



# Sun 740 Series Low- & High-Power Coils

## **FLeX COMPATIBLE**

*Works with Sun FLeX Series  
Solenoid Valves*

## **SIX COIL VOLTAGES**

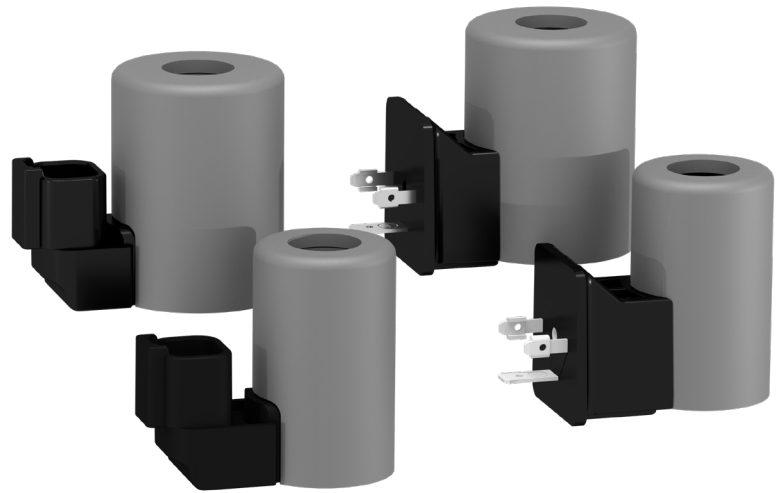
*12, 14, 24, 28 Vdc  
115/230 Vac*

## **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

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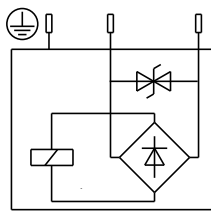
[sunhydraulics.com/models/  
electronics/coils/740-series](https://www.sunhydraulics.com/models/electronics/coils/740-series)

## MODEL 740 SERIES COILS

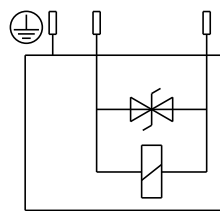
### 17- & 25-W IN VDC & VAC VERSIONS

- 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).
- This coil is CE compliant. It meets the requirements of the Low Voltage Directive (2006/95/EC) and EN 60204-1:2006.

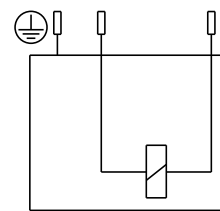
#### INTERNAL WIRING DIAGRAM CIRCUITRY




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

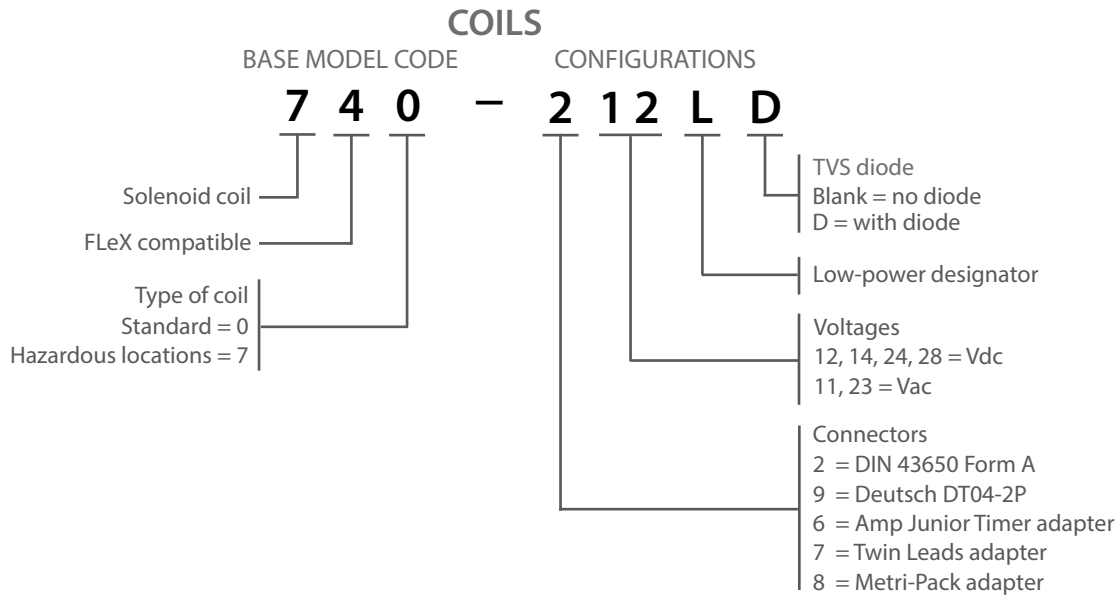
TECHNICAL SPECIFICATIONS	LOW-POWER	HIGH-POWER
Power Consumption (cold) at Rated Voltage	17 W	25 W
Ambient Temperature @ 100% Duty Cycle (Maximum)	100° C (212° F)	50° C (122° F)
Operating Temperature Range	-40° to 110° C (-40° to 230° F)	-40° to 110° C (-40° to 230° F)
Typical Coil Temp at 68°F (20°C) 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)
<b>PROPORTIONAL PERFORMANCE DATA</b>		
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 page 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

