



# Solenoid Valve Connectors

EN175301-803, De Facto Standard

Cordsets | Field Wireables | Accessories

UL File #:

**E205538**

While most industrial electrical connectors are used in a wide variety of applications, the “solenoid valve connector” is primarily used on solenoid valves. Over the years as solenoid valves have changed and reduced in size, the solenoid valve connectors have changed as well.

Designed to conform to EN175301-803 (formerly DIN 43650), or to “De Facto” standards, Mencom solenoid valve connectors are available in 5 different interfaces (Form A, Form B, Form C as well as Industry Standard Form B and Industry Standard Form C).

## How it works

A solenoid valve is an electromechanically operated valve. The valve is controlled by an electric current through a solenoid: in the case of a two-port valve the flow is switched on or off; in the case of a three-port valve, the outflow is switched between the two outlet ports. Multiple solenoid valves can be placed together on a manifold.

## Where it is used

Solenoid valves are most frequently used to control elements in fluidics. Their tasks are to shut off, release, dose, distribute or mix fluids. They are found in many application areas. Solenoids offer fast and safe switching, high reliability, long service life, and compact design.

## Features

Our standard valve connector offers a polyamide body with thermoplastic gasket integrally molded into the face of the mold connectors. Molded versions utilize a PVC jacket with 18 AWG conductors, while the field wireables are available in PG9, PG11, and ½” NPT threaded openings. Valve connectors with circuitry and suppression aid in diagnostics and protection of equipment. Several circuitry and suppression options are available.

Our valve connectors all carry an IP65 Rating.



Valve Connectors

T

# Solenoid Valve Connectors

EN175301-803, De Facto Standard



## Contents

<b>Part Number Matrix</b>				<b>T-3</b>
<b>Accessories</b>				<b>T-4</b>
<b>Form A</b>	EN175301-803 (Formerly DIN 43650)	Field Wireable Plugs		<b>T-5</b>
		to Micro-DC Male Receptacle		<b>T-6</b>
		Cordsets		<b>T-7</b>
		to Micro-DC Male Plug		<b>T-8</b>
<b>Form B</b>	EN175301-803 (Formerly DIN 43650)	Field Wireable Plugs		<b>T-9</b>
		Cordsets		<b>T-9</b>
		to Micro-DC Male Receptacle		<b>T-10</b>
		to Micro-DC Male Plug		<b>T-11</b>
	Industry Standard	Field Wireable Plugs		<b>T-12</b>
		Cordsets		<b>T-12</b>
		to Micro-DC Male Receptacle		<b>T-13</b>
		to Micro-DC Male Plug		<b>T-14</b>
<b>Form C</b>	EN175301-803 (Formerly DIN 43650)	Field Wireable Plugs		<b>T-15</b>
		Cordsets		<b>T-15</b>
		to Micro-DC Male Receptacle		<b>T-16</b>
		to Micro-DC Male Plug		<b>T-17</b>
	Industry Standard	Field Wireable Plugs		<b>T-18</b>
		Cordsets		<b>T-18</b>
		to Micro-DC Male Receptacle		<b>T-19</b>
		to Micro-DC Male Plug		<b>T-20</b>

Valve Connectors

T



# Solenoid Valve Connectors

## Solenoid Valve Connectors Part Number Matrix

Not all options available with all valve connectors, please consult factory.

V   -    -

### Style

Black cable unless indicated

- A = DIN Form A
- B = DIN Form B
- C = DIN Form C
- D = Ind. Std. Form B {ISB}
- E = Ind. Std. Form C {ISC}
- F = DIN Form A - Gray
- G = DIN Form B - Gray
- J = Ind. Std. Form B {ISB} - Gray
- H = DIN Form C - Gray
- K = Ind. Std. Form C {ISC} - Gray

### Circuit Design

- A = LED Only; 24V AC/DC
- B = LED Only; 120V AC/DC
- C = LED w/ Flyback Diode; 10-50V DC
- G = LED & MOV; 24V AC/DC
- J = LED & MOV; 120V AC/DC
- N = No Circuitry
- R = LED w/ BRD RECT & MOV; 120V AC/DC
- S = Bi-Color LED's; 10-50V AC/DC
- T = Bi-Color LED's; 120V AC/DC
- Z = LED; Zeners; 24V AC/DC

### Length in Meter

- 0 (ZERO) = No Cable (Field Wireable)
- A = 10M
- 2 = 2M
- 5 = 5M

Other lengths are available by request.

### Contacts

- 2 = 2+Ground/Ground Cable Side
- 3 = 3+Ground/Ground Cable Side
- 8 = 2+Ground/Ground Opposite Side
- 9 = 3+Ground/Ground Opposite Side

### Wiring Design

- 00 (Double Zero) = STD Cable
- 50 = Formed Gasket

Or

0

### Config & Wiring

- 1 = Straight
- 2 = R/A
- 3 & Up = Custom

### Pins

2,3,4,5, Etc.

### Connector

- 1 = MIN
- 2 = MAC
- 3 = MDC
- 4 = NAN

### Threads

- 0 (Zero) = N/A - CBL Version
- 2 = 1/2 NPT
- 7 = PG7
- 9 = PG9
- 1 = PG11



# Solenoid Valve Connectors

*Solenoid Valve Accessories*



Circuit Diagrams | Accessories | IP65 Rating

Male Bases: All connectors are made via solder tabs.					
View	# of Poles	Maximum Conductor Size	Maximum Voltage	Material	Part Number
	2 + Ground	16 AWG	250 VAC	Polyamide	VMA-020-00
	3 + Ground	16 AWG	250 VAC	Polyamide	VMA-030-00

Thumb Screws			
View	Material	Part Number	Form Style
	Nickel Plated Copper Alloy	V-25TB	Cable Version Form A (VA Series) Cable Version Form B (VB Series) Cable Version Industry Standard B (VD Series) Field Wireable Industry Standard C (VE Series)
	Nickel Plated Copper Alloy	V-30TB	Field Wireable Form A (VA Series) Field Wireable Form B (VB Series) Field Wireable Industry Standard B (VD Series)

All Valve Connectors come standard with mounting screws.

<b>CIRCUIT C</b> LED W/ FLYBACK DIODE 	<b>CIRCUIT G</b> LED W/ MOV 	<b>CIRCUIT J</b> LED W/ MOV 	<b>CIRCUIT N</b> 
<b>CIRCUIT R</b> LED W/ BRD RECT & MOV 	<b>CIRCUIT S</b> BI-COLOR LED'S AC/DC 10-50V PIN 2 = YEL LED PIN 3 = GRN LED 	<b>CIRCUIT T</b> BI-COLOR LED'S 	OTHER CIRCUITS AVAILABLE PLEASE CONSULT FACTORY

Valve Connectors with LEDs and surge suppression aides in diagnostics and protection of equipment.

