

**General Description**

The D1VW Series directional control valves are high-performance, 4-chamber, direct operated, wet armature solenoid controlled, 3 or 4-way valves. They are available in 2 or 3-position and conform to NFPA's D03/CETOP 3 mounting patterns.

**Features**

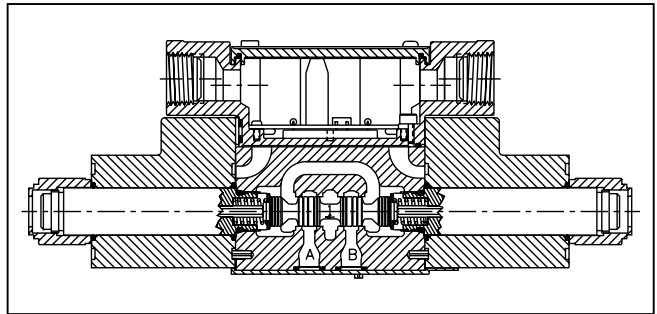
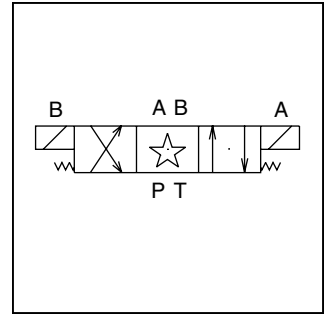
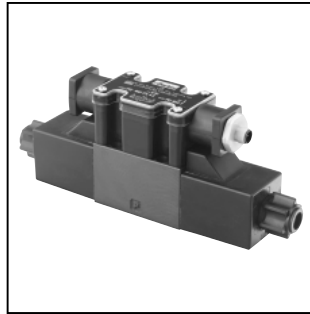
- Mechanically tunable soft shift
- Proportional spools, 21 standard spool styles available
- Repairable override
- DC surge suppression
- Nine electrical connection options
- AC & DC lights available (CSA approval for solenoids and lights)
- Internally ground
- Easy access mounting bolts
- Waterproof (NEMA 4 rated)
- Explosion proof
- CSA approved and U.L. recognized available
- No tools required for coil removal
- AC rectified coils

**Response Time\***

Nominal response time (milliseconds) at 345 Bar (5000 PSI) is 32 L/M (8.5 GPM).

Solenoid Type	Pull-In	Drop-Out
AC	13	20
DC 8 Watt or 10 Watt	61	22
DC 30 Watt	51	21

\* For soft shift, see ordering code X-number.



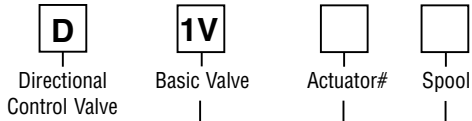
**Specifications**

<b>Mounting Pattern</b>	NFPA D03, CETOP 3; NG 6
<b>Mounting Interface</b>	DIN 24340-A6 ISO 4401-AB-03-4-A CETOP R35H 4.2-4-03, NFPA D03
<b>Maximum Pressure</b>	P, A, B 345 Bar (5000 PSI) Standard CSA  276 Bar (4000 PSI) Tank: 103 Bar (1500 PSI) Standard 207 Bar (3000 PSI) Optional with H, FH, G, LG CSA  103 Bar (1500 PSI)

Producción CNC, SA de CV  
 Av. Pie de la Cuesta No. 1440  
 Local 2 Col. Amalia Solorzano  
 Querétaro, Qro. CP 76130  
 Tel. (442) 253 7834  
 Fax. (442) 253 7997  
 www.parkerenc.com.mx



**Standard Valves**



2MD  
 NFPA D03  
 CETOP 3  
 DIN NG6

Code	Description
W	Solenoid, Wet Pin, Screw-in
HW	Reversed Wiring

Code	Description
N	Nitrile
V	Fluorocarbon
E *	EPR

Code	Description
A	24/50 VAC
D	120 VDC
G	198 VDC
J	24 VDC
K	12 VDC
L	6 VDC
N	220/50 VAC
Q	100/60 VAC
R	24/60 VAC
T	240/60 - 220/50 VAC
U	98 VDC
Y	120/60 - 110/50 VAC
Z	250 VDC

# Valve schematic symbols are per NFPA/ANSI standards, providing flow P to A when energizing solenoid A. Note operators reverse sides for #008 and #009 spools. See installation information for details. To configure per DIN standards (A coil over A port, B coil over B port) code valves as D1VHW\*\*\*.

\* Contact HVD for availability.

Code	Symbol	Code	Symbol
001		014	
002		015	
003		016	
004		020*	
005		021	
006		022	
007		026*	
008*, 009**		030**	
010		081	
011		082	

Code	Description	Symbol
B*	2 position, spring offset P to A	
C	3 position, spring centered	
D†	2 position, detent, P to A and B to T	
E	2 position, spring centered and P to B	
F	2 position, spring offset P to A and centered	
H*	2 position, spring offset P to B	
K	2 position, spring centered and P to A	
M	2 position, spring offset P to B and centered	

\* 020, 026 and 030 spools only.  
 † 020 and 030 spools only.

\* 008, 020 & 026 spools have closed crossover.  
 \*\* 009 & 030 spool have open crossover.  
 See Universal Spool Chart for other spool options.

2502-A1.p65, dd



**Standard Valves**



☐  
Solenoid Connection

☐  
Coil Options

☐  
Tube Options

☐  
Manual Override Options

☐  
Electrical Options

☐  
Shift Response and Indication

☐  
Approvals

☐  
Valve Variations

☐  
Design Series

NOTE:  
Not required when ordering.

Code	Description
C	Conduit Box
D	Metric Plug (M12X1), DESINA
E	Explosion Proof Plug-In
H†	Single Spade
J**†	Deutsch (DT06-25)
L	Dual Screw Lug
M**†	Metri-Pack (150)
P	DIN with Plug
S	Double Spade
W*	DIN w/o Plug

\* Not available with lights.  
 \*\* See valve variations for others.  
 † DC only.

Code	Description
Omit	Standard Response
S2*	Soft Shift, 0.020" Orifice
S3*	Soft Shift, 0.030" Orifice
S4*	Soft Shift, 0.040" Orifice
S5*	Soft Shift, 0.050" Orifice
S6*	Soft Shift, 0.060" Orifice
SN*	Soft Shift, No Orifice
I7	Monitor Switch Direct Op. End Stroke
I8	Monitor Switch Direct Op. Start Stroke

\* Not available with 8 watt.

Code	Description
Omit	High Watt
D	Explosion Proof, EEXD ATEX
E	Explosion Proof, EEXME ATEX
F**	Low Watt
C†	CSA Hazardous Location
L***	8 Watt
O	Explosion Proof, MSHA
U	Explosion Proof, UL/CSA
X*	No Coils

\* See solenoid voltage code to specify proper tube.  
 \*\* AC only.  
 \*\*\* DC/AC Rectified only.  
 † Applicable to conduit box and plug-in style only.

Code	Description
Omit	No Options
J	Diode Surge Suppressor
B	Rectified Coil

Code	Description
Omit	Standard Valve
4*	C.S.A. Approved
K	UL Recognition

\* Not available with high pressure tube.