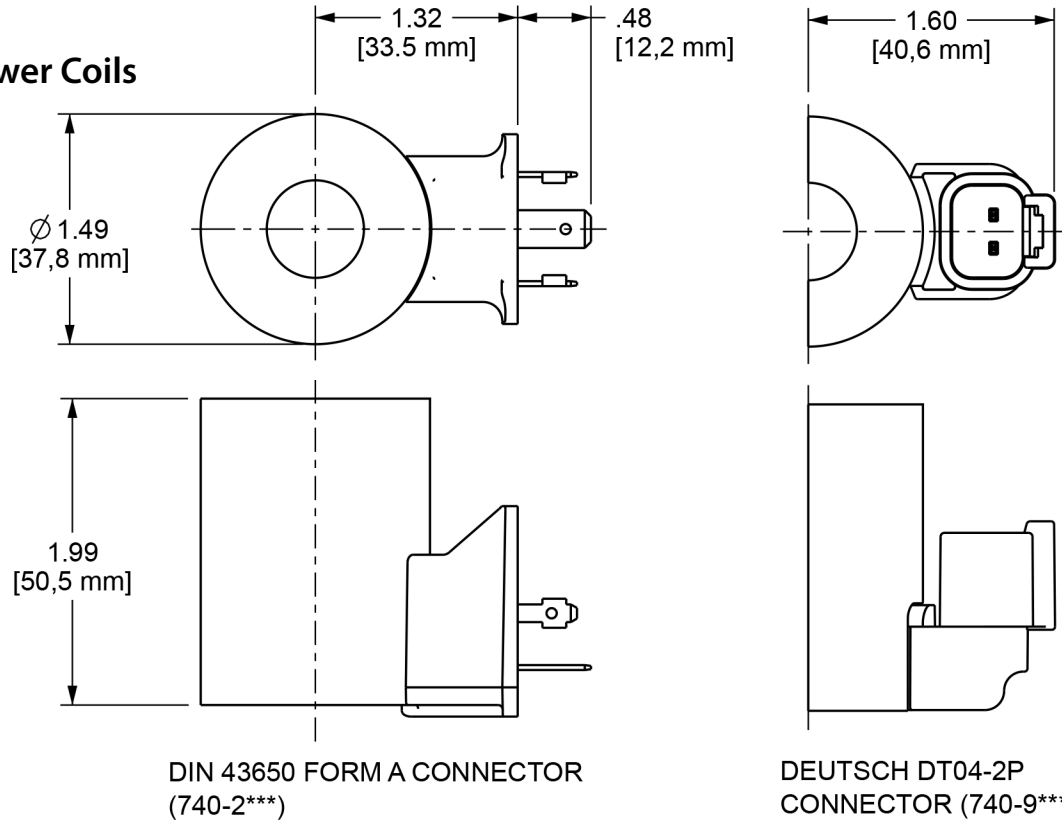
Voltage	DIN 43650 Form A (IP65/IP67)		Deutsch DT04-2P (IP69K)		Resistance @20°C (ohms) ±10% (with diode*)		TVS Diode (Nominal) Breakdown Voltage (with diode*)
	High-Power	Low-Power	High-Power	Low-Power	High-Power	Low-Power	
12 Vdc	740-212	740-212L	740-912	740-912L	5.8 Ω	8.5 Ω	68 Vdc
14 Vdc	740-214	740-214L	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

