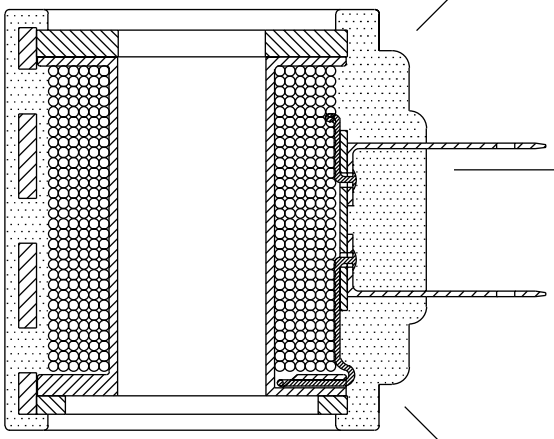
Continuous Duty Coils

WHY HYDRAFORCE COILS OUTPERFORM COMPETITIVE UNITS

More Ampere Turns
More copper wire turns deliver more magnetic flux per current input.

High Quality Materials
HydraForce coils are made with high quality, Class H magnetwire and insulation materials.

Rugged Casing
Coils are housed in a durable 30% glass-filled thermoplastic casing, providing a rigid base for coil terminations.



Superior Frame Density
Thick iron surrounds the copper winding, increasing the coil's flux density and therefore its power as an electromagnet.

Multiple Termination Options
HydraForce offers eight standard types of electrical connections, and will consider OEM requests for special terminations.

DC Windings
All windings are DC. AC service coils are internally full-wave-rectified, so cartridges are voltage-interchangeable and do not exhibit AC "buzz" or suffer burn-out due to partial armature shift. HydraForce DC coils are UL Listed under File #AU2326.

Custom Coils
HydraForce can provide windings precisely-tailored for special OEM applications. Some of the common windings are listed on the following page; consult the factory if these do not meet your requirements.

Heat Rise
Rather than using heat sinks or external cooling methods, HydraForce uses larger coils for lower heat rise, stronger electro-magnetic force and longer coil life. HydraForce coils can be operated continuously at ambient temperatures to 100°C without challenging the coil's insulation system.

Waterproofing Option
Virtually all standard solenoid valves and proportional solenoid valves can be waterproofed for high moisture applications. See page 8.250.1. Waterproofed coils are rated to IP67, NEMA 6+.

Note: Some coils may differ in construction from this illustration.

Continuous Duty Coils

COMMON WINDING SPECIFICATIONS

08, 80 Size Coil Data (14.7 Watts)		
Volts	Resistance (DC) @ 20°C Ohms	Initial Current Draw Amps
DC Service		
6*	2.46	2.44
10	6.8	1.47
12	9.8	1.22
20*	27.2	0.74
24	39.3	0.61
30*	61.4	0.49
36	88.3	0.41
48	156.6	0.31
72*	352.4	0.20
110	823.1	0.13
AC Service		
24	31.2	0.61
115	765.5	0.13
230	3035.0	0.06

*Special Order Coils

10, 38, 58, 12, 52, 16, 56 Size Coil Data (20 Watts)		
Volts	Resistance (DC) @ 20°C Ohms	Initial Current Draw Amps
DC Service		
6*	1.8	3.33
10	4.8	2.08
12	7.2	1.67
20*	19.0	1.05
24	28.8	0.83
30*	43.2	0.69
36	64.8	0.56
48	110.2	0.44
72*	249.8	0.29
110	605.0	0.18
AC Service		
24	23.6	0.83
115	568.0	0.17
230	2304.0	0.09

*Special Order Coils

70 Size Coil Data Proportional Coil Data		
Volts	Resistance (DC) @ 20°C Ohms	Nominal I-Max. Current Draw Amps
12	5.0	1.50
24	20.0	0.75