Valve Connectors

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# Solenoid Valve Connectors

Form A Solenoid Valve Field Wireable



Form A | EN175301-803 | Field Wireable Plugs | IP65 Rating

# of Poles	Voltage	Circuitry	Housing Color	Field Wireable		
				1/2" NPT	PG9	PG11
				Conduit	6 to 8 mm Cables	8 to 10 mm Cables
2 + Ground	250V AC/DC (Maximum)	None	Gray	N/A	VFN-029-00	VFN-021-00
			Black	VAN-022-00	VAN-029-00*	VAN-021-00*
	10-50V DC	LED w/ Flyback Diode	Clear	VAC-022-00	VAC-029-00	VAC-021-00
	24V AC/DC	LED w/ MOV	Clear	VAG-022-00	VAG-029-00	VAG-021-00
	110V AC/DC	LED w/ MOV	Clear	VAJ-022-00	VAJ-029-00	VAJ-021-00
3 + Ground	120V AC/DC	Bridge Rectifier w/ LED & MOV	Clear	VAR-022-00	VAR-029-00	VAR-021-00
	250V AC/DC (maximum)	None	Gray	N/A	VFN-039-00	VFN-031-00
			Black	VAN-032-00	VAN-039-00*	VAN-031-00*
	10-50V AC/DC	2-LED; Amber & Green	Clear	N/A	VAS-039-00	VAS-031-00
	120V AC/DC	2-LED; Amber & Green	Clear	N/A	VAT-039-00	VAT-031-00

\* UL Recognized

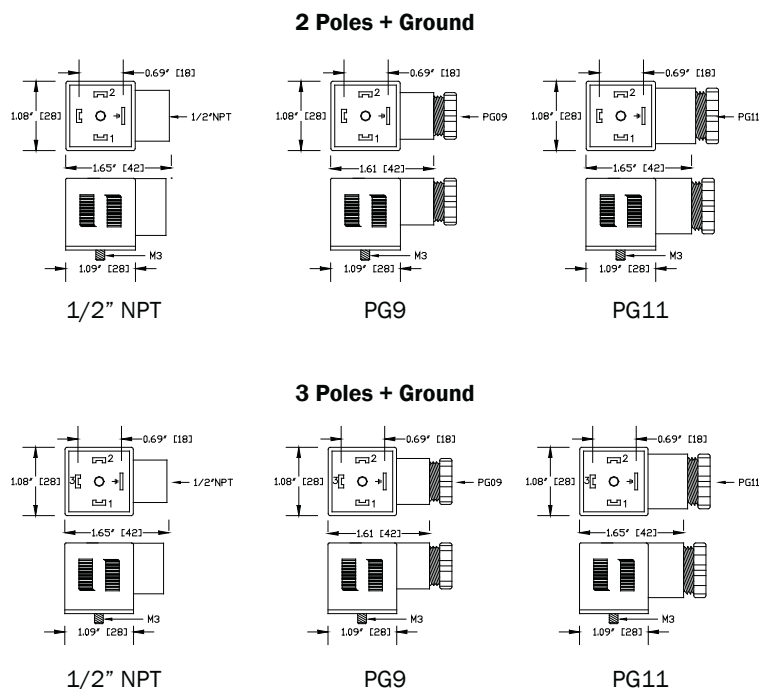
The ground position is not applicable for field wireable versions.

Formed Gasket	Material	Part Number
	Thermoplastic	V-GPRA

For V-GPRA formed gasket, replace a "-00" suffix with "-50".

## Specifications:

Body: Polyamide  
Contacts: Copper Alloy with Silver Plating  
Gasket: Thermoplastic  
Screw: Zinc Plated Steel  
Range: PG 9 - 6 to 8 mm  
PG 11 - 8 to 10 mm  
Temperature: Gray & Black: -40°C to 125°C  
(-40°F to +257°F)  
Clear: -25°C to 90°C  
(-13°F to 194°F)



Valve Connectors

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# Solenoid Valve Connectors

## Form A to M12 (MDC) Solenoid Valve Receptacles

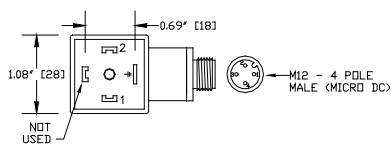
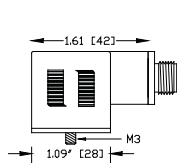


Form A to M12 (MDC) Male Receptacle | EN175301-803 | IP65 Rating

# of Poles	Voltage	Circuitry	Housing Color	M12 (MDC) # of Poles	
				4 Pole	5 Pole
2 + Ground	250V AC/DC (Maximum)	None	Gray	VFN-029-3401	VFN-029-3501
			Black	VAN-029-3401	VAN-029-3501
	10-50V DC	LED w/ Flyback Diode	Clear	VAC-029-3401	VAC-029-3501
	24V AC/DC	LED w/ MOV	Clear	VAG-029-3401	VAG-029-3501
	110V AC/DC	LED w/ MOV	Clear	VAJ-029-3401	VAJ-029-3501
	120V AC/DC	Bridge Rectifier w/ LED & MOV	Clear	VAR-029-3401	VAR-029-3501

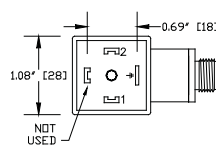
Two standard orientations are available. Please refer to the part number system shown above each drawing.

**Vxx-029-3401**



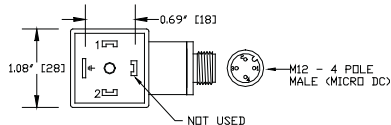
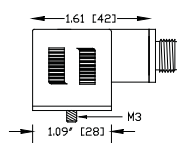
2 Poles + Ground  
(Ground Receptacle Side)

**Vxx-029-3501**



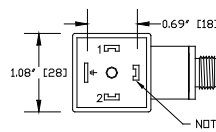
2 Poles + Ground  
(Ground Receptacle Side)

**Vxx-089-3401**



2 Poles + Ground  
(Ground Opposite Receptacle Side)

**Vxx-089-3501**



2 Poles + Ground  
(Ground Opposite Receptacle Side)

### DIN Connector Specifications:

Body: Polyamide  
Contacts: Copper Alloy with Silver Plating  
Insert: Polyamide  
Gasket: Thermoplastic  
Screw: Zinc Plated Steel  
Cable O.D.: PG 7 - 6 to 7 mm  
Temperature: Gray & Black: -40°C to 125°C (-40°F to +257°F)  
Clear: -25°C to 90°C (-13°F to 194°F)

### MDC Connector Specifications:

Coupling Nut: Nickel Plated Brass  
Insulator: Polyamide  
Contacts: Copper Alloy with Gold Plating  
O-Ring: BUNA-N  
Temperature: -40°C to 80°C (-40°F to +176°F)

Valve Connectors	M12 (MDC) 4 Pole PIN #	M12 (MDC) 5 Pole PIN #
1	4	4
2	3	3
Ground	N/A	5
3 Not Used	1, 2 & 5 Not Used	1 & 2 Not Used



# Solenoid Valve Connectors

## Form A Solenoid Valve Cordsets



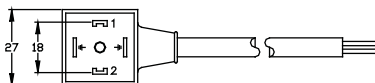
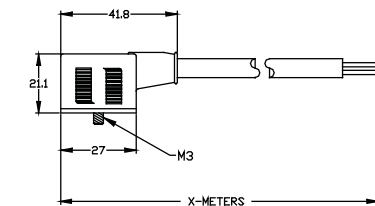
Form A | Cordset Version | EN175301-803 | IP65 Rating

# of Poles	Voltage	Circuitry	Cordsets		
			2 M	5 M	10M
2 + Ground**	250V AC/DC (Maximum)	None	VAN-220-00	VAN-520-00	VAN-A20-00
	10-50V DC	LED w/ Flyback Diode	VAC-220-00	VAC-520-00	VAC-A20-00
	24V AC/DC	LED w/ MOV	VAG-220-00	VAG-520-00	VAG-A20-00
	110V AC/DC	LED w/ MOV	VAJ-220-00	VAJ-520-00	VAJ-A20-00
	120V AC/DC	Bridge Rectifier w/ LED & MOV	VAR-220-00	VAR-520-00	VAR-A20-00
3 + Ground	250V AC/DC (maximum)	None	VAN-230-00	VAN-530-00	VAN-A30-00
	10-50V AC/DC	2-LED; Amber & Green	VAS-230-00	VAS-530-00	VAS-A30-00
	120V AC/DC	2-LED; Amber & Green	VAT-230-00	VAT-530-00	VAT-A30-00

\*\*2 Ground locations available for 2+ Ground Versions.