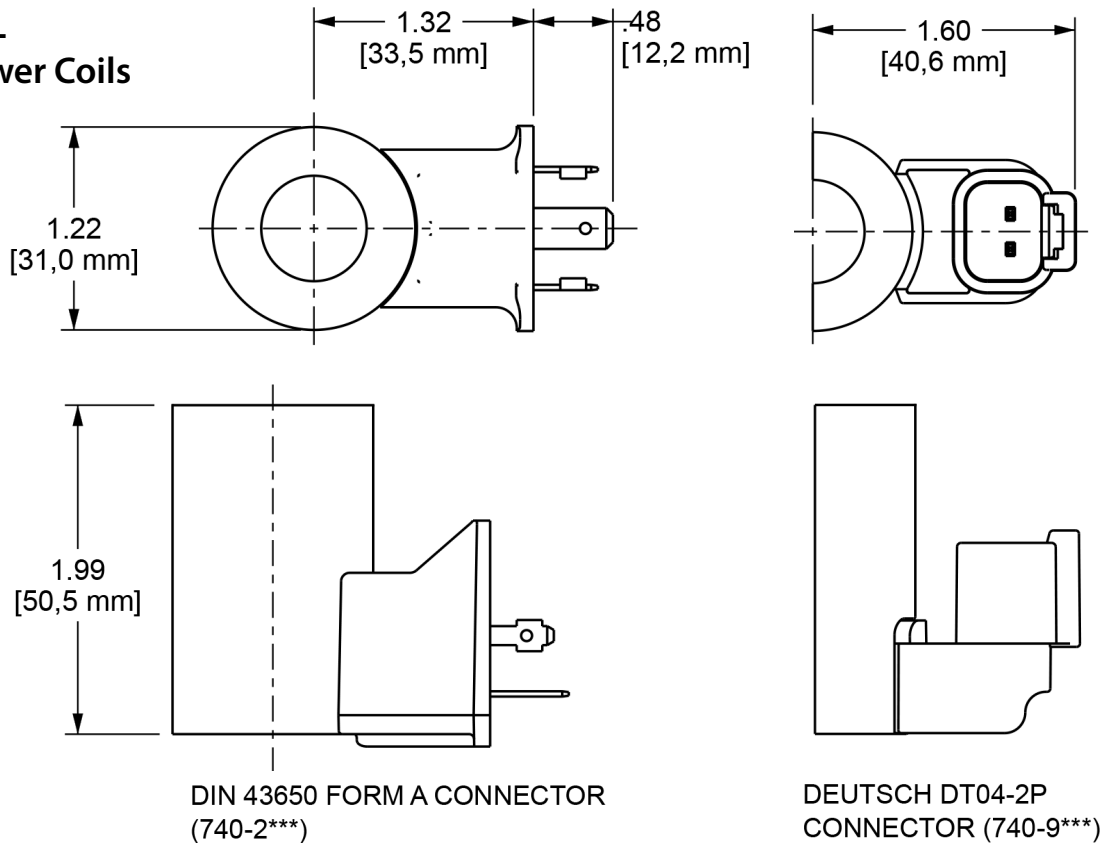
Voltage	Amp Junior Timer Adapter		Twin Leads Adapter		Metri-Pack, Series 150-2M Adapter	
	High-Power	Low-Power	High-Power	Low-Power	High-Power	Low-Power
12 Vdc	740-612	740-612L	740-712	740-712L	740-812	740-812L
14 Vdc	740-614	740-614L	740-714	740-714L	740-814	740-814L
24 Vdc	740-624	740-624L	740-724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



## 740-\*\*\*L Low-Power Coils



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>

#### 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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