Code	Description
Omit	Standard
P	Extended with Boot
T	None
R	Repairable
W	Waterproof Override Protection

Code	Description
5	Signal Lights
6	Manaplug - Brad Harrison Mini
7A	Manaplug - Brad Harrison (12x1) Micro
56	Manaplug (Mini) with Lights
7B	Manaplug (Micro) with Lights (D1 only)
1A	Manaplug (Mini) Single Sol. 5-pin
1B	Manaplug (Micro) Single Sol. 5-pin
1C	Manaplug (Mini) Single Sol. 5-pin, with Lights
1D	Manaplug (Micro) Single Sol. 5-pin, with Lights
4D	Twist & Lock Override (Old 5426)
4E	Push Manual Override (Old x5450)

Code	Description
Omit	Low Pressure, AC only
H	High Pressure, AC only
M	Low Pressure, DC-WI only
G	High Pressure, DC-WI only

**Valve Weight:**

Single Solenoid 1.36 kg (3.0 lbs.)  
 Double Solenoid 1.6 kg (3.5 lbs.)

**Standard Bolt Kit:** BK209

**Metric Bolt Kit:** BKM209

**Solenoid Ratings**

Insulation System	Class F
Allowable Deviation from rated voltage	-10% to +15% for DC and AC rectified coils -5% to +5% for AC Coils
Armature	Wet pin type
CSA File Number	LR60407
Environmental Capability	DC Solenoids are rated at NEMA 4 (IP67) or better when properly wired and installed. Contact HVD for AC coil applications.

**Explosion Proof Solenoid Ratings\***

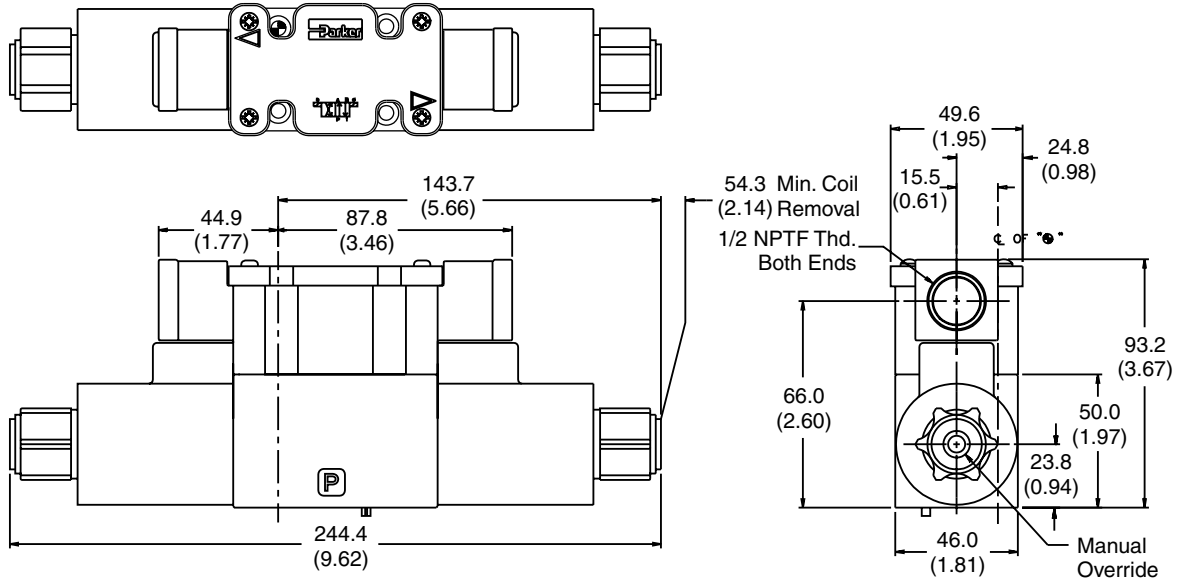
U.L. & CSA (EU)	Class I, Div 1 & 2, Groups C & D Class II, Div 1 & 2, Groups E, F & G As defined by the NEC
M.S.H.A. (EO)	Complies with 30CFR, Part 18
ATEX (ED)	Complies with ATEX requirements for: Exd, Group IIB; EN50014: 1999+ Amds. 1 & 2, EN50018: 2000
CSA Hazardous Location	Class II, Groups E, F & G

\* Allowable Voltage Deviation +/- 10%  
 Note that AC coils are single frequency only.