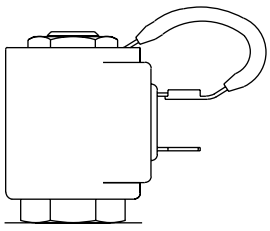
EHPR Coil Data Proportional Coil Data		
Volts	Resistance (DC) @ 20°C Ohms	Nominal I-Max. Current Draw Amps
10	3.1	1.50
12	5.4	1.20
20	12.5	0.75
24	21.7	0.60

COIL INFORMATION

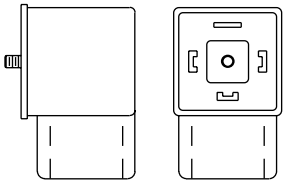
- AC service coils are internally rectified, and can be used in 50 or 60 cycle (Hz) lines.
- Special voltages and terminations are available for OEM applications; consult factory.
- Coil should always be installed with lettering facing up.
- Standard coils are not hermetically sealed. For applications requiring waterproof coils, see pages 8.250.1-2.
- AC voltage service with transient surges over 1000 volts may require that a varistor be placed in parallel at the coil.

Voltage	Varistor Part No.	Joule Rating Required
115	GE: V150LA10A Siemens: S10R150 or equivalent	45 minimum
230	GE: V250LA40A Siemens: S20R250 or equivalent	130 minimum

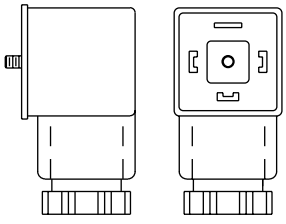
COIL ACCESSORIES



Coil Ground Strap for DS Coils
P/N 6502200



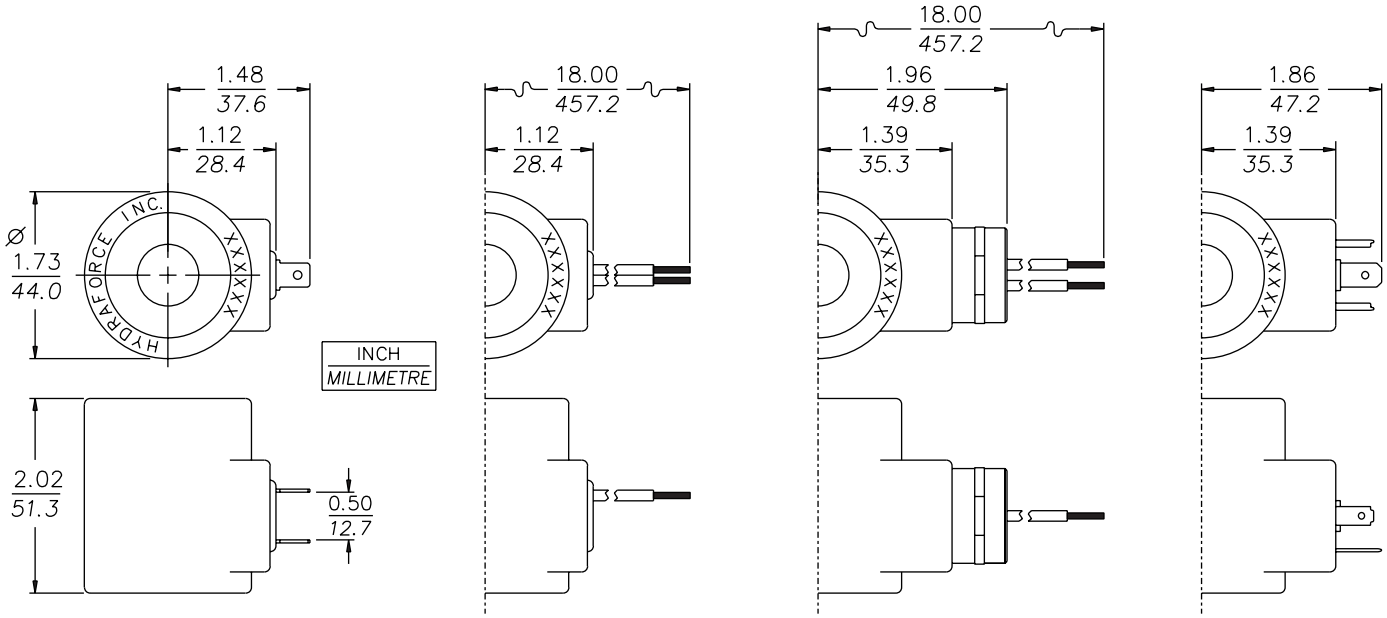
DIN 43650
1/2" Conduit to Connector
P/N 6110001



