hydraulic driver. It comes equipped with a ISO/DIN 43650, Form A overmolded connector that connects directly to the FLeX or 770 Series VDC ISO/DIN 43650 coils when combined with the coil clip accessory.

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					

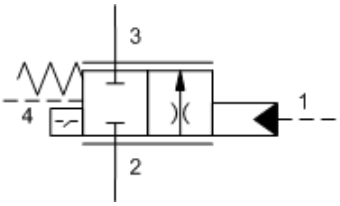
This Deutsch 2 pin connector kit is for use with Sun's 2 pin Deutsch coils. Assembly is required.

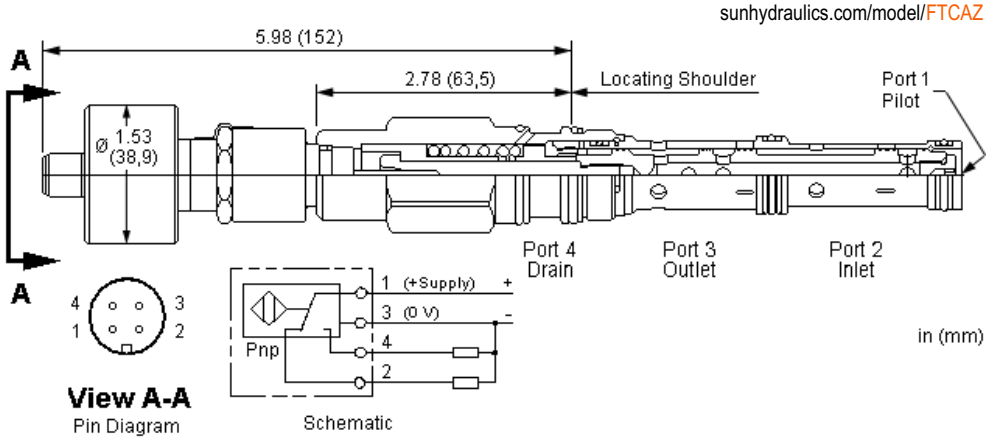
TECHNICAL DATA

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 in³/min.@1000 psi
Pilot Volume Displacement	.05 in³
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

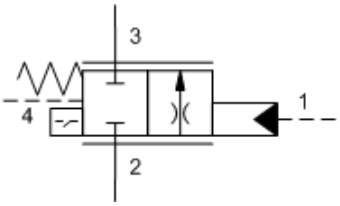
SPOOL CONFIGURATION (C)

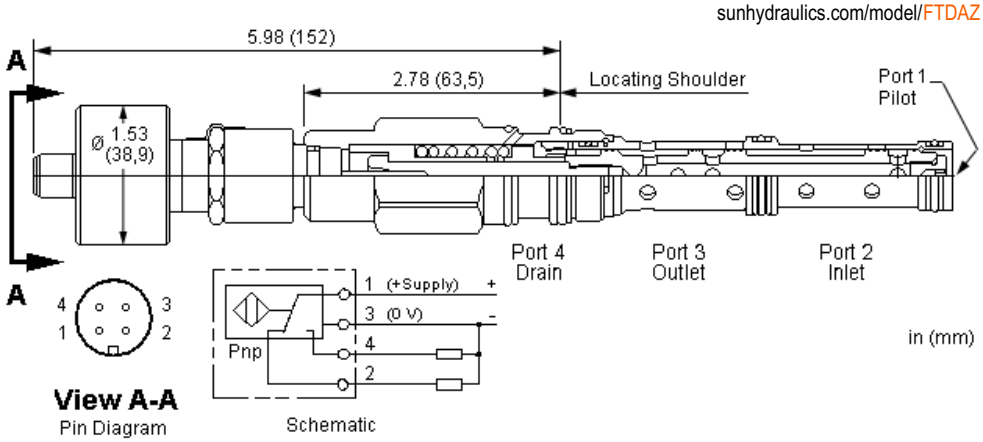
C Normally Closed

SEAL MATERIAL (N)

N Buna-N

V 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 in³/min.@1000 psi
Pilot Volume Displacement	.05 in³
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

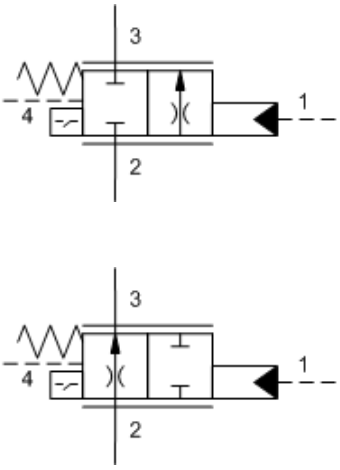
SPOOL CONFIGURATION (C)

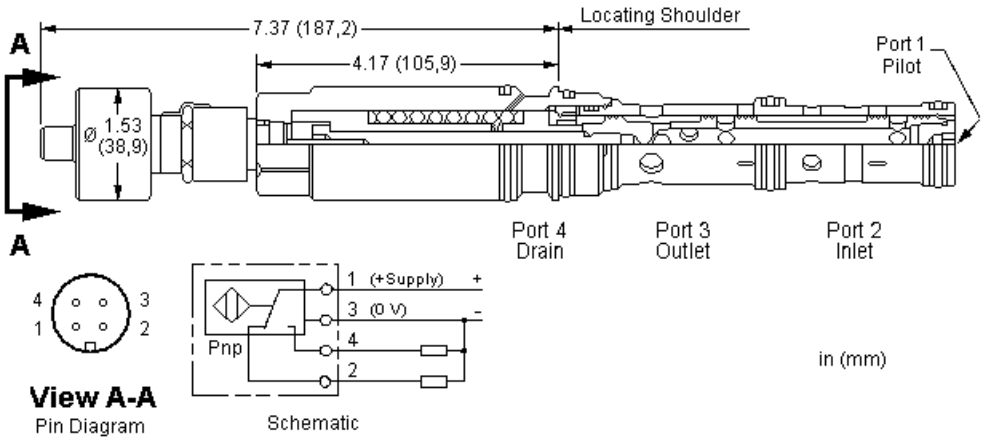
C Normally Closed

SEAL MATERIAL (N)

N Buna-N

V 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 in³/min.@1000 psi
Pilot Volume Displacement	.10 in³
Seal kit - Cartridge	Buna: 990053007
Seal kit - Cartridge	Viton: 990053006

NOTES

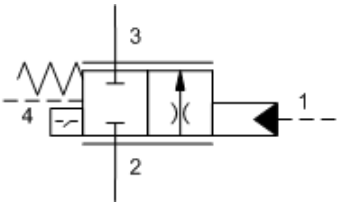
When installed in Sun's standard T-53A line mount manifold, plug unused ports and expect higher pressure drops.

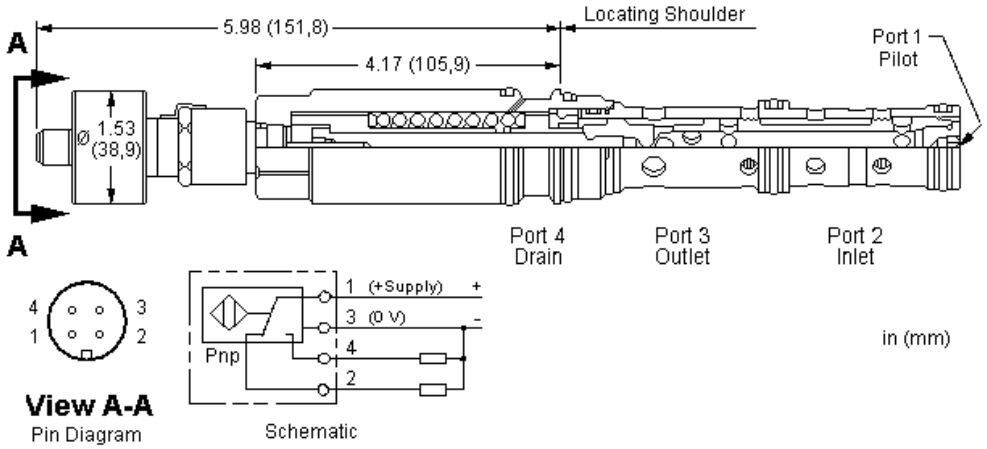
CONFIGURATION OPTIONS

Model Code Example: FTEAZCN

SPOOL CONFIGURATION	(C)
C Normally Closed	
H Normally Open	

SEAL MATERIAL	(N)
N Buna-N	
V 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)	10 in³/min.@1000 psi
Pilot Volume Displacement	.10 in³
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

SPOOL CONFIGURATION (C)	SEAL MATERIAL (N)
C Normally Closed	**N** Buna-N
	V 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

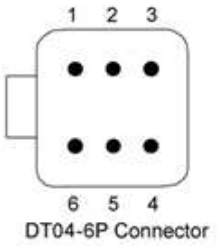
Supply Voltage	HHP or PC port powered
Operating Temperature Range	-4 - 140 °F
Cable Length	6 ft

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



DT04-6P Connector

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

TECHNICAL DATA

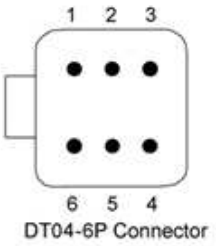
Connector	Deutsch DT06-6S (mates with DT04-6P)
Cable Length	10 ft

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



DT04-6P Connector

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

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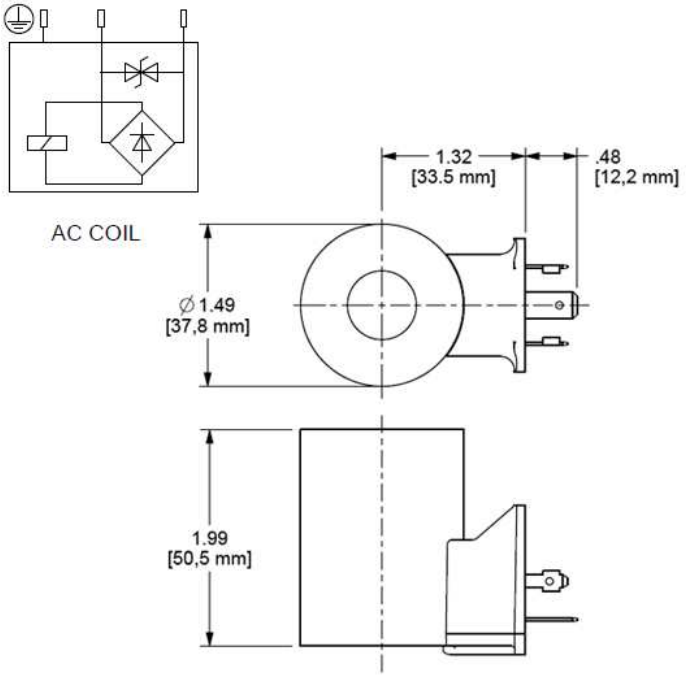
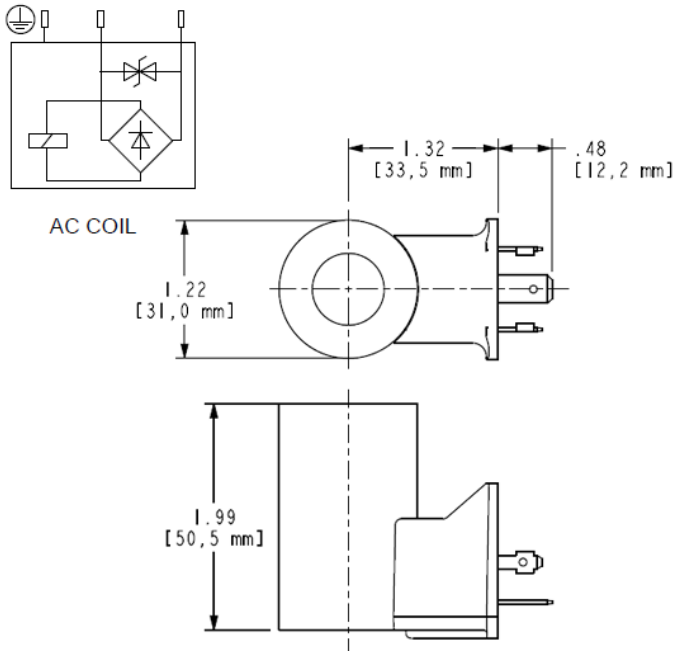


TECHNICAL DATA

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	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									