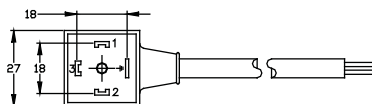
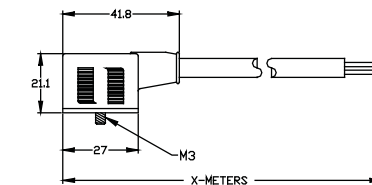
For cables with 3 + Ground, two standard orientations are available. Please refer to the part number system shown above each drawing.

Vxx-x2x-xx



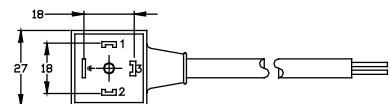
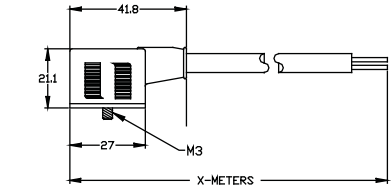
2 Poles + Ground  
(Dual Ground)

Vxx-x3x-xx



3 Poles + Ground  
(Ground Cable Side)

Vxx-x9x-xx



3 Poles + Ground  
(Ground Opposite Cable Side)

### Specifications:

Body: TPE  
Contacts: Copper Alloy with Silver Plating  
Gasket: Built-in TPE  
Screw: Zinc Plated Steel  
Cable: Black PVC  
2 Pole: 3x18 AWG; Cable O.D.: 0.26"  
3 Pole: 4x18 AWG; Cable O.D.: 0.27"  
Temperature: DIN Cables: -25°C to 90°C (-13°F to +194°F)

Valve Pin #	Color Code	
	2 + Ground	3 + Ground
1	Brown	Brown
2	Blue	Black
3	N/A	Blue
Ground	Green/Yellow	Green/Yellow

See Page T-4 for VAS & VAT wiring.



# Solenoid Valve Connectors

Form A to MDC (M12) Solenoid Valve Cordsets



Form A to MDC (M12) Male Plug | EN175301-803 | IP65 Rating

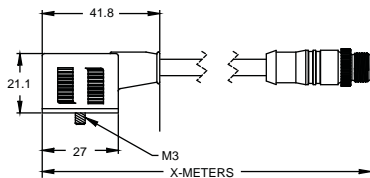
M12 (MDC) 4 Pole Cable								
# of Poles	Voltage	Circuitry	Straight Male			Right Angle Male		
			2 M	5 M	10 M	2M	5 M	10 M
2	250V AC/DC (Maximum)	None	VAN-220-3401	VAN-520-3401	VAN-A20-3401	VAN-220-3402	VAN-520-3402	VAN-A20-3402
	10-50V DC	LED w/ Flyback Diode	VAC-220-3401	VAC-520-3401	VAC-A20-3401	VAC-220-3402	VAC-520-3402	VAC-A20-3402
	24V AC/DC	LED w/ MOV	VAG-220-3401	VAG-520-3401	VAG-A20-3401	VAG-220-3402	VAG-520-3402	VAG-A20-3402
	110V AC/DC	LED w/ MOV	VAJ-220-3401	VAJ-520-3401	VAJ-A20-3401	VAJ-220-3402	VAJ-520-3402	VAJ-A20-3402
M12 (MDC) 5 Pole Cable								
2 + Ground	250V AC/DC (Maximum)	None	VAN-220-3501	VAN-520-3501	VAN-A20-3501	VAN-220-3502	VAN-520-3502	VAN-A20-3502
	10-50V DC	LED w/ Flyback Diode	VAC-220-3501	VAC-520-3501	VAC-A20-3501	VAC-220-3502	VAC-520-3502	VAC-A20-3502
	24V AC/DC	LED w/ MOV	VAG-220-3501	VAG-520-3501	VAG-A20-3501	VAG-220-3502	VAG-520-3502	VAG-A20-3502
	110V AC/DC	LED w/ MOV	VAJ-220-3501	VAJ-520-3501	VAJ-A20-3501	VAJ-220-3502	VAJ-520-3502	VAJ-A20-3502

For cables with 3 + Ground, two standard orientations are available. Please refer to the part number system shown above each drawing.

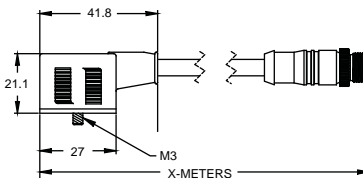
Other circuit options are available, please consult the factory.

Individual orders of less than 50 pieces will be manufactured using field wireable M12 connectors.

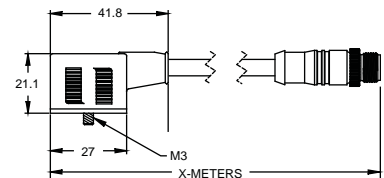
Vxx-x2x-3401



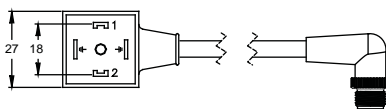
Vxx-x3x-3401



Vxx-x9x-3401

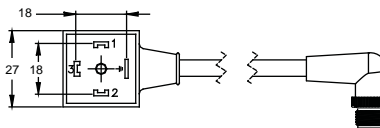


Vxx-x2x-3402



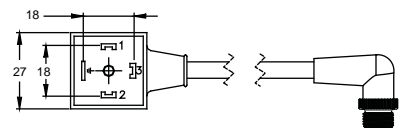
2 Poles + Ground  
(Dual Ground)

Vxx-x3x-3402



3 Poles + Ground  
(Ground Cable Side)

Vxx-x9x-3402



3 Poles + Ground  
(Ground Opposite Cable Side)

## DIN Connector Specifications:

Body: TPE  
Cable: Black PVC  
Contacts: Copper Alloy with Silver Plating  
Gasket: Built in TPE  
Screw: Zinc Plated Steel  
Temperature: -25°C to 90°C (-13°F to 194°F)

## MDC Connector Specifications:

Body: Oil Resistant Black PVC  
Coupling Nut: Nickel Plated Brass  
Insulator: Polyamide  
Contacts: Copper Alloy with Gold Plating  
Temperature: -40°C to 80°C (-40°F to +176°F)

M12 (MDC) 4 Pole	
Valve Pin #	M12 (MDC) Pin #
1	4
2	3
	1, 2 & 5 Not Used

2 + Ground to M12 (MDC) 5 Pole	
Valve Pin #	M12 (MDC) Pin #
1	4
2	3
Ground	5
	1, 2 Not Used

3 + Ground to M12 (MDC) 5 Pole	
	1 Not Used
1	4
2	3
3	2
Ground	5





# Solenoid Valve Connectors

## Form B Solenoid Valve Connectors



Form B | EN175301-803 | Field Wireable Plugs | Cordsets | IP65 Rating

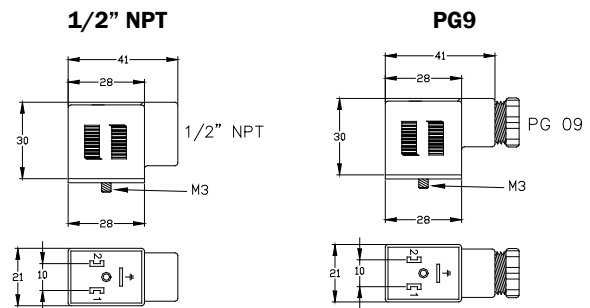
# of Poles	Voltage	Circuitry	Field Wireable		Cordsets		
			1/2" NPT Conduit	PG 9 6 to 8 mm	2 M	5 M	10 M
2 + Ground	250V AC/DC (Maximum)	None	N/A	VGN-029-00 (Gray)	N/A	N/A	N/A
			VBN-022-00 (Black)	VBN-029-00 (Black)	VBN-220-00	VBN-520-00	VBN-A20-00
	10-50V DC	LED w/ Flyback Diode	VBC-022-00 (Clear)	VBC-029-00 (Clear)	VBC-220-00	VBC-520-00	VBC-A20-00
	24V AC/DC	LED w/ MOV	VBG-022-00 (Clear)	VBG-029-00 (Clear)	VBG-220-00	VBG-520-00	VBG-A20-00
	110V AC/DC	LED w/ MOV	VBJ-022-00 (Clear)	VBJ-029-00 (Clear)	VBJ-220-00	VBJ-520-00	VBJ-A20-00

The ground position is not applicable for field wireable versions.