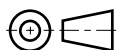
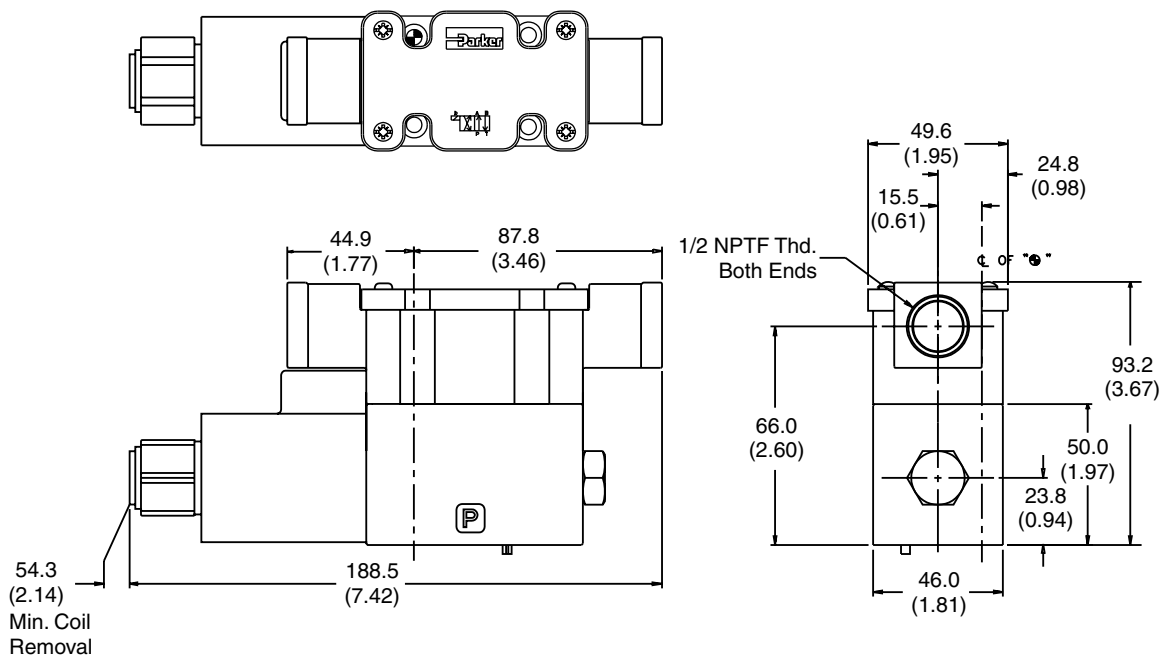
Code		Voltage	In Rush Amps Amperage	In Rush Amps D1VW VA @ 3MM	Holding Amps D1VW	Watts D1VW	Resistance D1VW
Voltage Code	Power Code						
<b>A</b>		24/50 VAC, High Watt	7.00 Amps	168 VA	2.65 Amps	28 W	1.67 ohm(s)
<b>D</b>	<b>L</b>	120 VDC	N/A	N/A	0.09 Amps	10 W	1584.00 ohm(s)
			N/A	N/A	0.26 Amps	30 W	528.00 ohm(s)
<b>E</b>		24/60 VAC, High Watt	6.00 Amps	144 VA	1.85 Amps	20 W	1.67 ohm(s)
		24/50 VAC, High Watt	7.00 Amps	168 VA	2.65 Amps	28 W	1.67 ohm(s)
<b>G</b>	<b>L</b>	198 VDC	N/A	N/A	0.05 Amps	10 W	3920.40 ohm(s)
			N/A	N/A	0.15 Amps	30 W	1306.80 ohm(s)
<b>J</b>	<b>L</b>	24 VDC	N/A	N/A	0.44 Amps	10 W	51.89 ohm(s)
			N/A	N/A	1.32 Amps	30 W	17.27 ohm(s)
<b>K</b>	<b>L</b>	12 VDC	N/A	N/A	0.88 Amps	10 W	12.97 ohm(s)
			N/A	N/A	2.64 Amps	30 W	4.32 ohm(s)
<b>L</b>	<b>L</b>	6 VDC	N/A	N/A	1.67 Amps	10 W	3.59 ohm(s)
			N/A	N/A	5.00 Amps	30 W	1.20 ohm(s)
<b>M</b>	<b>L</b>	9 VDC	N/A	N/A	1.11 Amps	10 W	8.12 ohm(s)
			N/A	N/A	3.35 Amps	30 W	2.67 ohm(s)
<b>P</b>		110/50 VAC			0.38 Amps	19 W	135.00 ohm(s)
<b>R</b>		24/60 VAC, High Watt	8.00 Amps	192 VA	2.70 Amps	27 W	1.40 ohm(s)
	<b>F</b>	24/60 VAC, Low Watt	6.67 Amps	160 VA	2.20 Amps	23 W	1.52 ohm(s)
<b>S</b>	<b>***Specials***</b>	SEE BELOW					
<b>T</b>		240/60 VAC, High Watt	0.77 Amps	185 VA	0.26 Amps	25 W	134.50 ohm(s)
		220/50 VAC, High Watt	0.82 Amps	180 VA	0.31 Amps	27 W	134.50 ohm(s)
	<b>F</b>	240/60 VAC, Low Watt	0.70 Amps	168 VA	0.22 Amps	21 W	145.00 ohm(s)
	<b>F</b>	220/50 VAC, Low Watt	0.75 Amps	165 VA	0.26 Amps	23 W	145.00 ohm(s)
<b>U</b>	<b>L</b>	98 VDC	N/A	N/A	0.10 Amps	10 W	960.00 ohm(s)
<b>X</b>	<b>L</b>	16 VDC	N/A	N/A	0.63 Amps	10 W	25.60 ohm(s)
<b>Y</b>		120/60 VAC, High Watt	1.55 Amps	186 VA	0.49 Amps	25 W	33.70 ohm(s)
		110/50 VAC, High Watt	1.65 Amps	182 VA	0.58 Amps	27 W	33.70 ohm(s)
	<b>F</b>	120/60 VAC, Low Watt	1.40 Amps	168 VA	0.42 Amps	21 W	36.50 ohm(s)
	<b>F</b>	110/50 VAC, Low Watt	1.50 Amps	165 VA	0.50 Amps	23 W	36.50 ohm(s)
	<b>L*B</b>	120/60 VAC, 10 Watt	0.63 Amps	83 VA	0.18 Amps	10 W	75.00 ohm(s)
	<b>L*B</b>	110/50 VAC, 10 Watt	0.73 Amps	79 VA	0.20 Amps	10 W	75.00 ohm(s)
	<b>*H</b>	120/60 VAC, High Pressure	1.40 Amps	168 VA	0.50 Amps	26 W	36.50 ohm(s)
	<b>*H</b>	110/50 VAC, High Pressure	1.48 Amps	163 VA	0.60 Amps	28 W	36.50 ohm(s)
<b>Z</b>	<b>L</b>	250 VDC	N/A	N/A	0.04 Amps	10 W	6875.00 ohm(s)
			N/A	N/A	0.13 Amps	30 W	1889.64 ohm(s)
<b>Specials S</b>	Other voltages/frequencies may be available Contact HVD for more information						
<b>Explosion Proof Solenoids</b>							
<b>R</b>		24/60 VAC	7.63 Amps	183 VA	2.85 Amps	27 W	1.99 ohm(s)
<b>T</b>		240/60 VAC	0.76 Amps	183 VA	0.29 Amps	27 W	1.34 ohm(s)
<b>N</b>		220/50 VAC	0.77 Amps	169 VA	0.31 Amps	27 W	1.38 ohm(s)
<b>Y</b>		120/60 VAC	1.60 Amps	192 VA	0.58 Amps	27 W	33.50 ohm(s)
<b>P</b>		110/50 VAC	1.47 Amps	162 VA	0.57 Amps	27 W	34.70 ohm(s)
<b>Q</b>		100/60 VAC	1.90 Amps	192 VA	0.70 Amps	27 W	38.60 ohm(s)
<b>K</b>		12 VDC	N/A	N/A	2.75 Amps	33 W	4.36 ohm(s)
<b>J</b>		24 VDC	N/A	N/A	1.38 Amps	33 W	17.33 ohm(s)
<b>D</b>		120 VDC	N/A	N/A	0.28 Amps	33 W	420.92 ohm(s)
<b>Z</b>		250 VDC	N/A	N/A	0.13 Amps	33 W	1952.66 ohm(s)

Inch equivalents for millimeter dimensions are shown in (\*\*)