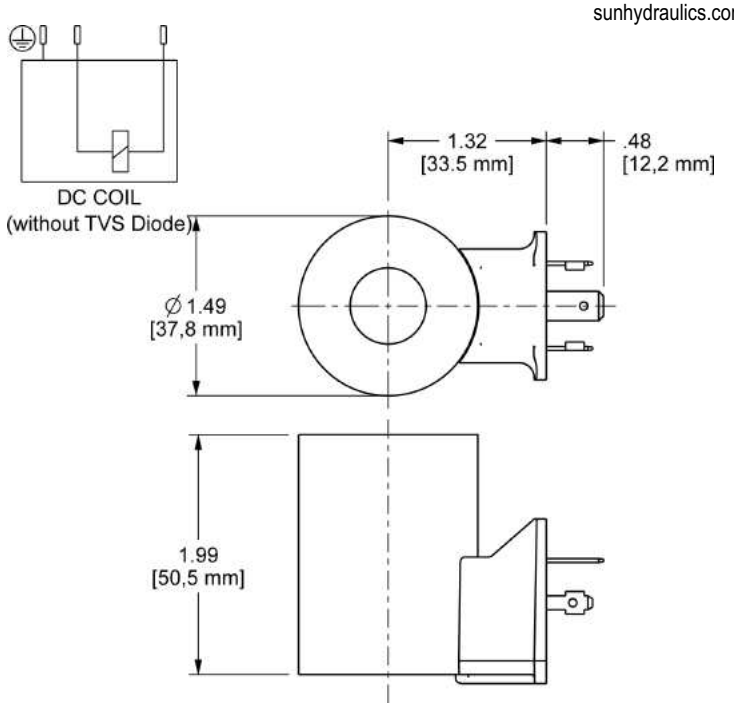


TECHNICAL DATA

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

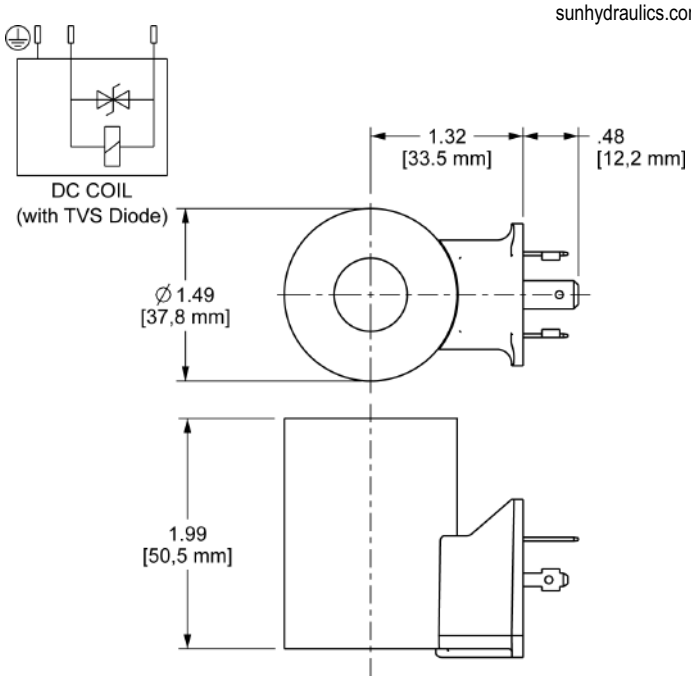


TECHNICAL DATA

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	

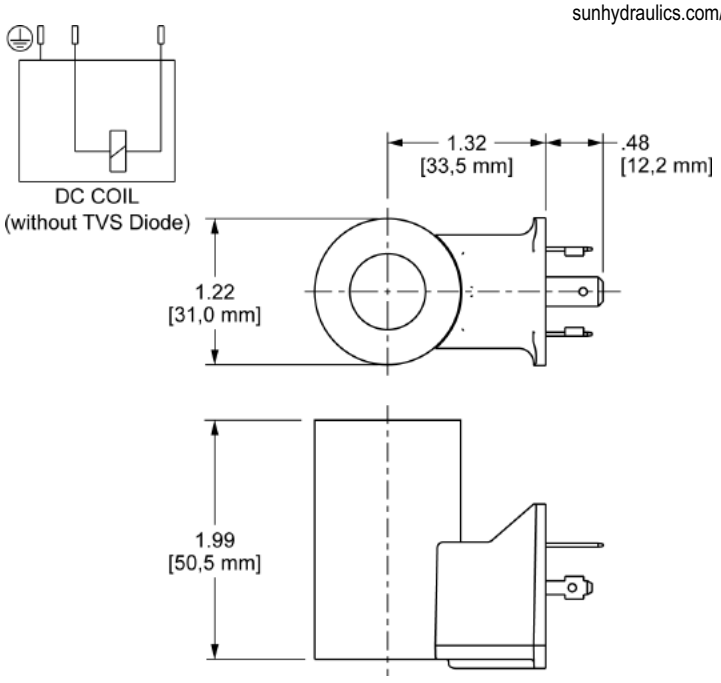


TECHNICAL DATA

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	

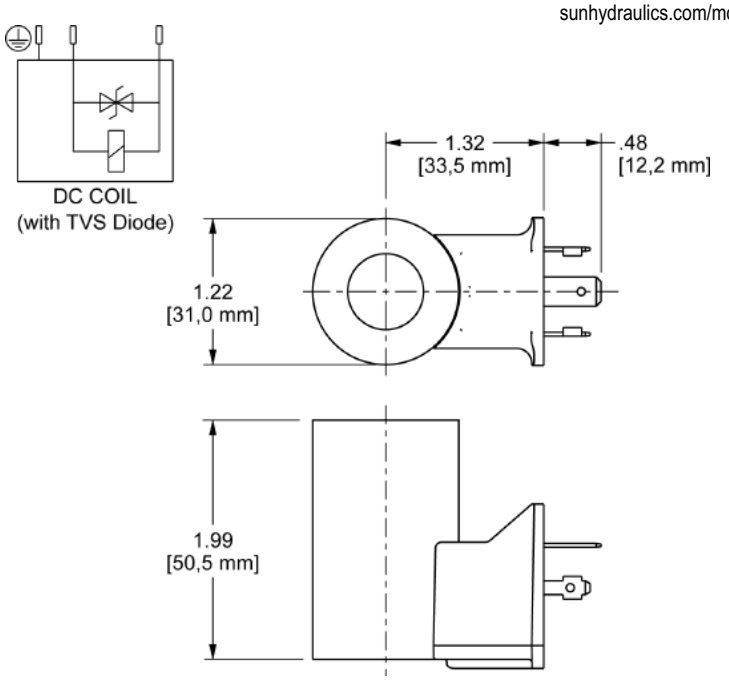


TECHNICAL DATA

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								

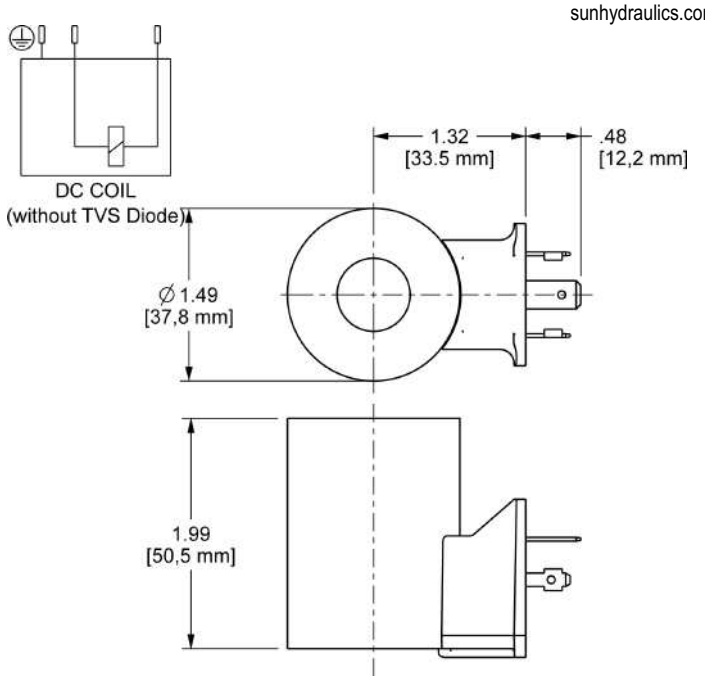


TECHNICAL DATA

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							

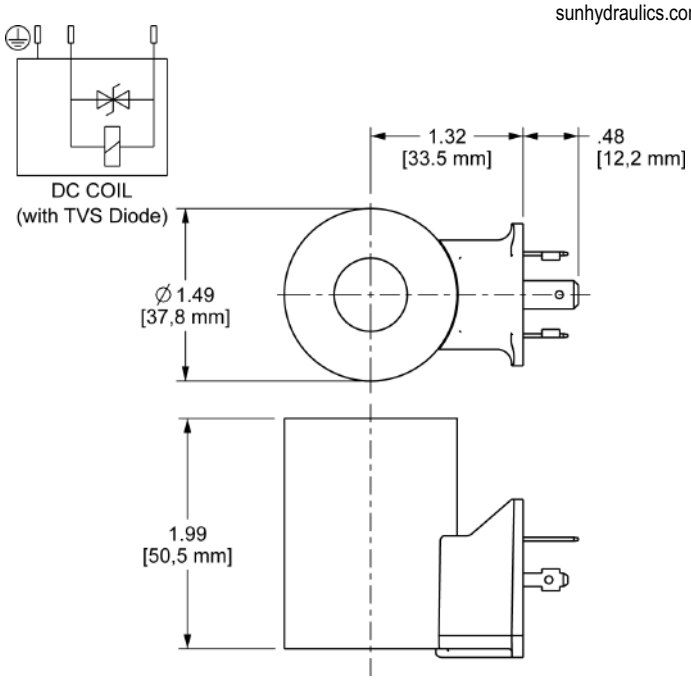


TECHNICAL DATA

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	

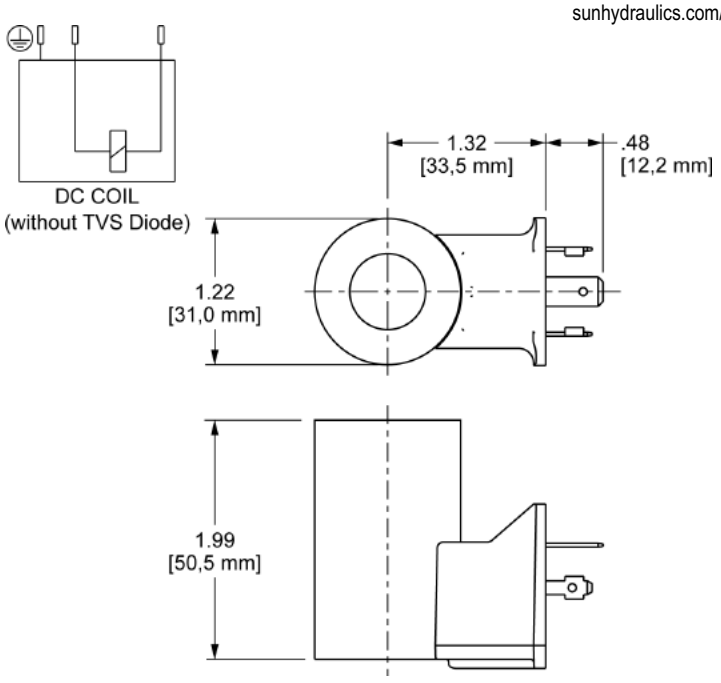


TECHNICAL DATA

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	

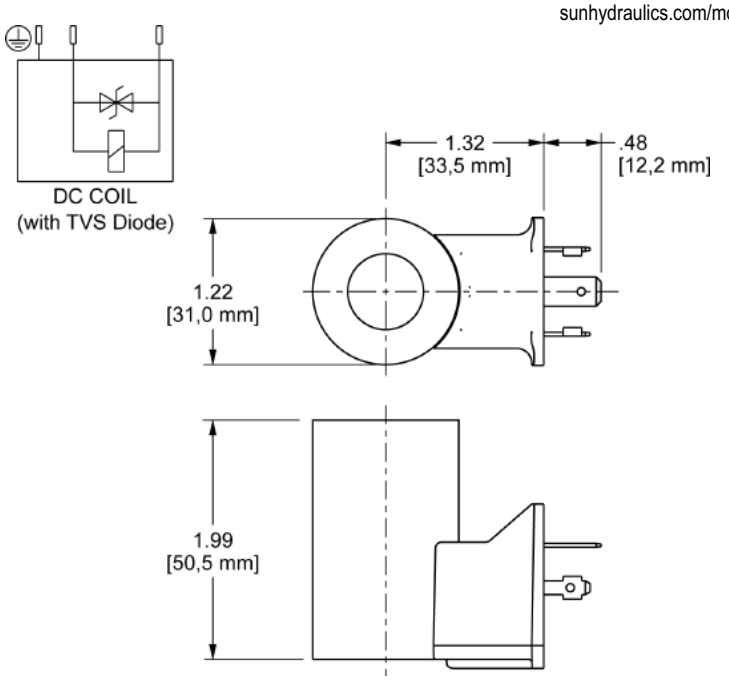


TECHNICAL DATA

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						

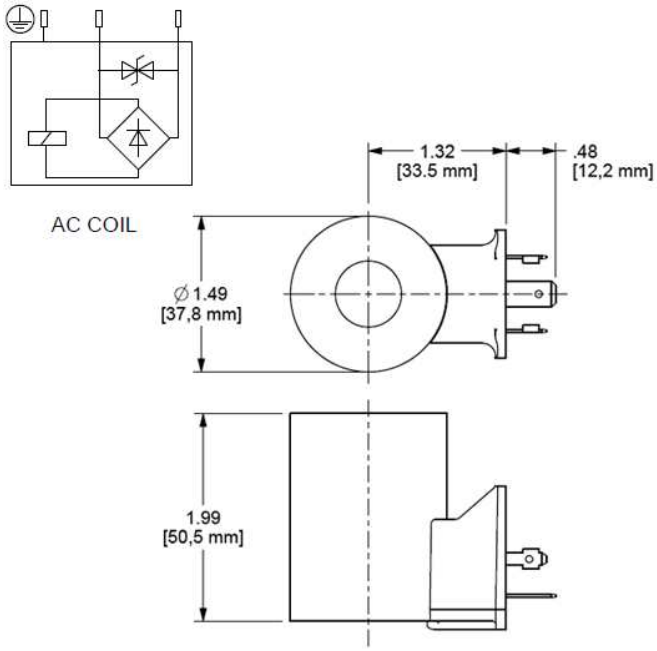


TECHNICAL DATA

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							

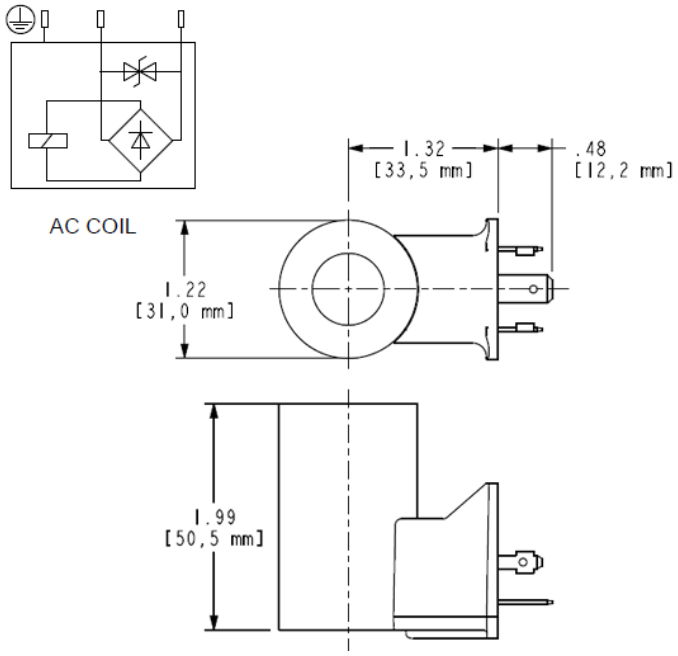


TECHNICAL DATA

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									

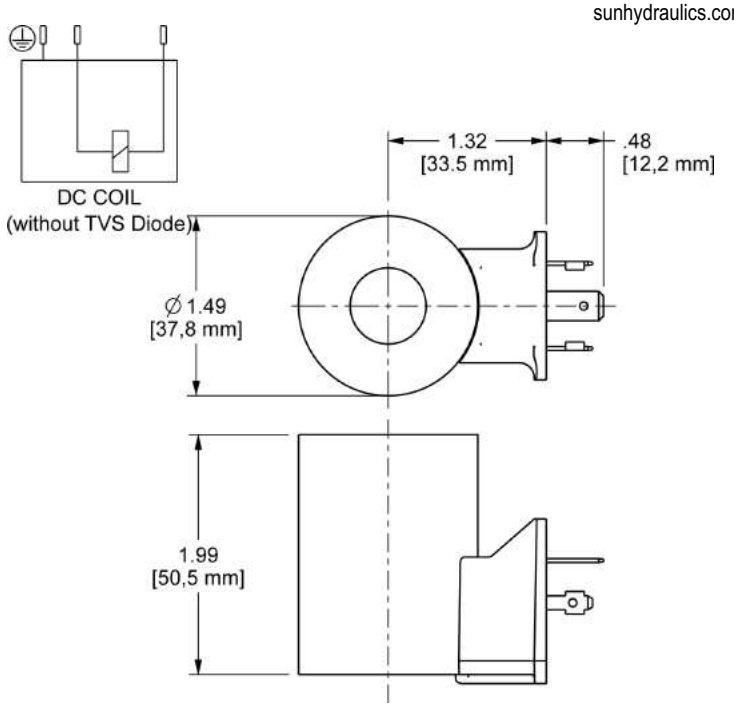


TECHNICAL DATA

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

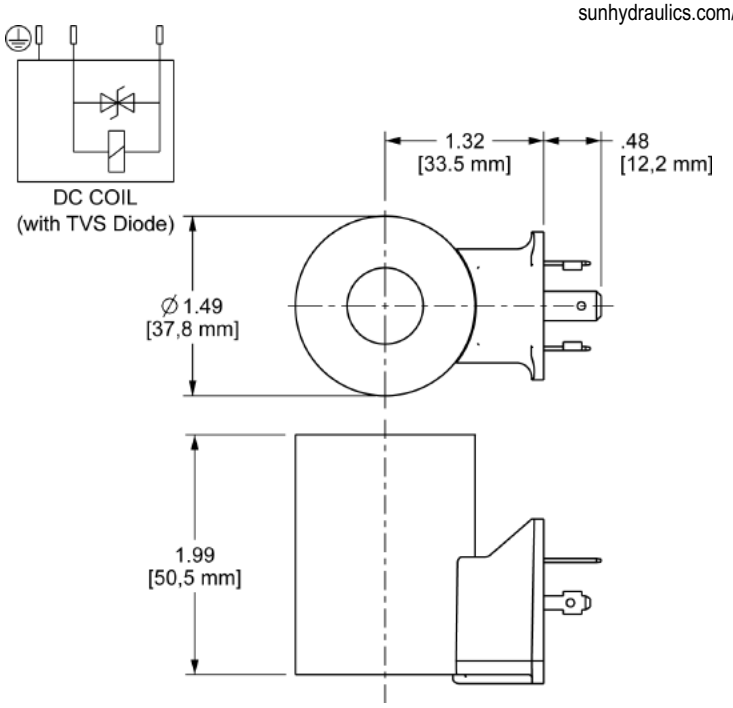


TECHNICAL DATA

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	

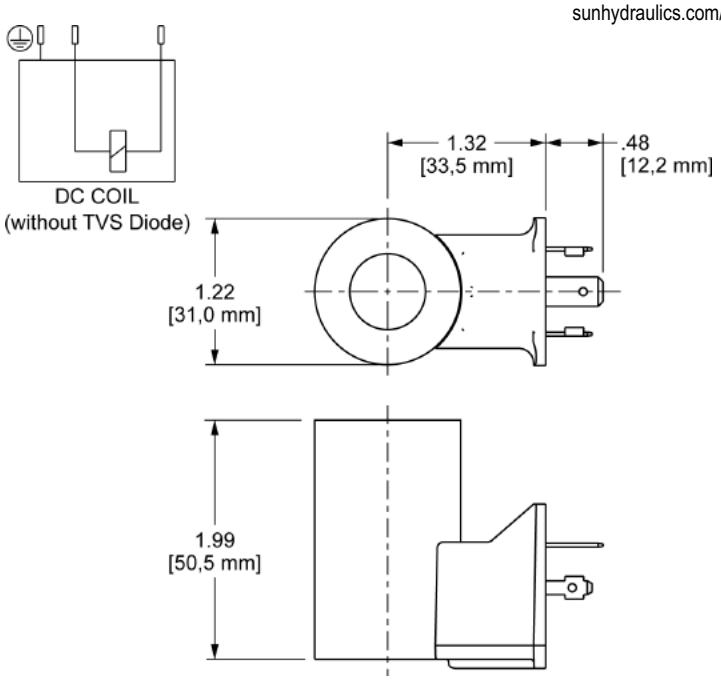


TECHNICAL DATA

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	

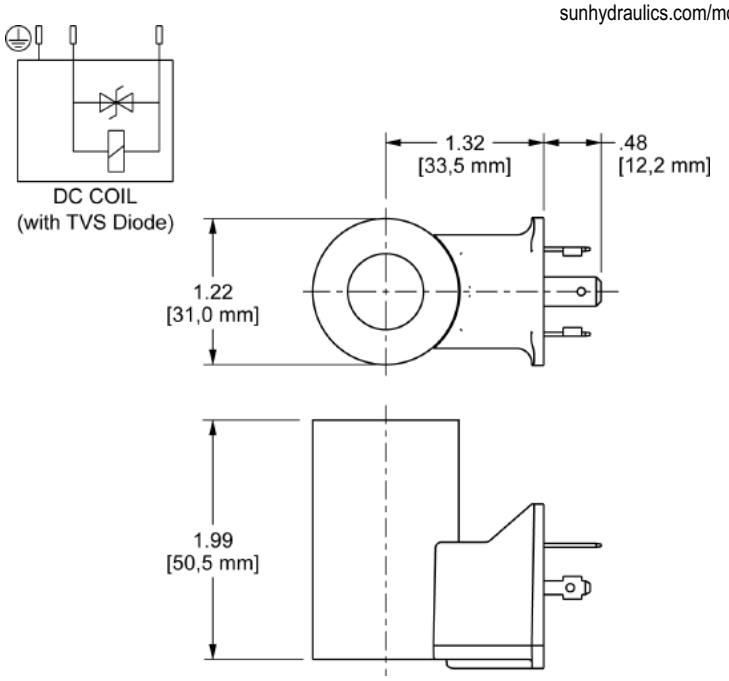


TECHNICAL DATA

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							

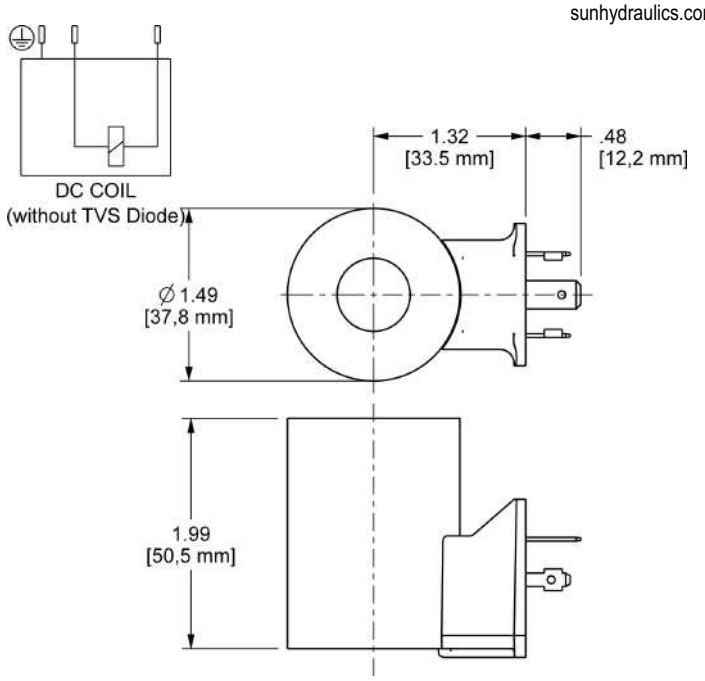


TECHNICAL DATA

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							

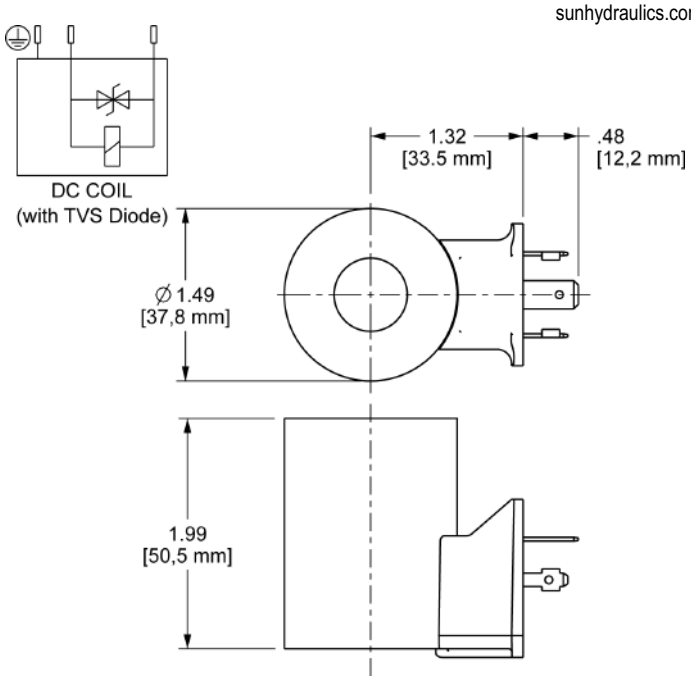


TECHNICAL DATA

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	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	

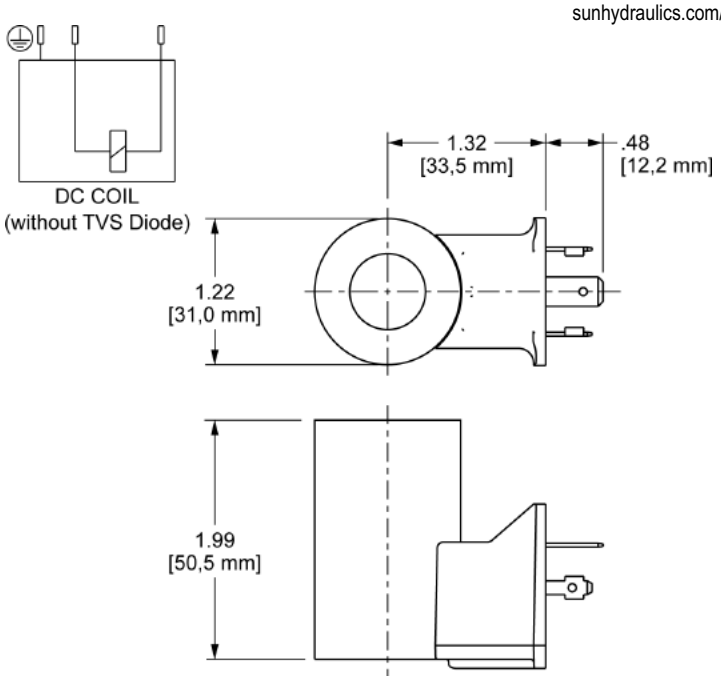


TECHNICAL DATA

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	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	

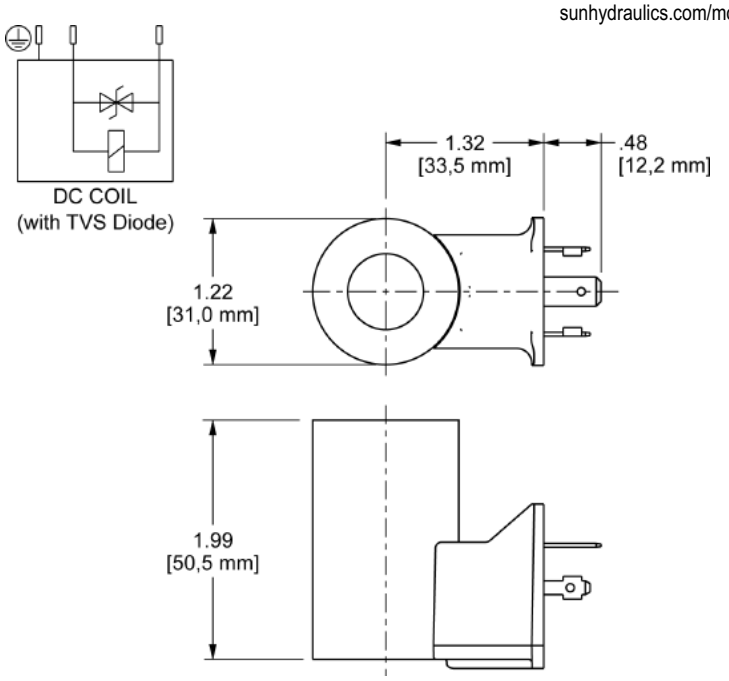


TECHNICAL DATA

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							

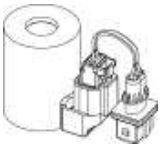


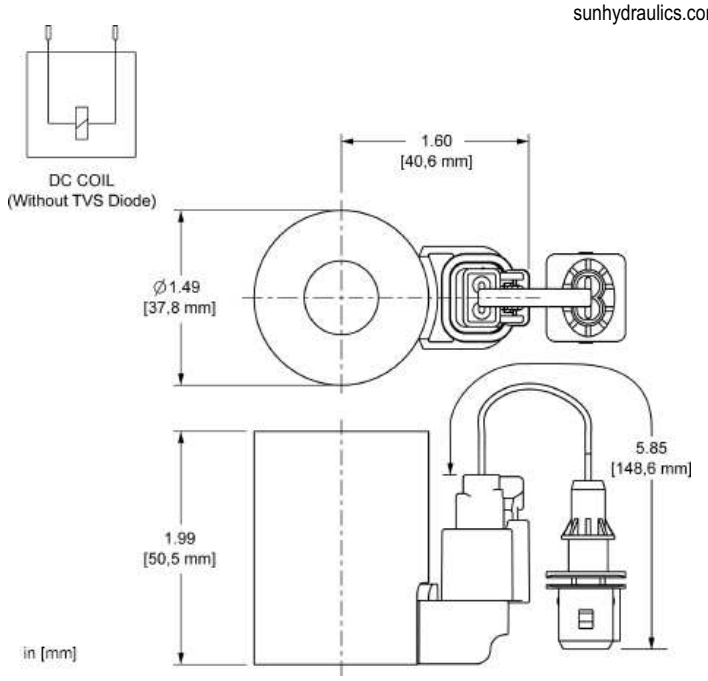
TECHNICAL DATA

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							





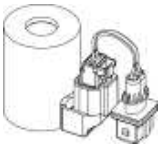
This 740 Series Coil configuration uses a connector adapter kit to provide the required termination.

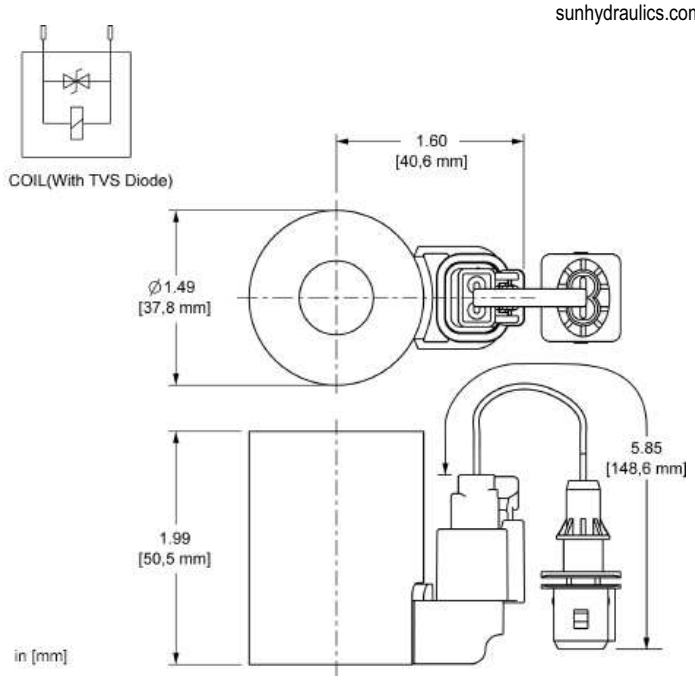
TECHNICAL DATA

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





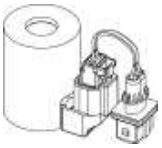
This 740 Series Coil configuration uses a connector adapter kit to provide the required termination.

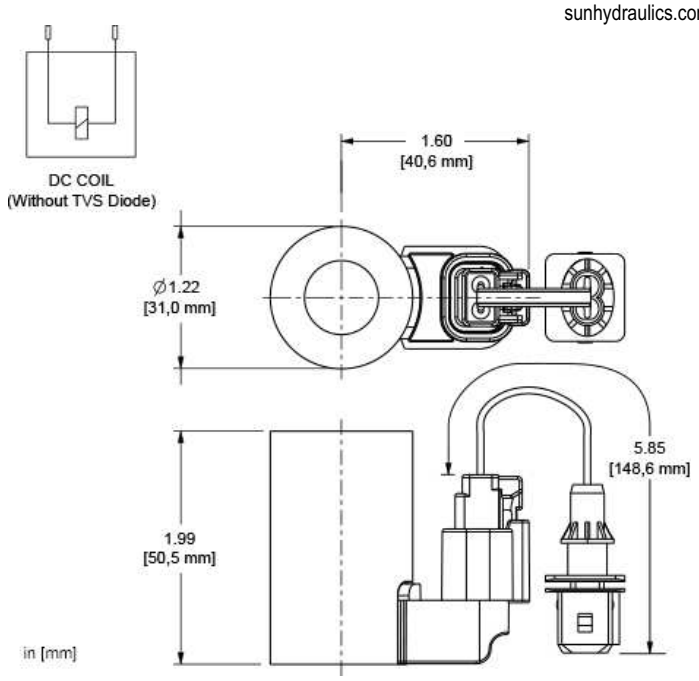
TECHNICAL DATA

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





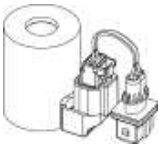
This 740 Series Coil configuration uses a connector adapter kit to provide the required termination.

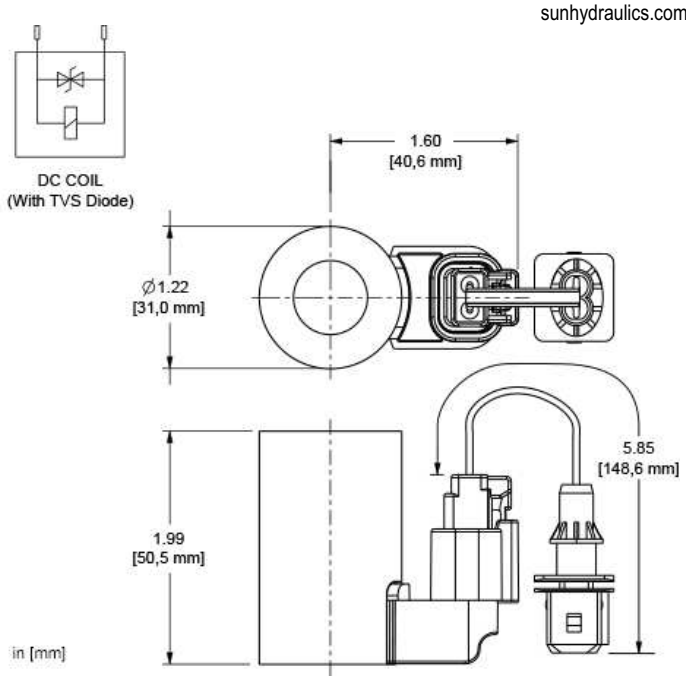
TECHNICAL DATA

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





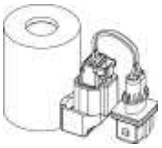
This 740 Series Coil configuration uses a connector adapter kit to provide the required termination.

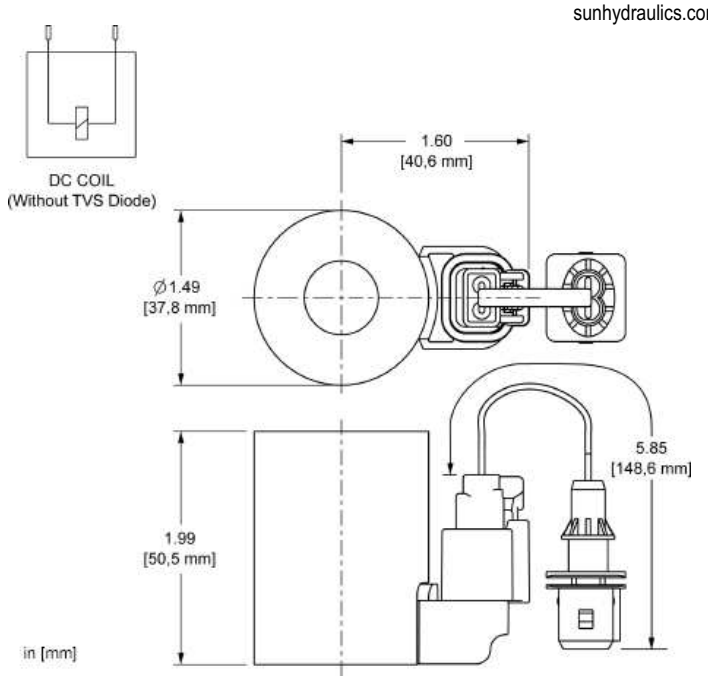
TECHNICAL DATA

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





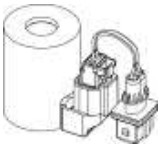
This 740 Series Coil configuration uses a connector adapter kit to provide the required termination.

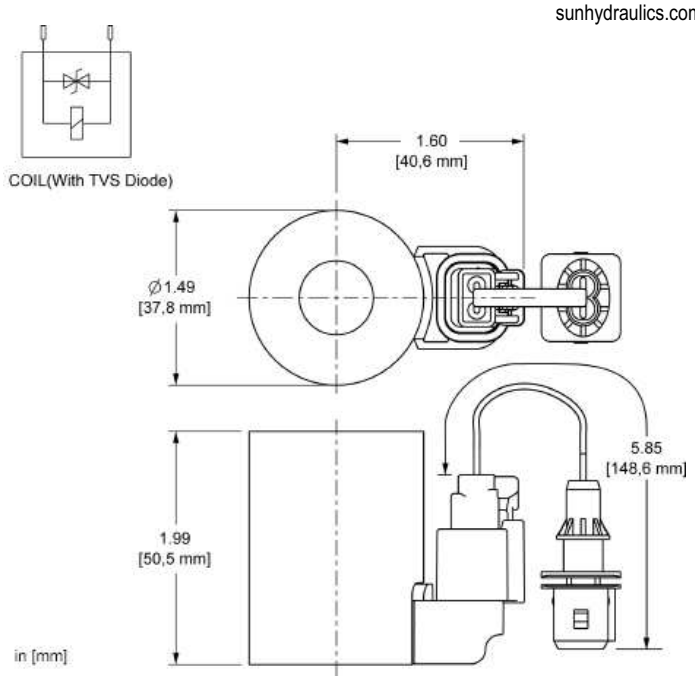
TECHNICAL DATA

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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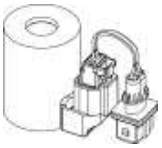
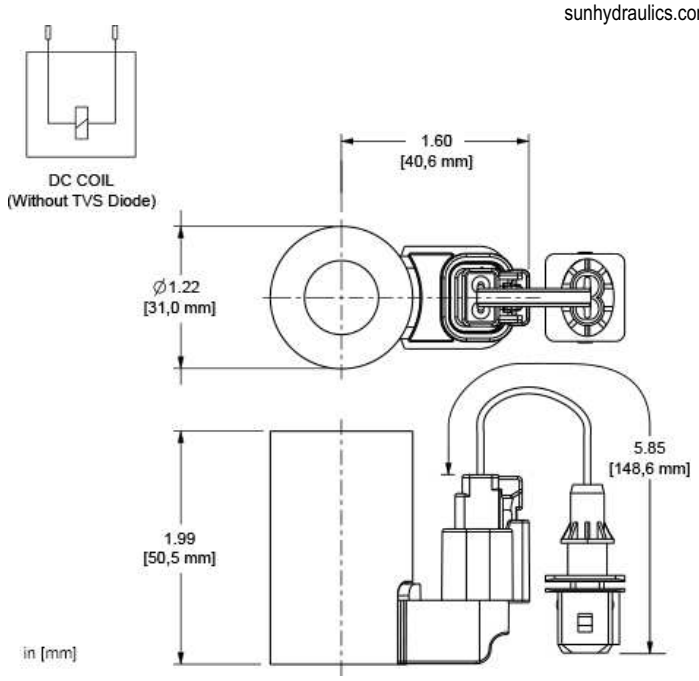
TECHNICAL DATA

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	FMDF	FMDG	FPBF	FPBG	FPBI
FPBJ	FPBU	FREP	PRDF	PRDG	RPEI	RVCK	RVCL	RVCM	RVCN





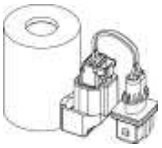
This 740 Series Coil configuration uses a connector adapter kit to provide the required termination.

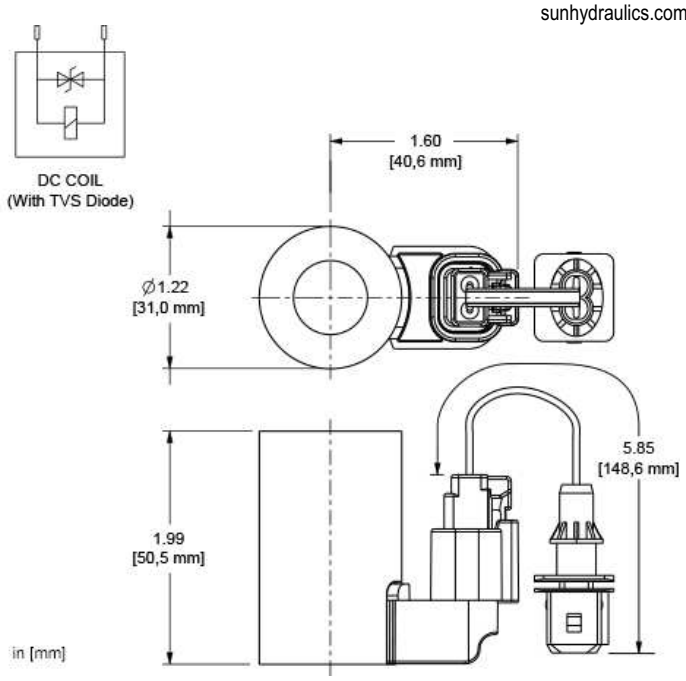
TECHNICAL DATA

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	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





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

TECHNICAL DATA

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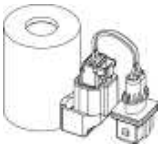
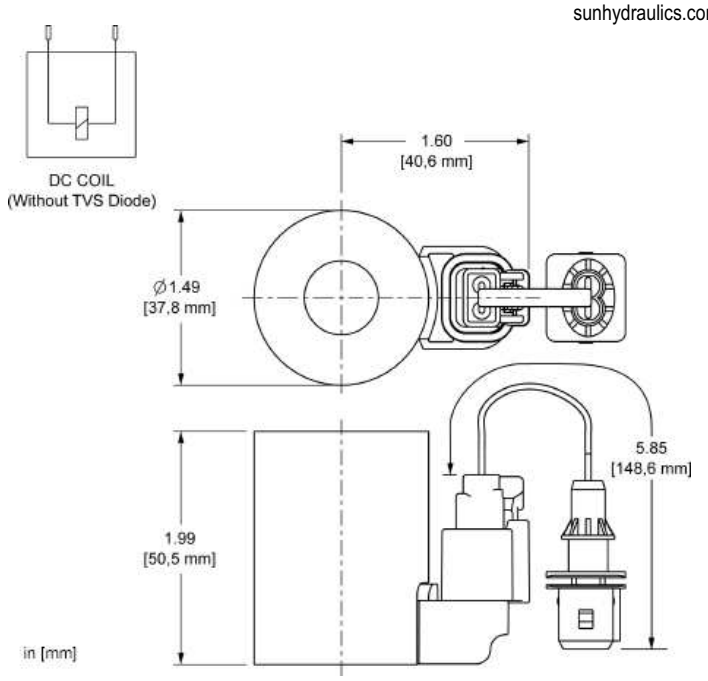
Arc Suppression (TVS)	Included
Power Consumption (cold) - at rated voltage	17 Watts
Maximum Ambient Temperature	212 °F
Voltage/Frequency	14 VDC
Operating Voltage Range	+10%/-15%
Duty Cycle Rating	100 %
Connector	AMP Junior Timer
Coil Nut Torque	4.5 lbf in.

USED WITH

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





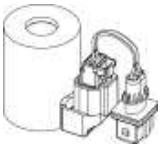
This 740 Series Coil configuration uses a connector adapter kit to provide the required termination.

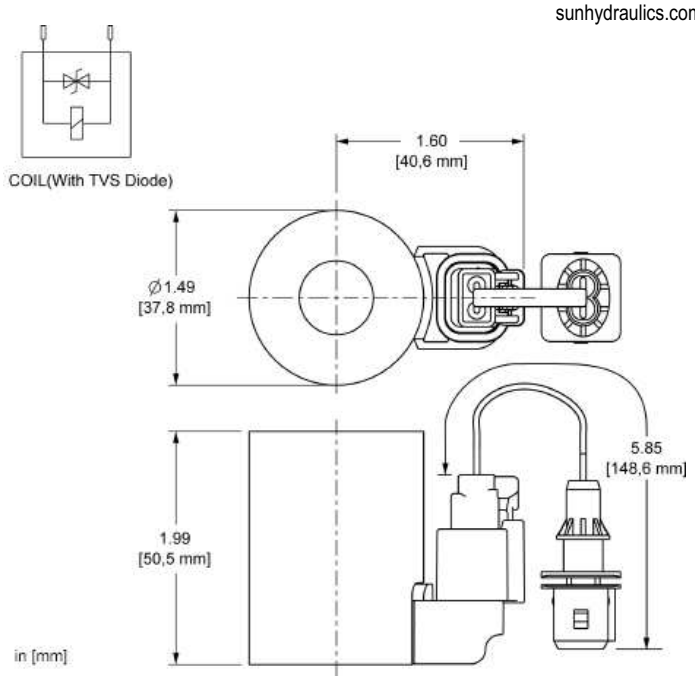
TECHNICAL DATA

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	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





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TECHNICAL DATA

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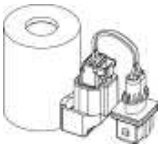
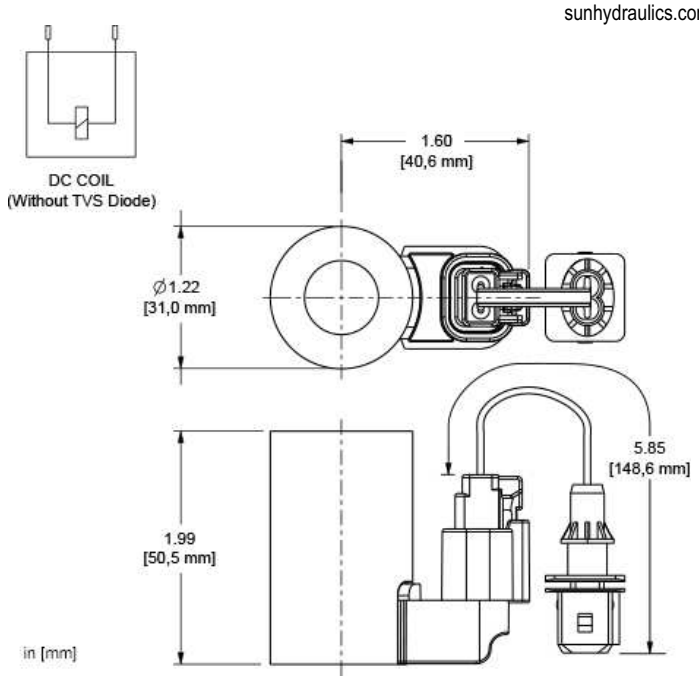
Power Consumption (cold) - at rated voltage	25 Watts
Maximum Ambient Temperature	122 °F
Voltage/Frequency	24 VDC
Operating Voltage Range	+10%/-15%
Duty Cycle Rating	100 %
Connector	AMP Junior Timer
Coil Nut Torque	4.5 lbf in.