Two standard orientations are available for the cordset versions. Please refer to the part number system shown above each drawing.

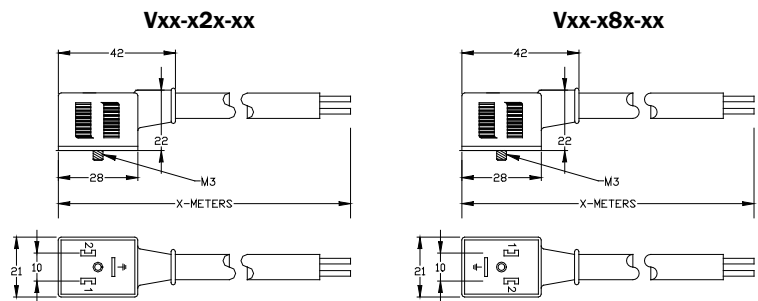
### Field Wireable Specifications:

Body: Polyamide  
Contacts: Copper Alloy with Silver Plating  
Insert: Polyamide  
Gasket: Thermoplastic  
Screw: Zinc Plated Steel  
Cable O.D.: PG 9 - 6 to 8 mm  
Temperature: Gray & Black: -40°C to 125°C (-40°F to +257°F)  
Clear: -25°C to 90°C (-13°F to 194°F)



### Cordset Version Specifications:

Body: TPE  
Contacts: Copper Alloy with Silver Plating  
Insert: Polyamide  
Gasket: Built-in TPE  
Screw: Zinc Plated Steel  
Cable: Black PVC  
2 Pole: 3x18 AWG; Cable O.D.: 0.26"  
Temperature: -25°C to 90°C (-13°F to 194°F)



2 Poles + Ground  
(Ground Cable Side)

2 Poles + Ground  
(Ground Opposite Cable Side)

Valve Pin #	Color Code
1	Brown
2	Blue
Ground	Green/Yellow

Valve Connectors

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# Solenoid Valve Connectors

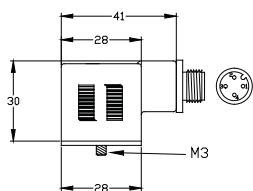
## Form B to M12 (MDC) Solenoid Valve Receptacles



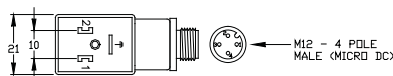
Form B to M12 (MDC) Male Receptacle | EN175301-803 | IP65 Rating

# of Poles	Voltage	Circuitry	Housing Color	M12 (MDC) # of Poles	
				4 Pole	5 Pole
2 + Ground	250V AC/DC (Maximum)	None	Gray	VGN-029-3401	VGN-029-3501
			Black	VBN-029-3401	VBN-029-3501
	10-50V DC	LED w/ Flyback Diode	Clear	VBC-029-3401	VBC-029-3501
	24V AC/DC	LED w/ MOV	Clear	VBG-029-3401	VBG-029-3501
	110V AC/DC	LED w/ MOV	Clear	VBJ-029-3401	VBJ-029-3501

Two standard orientations are available. Please refer to the part number system shown above each drawing.

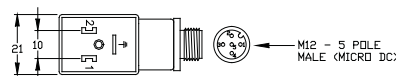


**Vxx-029-3401**

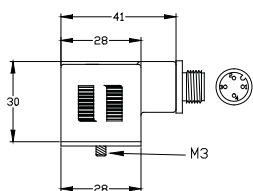


2 Poles + Ground  
(Ground Receptacle Side)

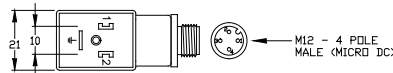
**Vxx-029-3501**



2 Poles + Ground  
(Ground Receptacle Side)

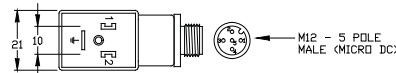


**Vxx-089-3401**



2 Poles + Ground  
(Ground Opposite Receptacle Side)

**Vxx-089-3501**



2 Poles + Ground  
(Ground Opposite Receptacle Side)

### DIN Connector Specifications:

Body: Polyamide  
Contacts: Copper Alloy with Silver Plating  
Insert: Polyamide  
Gasket: Thermoplastic  
Screw: Zinc Plated Steel  
Temperature: -25°C to 90°C (-13°F to 194°F)

### MDC Connector Specifications:

Body: Oil Resistant Black PVC  
Coupling Nut: Nickel Plated Brass  
Insulator: Polyamide  
Contacts: Copper Alloy with Gold Plating  
O-Ring: BUNA-N  
Temperature: -40°C to 80°C (-40°F to +176°F)

Valve Connectors	M12 (MDC) 4 Pole PIN #	M12 (MDC) 5 Pole PIN #
1	4	4
2	3	3
Ground	Not Used	5
	1, 2 & 5 Not Used	1 & 2 Not Used



# Solenoid Valve Connectors

Form B to M12 (MDC) Solenoid Valve Cordsets

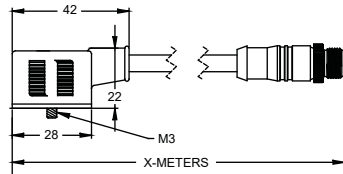


Form B to MDC (M12) Male Plug | EN175301-803 | IP65 Rating

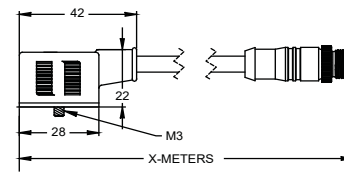
M12 (MDC) 4 Pole Cable								
# of Poles	Voltage	Circuitry	Straight Male			Right Angle Male		
			2 M	5 M	10 M	2M	5 M	10 M
2 + Ground	250V AC/DC (Maximum)	None	VBN-220-3401	VBN-520-3401	VBN-A20-3401	VBN-220-3402	VBN-520-3402	VBN-A20-3402
	10-50V DC	LED w/ Flyback Diode	VBC-220-3401	VBC-520-3401	VBC-A20-3401	VBC-220-3402	VBC-520-3402	VBC-A20-3402
	24V AC/DC	LED w/ MOV	VBG-220-3401	VBG-520-3401	VBG-A20-3401	VBG-220-3402	VBG-520-3402	VBG-A20-3402
	110V AC/DC	LED w/ MOV	VBJ-220-3401	VBJ-520-3401	VBJ-A20-3401	VBJ-220-3402	VBJ-520-3402	VBJ-A20-3402
M12 (MDC) 5 Pole Cable								
2 + Ground	250V AC/DC (Maximum)	None	VBN-220-3501	VBN-520-3501	VBN-A20-3501	VBN-220-3502	VBN-520-3502	VBN-A20-3502
	10-50V DC	LED w/ Flyback Diode	VBC-220-3501	VBC-520-3501	VBC-A20-3501	VBC-220-3502	VBC-520-3502	VBC-A20-3502
	24V AC/DC	LED w/ MOV	VBG-220-3501	VBG-520-3501	VBG-A20-3501	VBG-220-3502	VBG-520-3502	VBG-A20-3502
	110V AC/DC	LED w/ MOV	VBJ-220-3501	VBJ-520-3501	VBJ-A20-3501	VBJ-220-3502	VBJ-520-3502	VBJ-A20-3502

Two standard orientations are available. Please refer to the part number system shown above each drawing.  
Individual orders of less than 50 pieces will be manufactured using field wireable M12 connectors.

