



Sun 740 Series Low- & High-Power Coils

FLeX COMPATIBLE

*Works with Sun FLeX Series
Solenoid Valves*

SIX COIL VOLTAGES

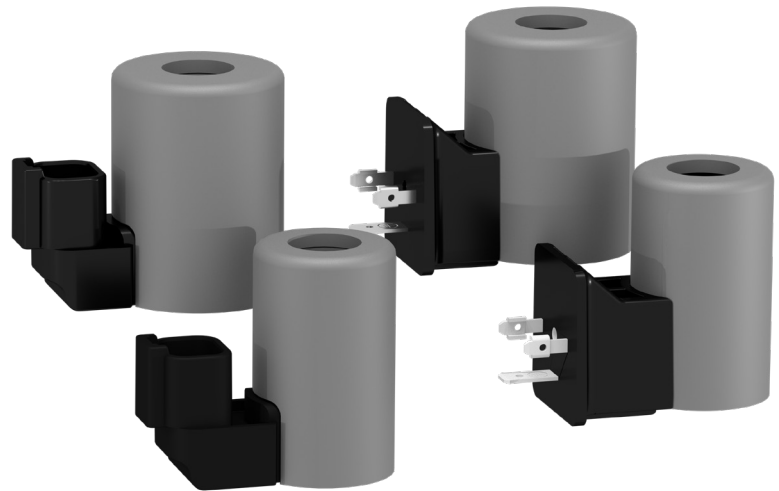
*12, 14, 24, 28 Vdc
115/230 Vac*

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

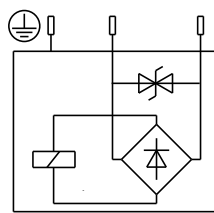
| | |
|--|----------|
| Technical Features | 2 |
| Technical Specifications | 3 |
| Models & Configurations | 4 |
| Dimensional Drawings | 5 |
| Compatibility & Accessories | 6 |

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

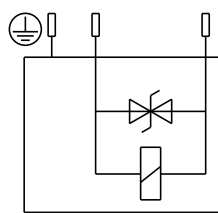
MODEL 740 SERIES COILS 17- & 25-W IN VDC & VAC VERSIONS

- 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).

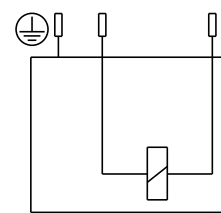
INTERNAL WIRING DIAGRAM CIRCUITRY




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

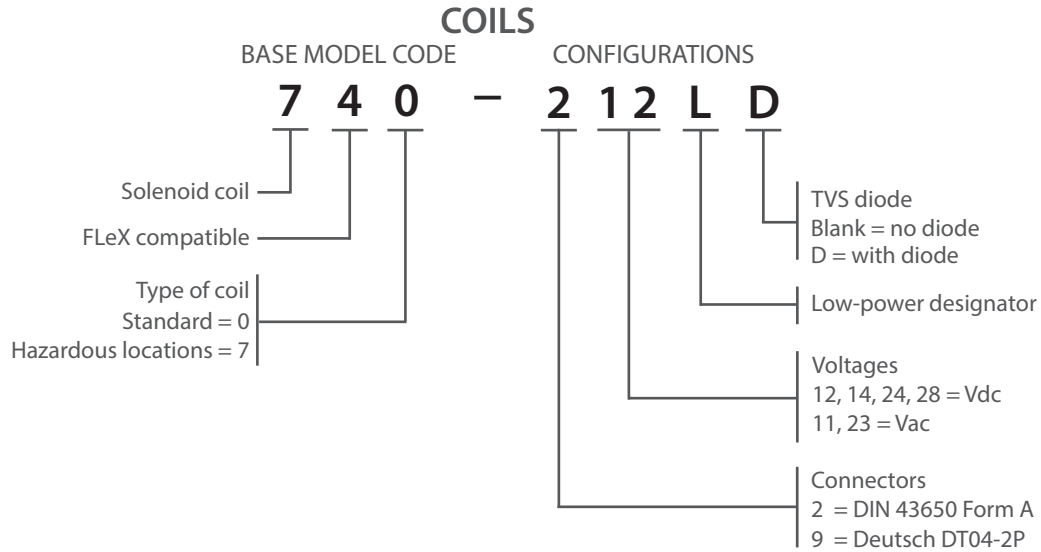
| TECHNICAL SPECIFICATIONS | LOW-POWER | HIGH-POWER |
|--|-------------------------------------|-------------------------------------|
| Power Consumption (cold) at Rated Voltage | 17 W | 25 W |
| Ambient Temperature @ 100% Duty Cycle (Maximum) | 100° C (212° F) | 50° C (122° F) |
| Operating Temperature Range | -30° to 110° C (-22° to 230° F) | -30° to 110° C (-22° 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.