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	FMDF	FMDG	FPBF	FPBG	FPBI
FPBJ	FPBU	FREP	PRDF	PRDG	RPEI	RVCK	RVCL	RVCM	RVCN





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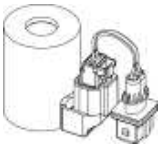
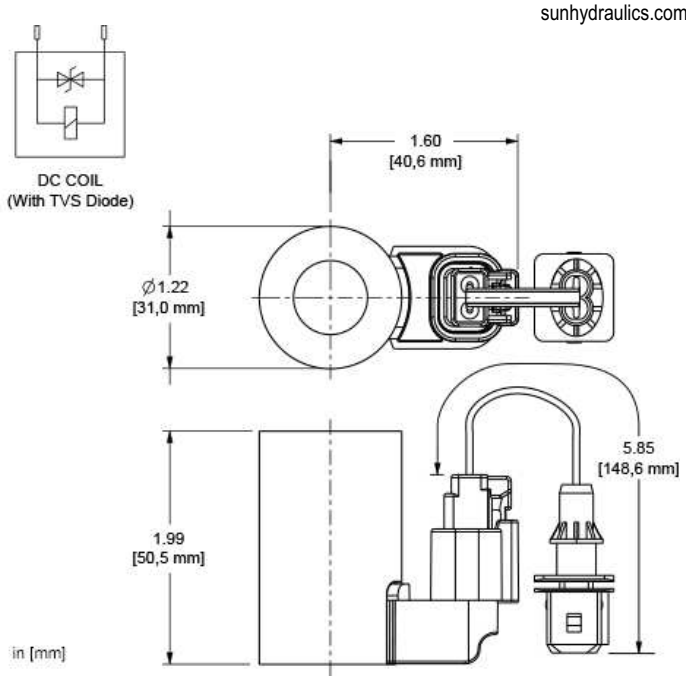
TECHNICAL DATA

Operating Temperature Range	-40 to 230 °F
Arc Suppression (TVS)	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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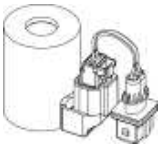
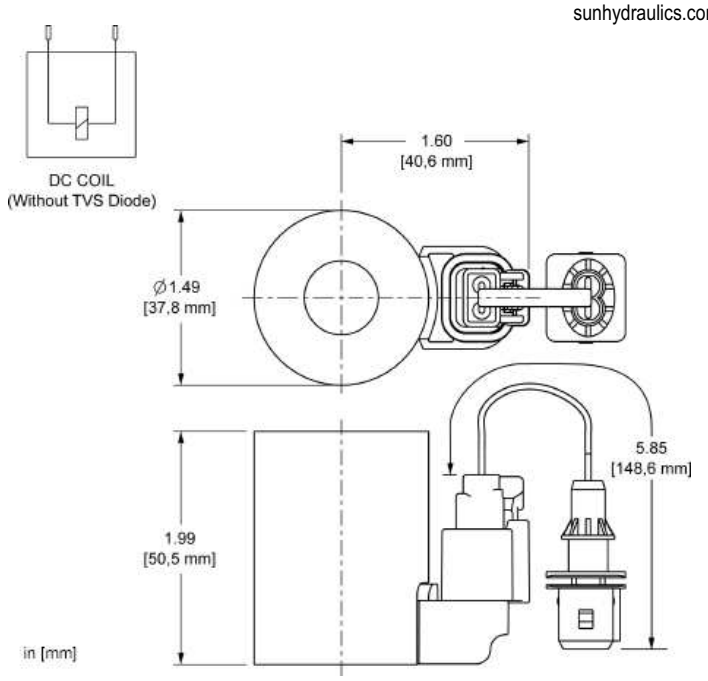
TECHNICAL DATA

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						





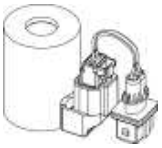
This 740 Series Coil configuration uses a connector adapter kit to provide the required termination.

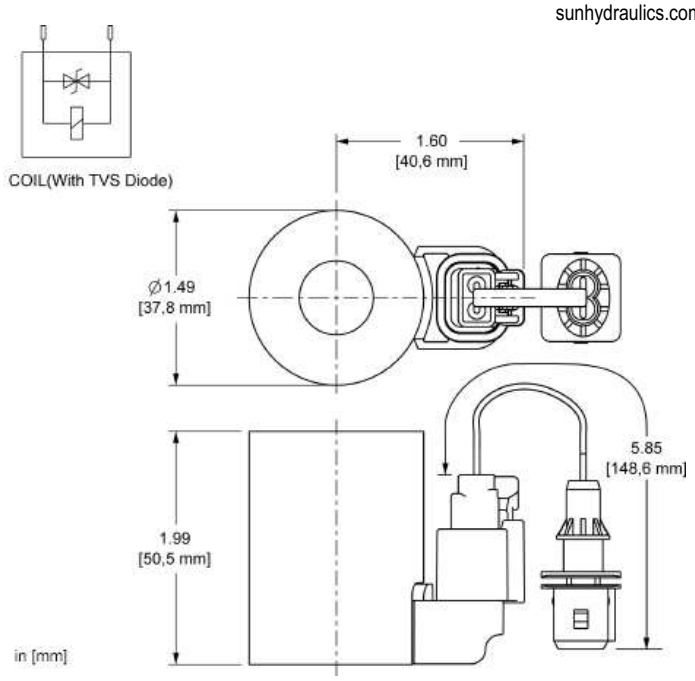
TECHNICAL DATA

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	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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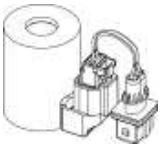
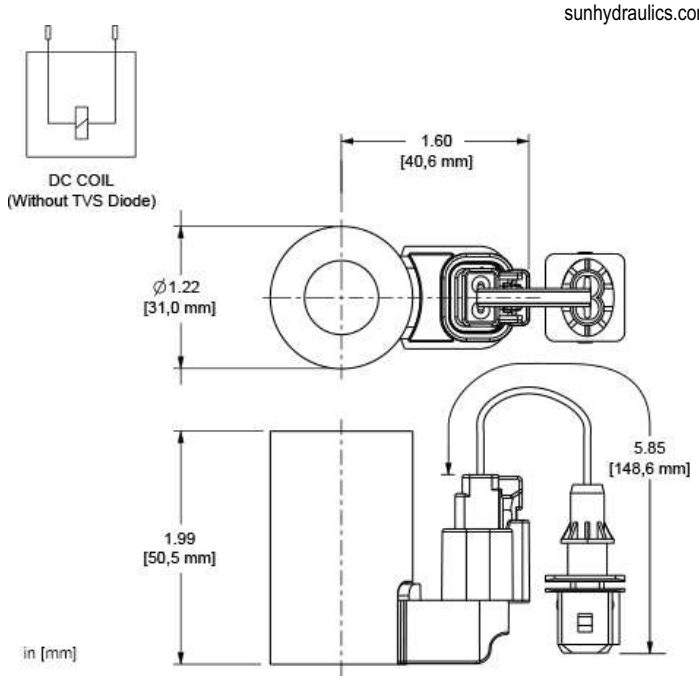
TECHNICAL DATA

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	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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TECHNICAL DATA

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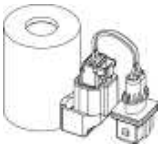
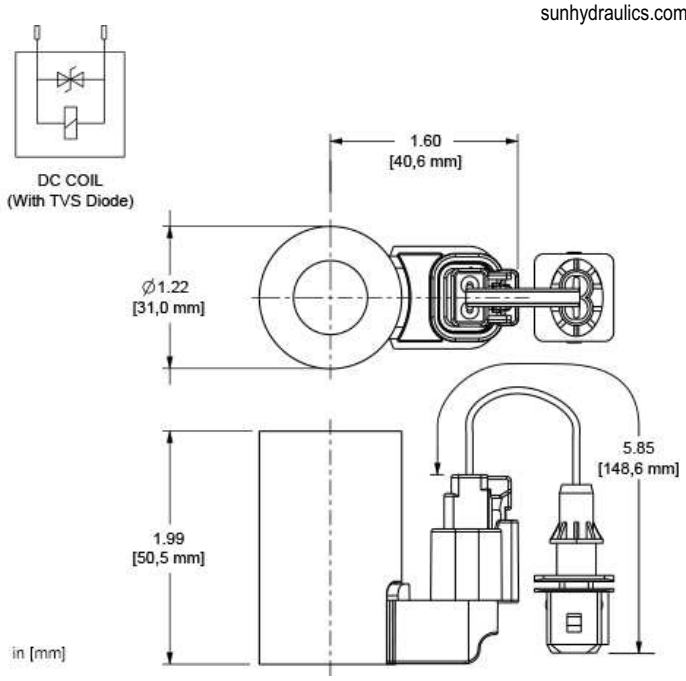
Arc Suppression (TVS)	None
Power Consumption (cold) - at rated voltage	17 Watts
Maximum Ambient Temperature	212 °F
Voltage/Frequency	28 VDC
Operating Voltage Range	+10%/-15%
Duty Cycle Rating	100 %
Connector	AMP Junior Timer
Coil Nut Torque	4.5 lbf in.

USED WITH

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





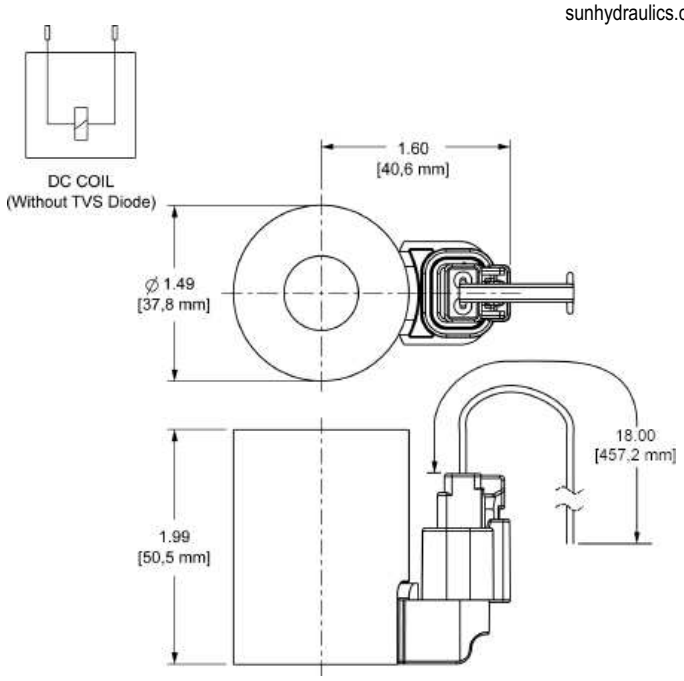
This 740 Series Coil configuration uses a connector adapter kit to provide the required termination.

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	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



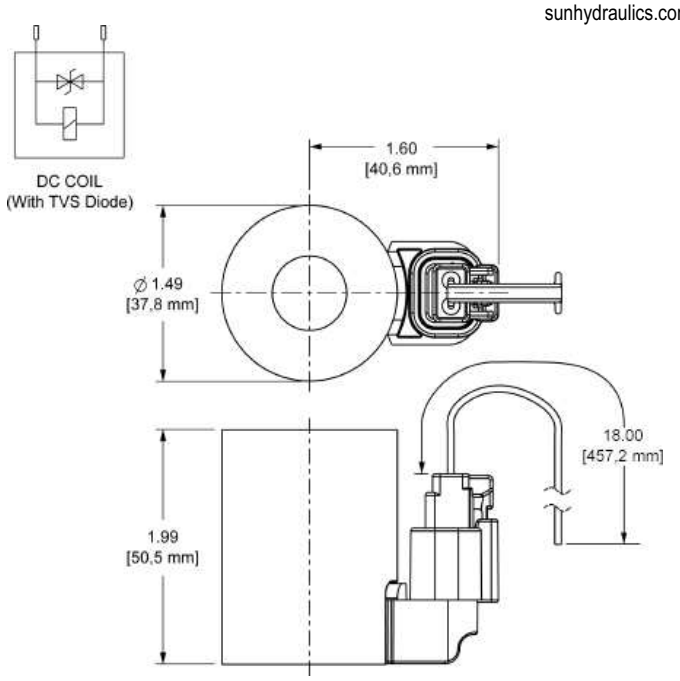
This 740 Series Coil configuration uses a connector adapter kit to provide the required termination.

TECHNICAL DATA

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	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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TECHNICAL DATA

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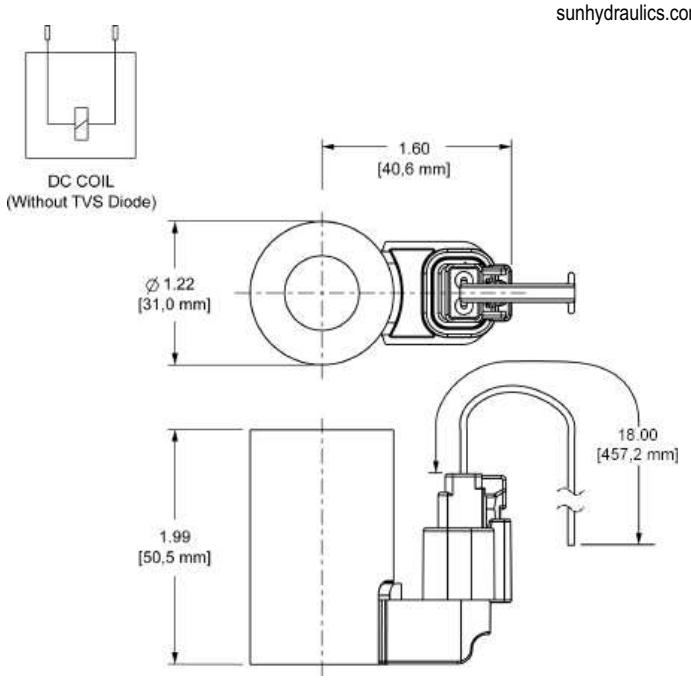
Voltage/Frequency	12 VDC
Operating Voltage Range	+10%/-15%
Duty Cycle Rating	100 %
Connector	Twin lead 18 AWG x 18 in. (460 mm)
Coil Nut Torque	4.5 lbf in.

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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TECHNICAL DATA

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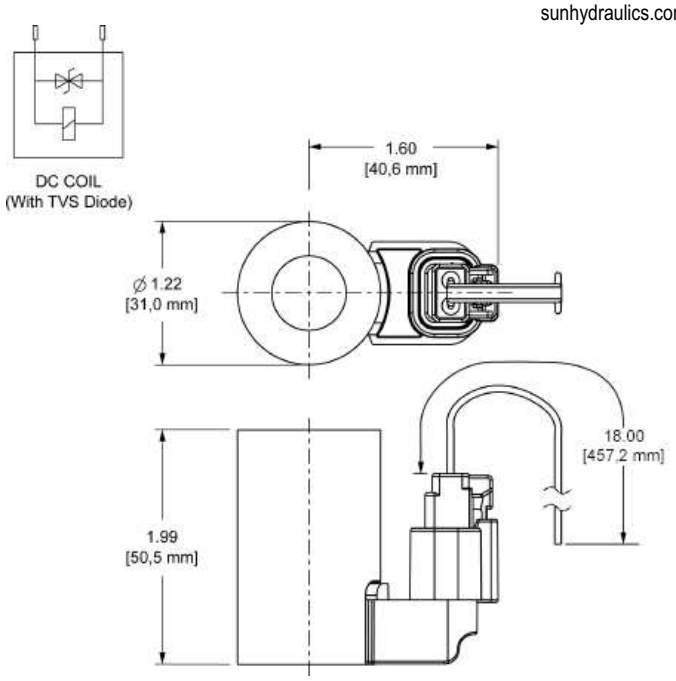
Duty Cycle Rating	100 %
Connector	Twin lead 18 AWG x 18 in. (460 mm)
Coil Nut Torque	4.5 lbf in.

USED WITH

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



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USED WITH

DBAF DBAFS DFBD DFBE DMBD DNBD DTAF DTAFS DTBF FPBD
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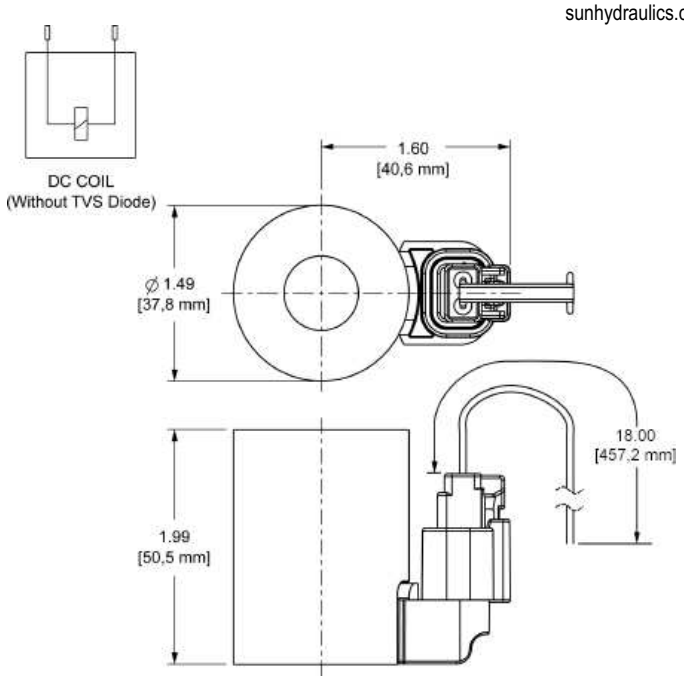

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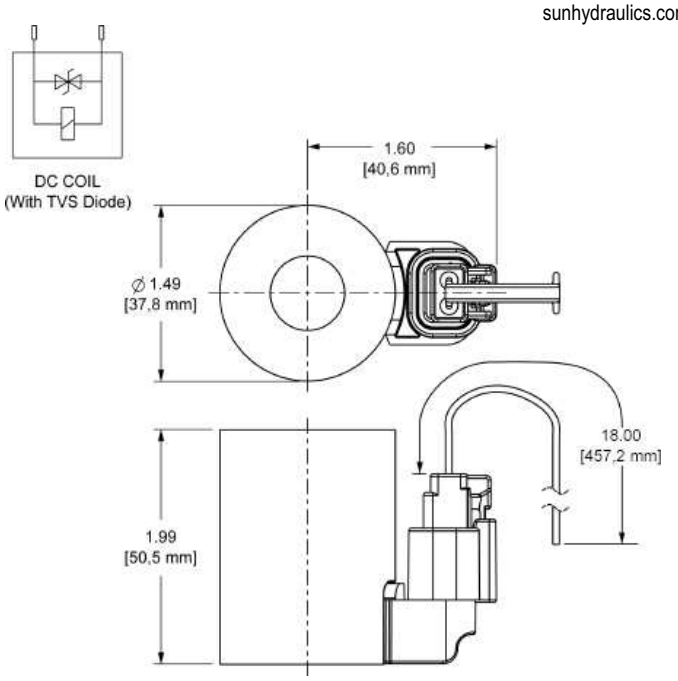
TECHNICAL DATA

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	14 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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USED WITH

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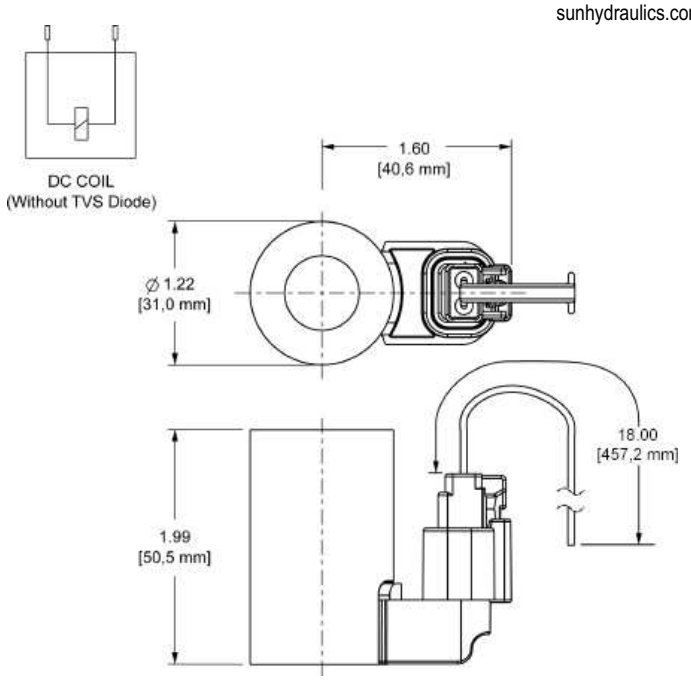
DFFI	DFFJ	DLDF	DLDFS	DMBF	DNBF	DTAF	DTAFS	DTBF	DTCF
DTDF	DTDFS	DWBF	DWDF	FDEP	FMDF	FMDG	FPBF	FPBG	FPBI
FPBJ	FPBU	FREP	PRDF	PRDG	RPEI	RVCK	RVCL	RVCM	RVCN



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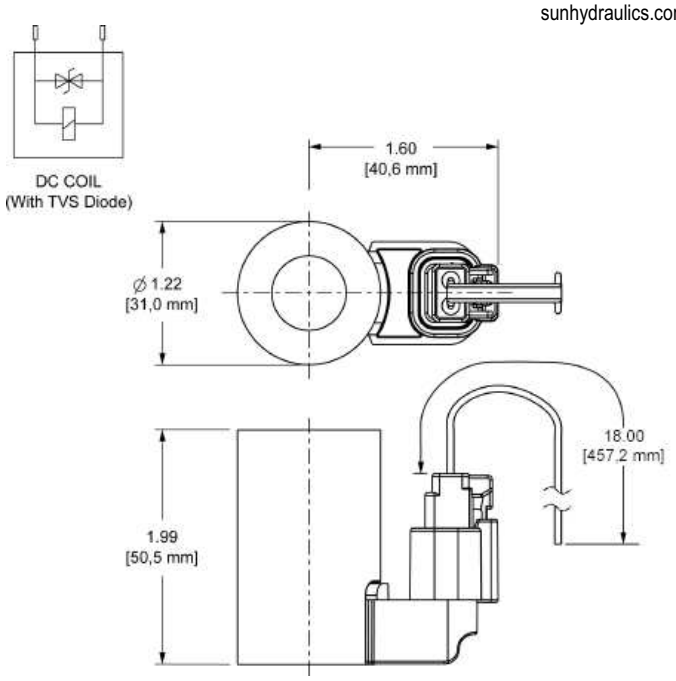
Coil Nut Torque	4.5 lbf in.

USED WITH

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



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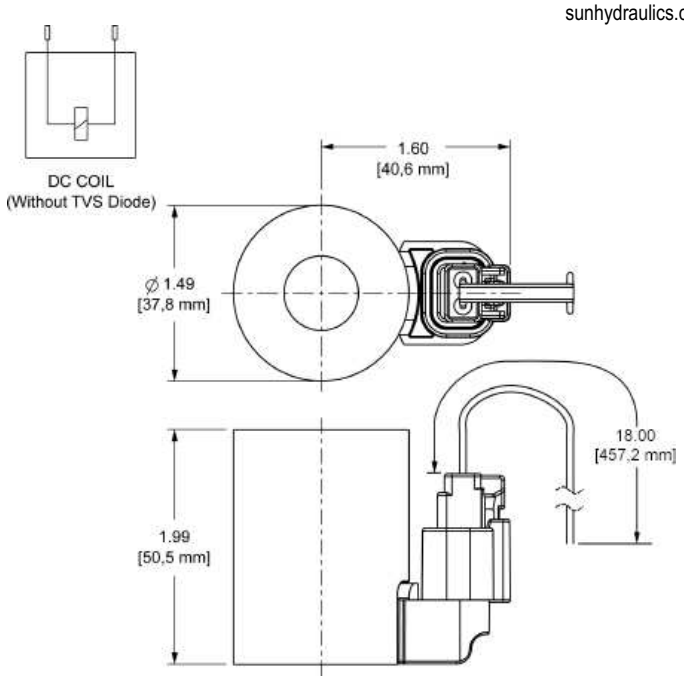

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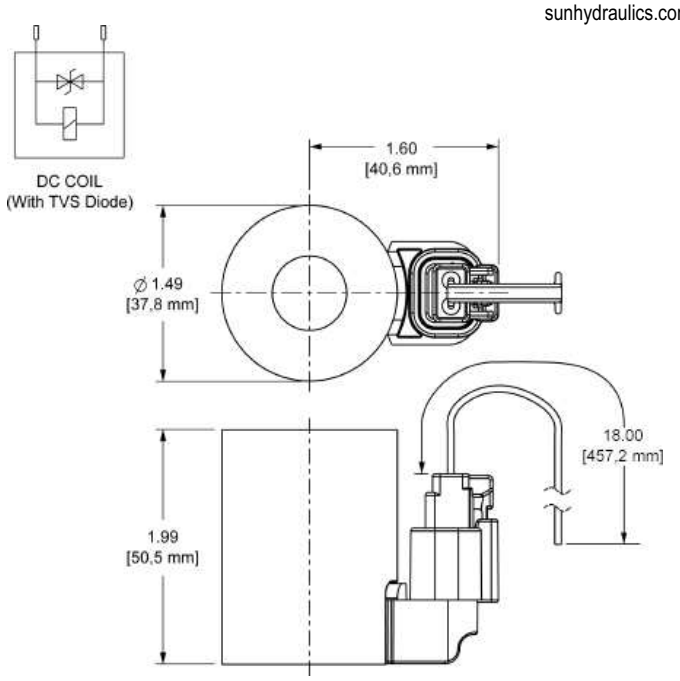
Duty Cycle Rating	100 %
Connector	Twin lead 18 AWG x 18 in. (460 mm)
Coil Nut Torque	4.5 lbf in.

USED WITH

DBAF	DBAFS	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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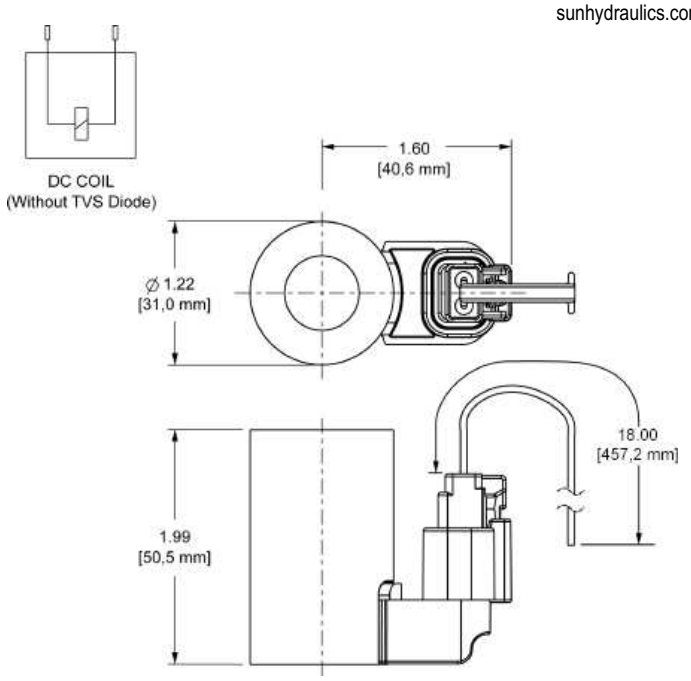
Coil Nut Torque	4.5 lbf in.

USED WITH

DBAF	DBAFS	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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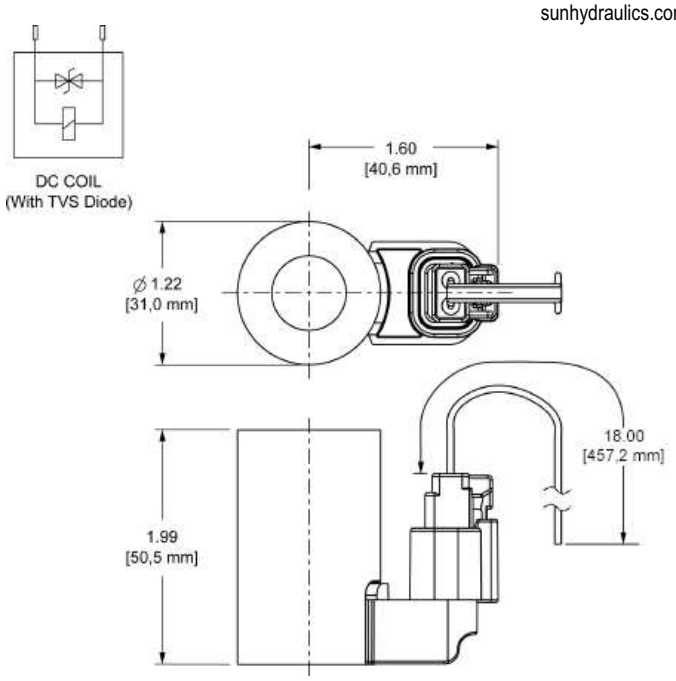
Coil Nut Torque	4.5 lbf in.

USED WITH

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



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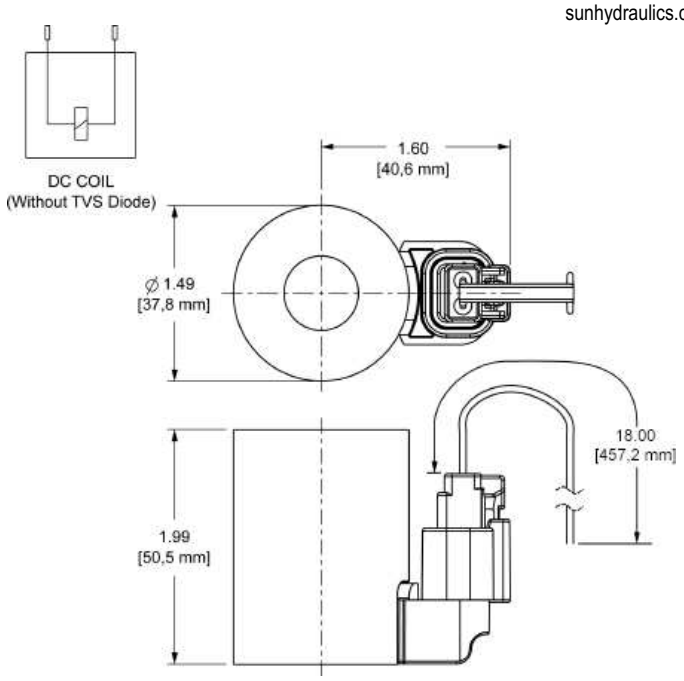
Coil Nut Torque	4.5 lbf in.

USED WITH

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



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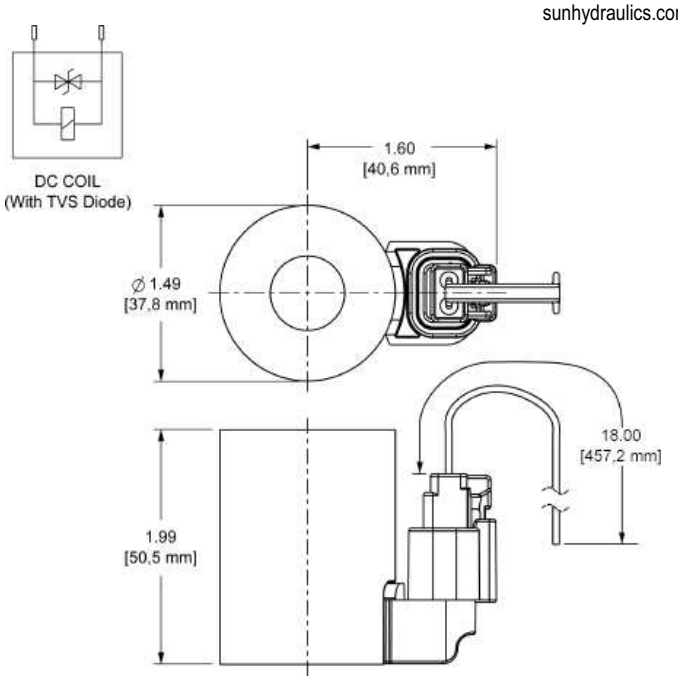
Maximum Ambient Temperature	122 °F
Voltage/Frequency	28 VDC
Operating Voltage Range	+10%/-15%
Duty Cycle Rating	100 %
Connector	Twin lead 18 AWG x 18 in. (460 mm)
Coil Nut Torque	4.5 lbf in.