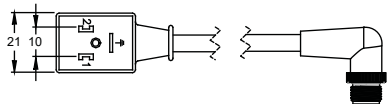
Vxx-x2x-3401



Vxx-x8x-3401

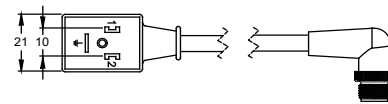


Vxx-x2x-3402



2 Poles + Ground  
(Ground Cable Side)

Vxx-x8x-3402



2 Poles + Ground  
(Ground Opposite Cable Side)

## DIN Connector Specifications:

Body: Polyamide  
Cable : Black PVC  
Contacts: Copper Alloy with Silver Plating  
Gasket: Built in TPE  
Screw: Zinc Plated Steel  
Temperature: -25°C to 90°C (-13°F to 194°F)

## MDC Connector Specifications:

Body: Oil Resistant Black PVC  
Coupling Nut: Nickel Plated Brass  
Insulator: Polyamide  
Contacts: Copper Alloy with Gold Plating  
Temperature: -40°C to 80°C (-40°F to +176°F)

Valve Connectors	M12 (MDC) 4 Pole PIN #	M12 (MDC) 5 Pole PIN #
1	4	4
2	3	3
Ground	Not Used	5
	1, 2 & 5 Not Used	1 & 2 Not Used



# Solenoid Valve Connectors

## Form B Solenoid Valve Field Connectors



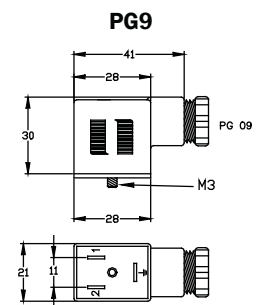
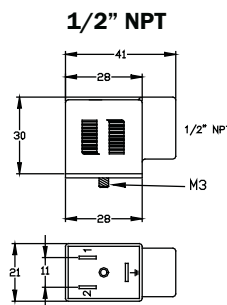
Form B | Industry Standard | Field Wireable Plugs | Cordsets | IP65 Rating

# of Poles	Voltage	Circuitry	Field Wireable		Cordsets		
			1/2" NPT Conduit	PG 9 6 to 8 mm	2 M	5 M	10 M
2 + Ground	250V AC/DC (Maximum)	None	N/A	VJN-029-00 (Gray)	VDN-220-00	VDN-520-00	VDN-A20-00
			VDN-022-00 (Black)	VDN-029-00* (Black)			
	10-50V DC	LED w/ Flyback Diode	VDC-022-00 (Clear)	VDC-029-00 (Clear)	VDC-220-00	VDC-520-00	VDC-A20-00
	24V AC/DC	LED w/ MOV	VDG-022-00 (Clear)	VDG-029-00 (Clear)	VDG-220-00	VDG-520-00	VDG-A20-00
	110V AC/DC	LED w/ MOV	VDJ-022-00 (Clear)	VDJ-029-00 (Clear)	VDJ-220-00	VDJ-520-00	VDJ-A20-00

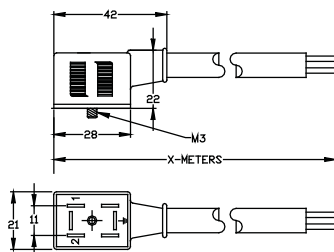
\* UL Recognized

Two standard orientations are available for the VDC, VDG and VDJ cordset versions. Please refer to the part number system shown above each drawing. The ground position is not applicable for field wireable versions.

Valve Pin #	Color Code
1	Brown
2	Blue
Ground	Green/Yellow

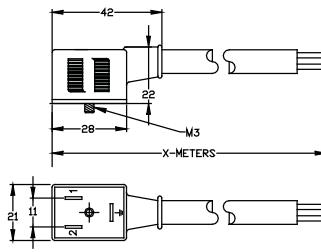


VDN-x2x-00



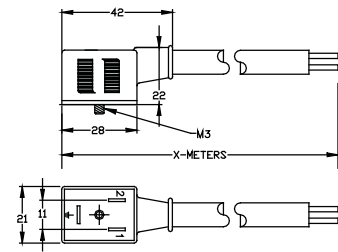
2 Poles + Ground  
(Dual Ground)

Vxx-x2x-00



2 Poles + Ground  
(Ground Cable Side)

Vxx-x8x-00



2 Poles + Ground  
(Ground Opposite Cable Side)

### Field Wireable Specifications:

Body: Polyamide  
Contacts: Copper Alloy with Silver Plating  
Insert: Polyamide  
Gasket: Thermoplastic  
Screw: Zinc Plated Steel  
Cable O.D.: PG 9 - 6 to 8 mm  
Temperature: Gray & Black: -40°C to 125°C (-40°F to +257°F)  
Clear: -25°C to 90°C (-13°F to 194°F)

### Cordset Version Specifications:

Body: TPE  
Contacts: Copper Alloy with Silver Plating  
Insert: Polyamide  
Gasket: Built-in TPE  
Screw: Zinc Plated Steel  
Cable: Black PVC  
2 Pole: 3x18 AWG; Cable O.D.: 0.26"  
Temperature: -25°C to 90°C (-13°F to 194°F)



# Solenoid Valve Connectors

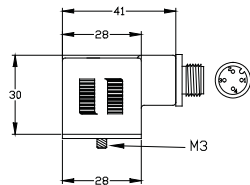
## Form B to MDC (M12) Solenoid Valve Receptacles



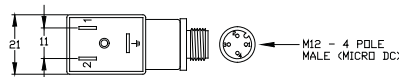
Form B to Micro-DC (M12) Male Receptacle | Industry Standard | IP65 Rating

# of Poles	Voltage	Circuitry	Housing Color	M12 (MDC) # of Poles	
				4 Pole	5 Pole
2 + Ground	250V AC/DC (Maximum)	None	Gray	VJN-029-3401	VJN-029-3501
			Black	VDN-029-3401	VDN-029-3501
	10-50V DC	LED w/ Flyback Diode	Clear	VDC-029-3401	VDC-029-3501
	24V AC/DC	LED w/ MOV	Clear	VDG-029-3401	VDG-029-3501
	110V AC/DC	LED w/ MOV	Clear	VDJ-029-3401	VDJ-029-3501

Two standard orientations are available. Please refer to the part number system shown above each drawing.

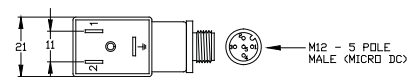


**Vxx-029-3401**

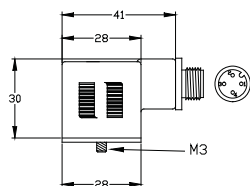


2 Poles + Ground  
(Ground Receptacle Side)

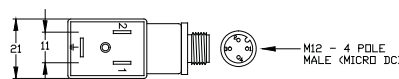
**Vxx-029-3501**



2 Poles + Ground  
(Ground Receptacle Side)

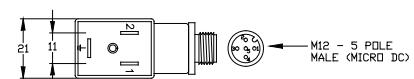


**Vxx-089-3401**



2 Poles + Ground  
(Ground Opposite Receptacle Side)

**Vxx-089-3501**



2 Poles + Ground  
(Ground Opposite Receptacle Side)

### DIN Connector Specifications:

Body: Polyamide  
Contacts: Copper Alloy with Silver Plating  
Insert: Polyamide  
Gasket: Thermoplastic  
Screw: Zinc Plated Steel  
Temperature: -25°C to 90°C (-13°F to 194°F)

### MDC Connector Specifications:

Body: Oil Resistant Black PVC  
Coupling Nut: Nickel Plated Brass  
Insulator: Polyamide  
Contacts: Copper Alloy with Gold Plating  
O-Ring: BUNA-N  
Temperature: -40°C to 80°C (-40°F to +176°F)