Plug-In Box, Double DC Solenoid



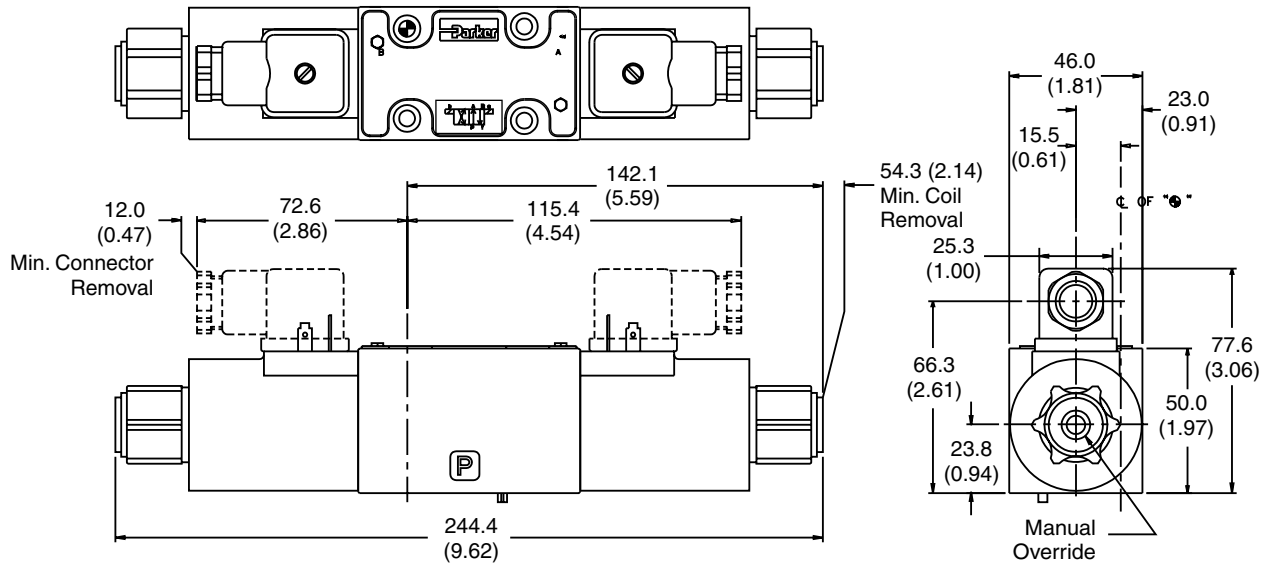
Plug-In Box, Single DC Solenoid



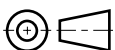
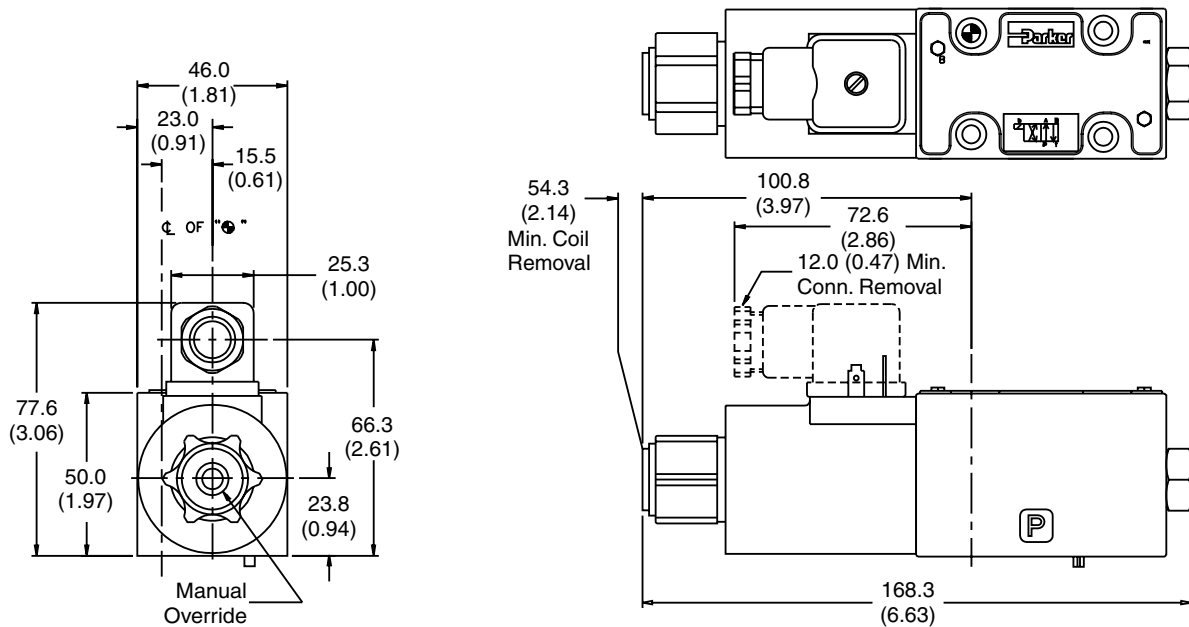
Inch equivalents for millimeter dimensions are shown in (\*\*)