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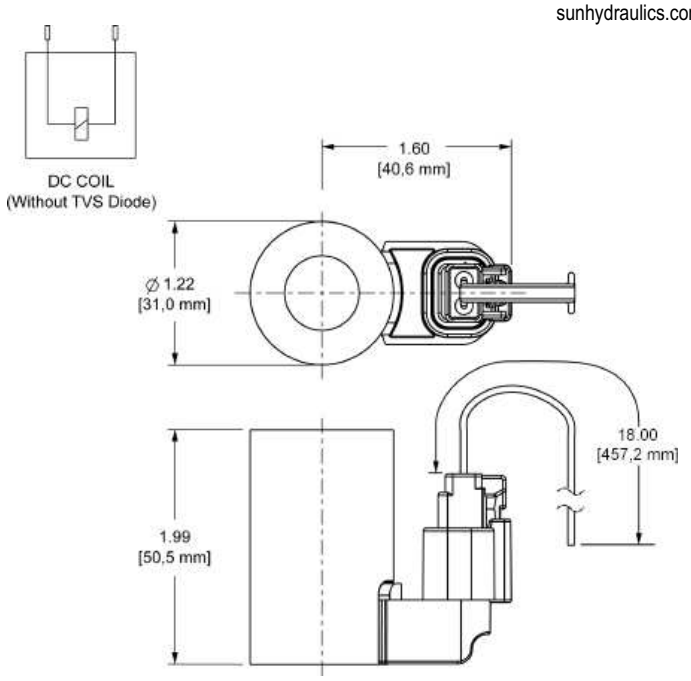
Coil Nut Torque	4.5 lbf in.

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	PRDF	PRDG	RPEI	RVCK	RVCL	RVCM	RVCN	



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Voltage/Frequency	28 VDC
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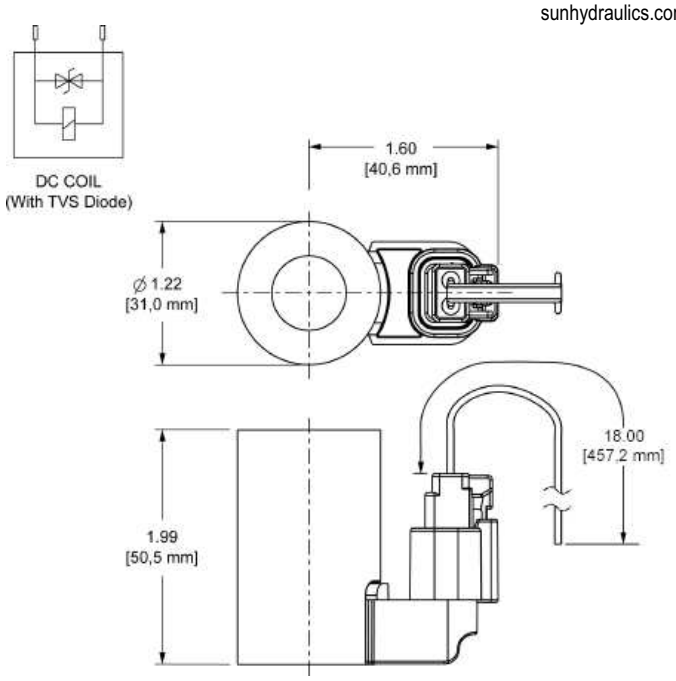
Duty Cycle Rating	100 %
Connector	Twin lead 18 AWG x 18 in. (460 mm)
Coil Nut Torque	4.5 lbf in.

USED WITH

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



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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

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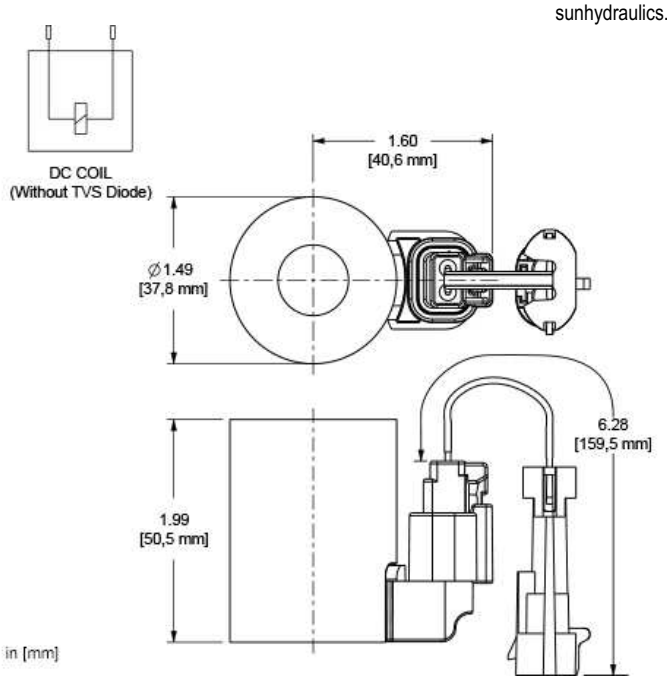
FPBE FPBM FPBN RPEI



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TECHNICAL DATA

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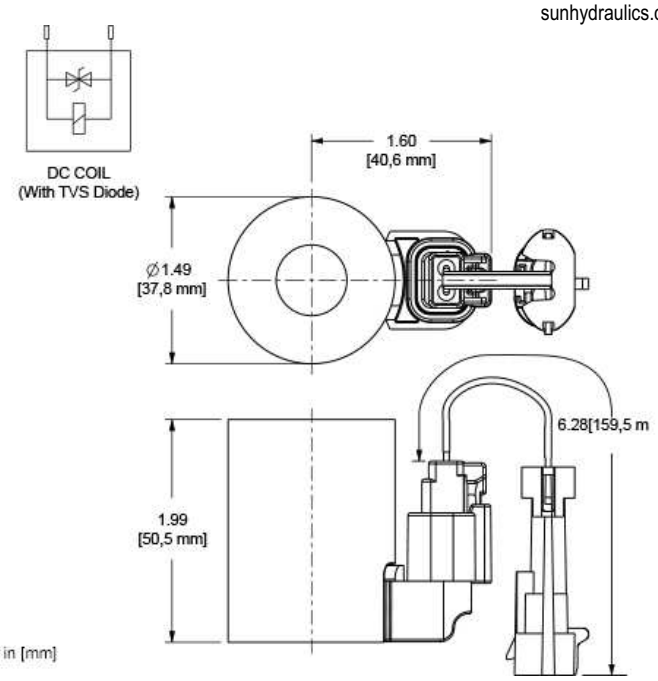
Power Consumption (cold) - at rated voltage	25 Watts
Maximum Ambient Temperature	122 °F
Voltage/Frequency	12 VDC
Operating Voltage Range	+10%/-15%
Duty Cycle Rating	100 %
Connector	Metripack Series 150-2M
Coil Nut Torque	4.5 lbf in.

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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Maximum Ambient Temperature	122 °F
Voltage/Frequency	12 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
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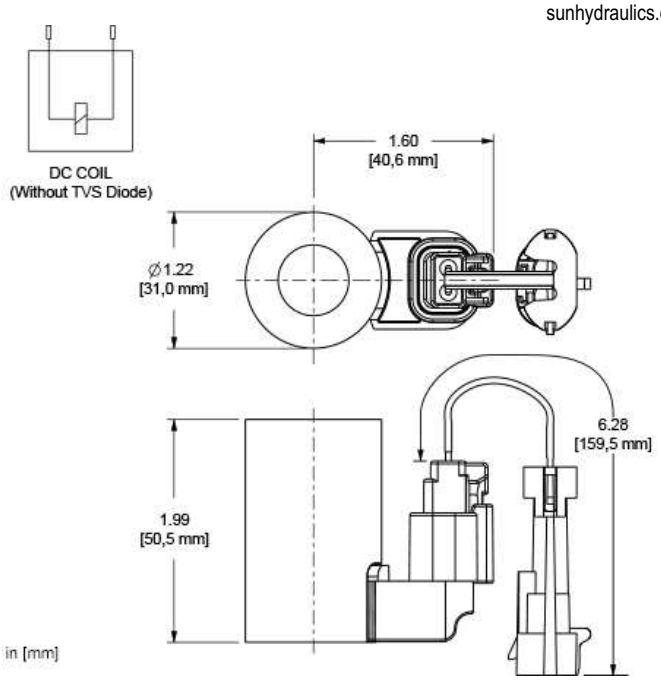

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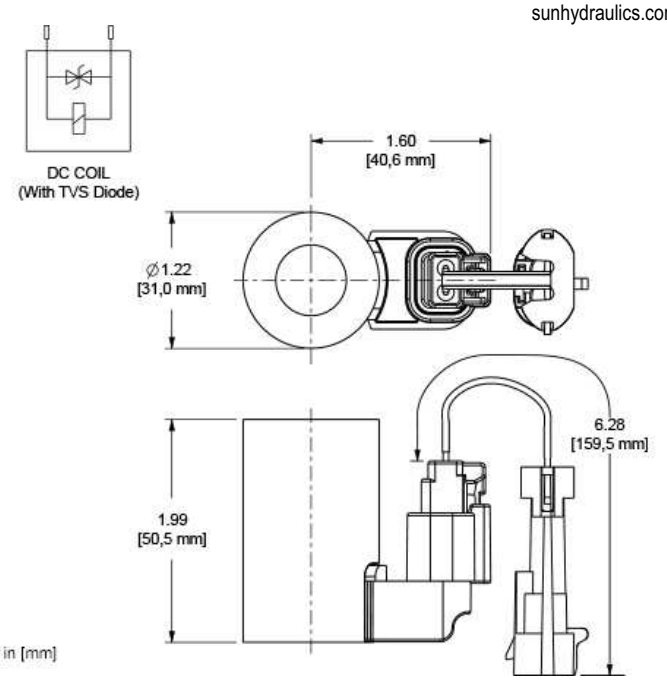
Maximum Ambient Temperature	212 °F
Voltage/Frequency	12 VDC
Operating Voltage Range	+10%/-15%
Duty Cycle Rating	100 %
Connector	Metripack Series 150-2M
Coil Nut Torque	4.5 lbf in.

USED WITH

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



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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
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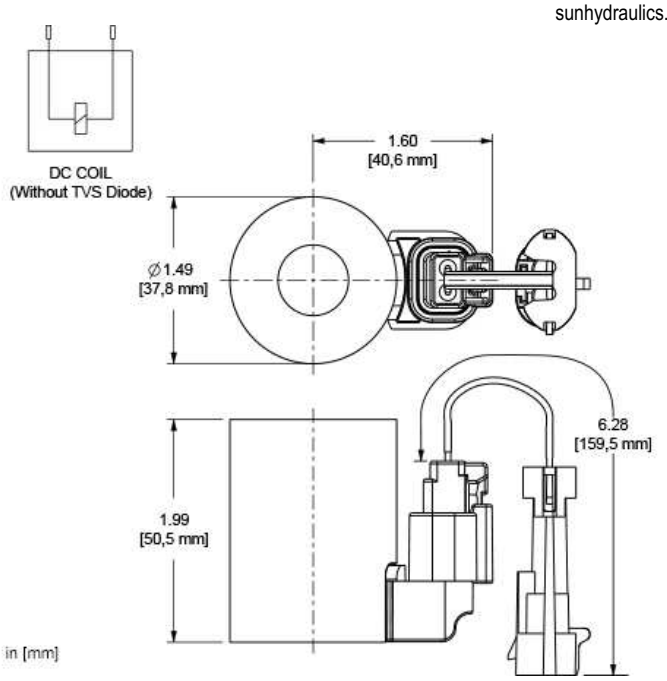

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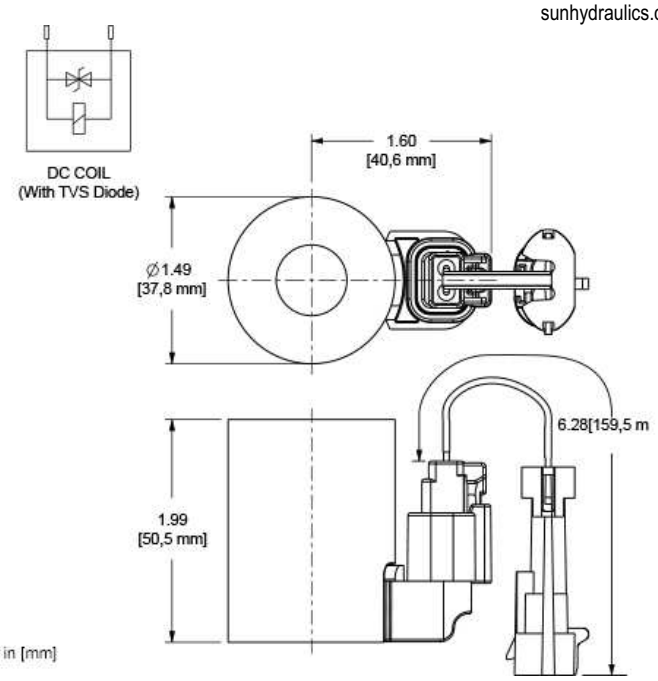
Coil Nut Torque	4.5 lbf in.

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
FPBU	FREP	PRDF	PRDG	RPEI	RVCK	RVCL	RVCM	RVCN	



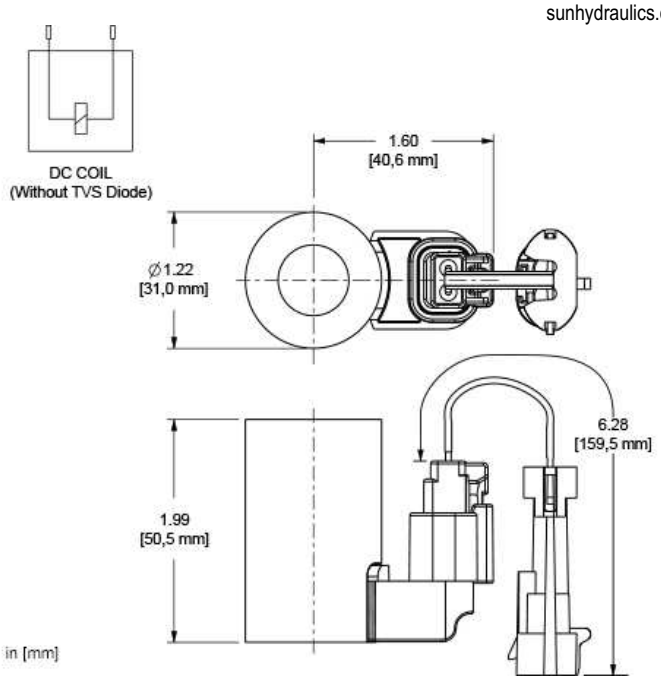
This 740 Series Coil configuration uses a connector adapter kit to provide the required termination.

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	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	



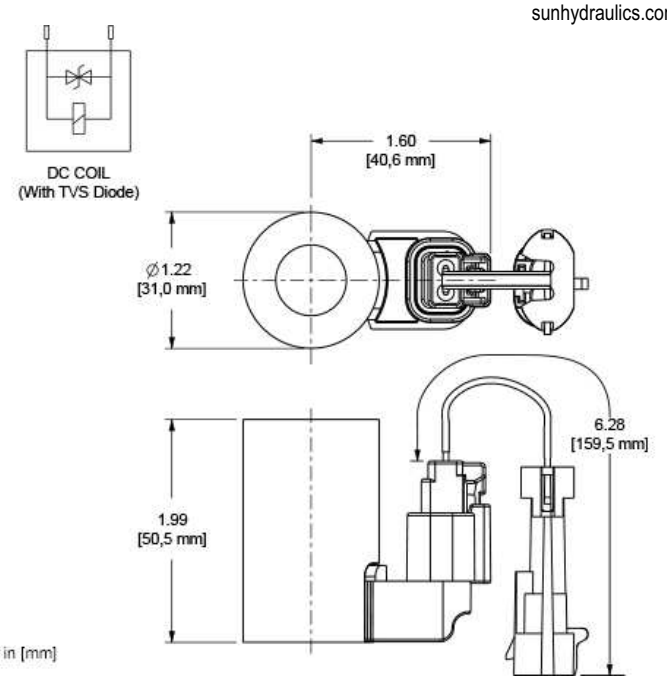
This 740 Series Coil configuration uses a connector adapter kit to provide the required termination.

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	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



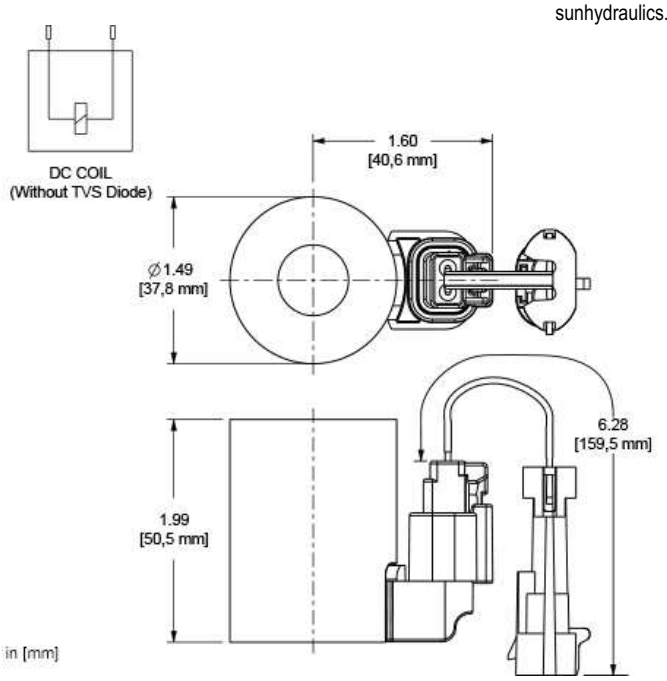
This 740 Series Coil configuration uses a connector adapter kit to provide the required termination.

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



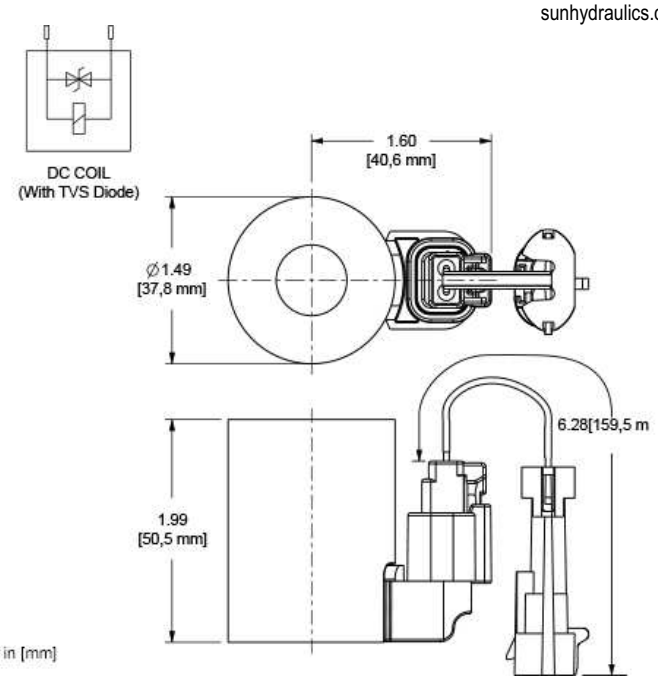
This 740 Series Coil configuration uses a connector adapter kit to provide the required termination.

TECHNICAL DATA

Operating Temperature Range	-40 to 230 °F
Arc Suppression (TVS)	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	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	



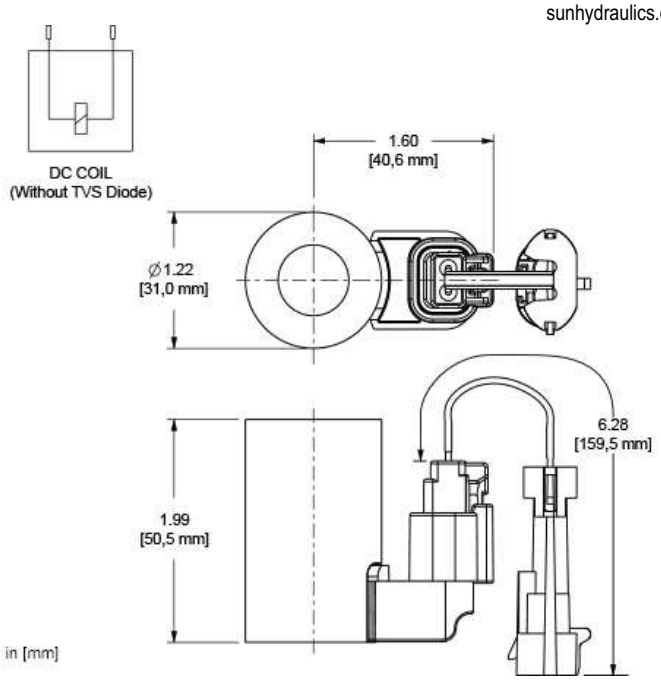
This 740 Series Coil configuration uses a connector adapter kit to provide the required termination.

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	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	



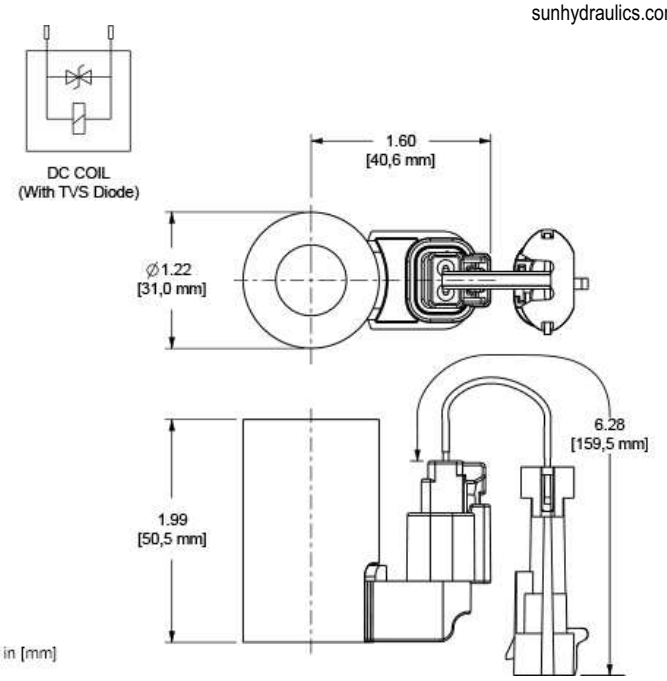
This 740 Series Coil configuration uses a connector adapter kit to provide the required termination.

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	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



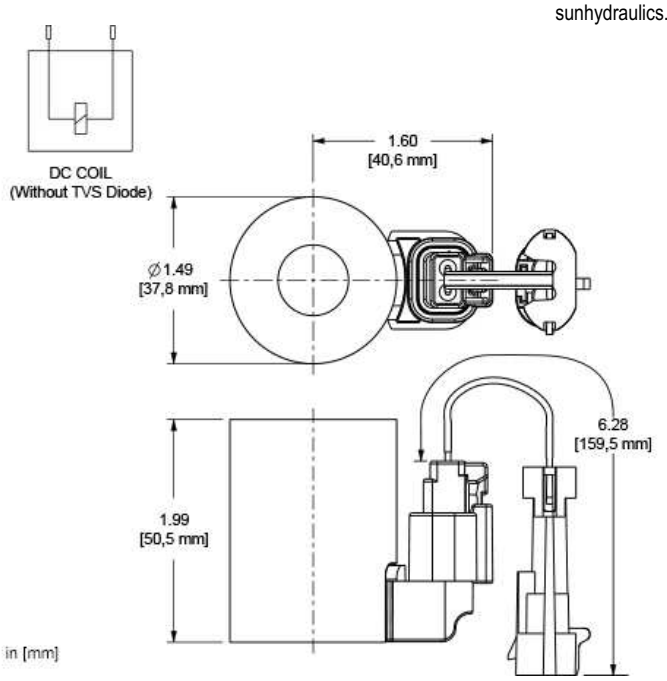
This 740 Series Coil configuration uses a connector adapter kit to provide the required termination.

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	24 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



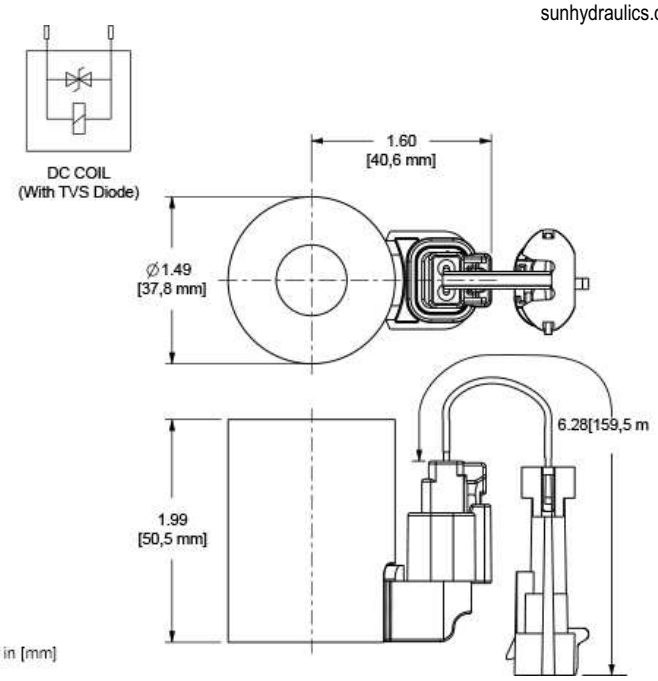
This 740 Series Coil configuration uses a connector adapter kit to provide the required termination.

TECHNICAL DATA

Operating Temperature Range	-40 to 230 °F
Arc Suppression (TVS)	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	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	DTAF	DTAFS	DTBF	DTCF	DTDF	DTDFS
DWBF	DWDF	FDEP	FMDF	FMDG	FPBF	FPBG	FPBI	FPBJ	FPBU
FREP	PRDF	PRDG	RPEI	RVCK	RVCL	RVCM	RVCN		



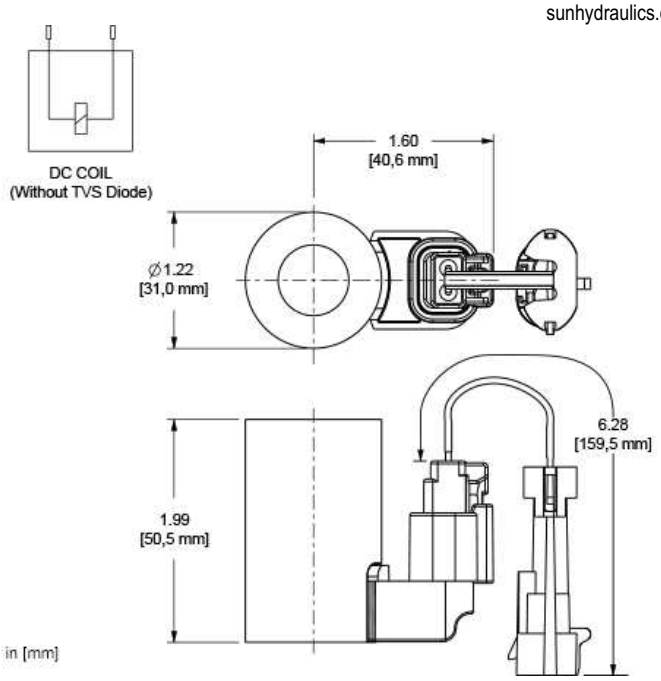
This 740 Series Coil configuration uses a connector adapter kit to provide the required termination.

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	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			



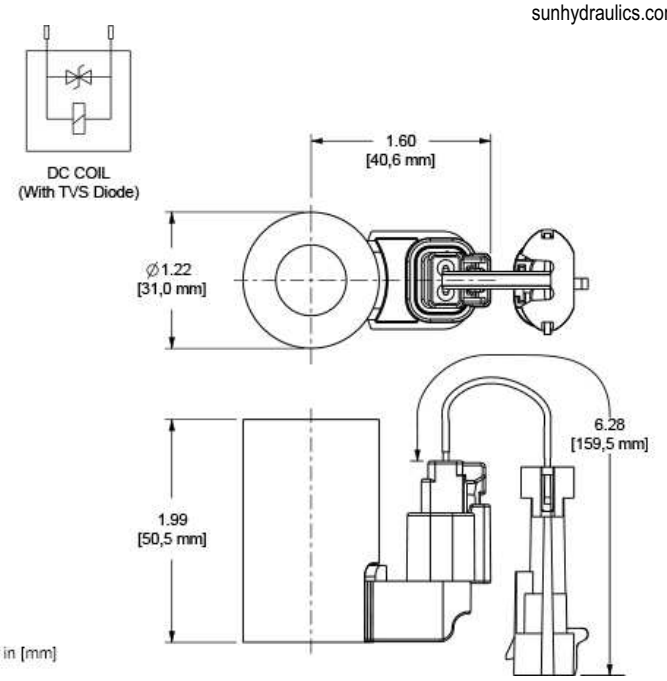
This 740 Series Coil configuration uses a connector adapter kit to provide the required termination.

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



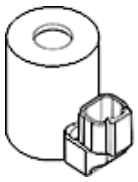
This 740 Series Coil configuration uses a connector adapter kit to provide the required termination.