Valve Connectors	M12 (MDC) 4 Pole PIN #	M12 (MDC) 5 Pole PIN #
1	4	4
2	3	3
Ground	Not Used	5
	1, 2 & 5 Not Used	1 & 2 Not Used

Valve Connectors

T



# Solenoid Valve Connectors

Form B to M12 (MDC) Solenoid Valve Cordsets

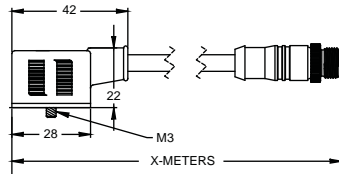


Form B to Micro-DC (M12) Male Plug | Industry Standard | IP65 Rating

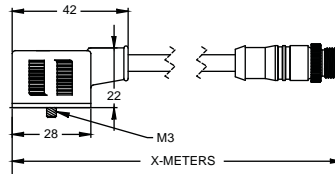
M12 (MDC) 4 Pole Cable								
# of Poles	Voltage	Circuitry	Straight Male			Right Angle Male		
			2 M	5 M	10 M	2M	5 M	10 M
2 + Ground	250V AC/DC (Maximum)	None	VDN-220-3401	VDN-520-3401	VDN-A20-3401	VDN-220-3402	VDN-520-3402	VDN-A20-3402
	10-50V DC	LED w/ Flyback Diode	VDC-220-3401	VDC-520-3401	VDC-A20-3401	VDC-220-3402	VDC-520-3402	VDC-A20-3402
	24V AC/DC	LED w/ MOV	VDG-220-3401	VDG-520-3401	VDG-A20-3401	VDG-220-3402	VDG-520-3402	VDG-A20-3402
	110V AC/DC	LED w/ MOV	VDJ-220-3401	VDJ-520-3401	VDJ-A20-3401	VDJ-220-3402	VDJ-520-3402	VDJ-A20-3402
M12 (MDC) 5 Pole Cable								
2 + Ground	250V AC/DC (Maximum)	None	VDN-220-3501	VDN-520-3501	VDN-A20-3501	VDN-220-3502	VDN-520-3502	VDN-A20-3502
	10-50V DC	LED w/ Flyback Diode	VDC-220-3501	VDC-520-3501	VDC-A20-3501	VDC-220-3502	VDC-520-3502	VDC-A20-3502
	24V AC/DC	LED w/ MOV	VDG-220-3501	VDG-520-3501	VDG-A20-3501	VDG-220-3502	VDG-520-3502	VDG-A20-3502
	110V AC/DC	LED w/ MOV	VDJ-220-3501	VDJ-520-3501	VDJ-A20-3501	VDJ-220-3502	VDJ-520-3502	VDJ-A20-3502

Two standard orientations are available for the VDG and VDJ versions. Please refer to the part number system shown above each drawing. Individual orders of less than 50 pieces will be manufactured using field wireable M12 connectors.

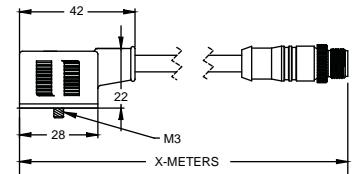
VDN-x2x-3401



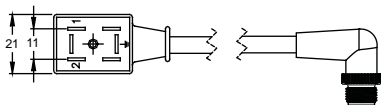
Vxx-x2x-3401



Vxx-x8x-3401

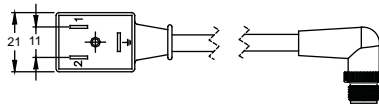


VDN-x2x-3402



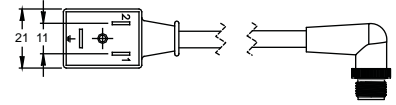
2 Poles + Ground  
(Dual Ground)

Vxx-x2x-3402



2 Poles + Ground  
(Ground Cable Side)

Vxx-x8x-3402



2 Poles + Ground  
(Ground Opposite Cable Side)

## DIN Connector Specifications:

Body: Polyamide  
Cable : Black PVC  
Contacts: Copper Alloy with Silver Plating  
Gasket: Built in TPE  
Screw: Zinc Plated Steel  
Temperature: -25°C to 90°C (-13°F to 194°F)

## MDC Connector Specifications:

Body: Oil Resistant Black PVC  
Coupling Nut: Nickel Plated Brass  
Insulator: Polyamide  
Contacts: Copper Alloy with Gold Plating  
Temperature: -40°C to 80°C (-40°F to +176°F)

Valve Connectors	M12 (MDC) 4 Pole PIN #	M12 (MDC) 5 Pole PIN #
1	4	4
2	3	3
Ground	Not Used	5
	1, 2 & 5 Not Used	1 & 2 Not Used



# Solenoid Valve Connectors

## Form C Solenoid Valve Connectors



Form C | EN175301-803 | Field Wireable Plugs | Cordsets | IP65 Rating

# of Poles	Voltage	Circuitry	Field Wireable	Cordsets		
			PG 7 6 to 7 mm	2 M	5 M	10 M
2 + Ground**	250V AC/DC (Maximum)	None	VHN-027-00 (Gray)	VCN-220-00	VCN-520-00	VCN-A20-00
			VCN-027-00 (Black)			
	10-50V DC	LED w/ Flyback Diode	VCC-027-00 (Clear)	VCC-220-00	VCC-520-00	VCC-A20-00
	24V AC/DC	LED w/ MOV	VCG-027-00 (Clear)	VCG-220-00	VCG-520-00	VCG-A20-00
3 + Ground	250V AC/DC (Maximum)	None	VCJ-027-00 (Clear)	VCJ-220-00	VCJ-520-00	VCJ-A20-00
			VHN-037-00 (Gray)			
3 + Ground	250V AC/DC (Maximum)	None	VCN-037-00 (Black)	VCN-230-00	VCN-530-00	VCN-A30-00

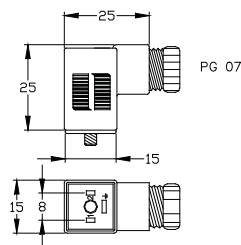
\*\*2 Ground locations available for 2+ Ground Versions.

For cables with 3 + Ground, two standard orientations are available. Please refer to the part number system shown above each drawing.

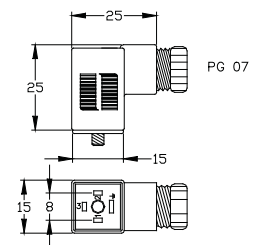
The ground position is not applicable for field wireable versions.

Valve Pin #	Color Code	
	2 + Ground	3 + Ground
1	Brown	Brown
2	Blue	Gray
3	N/A	Black
Ground	Green/Yellow	Green/Yellow

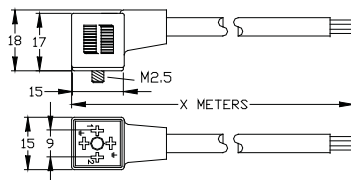
2 Poles + Ground



3 Poles + Ground

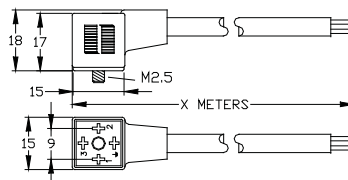


Vxx-x2x-00



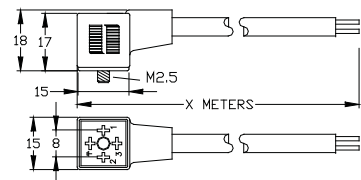
2 Poles + Ground  
(Dual Ground)