**A**

**Hirschmann, Double DC Solenoid**

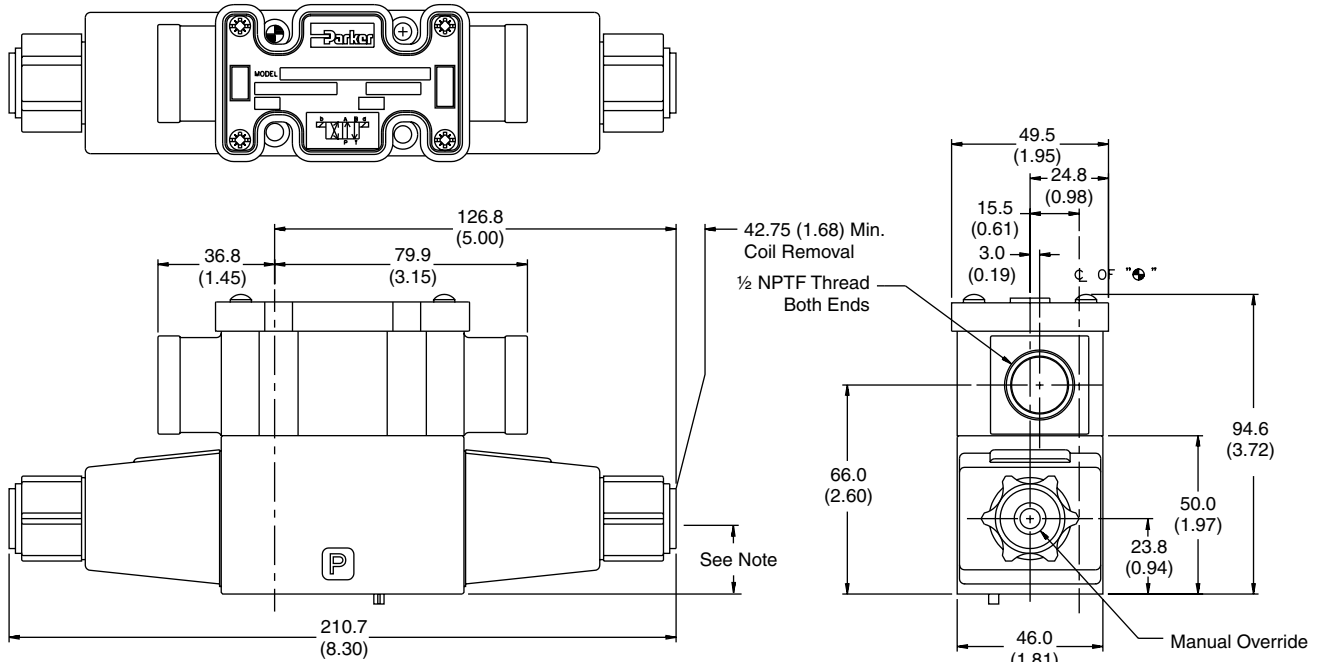


**Hirschmann, Single DC Solenoid**



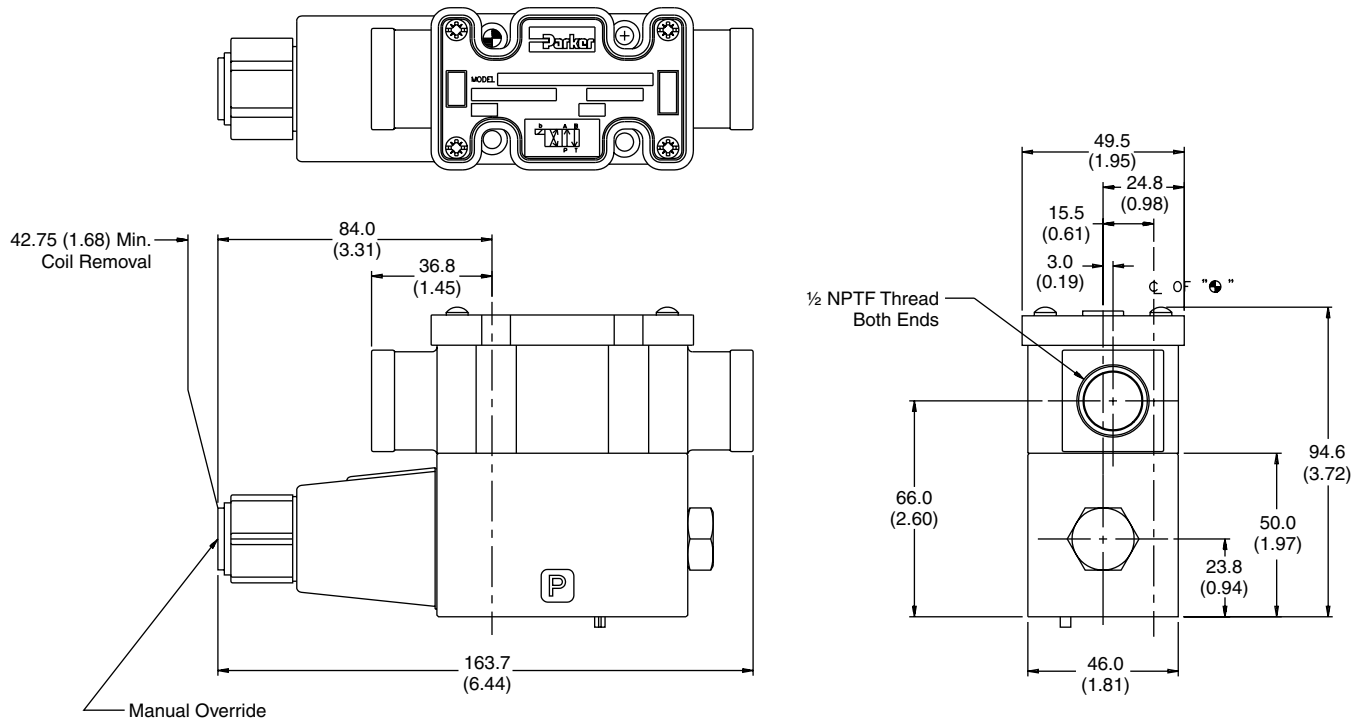
Inch equivalents for millimeter dimensions are shown in (\*\*)

**Conduit Box, Double AC Solenoid**



**Note:** 22.0 mm (.87") from bottom of bolt hole counterbore to bottom of valve.

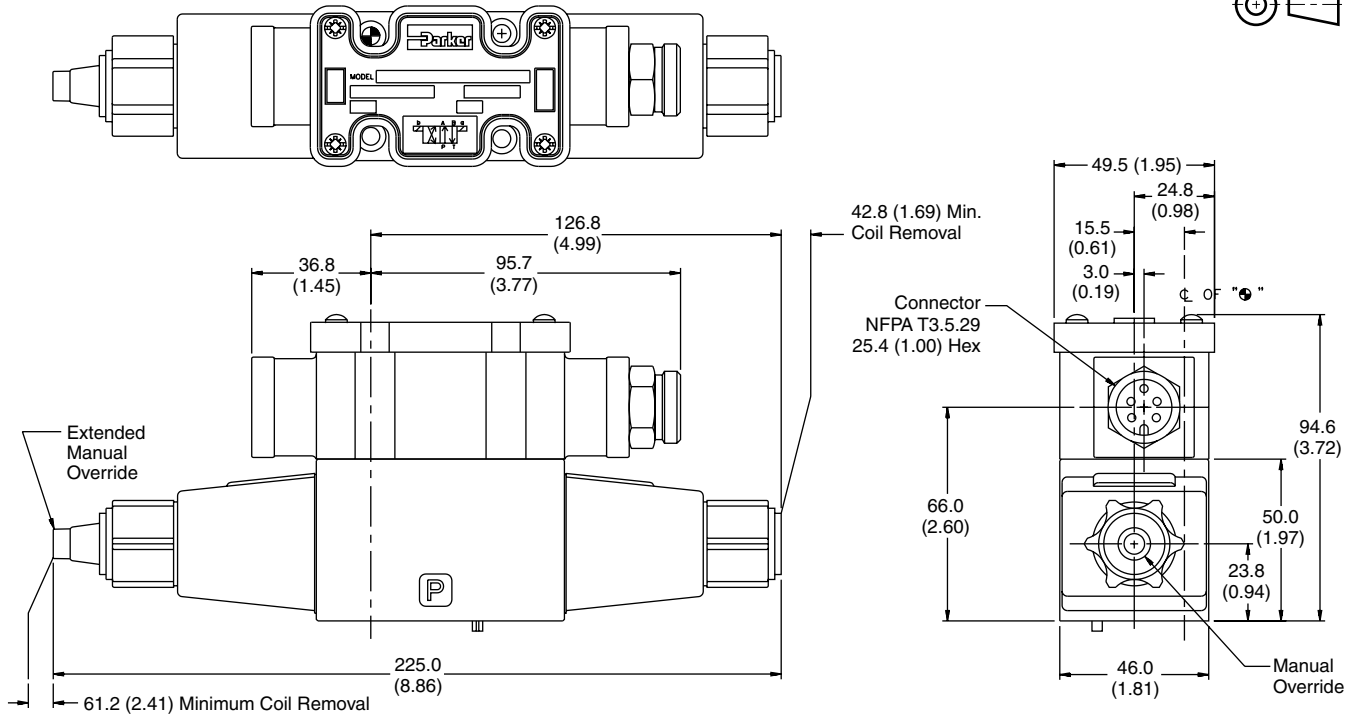
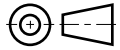
**Conduit Box, Single AC Solenoid**