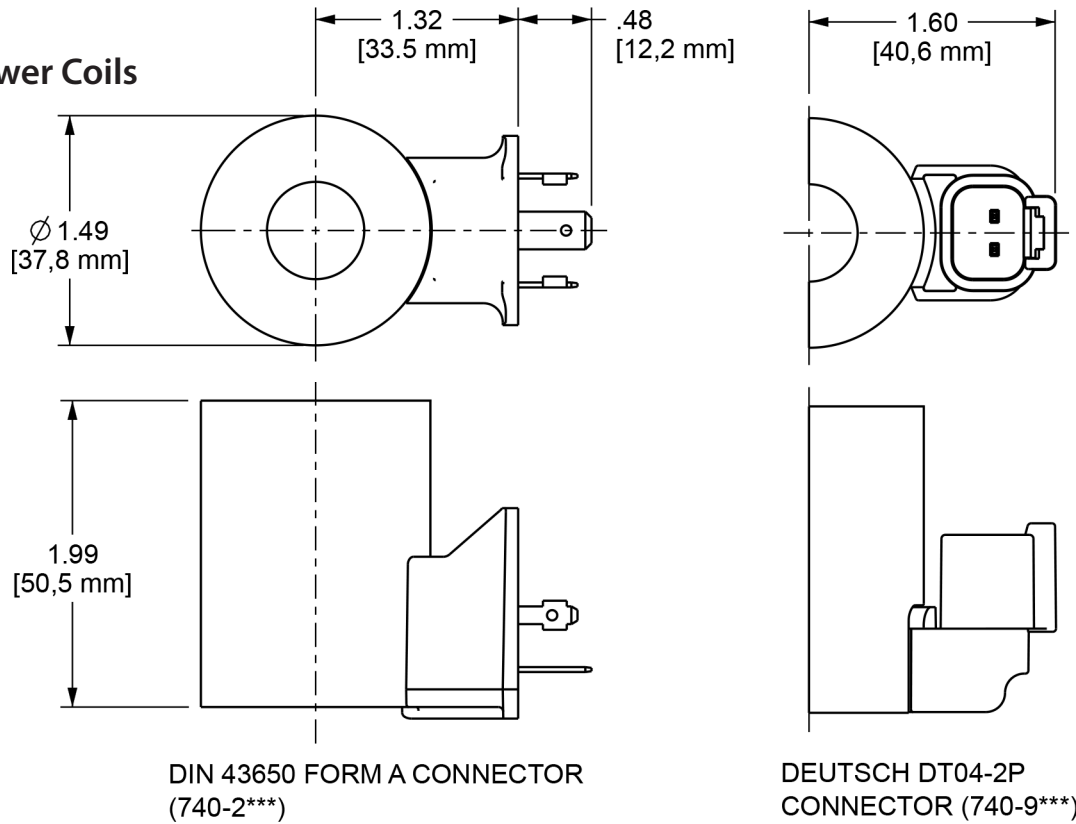
COIL CONFIGURATION OPTIONS

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

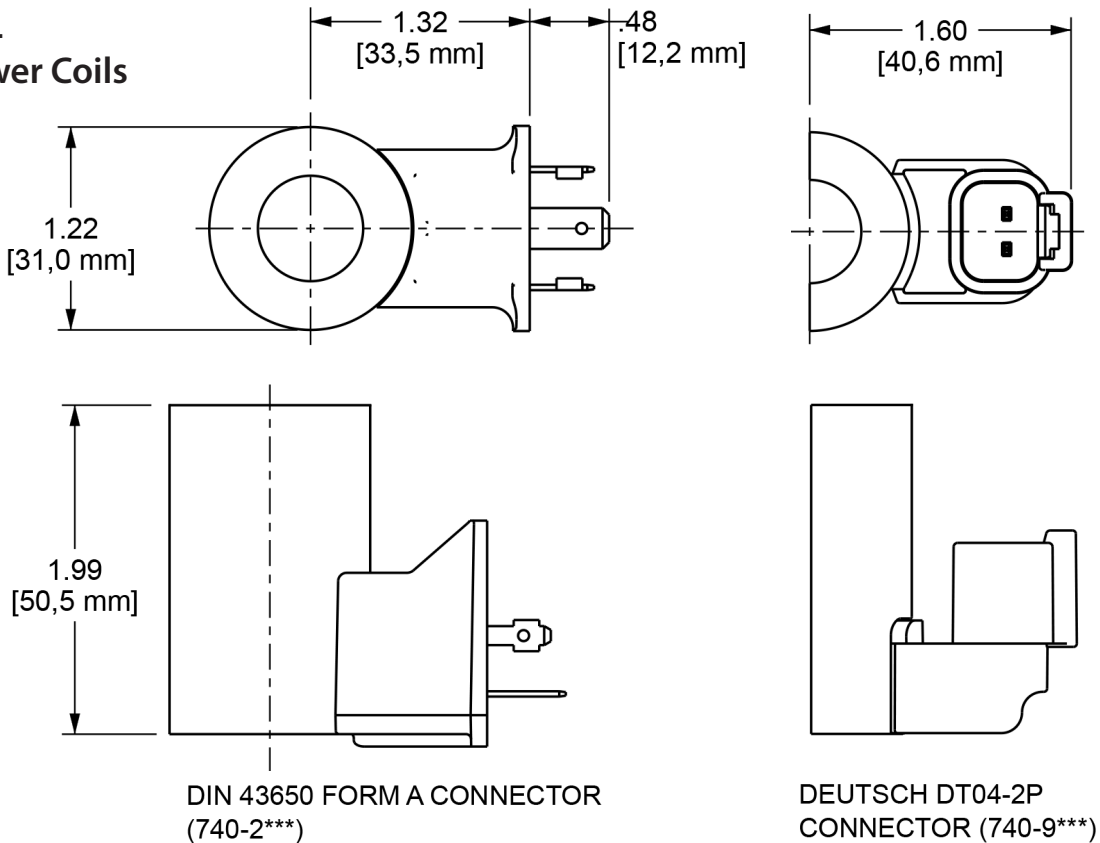
| Voltage | DIN 43650 Form A (IP65/IP67) | | Deutsch DT04-2P (IP69K) | | Resistance @20°C (ohms) ±10% (with diode*) | | TVS Diode (Nominal) Breakdown Voltage (with diode*) |
|---------|------------------------------|-----------|-------------------------|-----------|--|-----------|---|
| | High-Power | 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 |

* Above model codes are shown 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-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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