Vxx-x3x-00



3 Poles + Ground  
(Ground Cable Side)

Vxx-x9x-00



3 Poles + Ground  
(Ground Opposite Cable Side)

### Field Wireable Specifications:

Body: Polyamide  
Contacts: Copper Alloy with Silver Plating  
Insert: Polyamide  
Gasket: Thermoplastic  
Screw: Zinc Plated Steel  
Cable O.D.: PG 7 - 6 to 7 mm  
Temperature: Gray & Black: -40°C to 125°C (-40°F to +257°F)  
Clear: -25°C to 90°C (-13°F to 194°F)

### Cordset Version Specifications:

Body: Black Polyamide  
Contacts: Copper Alloy with Silver Plating  
Insert: Polyamide  
Gasket: Thermoplastic  
Screw: Zinc Plated Steel  
Cable: Black PVC  
2 Pole: 3x20 AWG; Cable O.D.: 0.22"  
3 Pole: 4x20 AWG; Cable O.D.: 0.23"  
Temperature: -25°C to 90°C (-13°F to 194°F)



# Solenoid Valve Connectors

## Form C to M12 (MDC) Solenoid Valve Receptacles

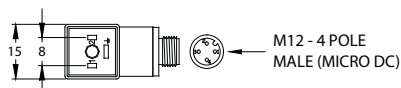
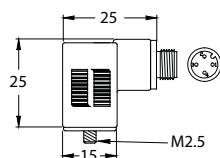


Form C to M12 (MDC) Male Receptacle | EN175301-803 | IP65 Rating

# of Poles	Voltage	Circuitry	Housing Color	M12 (MDC) 4 Pole
2 + Ground	250V AC/DC (Maximum)	None	Gray	VHN-027-3401
			Black	VCN-027-3401
	10-50V DC	LED w/ Flyback Diode	Clear	VCC-027-3401
	24V AC/DC	LED w/ MOV	Clear	VCG-027-3401
	110V AC/DC	LED w/ MOV	Clear	VCJ-027-3401

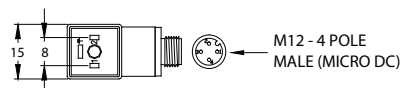
Two standard orientations are available. Please refer to the part number system shown above each drawing.

**Vxx-027-3401**



2 Poles + Ground  
(Ground Receptacle Side)

**Vxx-087-3401**



2 Poles + Ground  
(Ground Opposite Receptacle Side)

### DIN Connector Specifications:

Body: Polyamide  
Contacts: Copper Alloy with Silver Plating  
Insert: Polyamide  
Gasket: Thermoplastic  
Screw: Zinc Plated Steel  
Temperature: -25°C to 90°C (-13°F to 194°F)

### MDC Connector Specifications:

Body: Oil Resistant Black PVC  
Coupling Nut: Nickel Plated Brass  
Insulator: Polyamide  
Contacts: Copper Alloy with Gold Plating  
O-Ring: BUNA-N  
Temperature: -40°C to 80°C (-40°F to +176°F)

Valve Connectors	M12 (MDC) 4 Pole PIN #
1	4
2	3
Ground	Not Used
	1, 2 & 5 Not Used





# Solenoid Valve Connectors

Form C to MDC (M12) Solenoid Valve Cordsets

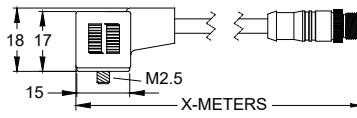


Form C to Micro-DC (M12) Male Plugs | EN175301-803 | IP65 Rating

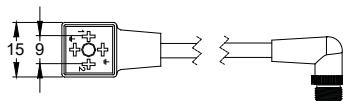
M12 (MDC) 4 Pole Cable								
# of Poles	Voltage	Circuitry	Straight Male			Right Angle Male		
			2 M	5 M	10 M	2M	5 M	10 M
2 + Ground	250V AC/DC (Maximum)	None	VCN-220-3401	VCN-520-3401	VCN-A20-3401	VCN-220-3402	VCN-520-3402	VCN-A20-3402
	10-50V DC	LED w/ Flyback Diode	VCC-220-3401	VCC-520-3401	VCC-A20-3401	VCC-220-3402	VCC-520-3402	VCC-A20-3402
	24V AC/DC	LED w/ MOV	VCG-220-3401	VCG-520-3401	VCG-A20-3401	VCG-220-3402	VCG-520-3402	VCG-A20-3402
	110V AC/DC	LED w/ MOV	VCJ-220-3401	VCJ-520-3401	VCJ-A20-3401	VCJ-220-3402	VCJ-520-3402	VCJ-A20-3402
M12 (MDC) 5 Pole Cable								
2 + Ground	250V AC/DC (Maximum)	None	VCN-220-3501	VCN-520-3501	VCN-A20-3501	VCN-220-3502	VCN-520-3502	VCN-A20-3502
	10-50V DC	LED w/ Flyback Diode	VCC-220-3501	VCC-520-3501	VCC-A20-3501	VCC-220-3502	VCC-520-3502	VCC-A20-3502
	24V AC/DC	LED w/ MOV	VCG-220-3501	VCG-520-3501	VCG-A20-3501	VCG-220-3502	VCG-520-3502	VCG-A20-3502
	110V AC/DC	LED w/ MOV	VCJ-220-3501	VCJ-520-3501	VCJ-A20-3501	VCJ-220-3502	VCJ-520-3502	VCJ-A20-3502

Individual orders of less than 50 pieces will be manufactured using field wireable M12 connectors.

Vxx-x2x-3401



Vxx-x2x-3402



2 Poles + Ground  
(Dual Ground)

Valve Connectors	M12 (MDC) 4 Pole PIN #	M12 (MDC) 5 Pole PIN #
1	4	4
2	3	3
Ground	Not Used	5
	1, 2 & 5 Not Used	1 & 2 Not Used

## DIN Connector Specifications:

Body: Polyamide  
Cable: Black PVC  
Contacts: Copper Alloy with Silver Plating  
Gasket: Thermoplastic  
Screw: Zinc Plated Steel  
Temperature: -25°C to 90°C (-13°F to 194°F)

## MDC Connector Specifications:

Body: Oil Resistant Black PVC  
Coupling Nut: Nickel Plated Brass  
Insulator: Polyamide  
Contacts: Copper Alloy with Gold Plating  
Temperature: -40°C to 80°C (-40°F to +176°F)

Valve Connectors

T



# Solenoid Valve Connectors

## Form C Solenoid Valve Field Connectors



Form C | Industry Standard | Field Wireable Plugs | Cordsets | IP65 Rating

# of Poles	Voltage	Circuitry	Field Wireable	Cordsets		
			PG 7 6 to 7 mm	2 M	5 M	10 M
2 + Ground**	250V AC/DC (Maximum)	None	VKN-027-00 (Gray)	VEN-220-00	VEN-520-00	VEN-A20-00
			VEN-027-00 (Black)			
	10-50V DC	LED w/ Flyback Diode	VEC-027-00 (Clear)	VEC-220-00	VEC-520-00	VEC-A20-00
	24V AC/DC	LED w/ MOV	VEG-027-00 (Clear)	VEG-220-00	VEG-520-00	VEG-A20-00
3 + Ground	250V AC/DC (Maximum)	None	VEJ-027-00 (Clear)	VEJ-220-00	VEJ-520-00	VEJ-A20-00
			VKN-037-00 (Gray)			
			VEN-037-00 (Black)	VEN-230-00	VEN-530-00	VEN-A30-00

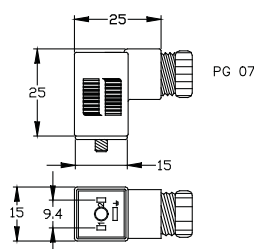
\*\*2 Ground locations available for 2+ Ground Versions.

For cables with 3 + Ground, two standard orientations are available. Please refer to the part number system shown above each drawing.