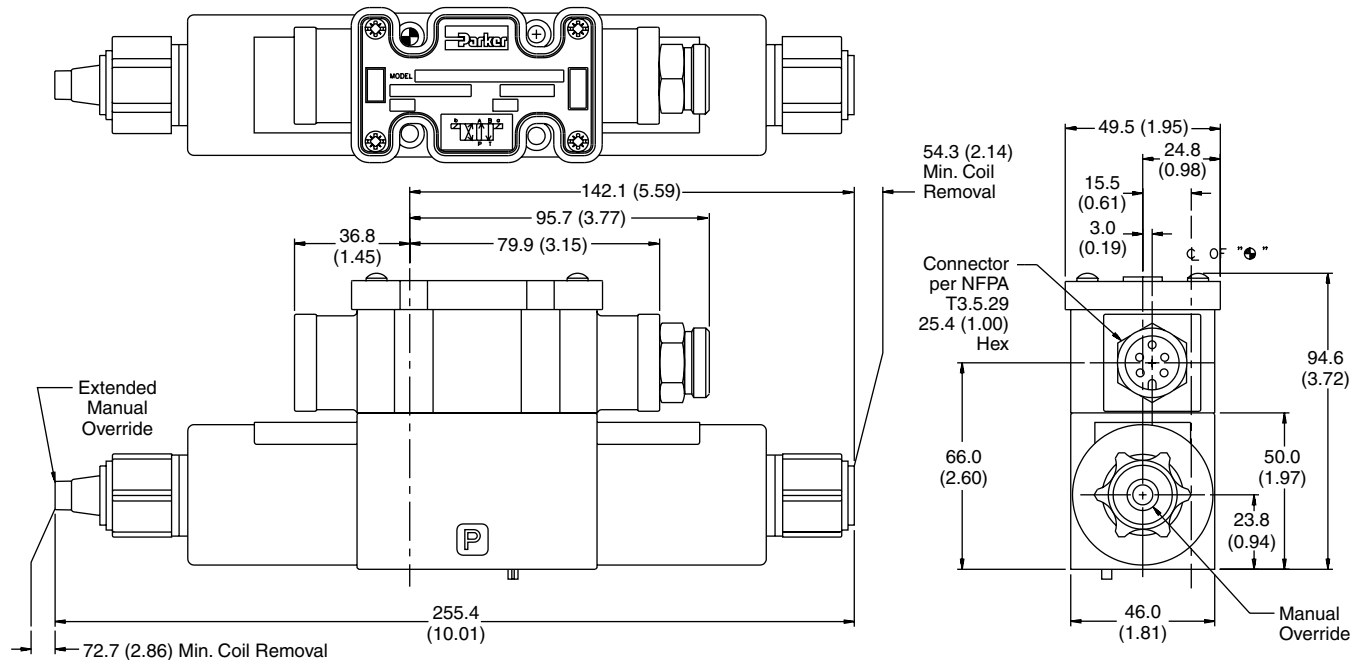
Inch equivalents for millimeter dimensions are shown in (\*\*)

**A**

**Conduit Box, Double AC Solenoid**  
with Variation 6 (Manaplug) & Variation P (Extended Manual Override)



**Conduit Box, Double DC & AC Rectified Solenoids**  
with Variation 6 (Manaplug) & Variation P (Extended Manual Override)



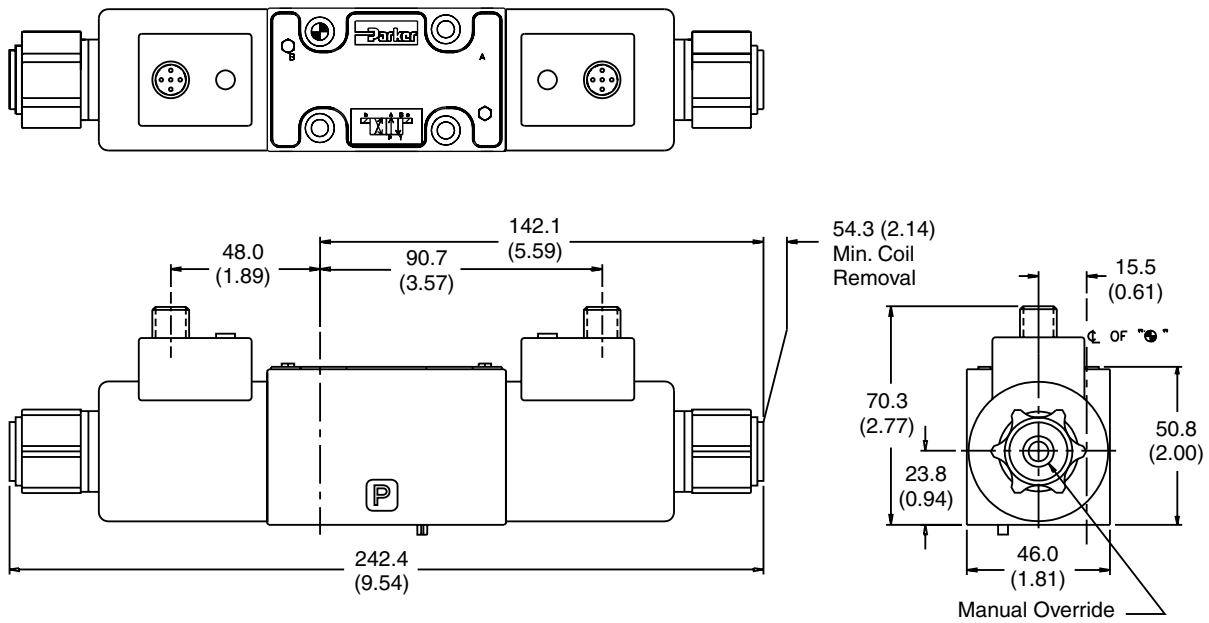




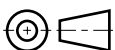
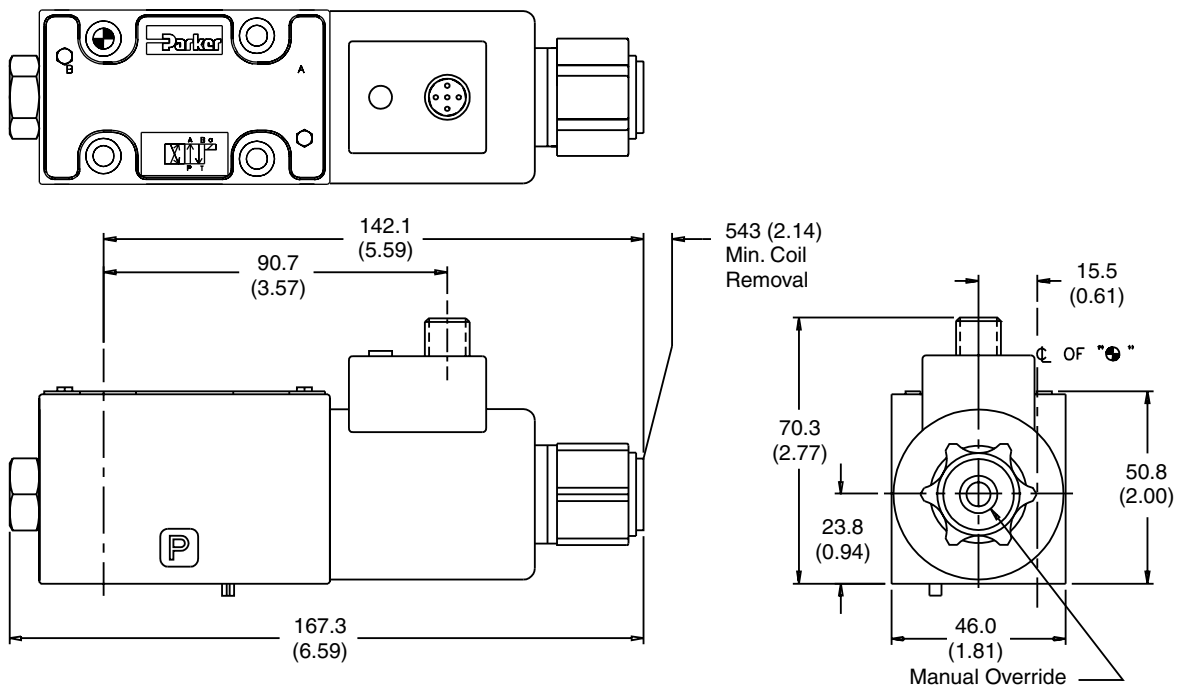
Inch equivalents for millimeter dimensions are shown in (\*\*)