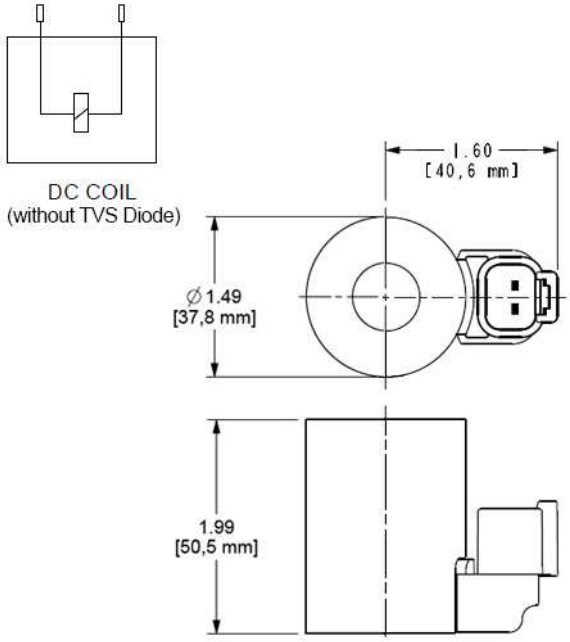
TECHNICAL DATA

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



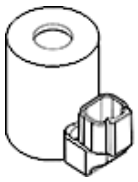


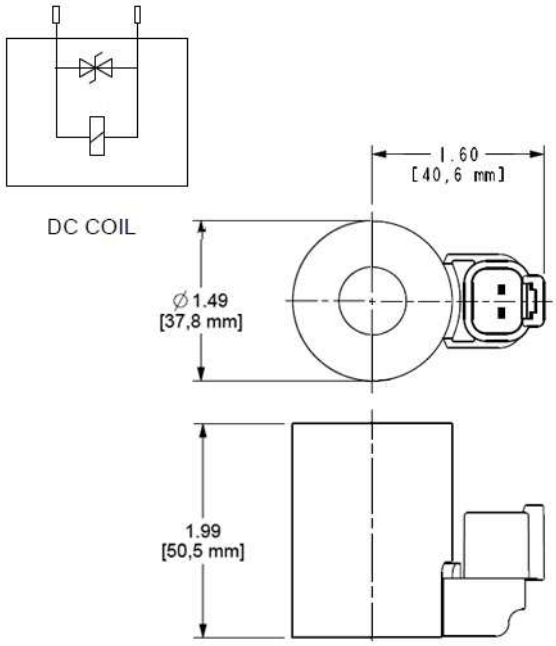
TECHNICAL DATA

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	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						



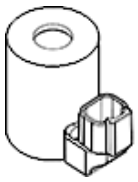


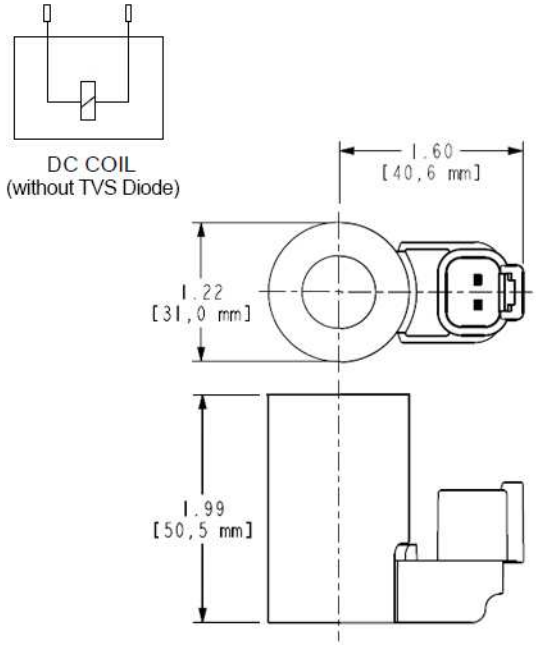
TECHNICAL DATA

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	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						



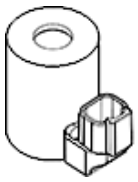


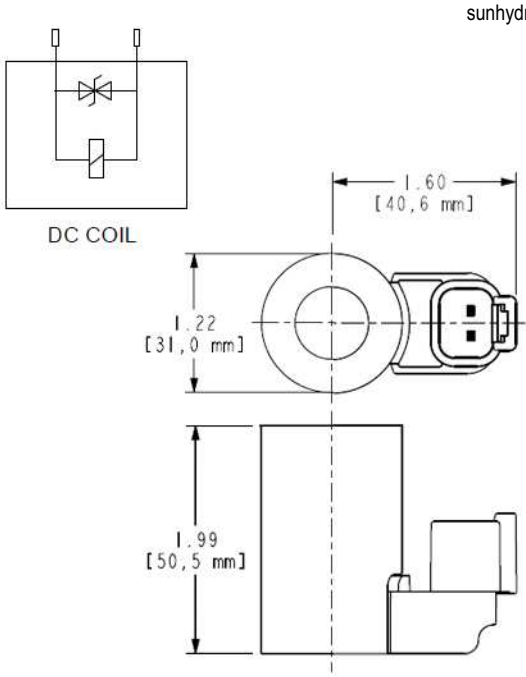
TECHNICAL DATA

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		



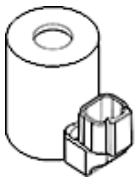


TECHNICAL DATA

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		

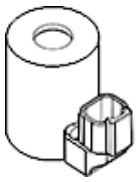


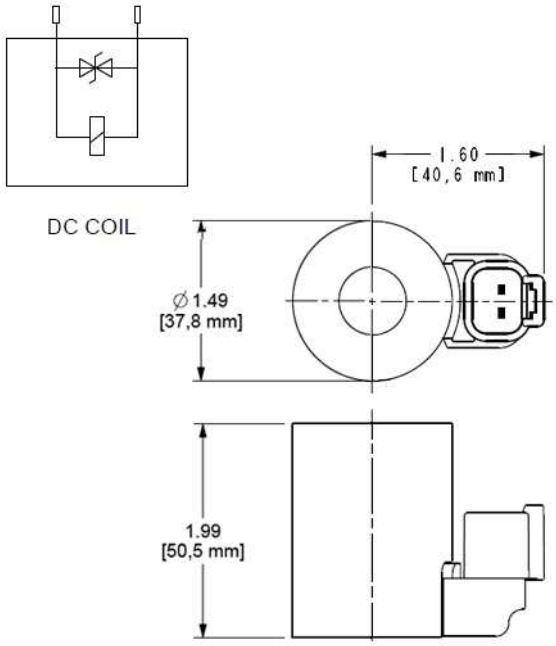
TECHNICAL DATA

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	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



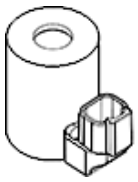


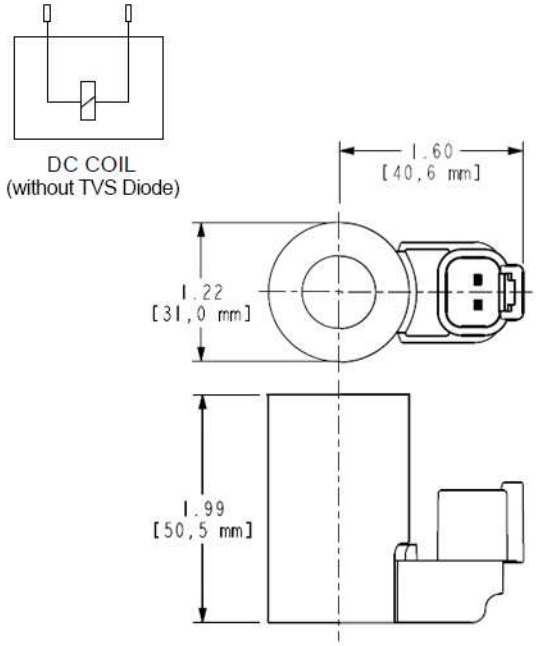
TECHNICAL DATA

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



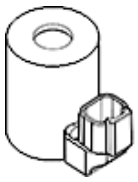


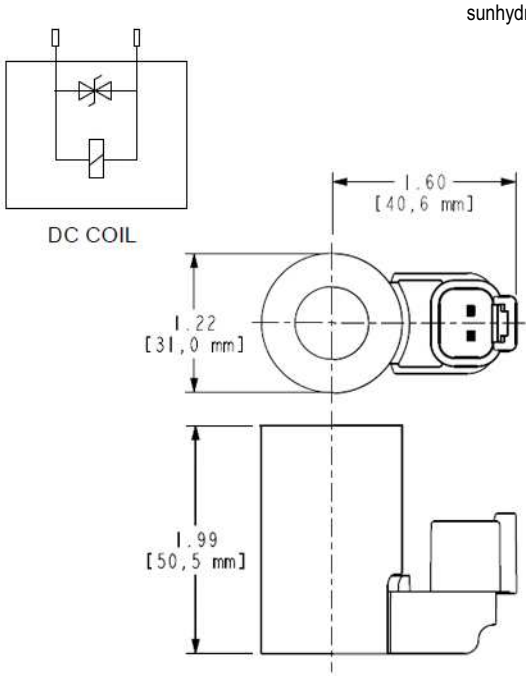
TECHNICAL DATA

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	



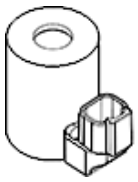


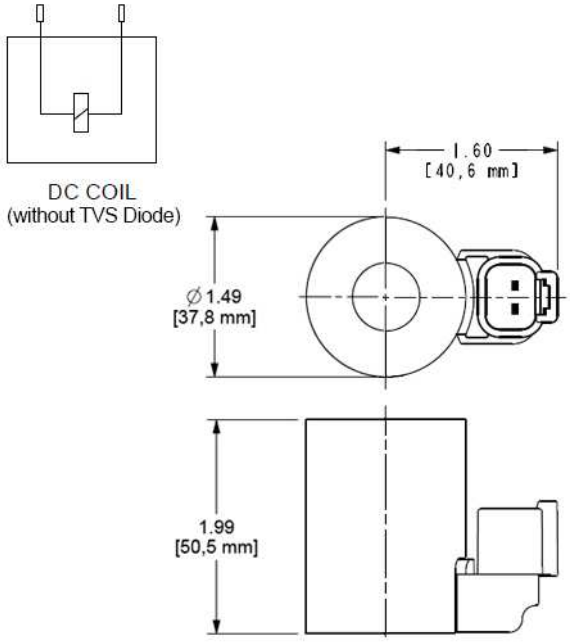
TECHNICAL DATA

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		



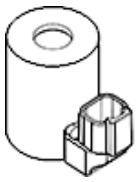


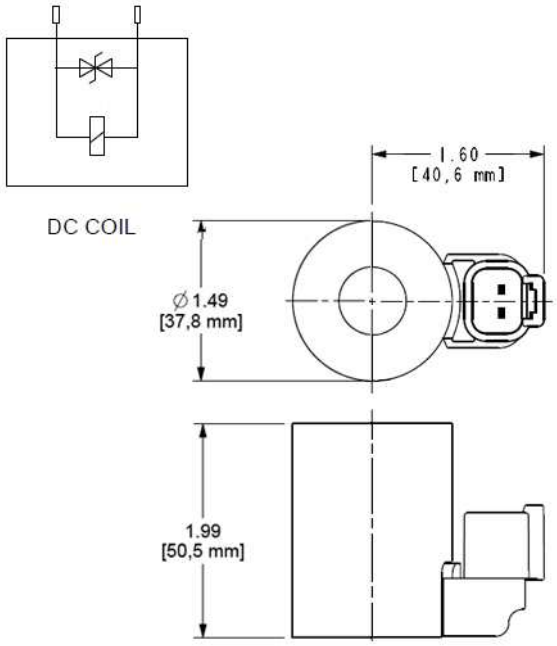
TECHNICAL DATA

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						



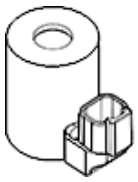


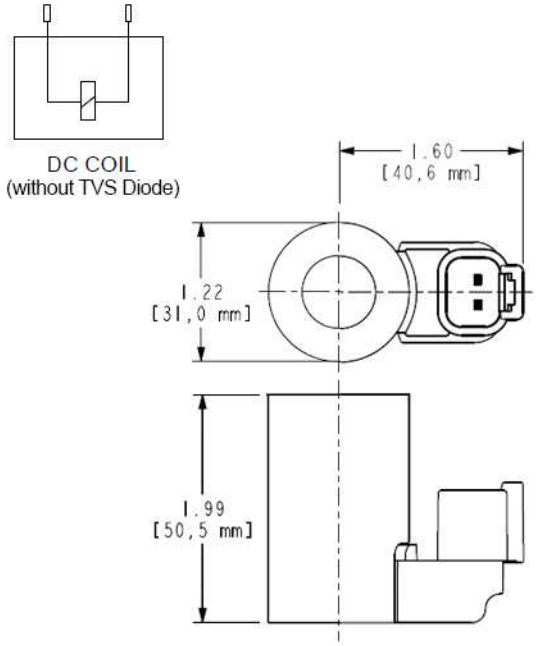
TECHNICAL DATA

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						



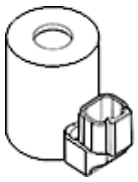


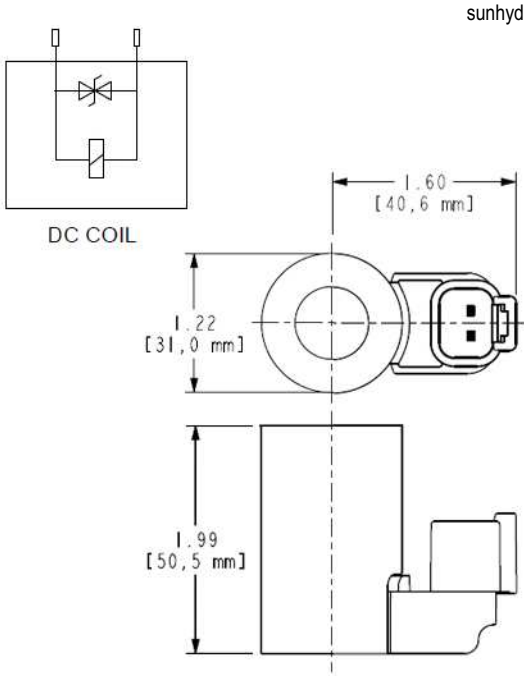
TECHNICAL DATA

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		



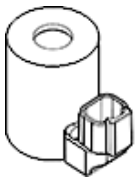


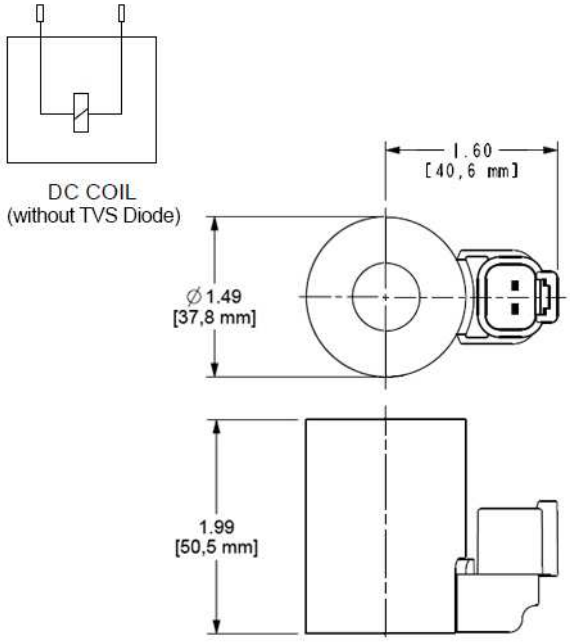
TECHNICAL DATA

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		



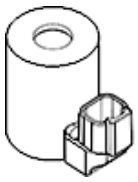


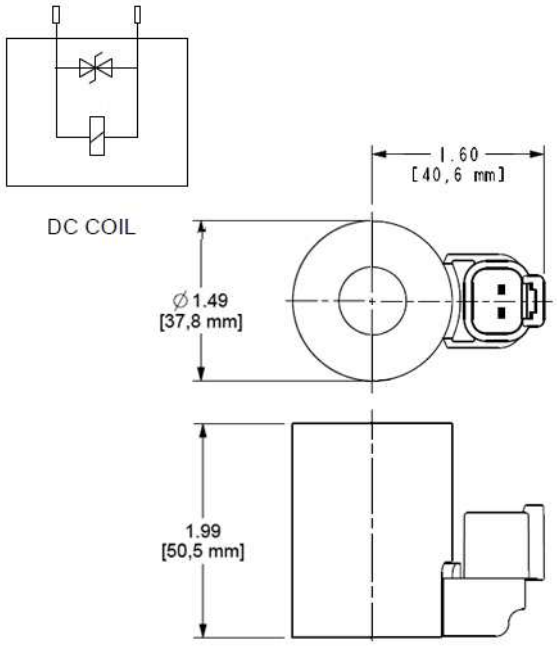
TECHNICAL DATA

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						



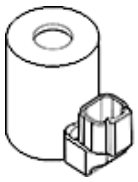


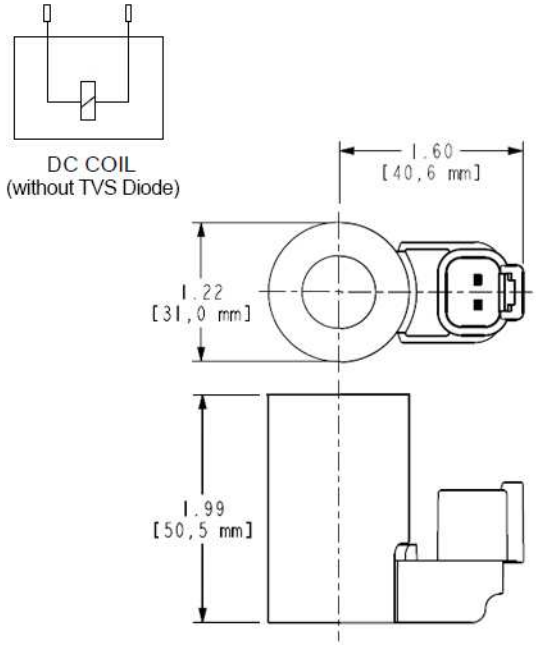
TECHNICAL DATA

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						



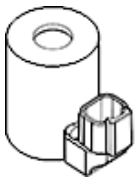


TECHNICAL DATA

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		

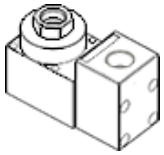


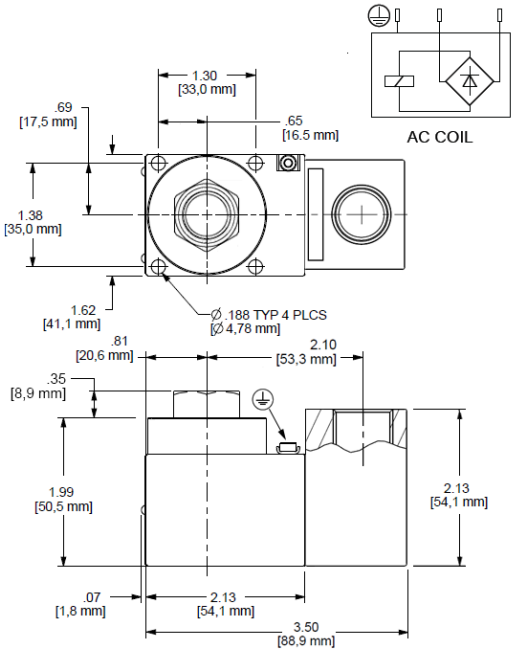
TECHNICAL DATA

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.

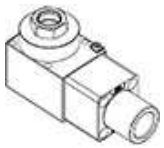
NOTES

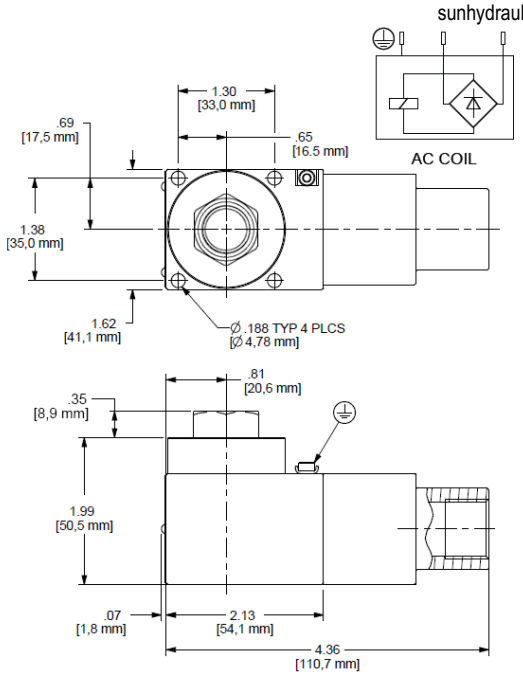
- 1. Mount coil onto spool (tube) body.
- 2. A cable entry hole is provided to accommodate any suitable certified flameproof cable entry device. Cable entry temperature may exceed 70° C (158° F).
- 3. Remove terminal box cover and connect electrical supply and earth to terminal block. Conductors according 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.
- 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
- 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.
- 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	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	M20 x 1.5 female connector
Coil Nut Torque	4.5 lbf in.

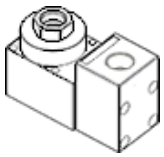
NOTES

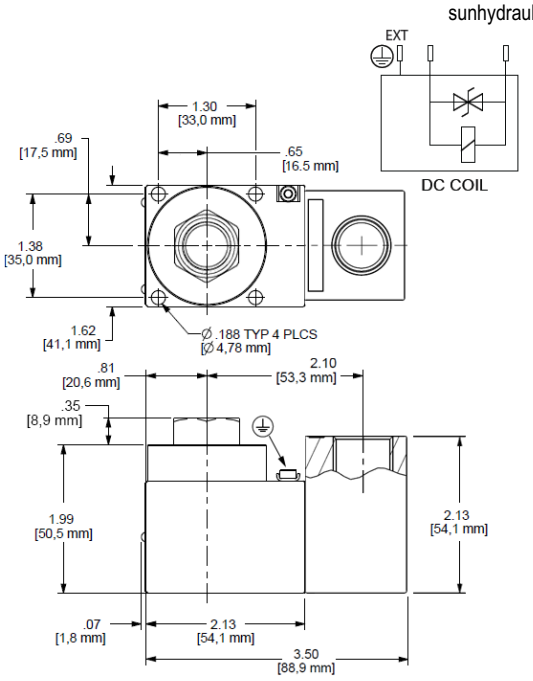
- 1. Mount coil onto spool (tube) body.
- 2. A cable entry hole is provided to accommodate any suitable certified flameproof cable entry device. Cable entry temperature may exceed 70° C (158° F).
- 3. Remove terminal box cover and connect electrical supply and earth to terminal block. Conductors according 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.
- 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.
- 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	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

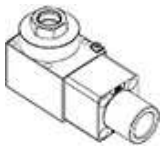
- 1. Mount coil onto spool (tube) body.
- 2. A cable entry hole is provided to accommodate any suitable certified flameproof cable entry device. Cable entry temperature may exceed 70° C (158° F).
- 3. Remove terminal box cover and connect electrical supply and earth to terminal block. Conductors according 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

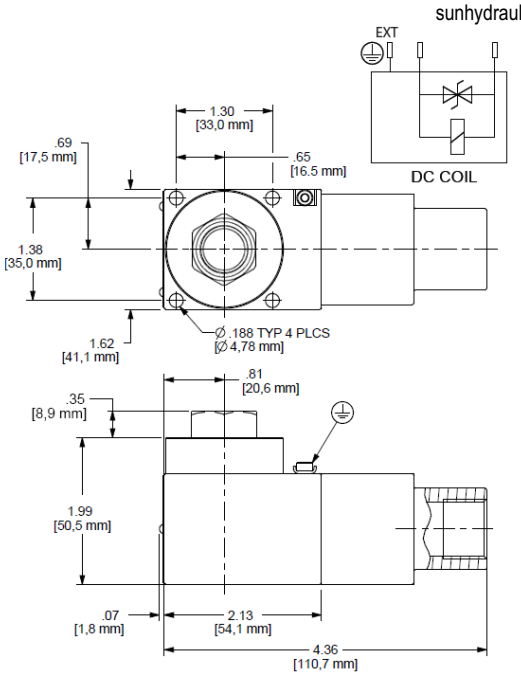
INCLUDED COMPONENTS

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

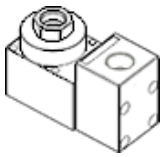
- 1. Mount coil onto spool (tube) body.
- 2. A cable entry hole is provided to accommodate any suitable certified flameproof cable entry device. Cable entry temperature may exceed 70° C (158° F).
- 3. Remove terminal box cover and connect electrical supply and earth to terminal block. Conductors according 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.

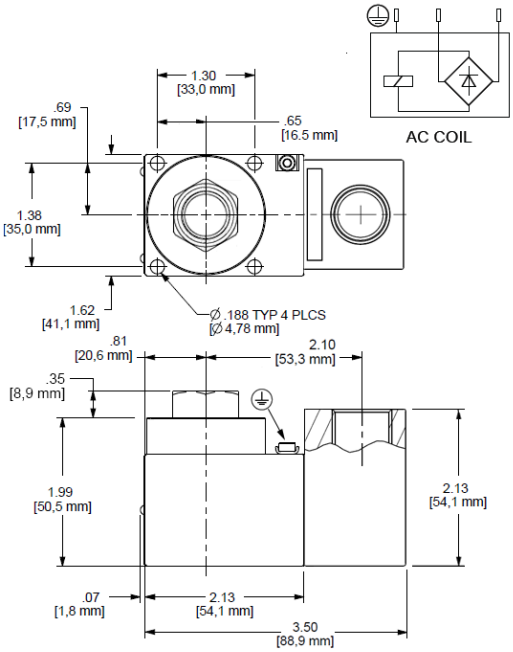
INCLUDED COMPONENTS

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.

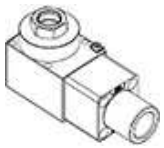
NOTES

- 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.
- 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.
- 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	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
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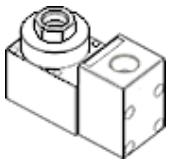
- Sun's 747 Series hazardous location coil requires more clearance than the FLeX 740 series coil. Sun manifolds with more than one cavity may not allow enough clearance for these coils. An additional 2.00” (50,8 mm) beyond the valve extension is needed for coil installation

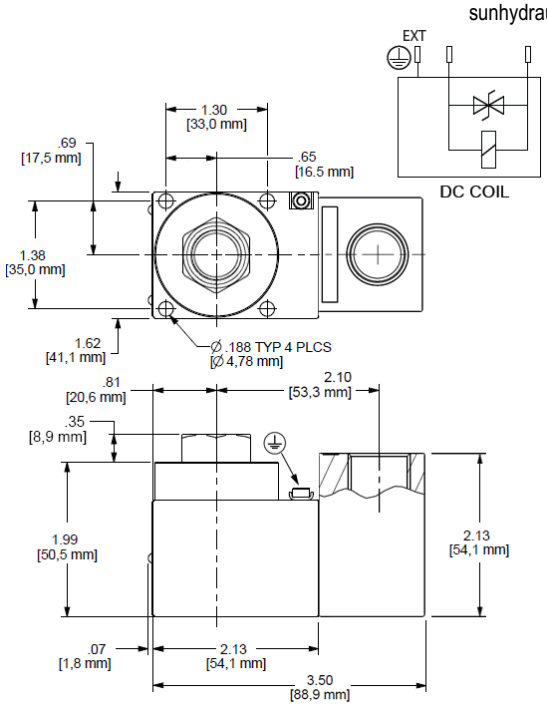
INCLUDED COMPONENTS

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	





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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.
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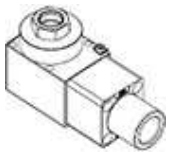
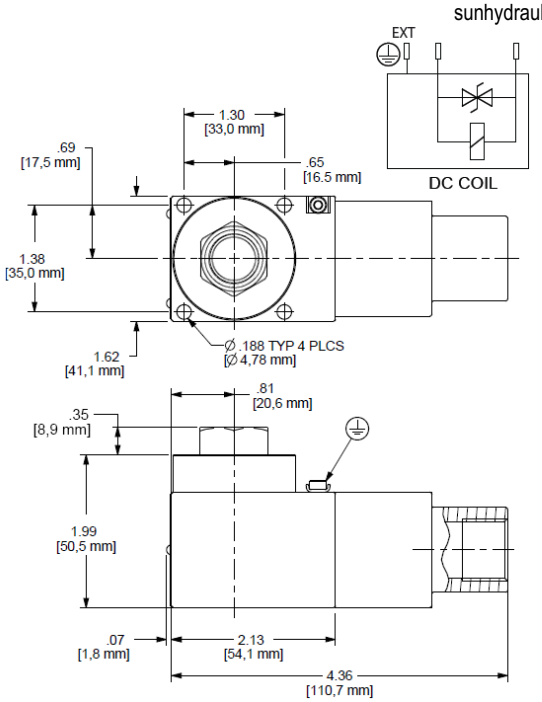
USED WITH

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





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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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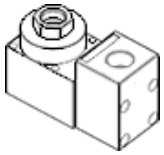
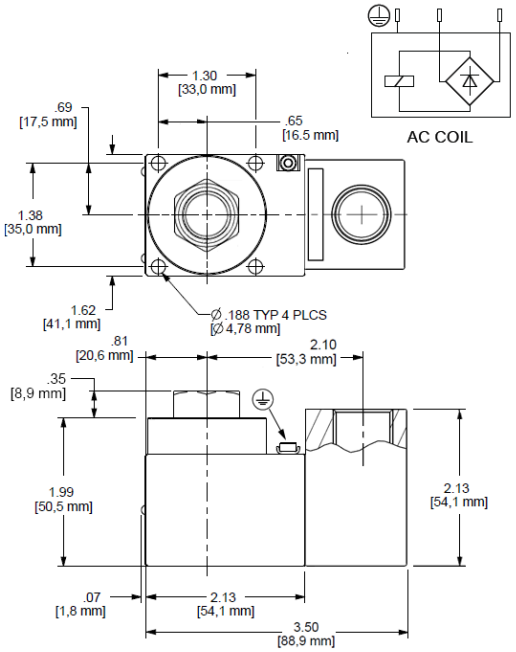
USED WITH

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	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	115 VAC 50/60 Hz (-15%/+0%)
Duty Cycle Rating	100 %
Connector	1/2" NPT female connector
Coil Nut Torque	4.5 lbf in.

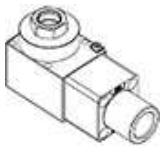
NOTES

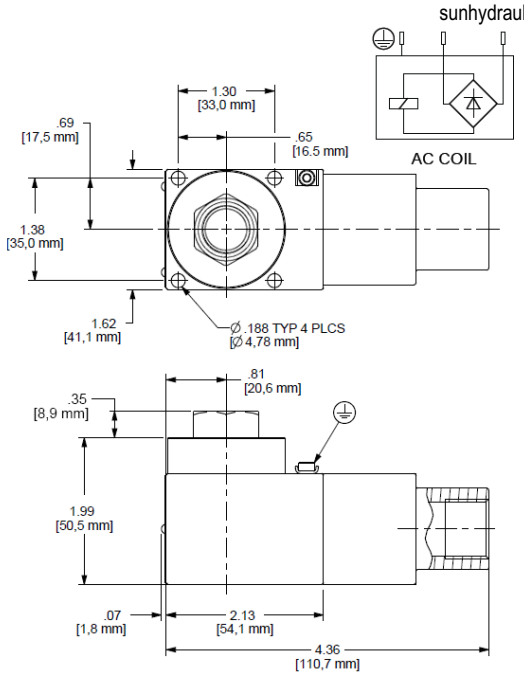
- 1. Mount coil onto spool (tube) body.
- 2. A cable entry hole is provided to accommodate any suitable certified flameproof cable entry device. Cable entry temperature may exceed 70° C (158° F).
- 3. Remove terminal box cover and connect electrical supply and earth to terminal block. Conductors according 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.
- 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.
- 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	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.