DIN 43650
Cable Gland PG 9
(7 mm nom. cable dia.)
P/N 6110002
or Cable Gland PG 11
(9 mm nom. cable dia.)
P/N 6110005

Continuous Duty Coils

SERIES 10, 12, 16, 38, 58 COIL INFORMATION



S
Dual Spades
SAE J858a

L
Dual Leads
18 Gauge
Optional 36-inch leads available. Consult factory.

P
1/2" Conduit &
18 Gauge Leads

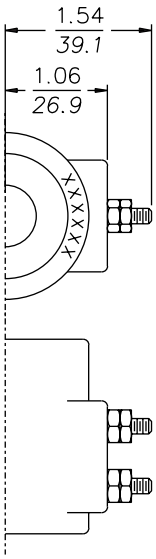
G
DIN 43650
Connector

Voltage	Part Number Suffix			
	S	L	P	G
10 VDC	6351010	6352010		
12 VDC	6351012	6352012	6355012	6356012
24 VDC	6351024	6352024	6355024	6356024
36 VDC	6351036	6352036		6356036
48 VDC	6351048	6352048		6356048
110 VDC				6356110
*24 VAC			6365024	6366024
*115 VAC			6365115	6366115
*230 VAC			6365230	6366230

*Rectified

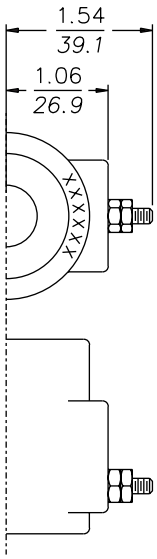
Continuous Duty Coils

SERIES 10, 12, 16, 38, 58 COIL INFORMATION



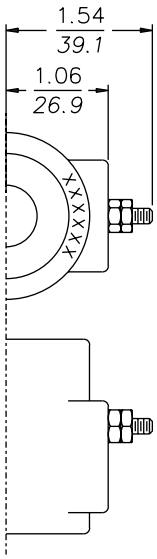
E

Double 8-32 Studs



D

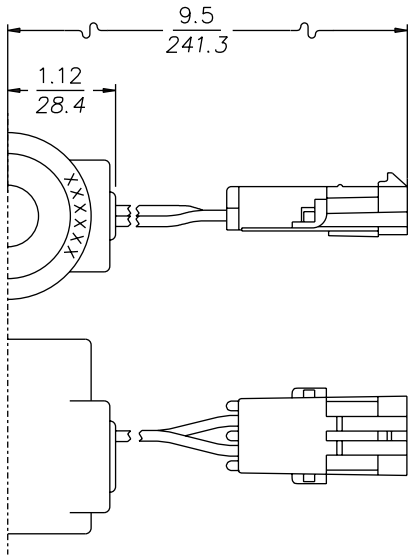
Single 8-32 Stud, Internal Ground with Diode



B

Single 8-32 Stud Internal Ground

'D' and 'B' coils are not recommended for use with anodized aluminum bodies or in heavily-painted housings with questionable ground path conductivity.



W

Dual 18 Gauge Leads with Weather Pack® Connector

For use with Packard part no. 12015792 male plug

Voltage	Part Number Suffix			
	E	D	B	W
10 VDC				6359410
12 VDC	6358012	6354012	6353012	6359412
24 VDC	6358024	6354024	6353024	6359424
36 VDC	6358036	6354036	6353036	6359436
48 VDC				6359448