**A**

**DESINA, Double DC Solenoid**

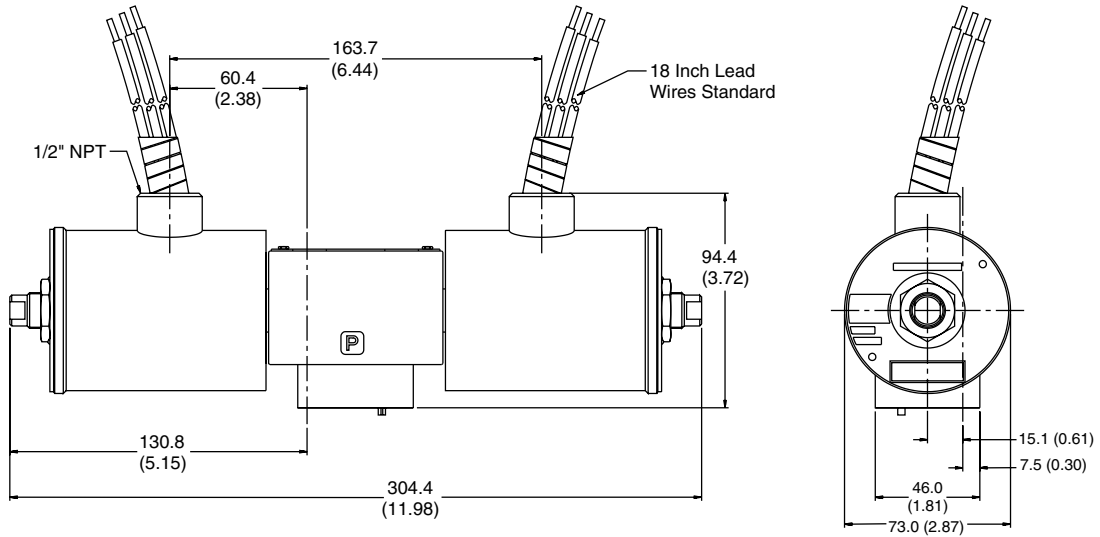


**DESINA, Single DC Solenoid**

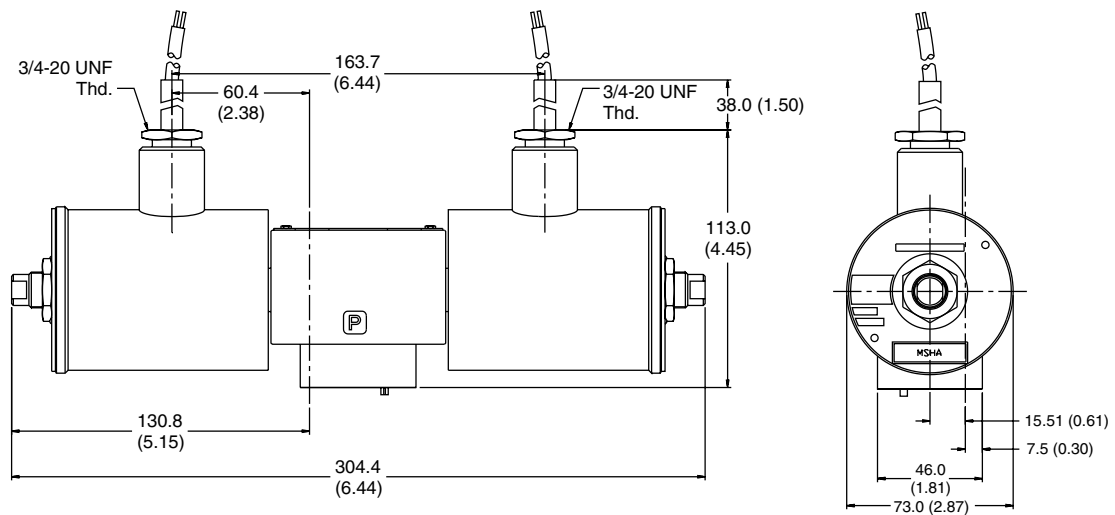


Inch equivalents for millimeter dimensions are shown in (\*\*)

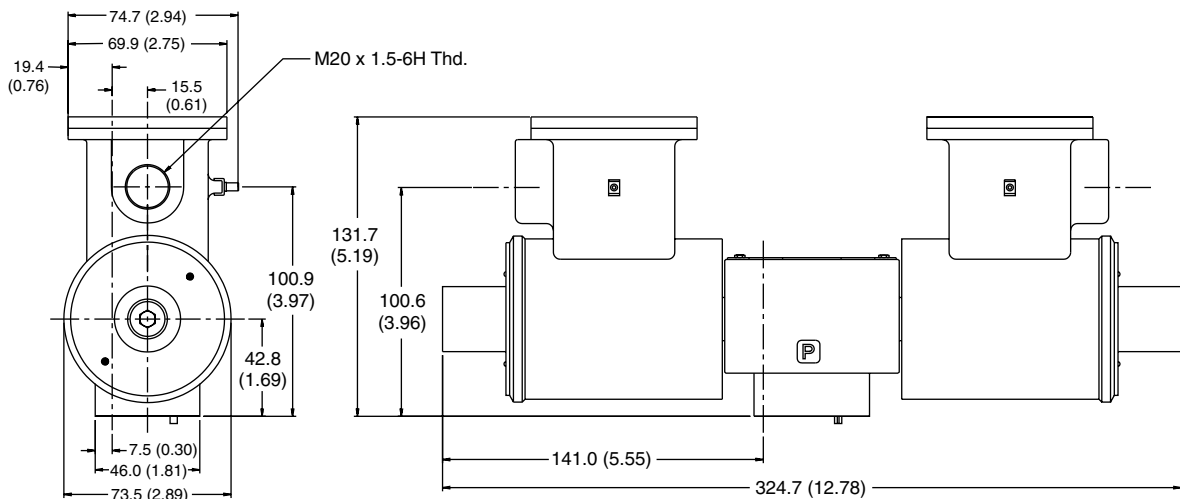
**Explosion Proof U.L. & C.S.A., Double Solenoid**