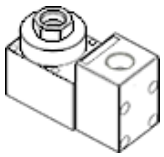
NOTES

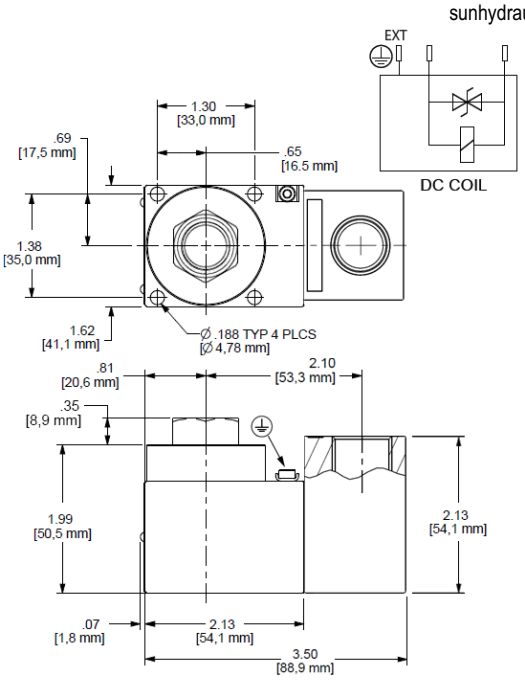
- 1. Mount coil onto spool (tube) body.
- 2. A cable entry hole is provided to accommodate any suitable certified flameproof cable entry device. Cable entry temperature may exceed 70° C (158° F).
- 3. Remove terminal box cover and connect electrical supply and earth to terminal block. Conductors according 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.
- 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.
- 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	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.
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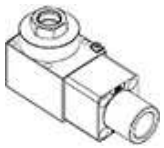
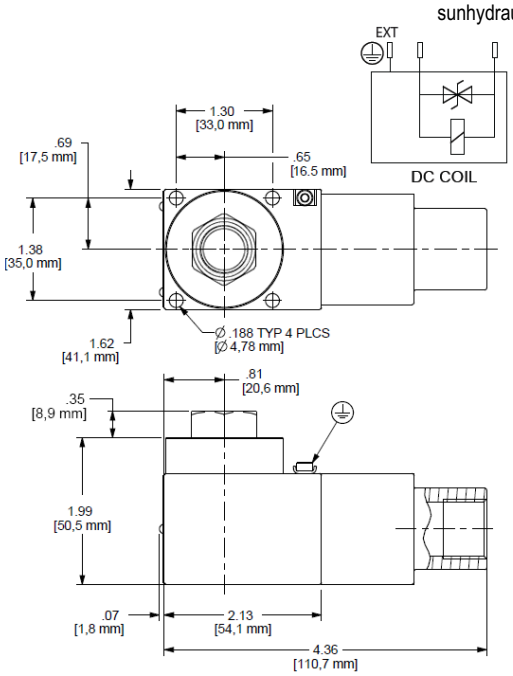
USED WITH

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





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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.
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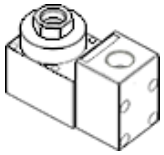
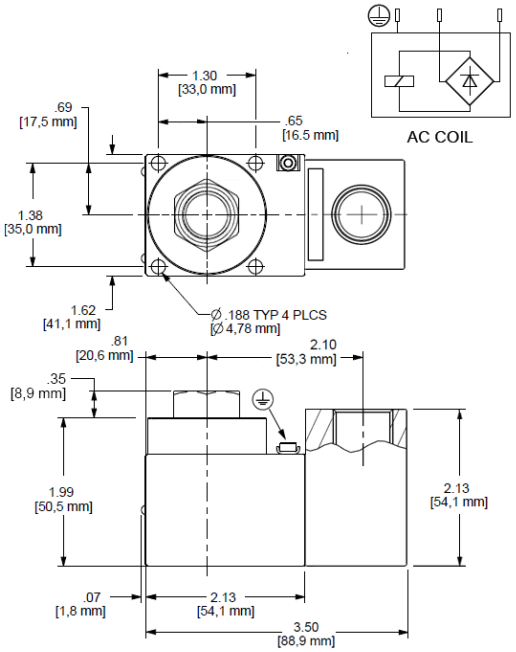
USED WITH

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





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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.

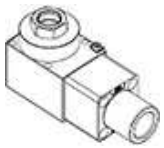
NOTES

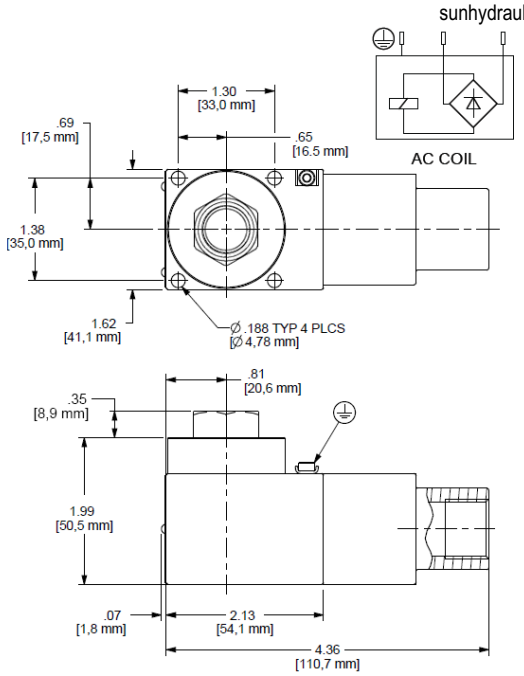
- 1. Mount coil onto spool (tube) body.
- 2. A cable entry hole is provided to accommodate any suitable certified flameproof cable entry device. Cable entry temperature may exceed 70° C (158° F).
- 3. Remove terminal box cover and connect electrical supply and earth to terminal block. Conductors according 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.
- 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.
- 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	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.

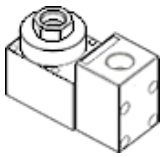
NOTES

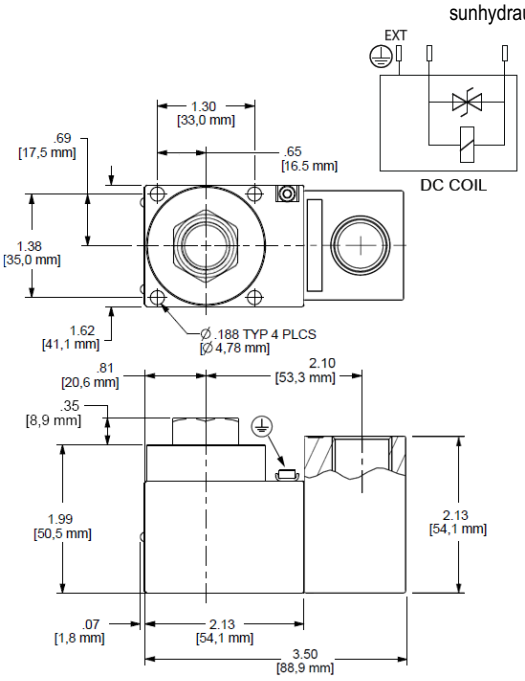
- 1. Mount coil onto spool (tube) body.
- 2. A cable entry hole is provided to accommodate any suitable certified flameproof cable entry device. Cable entry temperature may exceed 70° C (158° F).
- 3. Remove terminal box cover and connect electrical supply and earth to terminal block. Conductors according 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.
- 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.
- 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	FMDG
FPBF	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	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

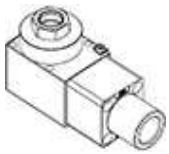
USED WITH

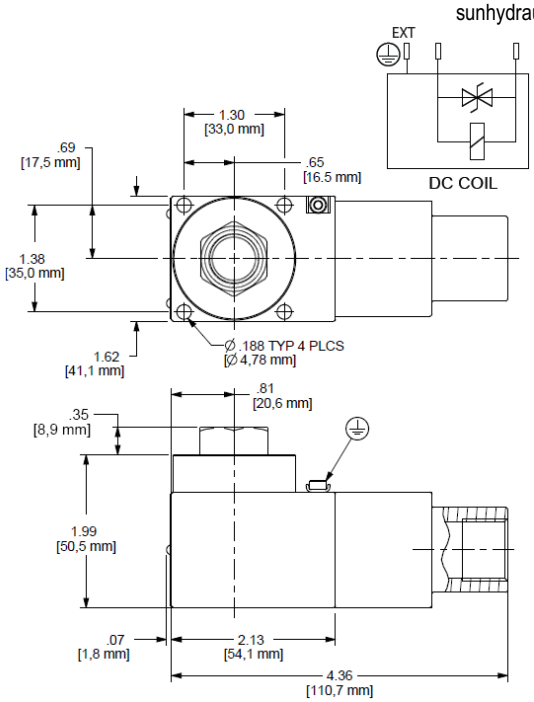
DBAF	DBAFS	DFBD	DFBE	DFBF	DFBG	DFCI	DFCJ	DFDI	DFDJ
DFEI	DFEJ	DFFI	DFFJ	DLDF	DLDFS	DMBD	DMBF	DNBD	DNBF
DTAF	DTAFS	DTBF	DTCF	DTDF	DTDFS	DWBF	DWDF	FDEP	FMDF
FMDG	FPBF	FPBG	FPBI	FPBJ	FPBU	FREP	PRDF	PRDG	RPEI
RVCK	RVCL	RVCM	RVCN	991711300	991711600	991712300	991712600	XMD-01	XMD-02

MODEL
747JN24CD

747 Series, 24 VDC hazardous location coil with 90 Deg 1/2" NPT connector - ATEX, IECEx, CSA

sunhydraulics.com/model/747JN24CD





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).
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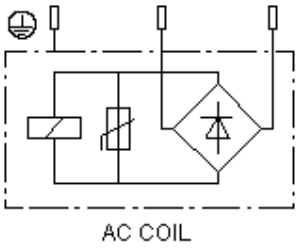
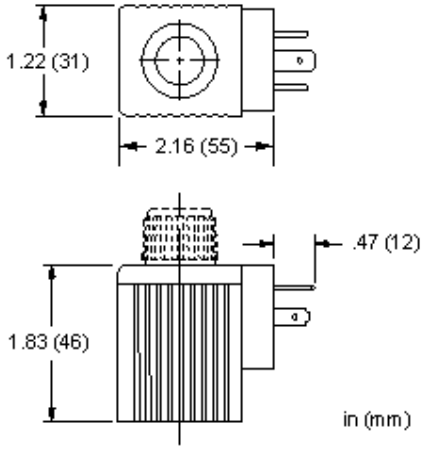
USED WITH

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



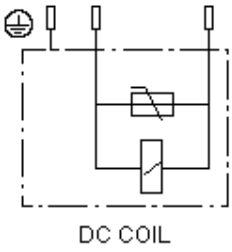


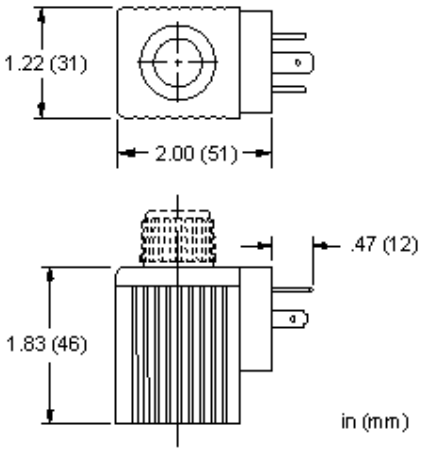
TECHNICAL DATA

Maximum Coil Temperature at 68ºF (20ºC) Ambient	218ºF (105ºC)
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



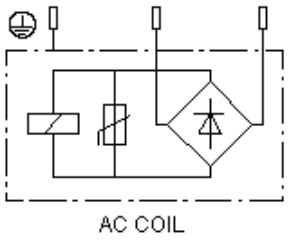


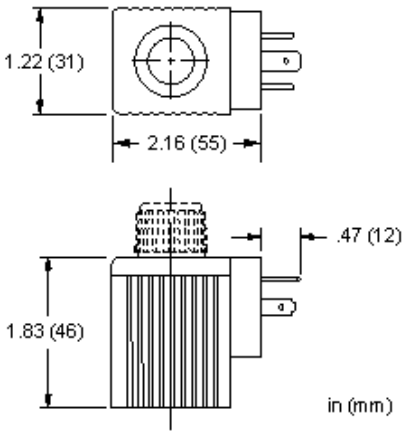
TECHNICAL DATA

Maximum Coil Temperature at 68ºF (20ºC) Ambient	218ºF (105ºC)
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



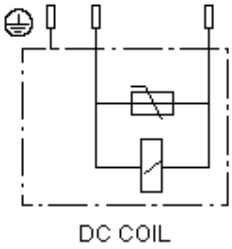


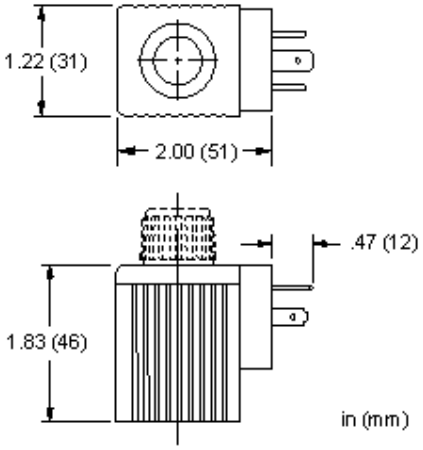
TECHNICAL DATA

Title	ISO/DIN 43650 Connector
Maximum Coil Temperature at 68ºF (20ºC) Ambient	218ºF (105ºC)
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



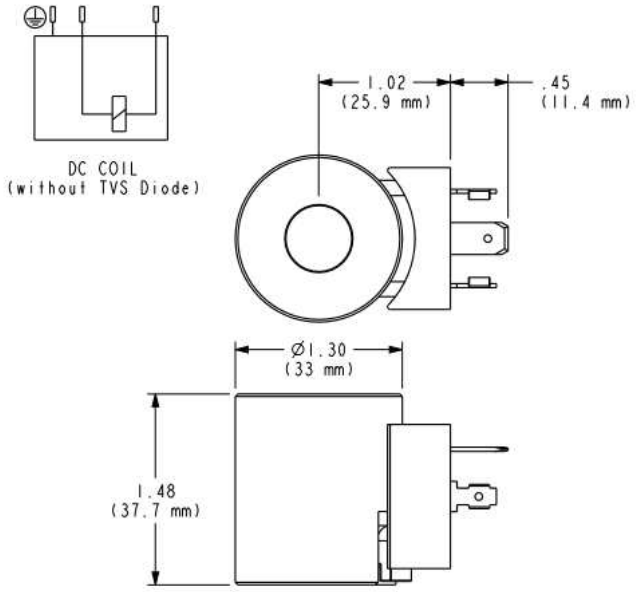


TECHNICAL DATA

Maximum Coil Temperature at 68ºF (20ºC) Ambient	218ºF (105ºC)
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

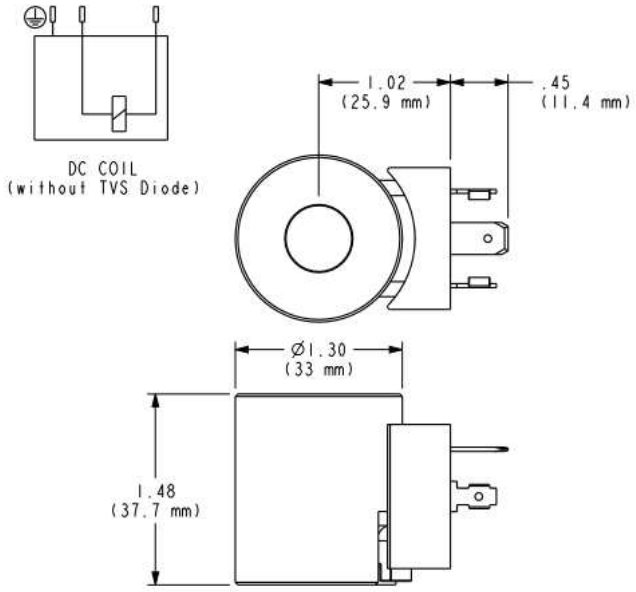


TECHNICAL DATA

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

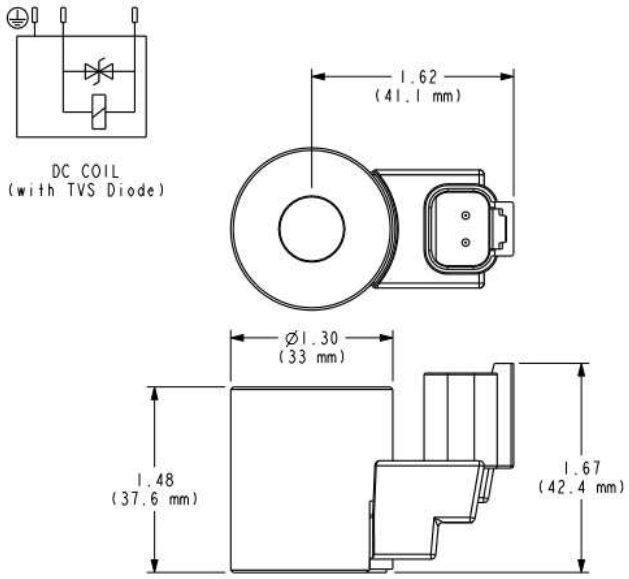


TECHNICAL DATA

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

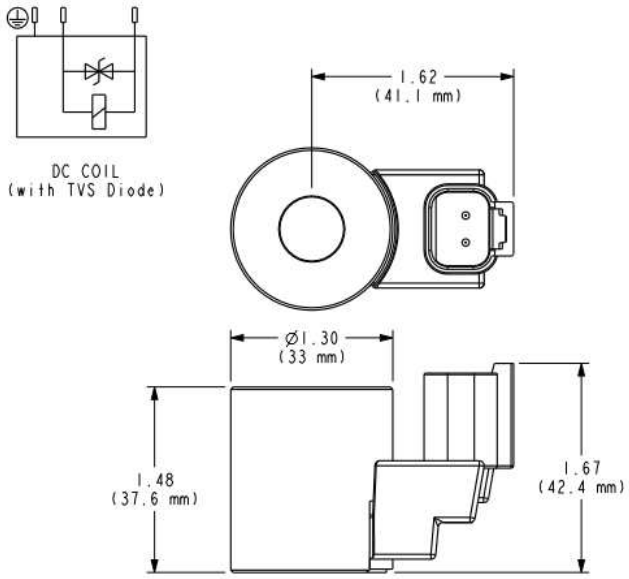


TECHNICAL DATA

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

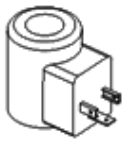


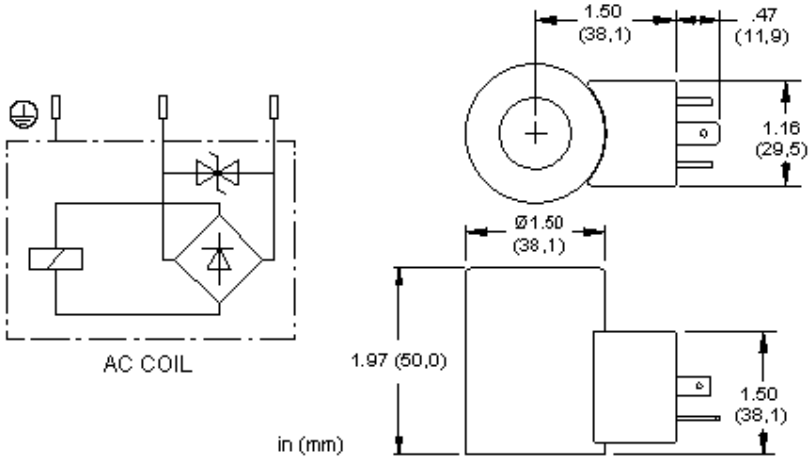
TECHNICAL DATA

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



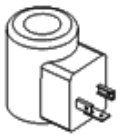


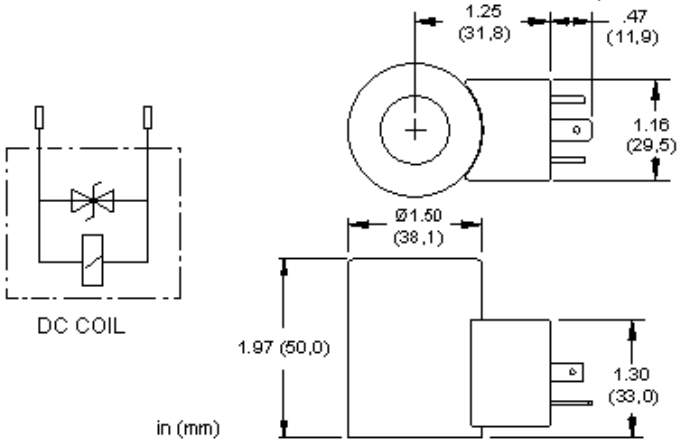
TECHNICAL DATA

Maximum Coil Temperature at 68ºF (20ºC) Ambient	218ºF (105ºC)
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									



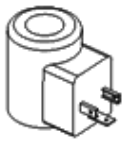


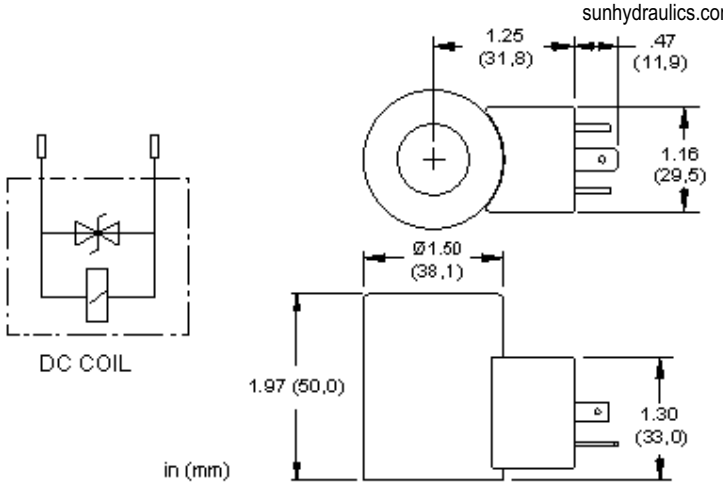
TECHNICAL DATA

Maximum Coil Temperature at 68ºF (20ºC) Ambient	218ºF (105ºC)
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									



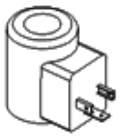


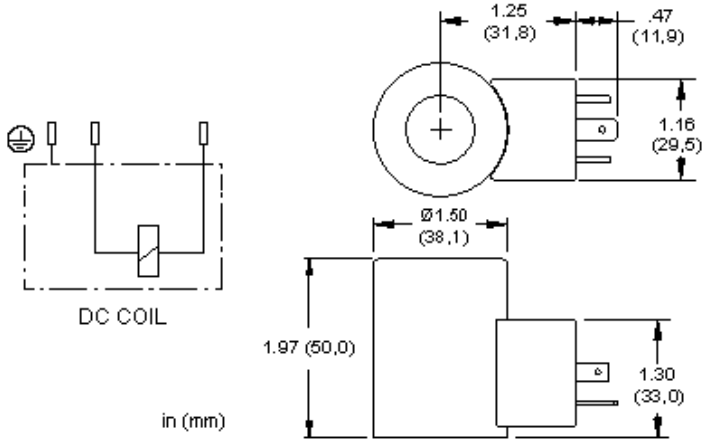
TECHNICAL DATA

Maximum Coil Temperature at 68ºF (20ºC) Ambient	218ºF (105ºC)
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



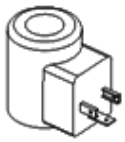


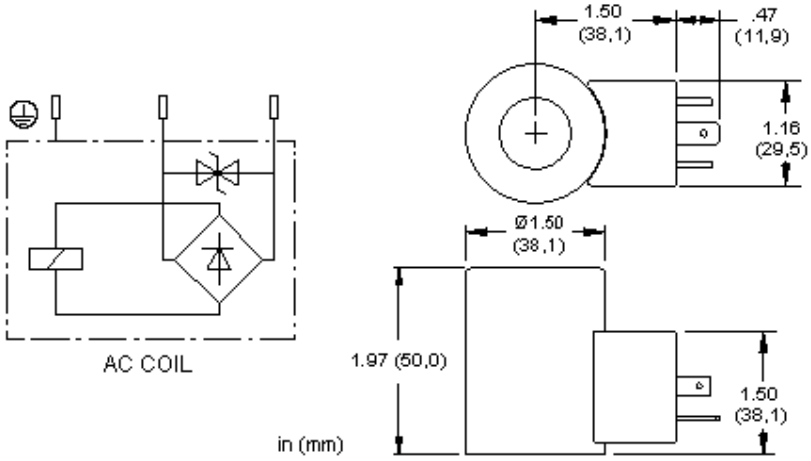
TECHNICAL DATA

Maximum Coil Temperature at 68ºF (20ºC) Ambient	218ºF (105ºC)
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									



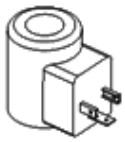


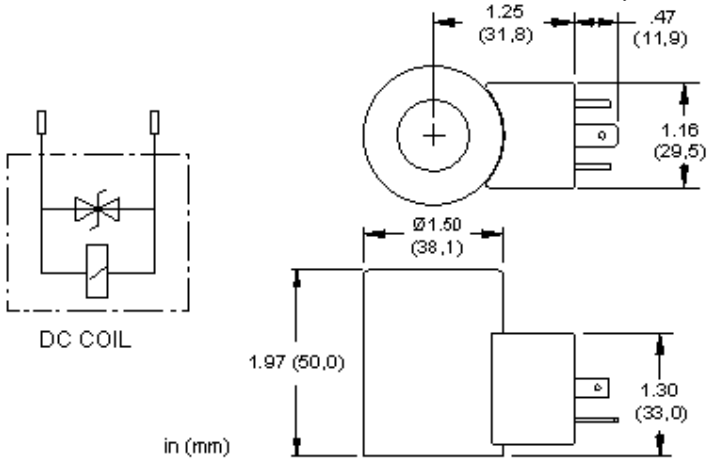
TECHNICAL DATA

Maximum Coil Temperature at 68ºF (20ºC) Ambient	218ºF (105ºC)
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									



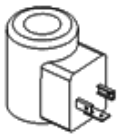


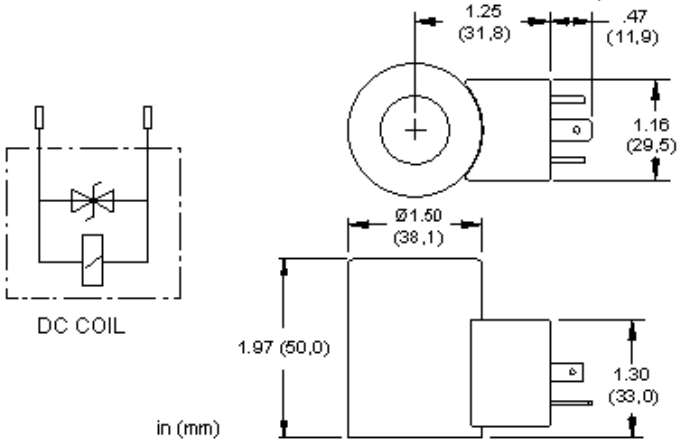
TECHNICAL DATA

Maximum Coil Temperature at 68ºF (20ºC) Ambient	218ºF (105ºC)
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



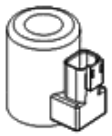


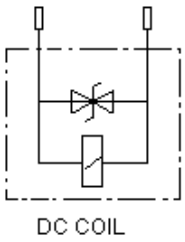
TECHNICAL DATA

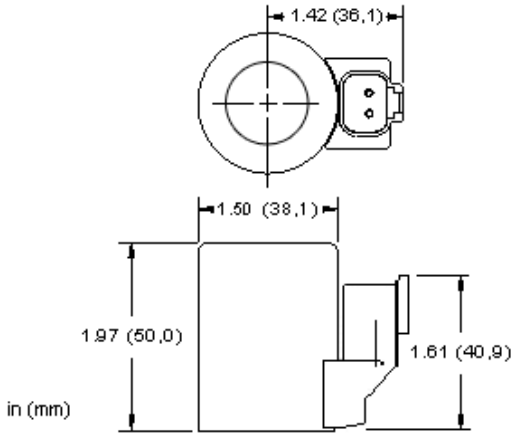
Maximum Coil Temperature at 68ºF (20ºC) Ambient	218ºF (105ºC)
Arc Suppression (TVS)	Included
Power Consumption (cold) - at rated voltage	22 watts
Maximum Ambient Temperature	122 °F
Voltage/Frequency	28 VDC
Operating Voltage Range	+/- 10% nominal
Duty Cycle Rating	100 %
Connector	ISO4400 - EN/DIN175301-803, 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





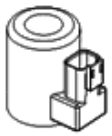


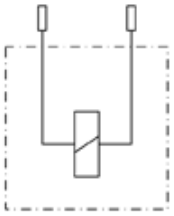
TECHNICAL DATA

Maximum Coil Temperature at 68ºF (20ºC) Ambient	218ºF (105ºC)
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.

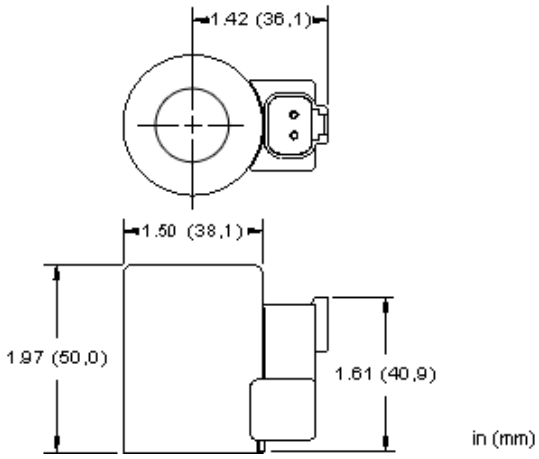
USED WITH

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

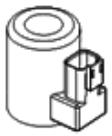


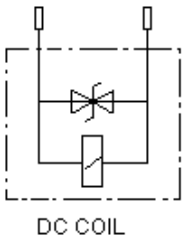
TECHNICAL DATA

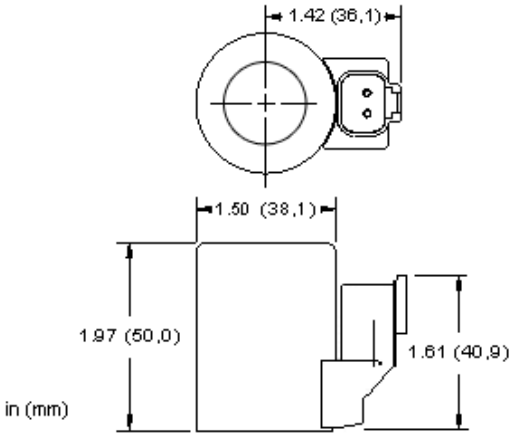
Maximum Coil Temperature at 68ºF (20ºC) Ambient	218ºF (105ºC)
Arc Suppression (TVS)	None
Power Consumption (cold) - at rated voltage	22 watts
Maximum Ambient Temperature	122 °F
Voltage/Frequency	12 VDC
Operating Voltage Range	+/- 10% nominal
Duty Cycle Rating	100 %
Connector	Deutsch DT04-2P
Connector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





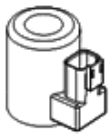


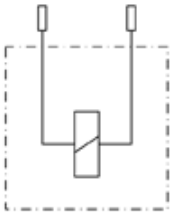
TECHNICAL DATA

Maximum Coil Temperature at 68ºF (20ºC) Ambient	218ºF (105ºC)
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.

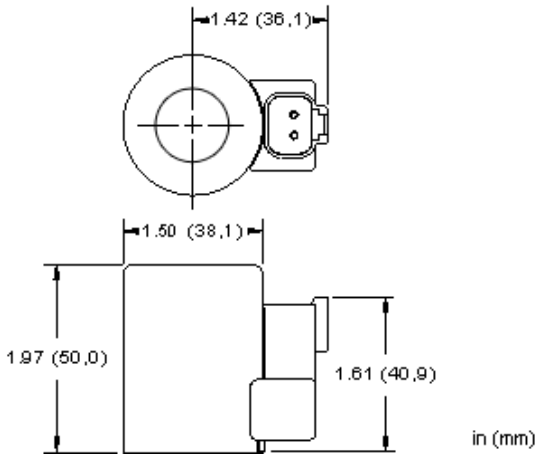
USED WITH

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





DC Coil – No Diode

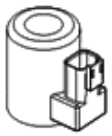


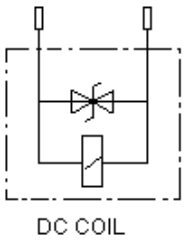
TECHNICAL DATA

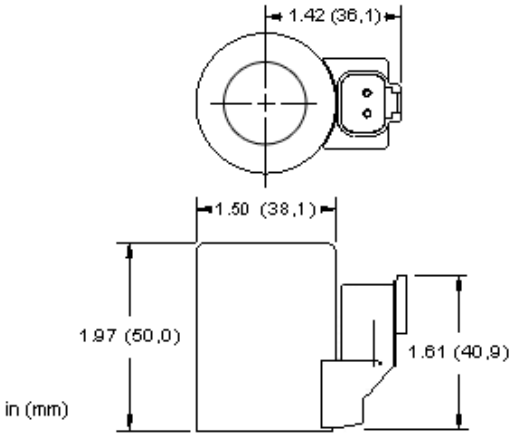
Maximum Coil Temperature at 68ºF (20ºC) Ambient	218ºF (105ºC)
Arc Suppression (TVS)	None
Power Consumption (cold) - at rated voltage	22 watts
Maximum Ambient Temperature	122 °F
Voltage/Frequency	14 VDC
Operating Voltage Range	+/- 10% nominal
Connector	Deutsch DT04-2P
Coil Nut Torque	4.5 lbf in.