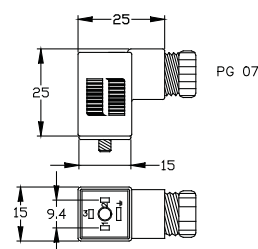
The ground position is not applicable for field wireable versions.

Valve Pin #	Color Code	
	2 + Ground	3 + Ground
1	Brown	Brown
2	Blue	Gray
3	N/A	Black
Ground	Green/Yellow	Green/Yellow

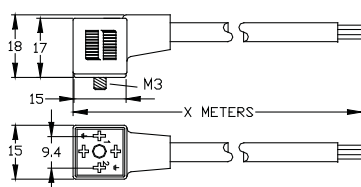
2 Poles + Ground



3 Poles + Ground

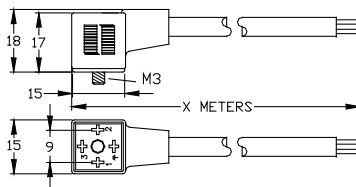


Vxx-x2x-00



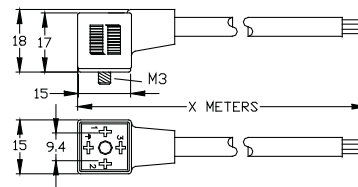
2 Poles + Ground  
(Dual Ground)

Vxx-x3x-00



3 Poles + Ground  
(Ground Cable Side)

Vxx-x9x-00



3 Poles + Ground  
(Ground Opposite Cable Side)

Valve Connectors

T

### Field Wireable Specifications:

Body: Polyamide  
Contacts: Copper Alloy with Silver Plating  
Insert: Polyamide  
Gasket: Thermoplastic  
Screw: Zinc Plated Steel  
Cable O.D.: PG 7 - 6 to 7 mm  
Temperature: Gray & Black: -40°C to 125°C (-40°F to +257°F)  
Clear: -25°C to 90°C (-13°F to 194°F)

### Cordset Version Specifications:

Body: Black Polyamide  
Contacts: Copper Alloy with Silver Plating  
Insert: Polyamide  
Gasket: Thermoplastic  
Screw: Zinc Plated Steel  
Cable: Black PVC  
2 Pole: 3x20 AWG; Cable O.D.: 0.22"  
3 Pole: 4x20 AWG; Cable O.D.: 0.23"  
Temperature: -25°C to 90°C (-13°F to 194°F)



# Solenoid Valve Connectors

## Form C to M12 (MDC) Solenoid Valve Receptacles

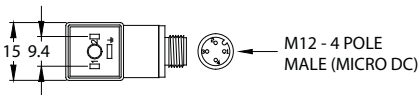
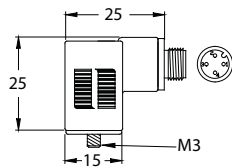


Form C to M12 (MDC) Male Receptacle | Industry Standard | IP65 Rating

# of Poles	Voltage	Circuitry	Housing Color	M12 (MDC) 4 Pole
2 + Ground	250V AC/DC (Maximum)	None	Gray	VKN-027-3401
			Black	VEN-027-3401
	10-50V DC	LED w/ Flyback Diode	Clear	VEC-027-3401
	24V AC/DC	LED w/ MOV	Clear	VEG-027-3401
	110V AC/DC	LED w/ MOV	Clear	VEJ-027-3401

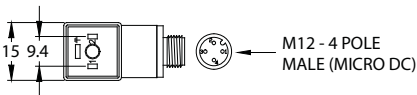
Two standard orientations are available. Please refer to the part number system shown above each drawing.

Vxx-027-3401



2 Poles + Ground  
(Ground Receptacle Side)

Vxx-087-3401



2 Poles + Ground  
(Ground Opposite Receptacle Side)

### DIN Connector Specifications:

Body: Polyamide  
Contacts: Copper Alloy with Silver Plating  
Insert: Polyamide  
Gasket: Thermoplastic  
Screw: Zinc Plated Steel  
Temperature: -25°C to 90°C (-13°F to 194°F)

### MDC Connector Specifications:

Body: Oil Resistant Black PVC  
Coupling Nut: Nickel Plated Brass  
Insulator: Polyamide  
Contacts: Copper Alloy with Gold Plating  
O-Ring: BUNA-N  
Temperature: -40°C to 80°C (-40°F to +176°F)

Valve Connectors	M12 (MDC) 4 Pole PIN #
1	4
2	3
Ground	Not Used
	1, 2 & 5 Not Used

Valve Connectors

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# Solenoid Valve Connectors

Form C to M12 (MDC) Solenoid Valve Cordsets

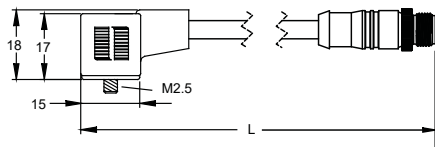


Form C to Micro-DC (M12) Male Plug | Industry Standard | IP65 Rating

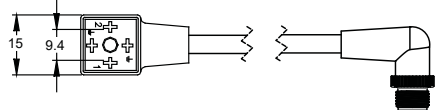
M12 (MDC) 4 Pole Cable								
# of Poles	Voltage	Circuitry	Straight Male			Right Angle Male		
			2 M	5 M	10 M	2M	5 M	10 M
2 + Ground	250V AC/DC (Maximum)	None	VEN-220-3401	VEN-520-3401	VEN-A20-3401	VEN-220-3402	VEN-520-3402	VEN-A20-3402
	10-50V DC	LED w/ Flyback Diode	VEC-220-3401	VEC-520-3401	VEC-A20-3401	VEC-220-3402	VEC-520-3402	VEC-A20-3402
	24V AC/DC	LED w/ MOV	VEG-220-3401	VEG-520-3401	VEG-A20-3401	VEG-220-3402	VEG-520-3402	VEG-A20-3402
	110V AC/DC	LED w/ MOV	VEJ-220-3401	VEJ-520-3401	VEJ-A20-3401	VEJ-220-3402	VEJ-520-3402	VEJ-A20-3402
M12 (MDC) 5 Pole Cable								
2 + Ground	250V AC/DC (Maximum)	None	VEN-220-3501	VEN-520-3501	VEN-A20-3501	VEN-220-3502	VEN-520-3502	VEN-A20-3502
	10-50V DC	LED w/ Flyback Diode	VEC-220-3501	VEC-520-3501	VEC-A20-3501	VEC-220-3502	VEC-520-3502	VEC-A20-3502
	24V AC/DC	LED w/ MOV	VEG-220-3501	VEG-520-3501	VEG-A20-3501	VEG-220-3502	VEG-520-3502	VEG-A20-3502
	110V AC/DC	LED w/ MOV	VEJ-220-3501	VEJ-520-3501	VEJ-A20-3501	VEJ-220-3502	VEJ-520-3502	VEJ-A20-3502

Individual orders of less than 50 pieces will be manufactured using field wireable M12 connectors.

Vxx-x2x-3401



Vxx-x2x-3402



2 Poles + Ground  
(Dual Ground)

Valve Connectors	M12 (MDC) 4 Pole PIN #	M12 (MDC) 5 Pole PIN #
1	4	4
2	3	3
Ground	Not Used	5
	1, 2 & 5 Not Used	1 & 2 Not Used

Valve Connectors

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## DIN Connector Specifications:

Body: Polyamide  
Cable: Black PVC  
Contacts: Copper Alloy with Silver Plating  
Gasket: Thermoplastic  
Screw: Zinc Plated Steel  
Temperature: -25°C to 90°C (-13°F to 194°F)

## MDC Connector Specifications:

Body: Oil Resistant Black PVC  
Coupling Nut: Nickel Plated Brass  
Insulator: Polyamide  
Contacts: Copper Alloy with Gold Plating  
Temperature: -40°C to 80°C (-40°F to +176°F)