**Explosion Proof M.S.H.A., Double Solenoid**



**Explosion Proof ATEX, Double Solenoid**

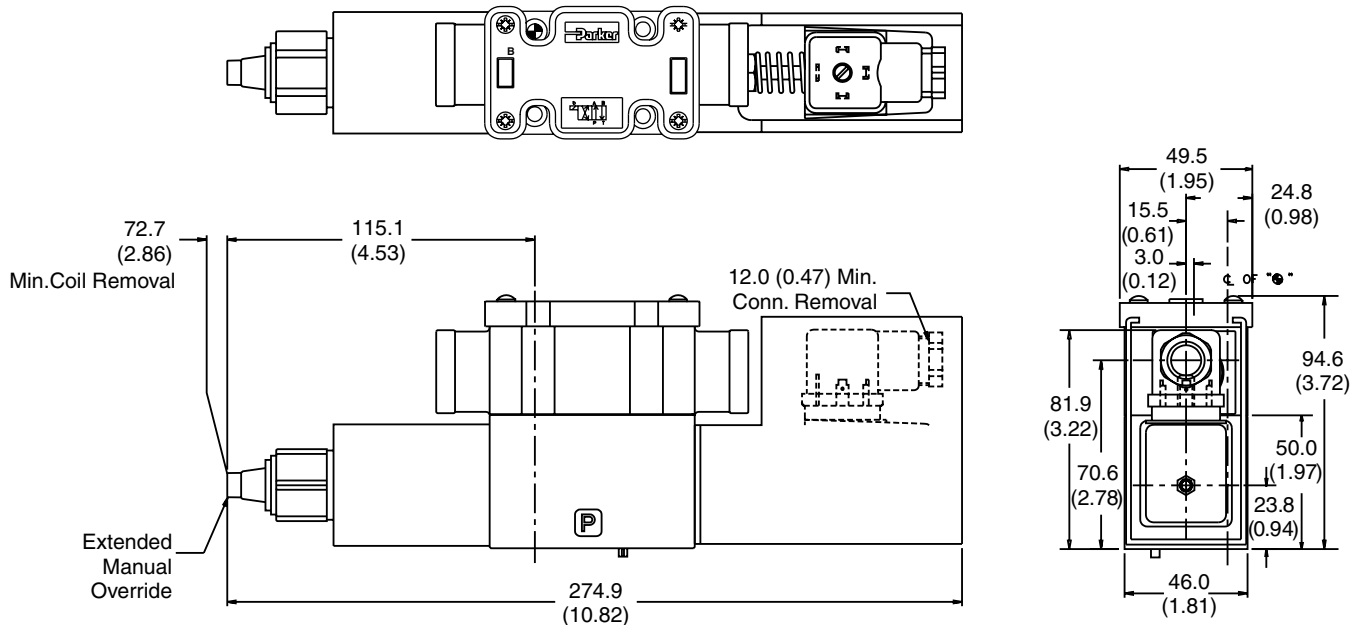
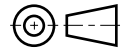


**Dimensions**

Inch equivalents for millimeter dimensions are shown in (\*\*)

**A**

**Conduit Box, Single DC Solenoid**  
with Variation I7 (Monitor Switch) & Variation P (Extended Manual Override)

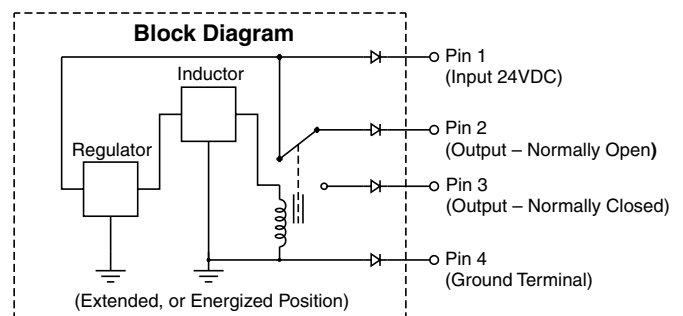


**Monitor Switch**  
(valve variation I7)

This feature provides for electrical confirmation of the spool shift. This can be used in safety circuits, to assure proper sequencing, etc.

**Switch Data**

Inductive switch requiring +18-42 volt input. Outputs A and B are opposite; one at "0" voltage, the other at input voltage. During switching, A and B outputs reverse. Provides 0.4A switching current.



For repetitive switch power-up conditions, please consult factory.

**Conduit Box  
(connection option G & C)**

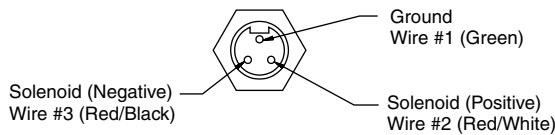
- Interface – 152.4 cm (6.0 inch) lead wires, 18 awg.
- Waterproof

**Plug-In Conduit Box**

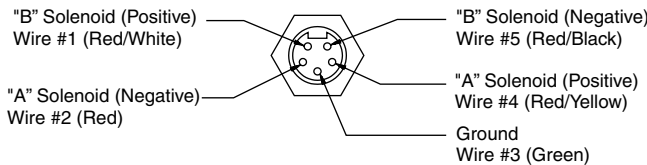
- NEMA 4 rated
- Phoenix connector
- Lights, Manaplug available

**Manaplug  
(valve variations 6, 56, 630)**

- Interface – Brad Harrison Plug
- 3-Pin for Single Solenoid
- 5-Pin for Double Solenoid



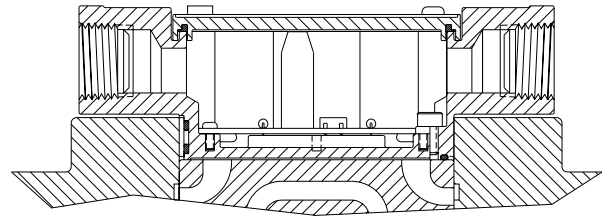
**3-Pin Manaplug (Mini) with Lights**  
Single Solenoid Valves



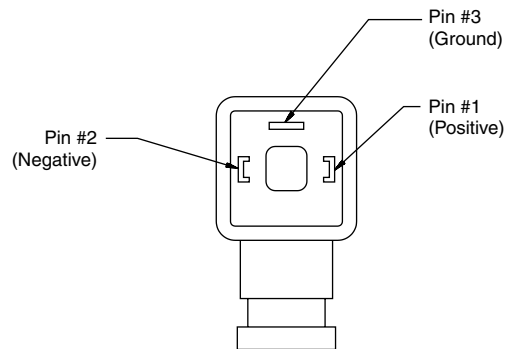
**5-Pin Manaplug (Mini) with Lights**  
Single and Double Solenoid Valves  
("A" and "B" Solenoids Reversed for #8 and #9 Spools)

**Signal Lights  
(valve variation 5)**

- Interface – LED

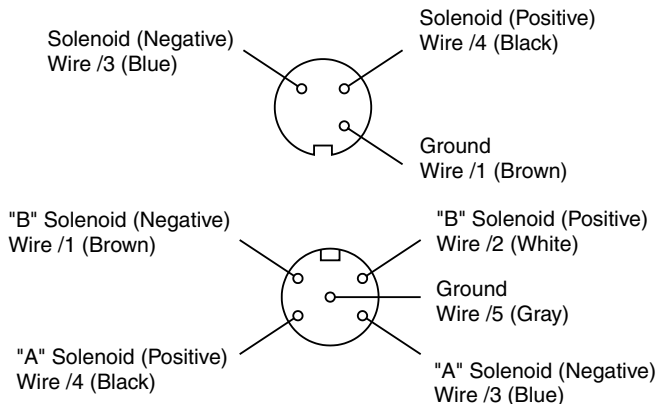


**Hirschmann Plug with Lights  
ISO 4400/DIN 43650 Form "A"**



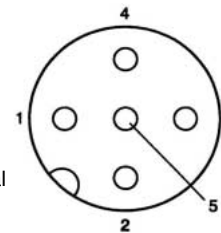
**Face View of Plug**

**Micro Connector  
valve variations 7A, 7B**



**DESINA Connector  
M12 pin assignment  
Standard**

- 1 = Not used
- 2 = Not used
- 3 = 0V
- 4 = Signal (24 V)
- 5 = Earth Ground



DESINA – design  
Pin 1 and 2  
connected