USED WITH

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





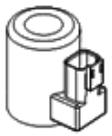


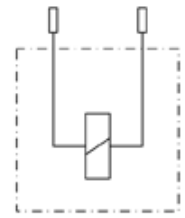
TECHNICAL DATA

Maximum Coil Temperature at 68ºF (20ºC) Ambient	218ºF (105ºC)
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.

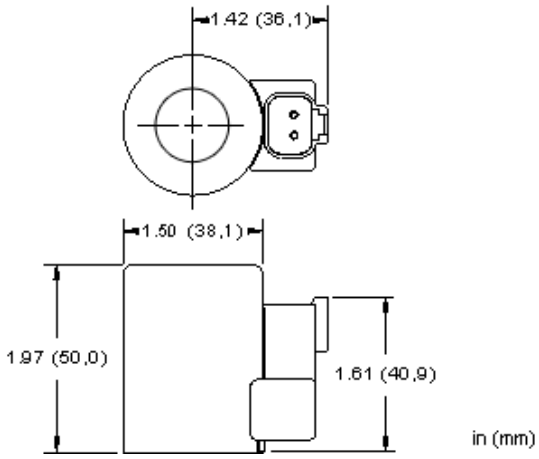
USED WITH

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

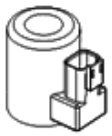


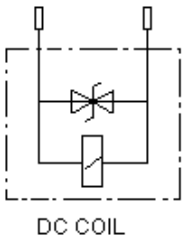
TECHNICAL DATA

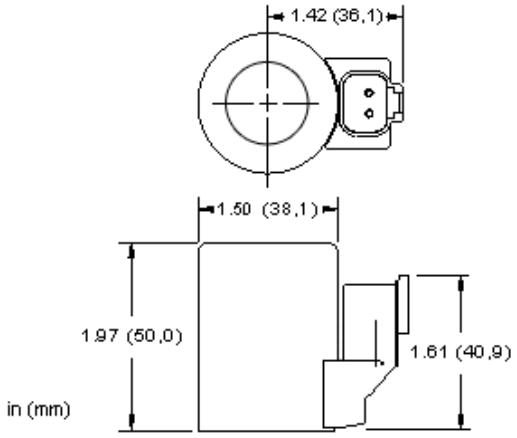
Maximum Coil Temperature at 68ºF (20ºC) Ambient	218ºF (105ºC)
Arc Suppression (TVS)	None
Power Consumption (cold) - at rated voltage	22 watts
Maximum Ambient Temperature	122 °F
Voltage/Frequency	24 VDC
Operating Voltage Range	+/- 10% nominal
Duty Cycle Rating	100 %
Connector	Deutsch DT04-2P
Connector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





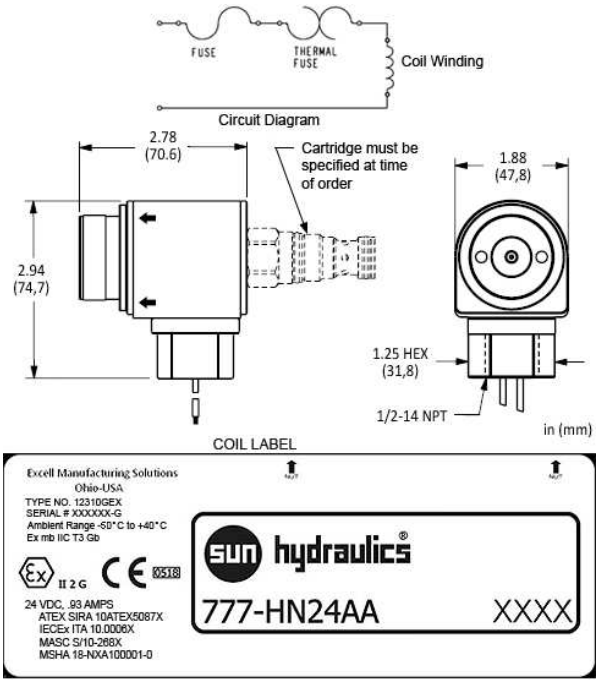


TECHNICAL DATA

Maximum Coil Temperature at 68ºF (20ºC) Ambient	218ºF (105ºC)
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 DMDAS DNCA DNDA DNDAS DNDC DNDY DNDYS FMDA 991723001 991723002



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

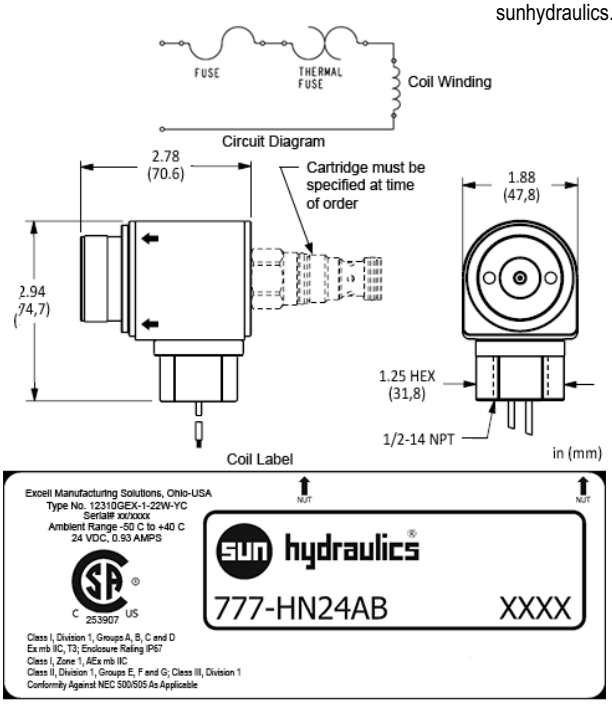
Ambient Temperature Range	-58 to 104 °F
Power Consumption (cold) - at rated voltage	22 watts
Nominal Current	0.93 amps at 68ºF (20ºC), 24 VDC
Diametric Coil Clearance Requirement	2.125 in.
Voltage/Frequency	24 VDC
Operating Voltage Range	+/- 10% nominal
Current Fuse (non-resettable)	3 amps
Thermal Fuse (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
RBAP									



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 68ºF (20ºC), 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
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.
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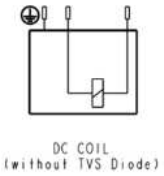
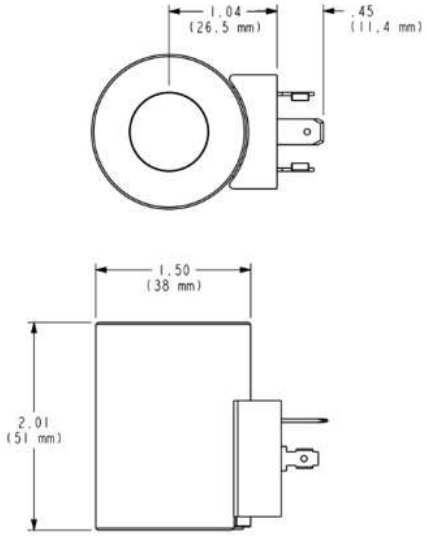
- For proportional valve applications, the maximum current of 590mA has been established so a proportional valve can function optimally under a variety of ambient temperatures.

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
RBAP									



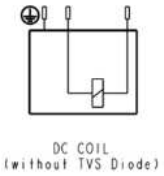


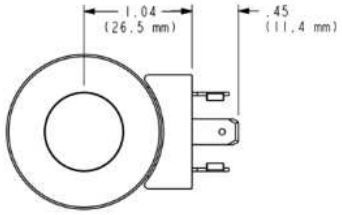
TECHNICAL DATA

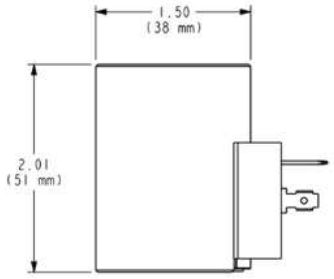
Arc Suppression (TVS)	None
Maximum Ambient Temperature	104 °F
Power Consumption at 68°F (20°C) cold - at rated voltage	36.9 watts
Voltage/Frequency	12 VDC
Operating Voltage Range	+/- 10% nominal
Duty Cycle Rating	100 %
Connector	ISO4400 - EN/DIN175301-803, Form A (ISO/DIN 43650) 3-pin
Coil Nut Torque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

USED WITH

FNUC





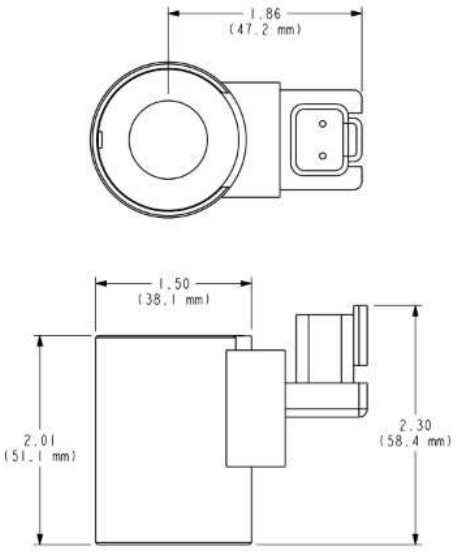


TECHNICAL DATA

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

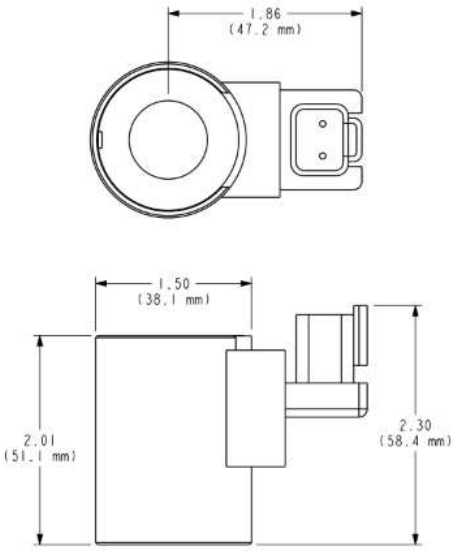


TECHNICAL DATA

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

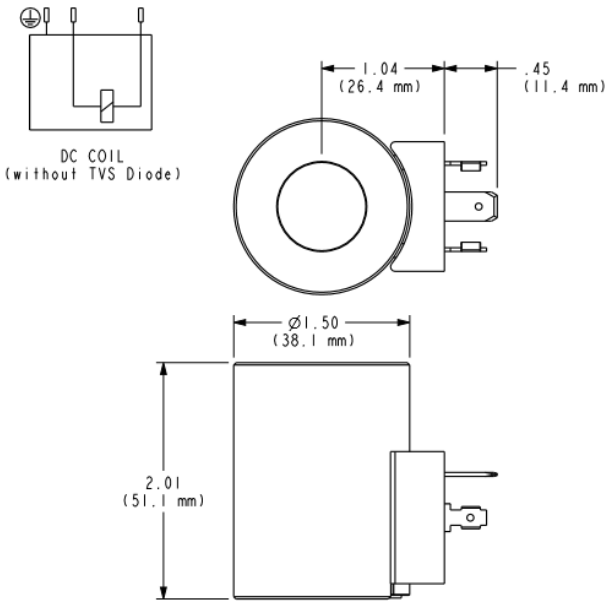


TECHNICAL DATA

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

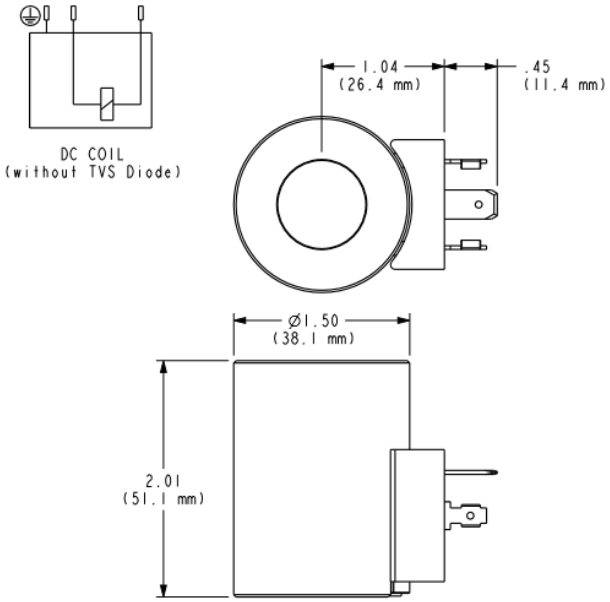


TECHNICAL DATA

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

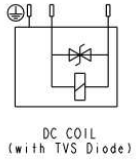


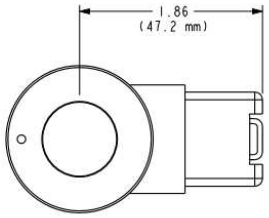
TECHNICAL DATA

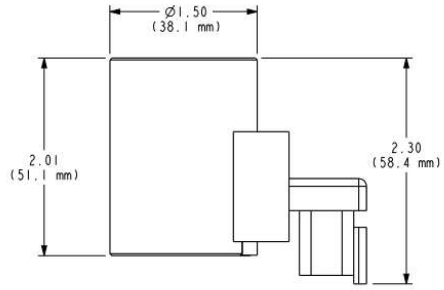
Operating Temperature Range	-4 to 215 °F
Arc Suppression (TVS)	None
Power Consumption (cold) - at rated voltage	24 Watts
Maximum Ambient Temperature	104 °F
Voltage/Frequency	24 VDC
Operating Voltage Range	+/- 10% nominal
Duty Cycle Rating	100 %
Connector	ISO4400 - EN/DIN175301-803, Form A (ISO/DIN 43650)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

USED WITH

DNUC





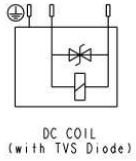


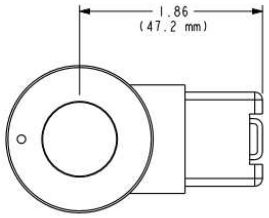
TECHNICAL DATA

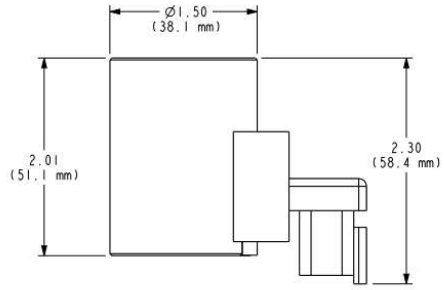
Operating Temperature Range	-4 to 215 °F
Arc Suppression (TVS)	Included
Power Consumption (cold) - at rated voltage	24 Watts
Maximum Ambient Temperature	104 °F
Voltage/Frequency	12 VDC
Operating Voltage Range	+/- 10% nominal
Duty Cycle Rating	100 %
Connector	Deutsch DT04-2P
Coil Nut Torque	44 lbf in.

USED WITH

DNUC





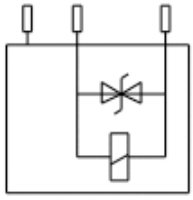


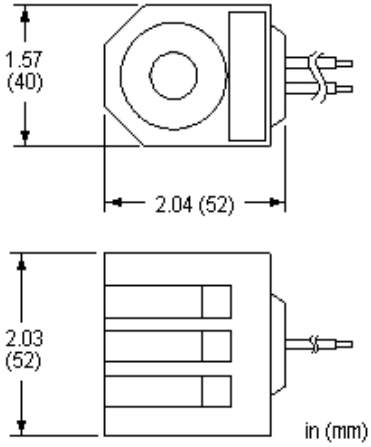
TECHNICAL DATA

Operating Temperature Range	-4 to 215 °F
Arc Suppression (TVS)	Included
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



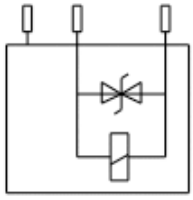


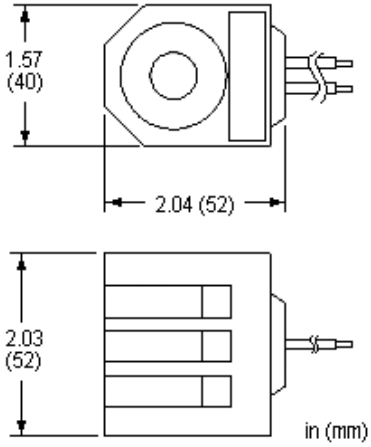
TECHNICAL DATA

Maximum Coil Temperature at 68ºF (20ºC) Ambient	221ºF (105ºC)
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



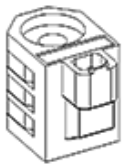


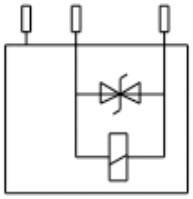
TECHNICAL DATA

Maximum Coil Temperature at 68ºF (20ºC) Ambient	221ºF (105ºC)
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	Twin lead 18 AWG x 24 in. (610 mm)
Coil Nut Torque	44 lbf in.

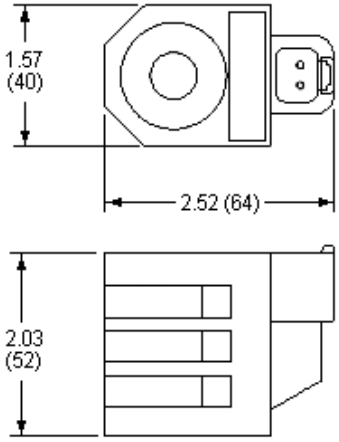
USED WITH

DLUT DMUQ DMUT DNUT





DC Coil

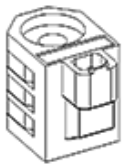


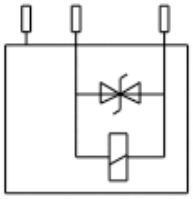
TECHNICAL DATA

Maximum Coil Temperature at 68ºF (20ºC) Ambient	221ºF (105ºC)
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
Coil Nut Torque	44 lbf in.

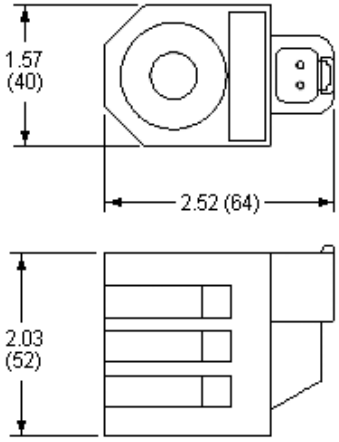
USED WITH

DLUT DMUQ DMUT DNUT





DC Coil

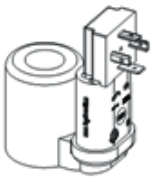


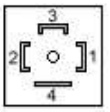
TECHNICAL DATA

Maximum Coil Temperature at 68ºF (20ºC) Ambient	221ºF (105ºC)
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
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.

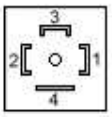
TECHNICAL DATA

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
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	0-20 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

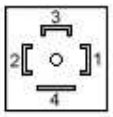
NOTES A source type input is required. A sinking type analog input will damage the amplifier.

USED WITH

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

24 VDC coil with embedded proportional IR amplifier, voltage command

snhy.com/7902B24V



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

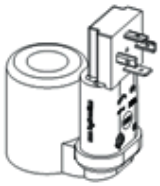
NOTES A source type input is required. A sinking type analog input will damage the amplifier.

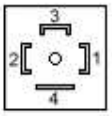
USED WITH

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

24 VDC coil with embedded proportional IR amplifier, voltage command

sunhydraulics.com/model/7902C24V





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.

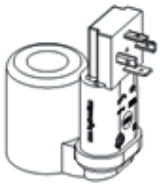
TECHNICAL DATA

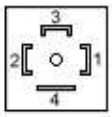
Supply Voltage	Equals coil voltage within +/-10%
Output Current	600 mA
Dither Frequency	Off, 80-300 Hz, in 20 Hz increments
Reference Voltage	+5V at 1mA
Operating Temperature Range	-4 - 158 °F
Analog Input Range	0-10V
Analog Input Impedance	13 Kilo-ohms
Card Function	+5V Reference Option
Voltage/Frequency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

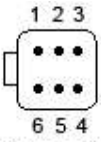
TECHNICAL DATA

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			



DT04-6P Connector

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	

24 VDC coil with embedded proportional IR amplifier, current command

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.

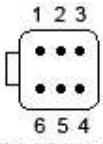
TECHNICAL DATA

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	



DT04-6P Connector

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	

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).

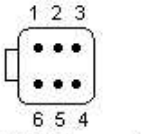
TECHNICAL DATA

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	DLDAS	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).

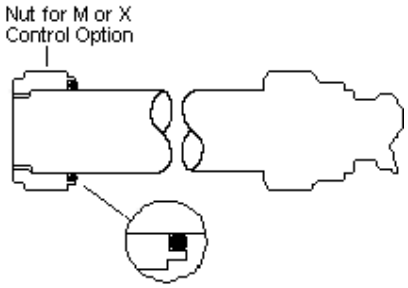
TECHNICAL DATA

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							

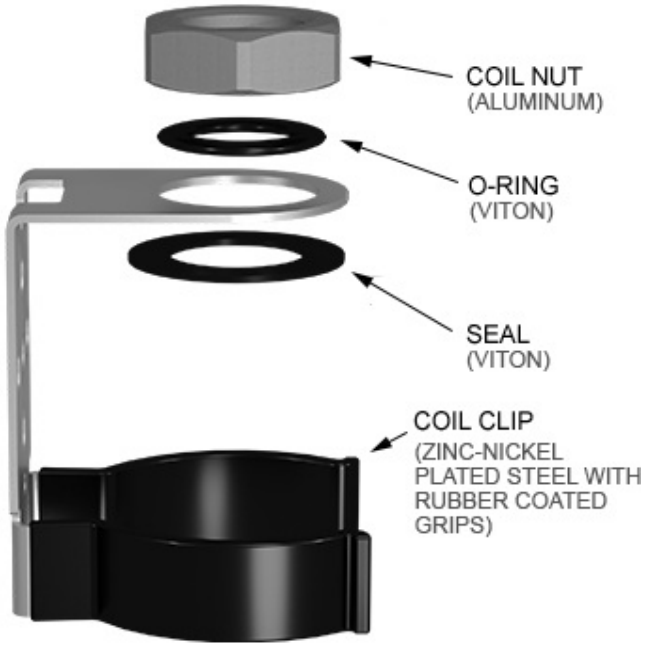
Sun's USB Infrared Cable Adapter provides a convenient interface between Sun's 790 Series Embedded Digital Proportional Valve Amplifier and a Windows based PC. Included with the Cable Adaptor is a USB memory key containing Sun's Amplifier Set Up Software.

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

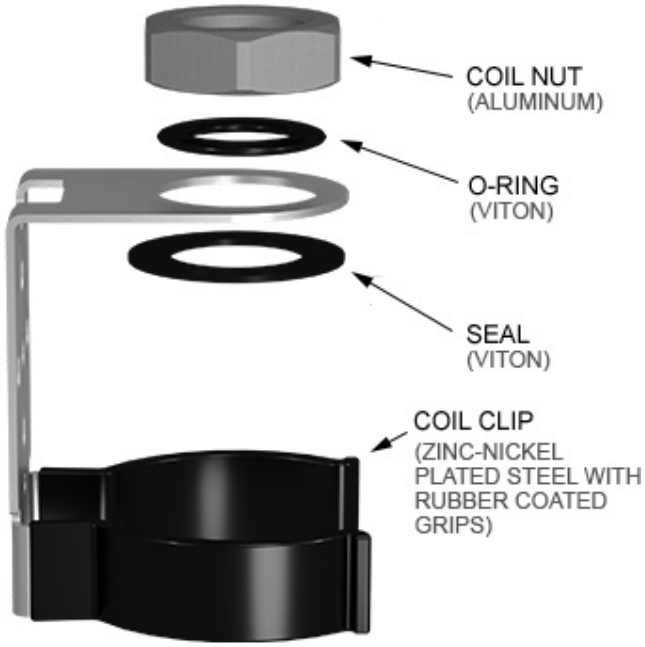


This coil clip kit is designed to attach Sun's XMD Series Driver to the FLeX high-power coil.

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

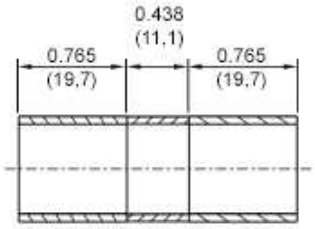
XMD-01 XMD-02



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

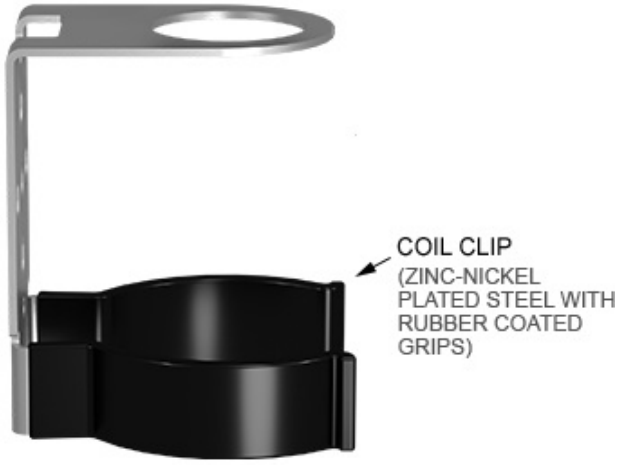


in (mm)

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

TECHNICAL DATA

Material	Zinc Nickel Plated Steel

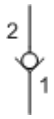


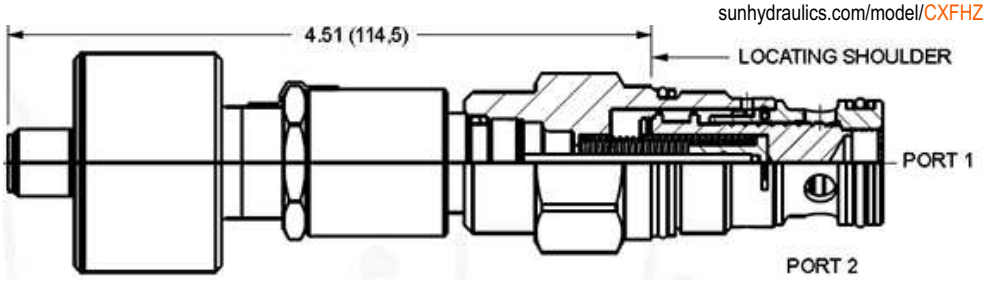
This coil clip is designed to attach Sun's XMD Series Driver to the 770 Series coils. Because it is compatible with the existing 770 series nut, no additional hardware is required.

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 in³/min.@1000 psi
Seal kit - Cartridge	Buna: 990203007
Seal kit - Cartridge	Viton: 990203006

CONFIGURATION OPTIONS

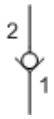
Model Code Example: CXFHZCN

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

Free flow nose to side check valve with position switch

SERIES 3 / CAPACITY: 60 gpm / CAVITY: T-16A

sunhydraulics.com/model/CXHHZ



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.

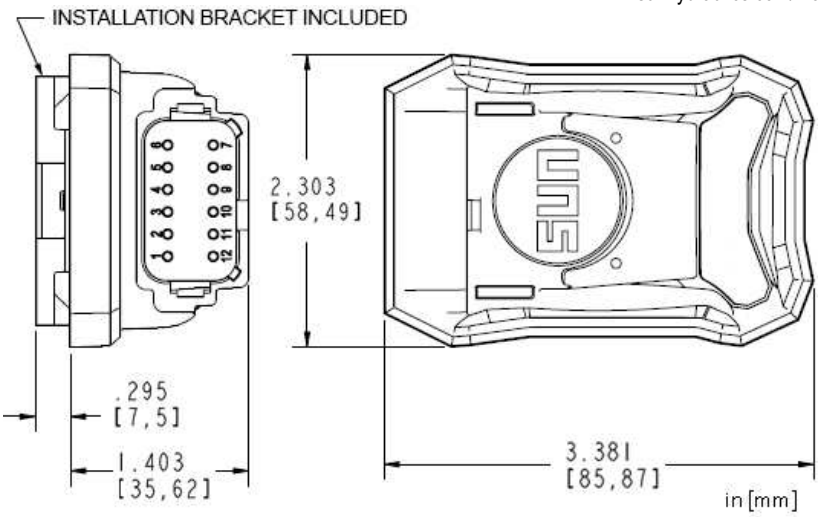
Maximum Operating Pressure	5000 psi
Maximum Valve Leakage at 110 SUS (24 cSt)	1 drops/min.
Transition leakage at 110 SUS (24 cSt)	2 in^3/min.@1000 psi
Seal kit - Cartridge	Buna: 990016007
Seal kit - Cartridge	Polyurethane: 990016002
Seal kit - Cartridge	Viton: 990016006

CONFIGURATION OPTIONS

Model Code Example: CXHHZCN

CRACKING PRESSURE	(C)
C 30 psi (2 bar)	
A 4 psi (0,3 bar)	

SEAL MATERIAL	(N)
N Buna-N	
V 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.

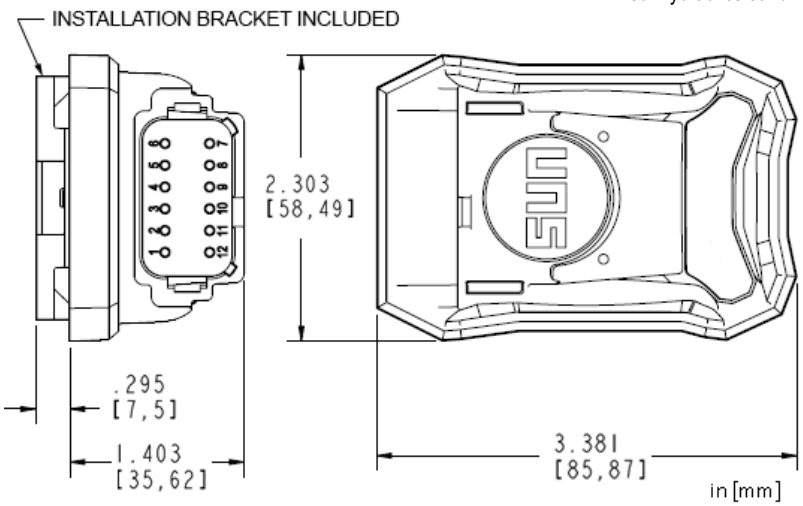
TECHNICAL DATA

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)
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

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since 1970

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Sun 740 Series
Low- & High-Power Coils

FLeX COMPATIBLE

Works with Sun FLeX Series Solenoid Valves

SIX COIL VOLTAGES

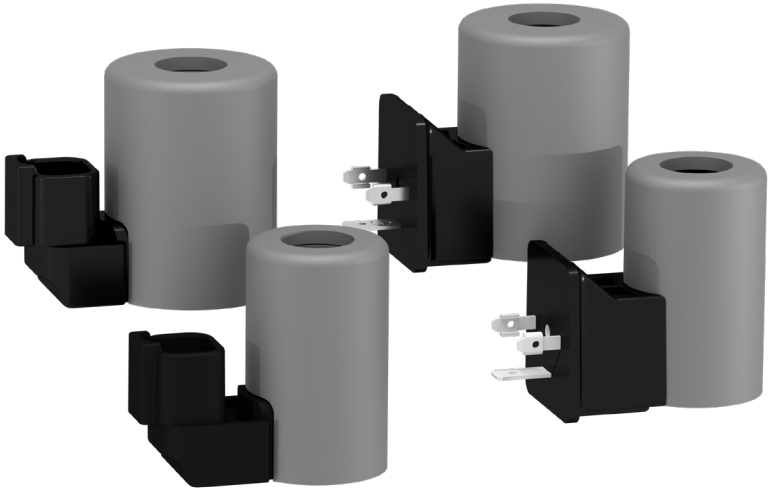
12, 14, 24, 28 Vdc
115/230 Vac

CONNECTOR OPTIONS

DIN & Deutsch

OPTIMIZED DRIVERS

Uses the Sun XMD single- and dual-coil drivers



740 SERIES

17-W & 25-W versions

LOW- & HIGH-POWER COILS: DC & AC VERSIONS WITH DIN & DEUTSCH CONNECTORS

TABLE OF CONTENTS

sunhydraulics.com/models/electronics/coils/740-series-flex

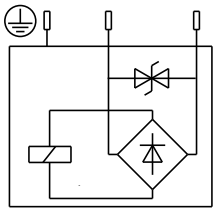
Pub.#999-901-721

MODEL 740 SERIES COILS

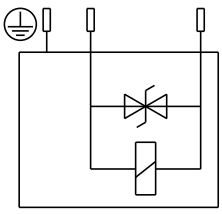
17- & 25-W IN VDC & VAC VERSIONS

- All coil windings utilize Class N, (392° F [200 °C] rated) wire.
- The standard Vdc coil does not include a transient voltage suppression (TVS) diode and should only be used when surge suppression is included elsewhere in the electrical system. If no surge suppression is included in the circuit, the coil version with TVS diode should be used.
- Power cable with mating connector is required and is not included with the coil.
- The coil is magnetically symmetrical and can be mounted in either direction on the solenoid tube for best cabling access without affecting performance.
- For optimum proportional performance, an amplifier with current sensing and adjustable dither should be used. Dither should be adjustable between 100 - 250 Hz.
- IP rating is dependent on the coil connector and the mating connector used.
- Connector options include DIN 43650 A and Deutsch DT04-2P. A Deutsch connector accessory with flying leads is available to accommodate other connector and wire-end options.
- All coils are fully RoHS compliant. Restricted materials less than 0.1% total by weight.
- The external steel shell is zinc-nickel plated (1000-hour salt fog protection).

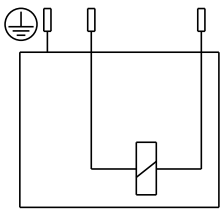
INTERNAL WIRING DIAGRAM CIRCUITRY



CIRCUIT DIAGRAM AC COIL



CIRCUIT DIAGRAM DC COIL



CIRCUIT DIAGRAM DC COIL (without TVS diode)

ONLY 740-2**** COILS (DIN 43650 A) HAVE GROUND CONNECTION ⏚

MODEL 740 SERIES COILS

17- & 25-W IN VDC & VAC VERSIONS

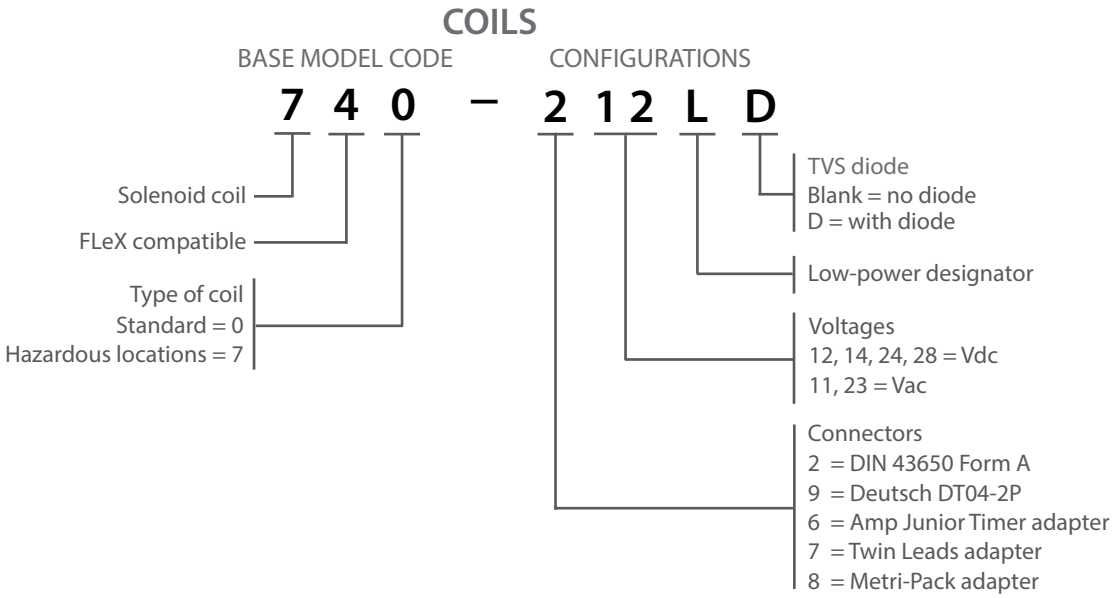
TECHNICAL SPECIFICATIONS	LOW-POWER	HIGH-POWER
Power Consumption (cold) at Rated Voltage	17 W	25 W
Ambient Temperature @ 100% Duty Cycle (Maximum)	100° C (212° F)	50° C (122° F)
Operating Temperature Range	-40° to 110° C (-40° to 230° F)	-40° to 110° C (-40° to 230° F)
Typical Coil Temp at 68°F (20°C) Ambient (@100% Duty Cycle)	80° C (176° F)	90° C (194° F)
Voltages (Vdc)	12, 14, 24, 28 Vdc	12, 14, 24, 28 Vdc
Voltages (Vac, 50/60-Hz operation)	115, 230 Vac	115, 230 Vac
Operating Voltage Tolerance (AC & DC coils)	+10%/-15%	+10%/-15%
Duty Cycle Rating	100%	100%
Connector Options (Seal Ratings)	DIN 43650 Form A (IP65/IP67)	DIN 43650 Form A (IP65/IP67)
	Deutsch DT04-2P (IP69K)	Deutsch DT04-2P (IP69K)
Seal & Nut Kit - Coil	990-740-006	990-740-006
Transient Voltage Suppression (TVS) Diode	Optional for DC, Standard for AC	Optional for DC, Standard for AC
Solenoid Tube Diameter	0.62 in (16 mm)	0.62 in (16 mm)
Coil Nut Torque	4.5 lbf in (0.51 N-m)	4.5 lbf in (0.51 N-m)
Coil Weight	6.4 oz (181 g)	9.6 oz (272 g)
PROPORTIONAL PERFORMANCE DATA		
Maximum Control Current	12 Vdc (820 mA) 24 Vdc (420 mA)	12 Vdc (1140 mA) 24 Vdc (580mA)
Nominal Resistance at 68° F (20° C)	See table on P 4	

MODEL 740 SERIES COILS

17- & 25-W IN VDC & VAC VERSIONS

MODEL CODE EXPLANATION

Sun 740 Series Solenoid Coils have a three-digit base model number. Each of the digits in the sequence has significance as shown in the model code explanation below. Configuration codes identify connection option, voltage, low- or high-power coil, and with or without surge suppression diode. All modifiers are not applicable for every model.



COIL CONFIGURATION OPTIONS

Low-Power (17-W) & High-Power (25-W) Coils

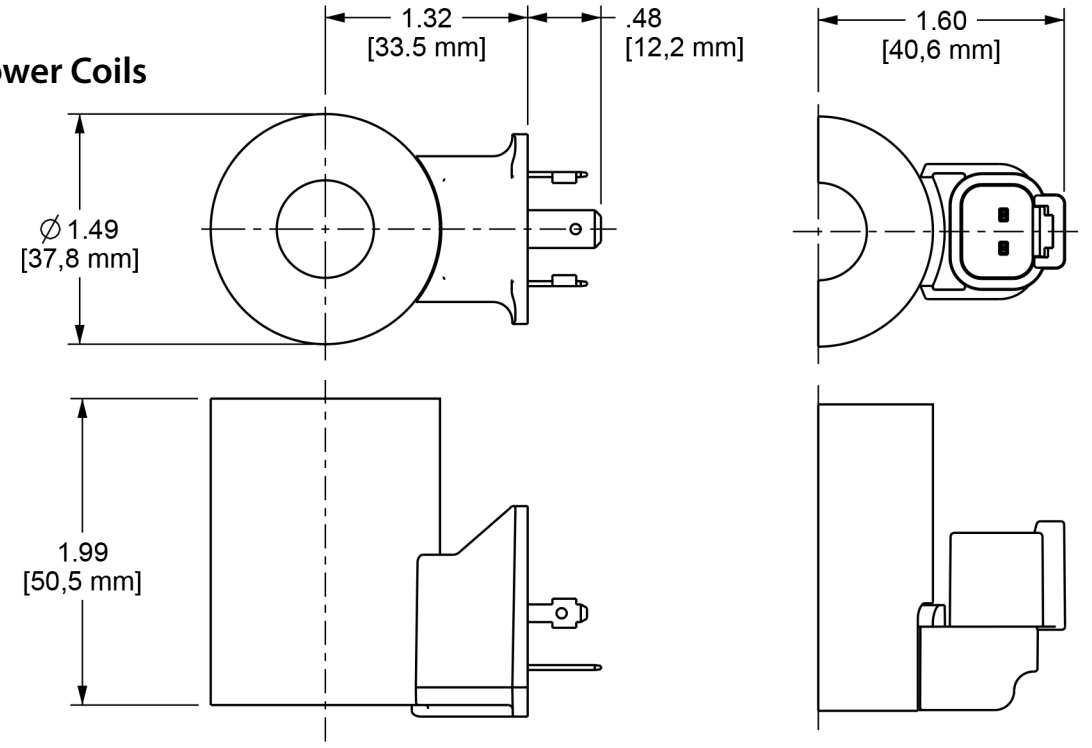
Voltage	DIN 43650 Form A (IP65/IP67)		Deutsch DT04-2P (IP69K)		Resistance @20°C (ohms) ±10% (with diode*)		TVS Diode (Nominal) Breakdown Voltage (with diode*)
	High-Power	Low-Power	High-Power	Low-Power	High-Power	Low-Power	
12 Vdc	740-212	740-212L	740-912	740-912L	5.8 Ω	8.5 Ω	68 Vdc
14 Vdc	740-214	740-214L	740-914	740-914L	7.8 Ω	11.5 Ω	68 Vdc
24 Vdc	740-224	740-224L	740-924	740-924L	23.0 Ω	33.9 Ω	68 Vdc
28 Vdc	740-228	740-228L	740-928	740-928L	31.4 Ω	46.1 Ω	68 Vdc
115 Vac	740-211	740-211L	N/A	N/A	416 Ω	612 Ω	250 Vac
230 Vac	740-223	740-223L	N/A	N/A	1686 Ω	2479 Ω	400 Vac

Coil Model Options with Connector Adapter

Voltage	Amp Junior Timer Adapter		Twin Leads Adapter		Metri-Pack, Series 150-2M Adapter	
	High-Power	Low-Power	High-Power	Low-Power	High-Power	Low-Power
12 Vdc	740-612	740-612L	740-712	740-712L	740-812	740-812L
14 Vdc	740-614	740-614L	740-714	740-714L	740-814	740-814L
24 Vdc	740-624	740-624L	740-724	740-724L	740-824	740-824L
28 Vdc	740-628	740-628L	740-728	740-728L	740-828	740-828L

*Model codes are shown above without transient voltage suppression (TVS) diodes.
To order Series 740 coils with a TVS diode, append model code with "D." (Example: 740-212LD)

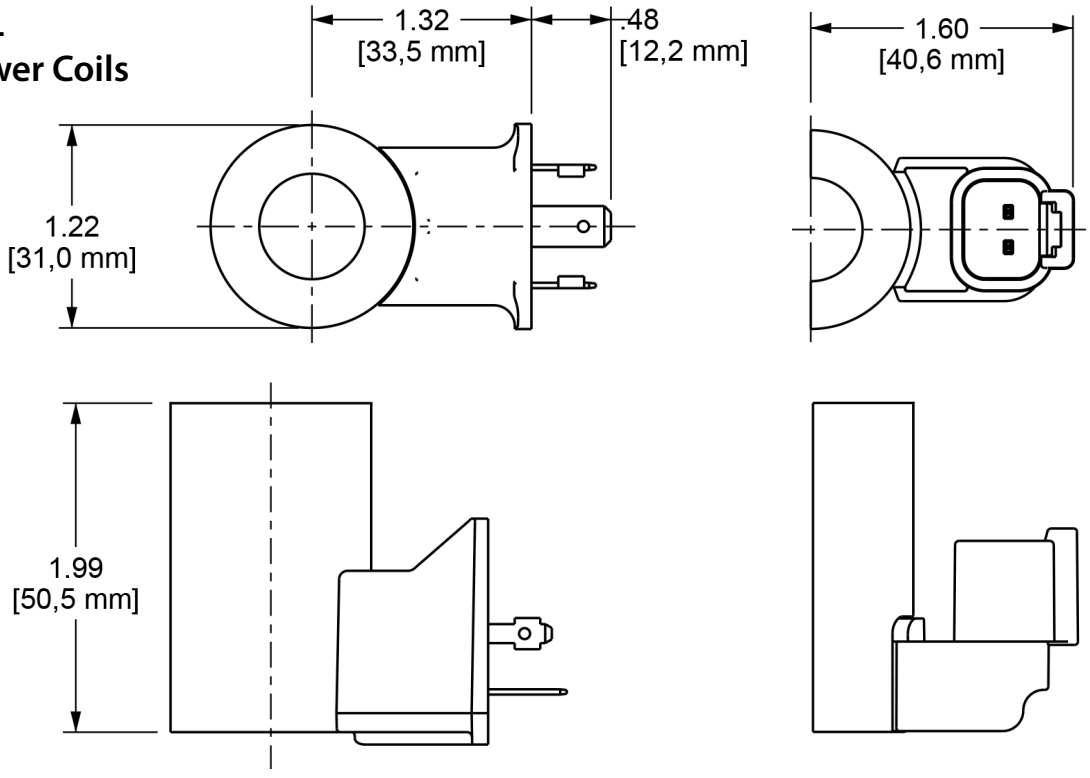
740-***
High-Power Coils



DIN 43650 FORM A CONNECTOR
(740-2***)

DEUTSCH DT04-2P
CONNECTOR (740-9***)

740-***L
Low-Power Coils



DIN 43650 FORM A CONNECTOR
(740-2***)

DEUTSCH DT04-2P
CONNECTOR (740-9***)

NOTE: Please verify cartridge clearance requirements when choosing a Sun manifold. Different valve controls and coils require different clearances. An additional 50,8 mm (2.00 inches) beyond the valve extension is needed for coil installation and removal.

MODEL 740 SERIES COILS

17- & 25-W IN VDC & VAC VERSIONS

VALVE COMPATIBILITY

Our 740 Series low- and high-power coils are compatible with the FLeX family of solenoid-operated directional, proportional and relief valves and newly released non-FLeX solenoid-operated valves.

For a complete list of compatible valves for each coil, please refer to the coil model on our website: https://www.sunhydraulics.com/models/electronics/coils/740-series-flex

ACCESSORIES

XMD Single- and Dual-Output Drivers

The XMD is a single- or dual-output driver used with solenoid-operated electro-proportional valves for the mobile and industrial hydraulic industries. The driver can be mounted on a manifold using the standard mount clip or directly to the 740 Series low- and high-power coils using an optional coil-mount clip.

DESCRIPTION	PART NUMBER
Single-output PWM driver w/ standard mounting bracket	XMD-01
Dual-output PWM driver w/ standard mounting bracket	XMD-02

Wire Harnesses

DESCRIPTION	PART NUMBER
Wire harness, 2-pin Deutsch-to-Metri-Pack Conversion	991-717
Wire harness, 2-pin Deutsch-to-Amp Jr Timer Conversion	991-718
Wire harness, 2-pin Deutsch-to-Twin-Lead Conversion	991-719

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December 2019

Sun 747 Series
Hazardous Location Coils

FLeX COMPATIBLE

Works with Sun FLeX Series Solenoid Valves

GLOBAL CERTIFICATION FOR HAZARDOUS LOCATIONS

ATEX, IECEx, CSA

DC & AC VOLTAGES

12/24 Vdc and 115/230 Vac

ELECTRICAL CONNECTION OPTIONS

M20 x 1.5 or 1/2" NPT

747 SERIES

HAZARDOUS LOCATION COILS
12-/24-Vdc or 115-/230-Vac

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Pub.#999-901-720

MODEL 747 HAZARDOUS LOCATION COILS

12-/24-VDC, 115-/230-VAC

- Designed to fit all Sun FLeX Series on/off and proportional valves (see Page 7).
- Global certifications include ATEX, IECEx, CSA (see "Hazardous Certifications" table on Page 3).
- All hazardous location coils are certified for gas and dust environments (T4 compliant for gas and T135° C for dust).
- The coil is CE compliant.
- These coils are fully RoHS compliant. Restricted materials comprise less than 0.1% total weight.
- IP66 rating (with suitable certified cable entry or conduit per IEC 60529).
- 1/2" NPT or M20 x 1.5 female thread for electrical connections are available.
- Includes vibration-resistant push-to-connect terminal block. Power cable with mating connector is required and not included with this product.
- The external steel shell is zinc-nickel plated (1000-hour salt fog protection).
- Fin-free design prevents build up of grease, dust and debris.
- The coil is magnetically symmetrical and can be mounted in either direction on the solenoid tube without affecting performance.
- A transient voltage suppression (TVS) diode is built into the DC coils and offers a 48-Vdc breakdown voltage. The AC coils are internally rectified.
- For optimum performance when used on a proportional valve, an amplifier with current feedback and adjustable dither should be used. Dither should be adjustable between 80-250 Hz.

MODEL 747 HAZARDOUS LOCATION COILS

12-/24-VDC, 115-/230-VAC

HAZARDOUS CERTIFICATIONS		
CERTIFICATION AGENCY	**LIQUIDS & GASES**	**DUSTS**
North America (NEC, CEC/CSA) (CSA 22.2 - 60079-0:11, 60079-1:11, 60079-31:1) (UL 60079-0:09, 60079-1:09, 60079-31:08)	Class I, Div 1, GRP B, C, D, T4 Class I, Zone 1, AEx d IIC T4 Gb Ex d IIC T4 Gb	Class II, Div 1, GRP E, F, G Class II, Zone 21, AEx tb IIIC T135°C Db Ex tb IIIC T135°C Db
IECEx (IEC 60079-0:2011, 60079-1:2014, 60079-31:2013)	Ex db IIC T4 Gb	Ex tb IIIC T135°C Db
ATEX (EN60079-0:2011, 60079-1:2014, 60079-31:2013)	CE 0518 Ex II 2GD	CE 0518 Ex II 2GD

SPECIFIC CONDITIONS FOR SAFE USE

The temperature of the fluid flowing through the valve and the solenoid must not exceed the ambient temperature specified on the nameplate.

The temperature at the entry point may be as high as 130° C (266° F) for T4. This should be taken into account when selecting suitable cable and entry devices.

Do not open the cover while solenoid is energized.

The special fasteners that are used in these devices are type M4 x 0.7 with a yield stress of 700 MPa; any replacement fasteners must conform to these requirements.

North American application: Internal electrical connections must be factory installed.

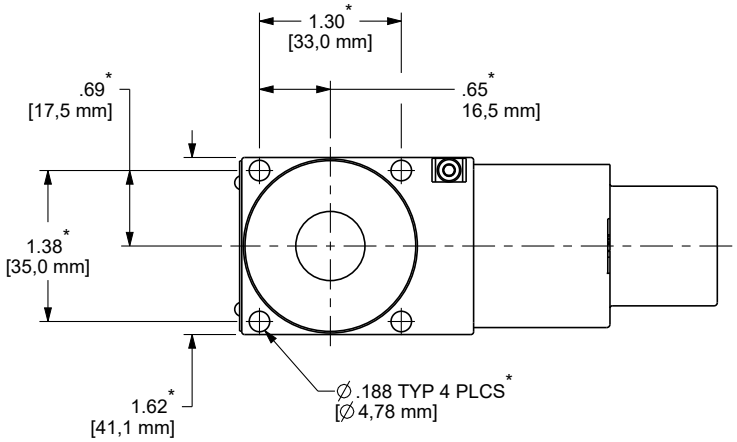
Warning: Failure or improper selection or improper use of the products described herein or related items can cause death, personal injury and property damage. Users, through their own analysis and testing, are solely responsible for making the final selection of the system and components and assuring that all performance, endurance, maintenance, safety and warning requirements of the application are met.

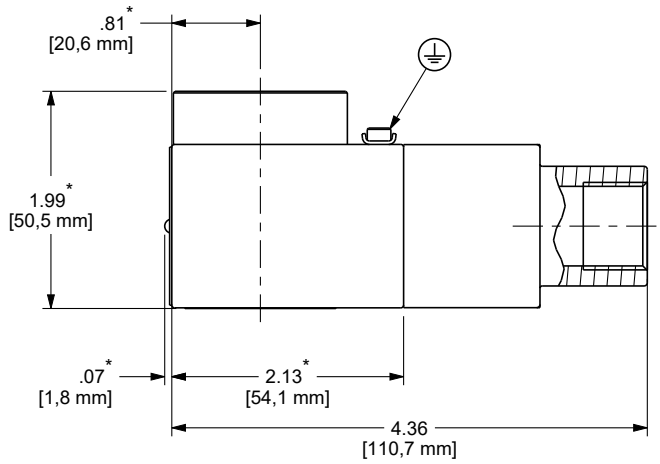
MODEL 747 HAZARDOUS LOCATION COILS

12-/24-VDC, 115-/230-VAC

TECHNICAL SPECIFICATIONS	
Power Consumption (@ 20° C) at Rated Voltage	30 W
Ambient Temperature Range	-40° to +70° C (-40° to +158° F)
Fluid Temperature Through Valve (Maximum)	70° C (+158° F)
Voltages (Vdc)	12 Vdc (-10%/+0%) 24 Vdc (-10%/+0%)
Voltages (Vac, 50/60-Hz operation)	115 Vac (130 Vac max.) 230 Vac (262 Vac max.)
Duty Cycle Rating	100%
Electrical Connector Options	M20 x 1.5 (180° or 90°) 1/2" NPT (180° or 90°)
Ingress Protection Rating (IEC 60529)	IP66 (w/ suitable cable entry/conduit)
Corrosion Resistance (ASTM B117, ISO 9227 5% saline)	1000 hours salt fog (zinc-nickel)
Seal & Nut Kit - Coil	990-747-006
Solenoid Tube Diameter	0.63" (16 mm)
Coil Nut Torque	4.5 lbf in. (0.51 N-m)
Coil Weight	1.8 lb (816 g)

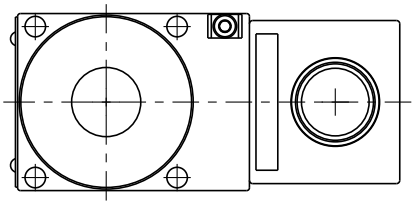
Model 747-J***CD
(90° connector)

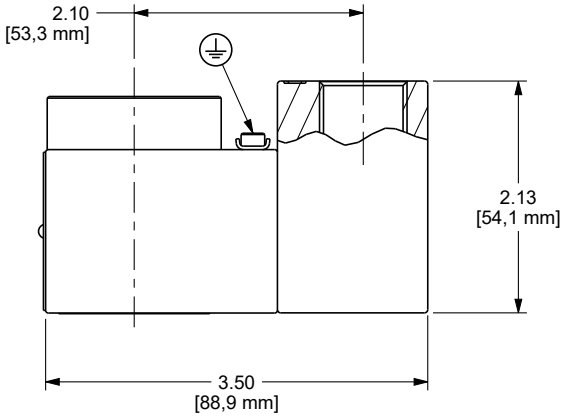




747-J***CD (90°)

Model 747-J***BD
(180° connector)





747-J***BD (180°)

*THESE DIMENSIONS ARE COMMON ON ALL 747-J***** COILS

INSTALLATION INSTRUCTIONS

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. Torque to min 1.92 ft-lbs (2.6 N-m).
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 spaced a minimum of 0.875" (22.23 mm) apart to ensure adequate heat dissipation.

NOTE

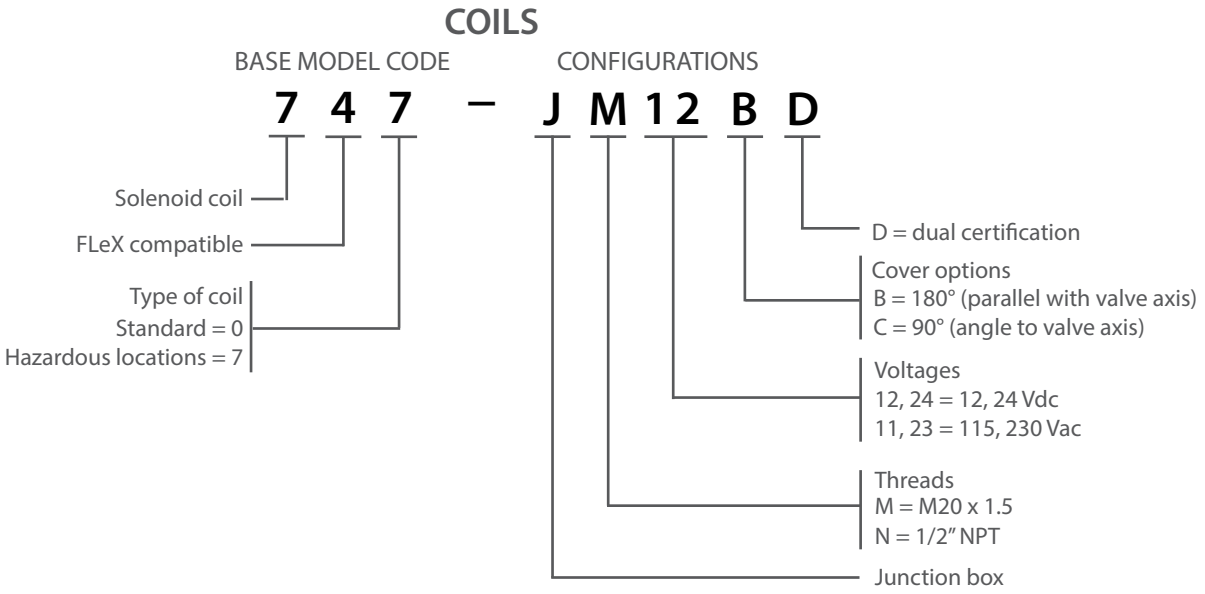
Please verify cartridge clearance requirements when choosing a Sun manifold. Different valve controls and coils require different clearances. An additional 2.00" (50,8 mm) beyond the valve extension is needed for coil installation and removal.

MODEL 747 HAZARDOUS LOCATION COILS

12-/24-VDC, 115-/230-VAC

MODEL CODE EXPLANATION

Sun 747 Series Hazardous Location Solenoid Coils have a three-digit base model number. Each of the digits in the sequence has significance as shown in the model code explanation below. Configurations codes identify connection option, voltages and cover options.



MODEL CODES BY VOLTAGE & CONNECTOR TYPE

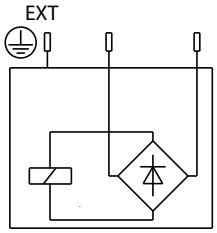
	M20 x 1.5 180°	M20 x 1.5 90°	1/2" NPT 180°	1/2" NPT 90°	Wattage @ 20° C	Resistance (±5%) @ 20° C	Circuitry
12 Vdc	747-JM12BD	747-JM12CD	747-JN12BD	747-JN12CD	29.6 W	4.9 Ω	W/DIODE
24 Vdc	747-JM24BD	747-JM24CD	747-JN24BD	747-JN24CD	29.9 W	19.3 Ω	W/DIODE
115 Vac 50/60 Hz	747-JM11BD	747-JM11CD	747-JN11BD	747-JN11CD	29.7 W	358.8 Ω	RECTIFIED
230 Vac 50/60 Hz	747-JM23BD	747-JM23CD	747-JN23BD	747-JN23CD	28.9 W	1477.0 Ω	RECTIFIED

NOTE: 180° connector axis of entry is parallel to the coil axis plane;
90° connector axis of entry is perpendicular to the coil axis plane.

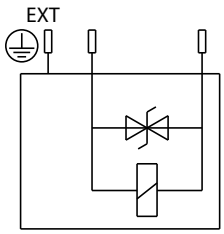
MODEL 747 HAZARDOUS LOCATION COILS

12-/24-VDC, 115-/230-VAC

INTERNAL WIRING DIAGRAM CIRCUITRY



CIRCUIT DIAGRAM AC COIL



CIRCUIT DIAGRAM DC COIL

NOTE: Coil is polarity insensitive.

TERMINAL BLOCK SPECIFICATIONS

Simple push-in termination of solid and ferruled conductors.
Connection technology: Cage Clamps
Conductor Size
- Solid: 0.2–2.5 mm^2
- Fine stranded: 0.2–2.5 mm^2
- Fine stranded (with insulated ferrule): 0.25–1.5 mm^2
- Fine stranded (with insulated ferrule): 0.25–2.5 mm^2

AWG 24-12 (4.1 mm max outside diameter)

RECOMMENDATION

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.

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.

VALVE COMPATIBILITY

MODEL 747 HAZARDOUS LOCATION COILS

12-/24-VDC, 115-/230-VAC

VALVE COMPATIBILITY

Our 747 Series hazardous location coils are compatible with the FLeX family of solenoid-operated directional, proportional and relief valves and newly released non-FLeX solenoid-operated valves.

For a complete list of compatible valves for each coil, please refer to the coil model on our website: https://www.sunhydraulics.com/models/electronics/coils/747-series-hazardous-location-flex

ACCESSORIES

XMD Single- and Dual-Output Drivers

The XMD is a single- or dual-output driver used with solenoid-operated electro-proportional valves for the mobile and industrial hydraulic industries. The XMD drivers are compatible with the 747 Series hazardous location coils, but the drivers themselves are not tested or certified for hazardous locations.

DESCRIPTION	PART NUMBER
Single-output PWM driver w/ standard mounting bracket	XMD-01
Dual-output PWM driver w/ standard mounting bracket	XMD-02

Wire Harnesses

DESCRIPTION	PART NUMBER
Wire harness, 2-pin Deutsch-to-Metri-Pack Conversion	991-717
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