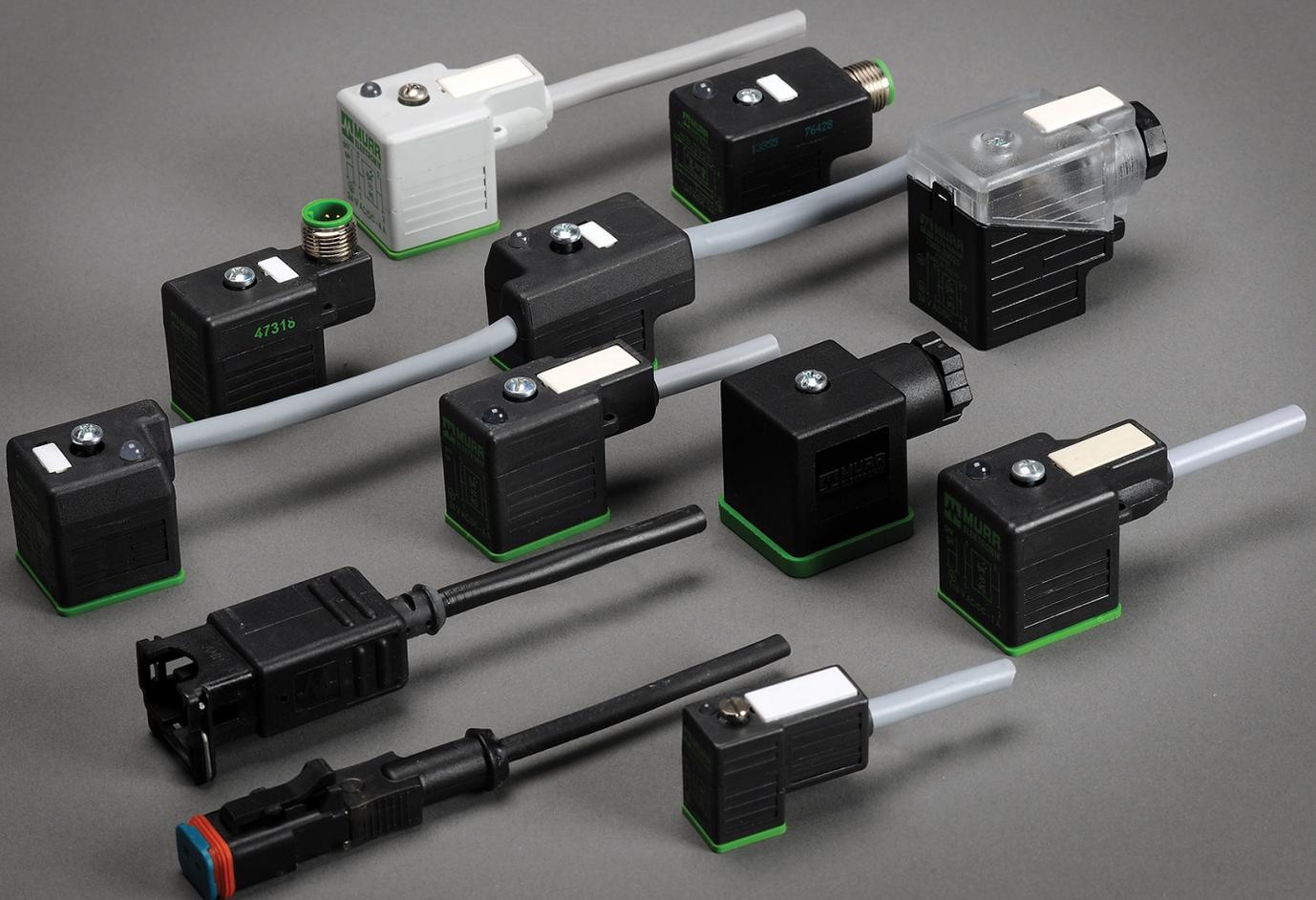


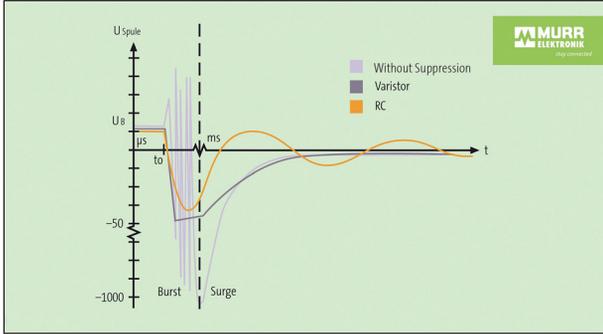
# VALVE PLUGS

More Variety, Less Effort

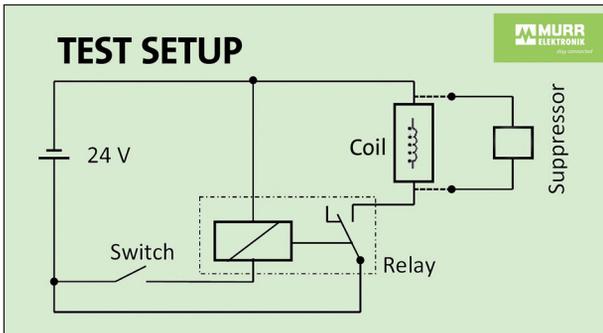


## WHY SUPPRESSION?

When an inductive load (coil), at 24V, is switched off, voltage spikes of more than 1000V will be created. Not only the coil but also other modules within the same circuit could be destroyed as a result of those voltage spikes.



At the beginning of the diagram you can see the curve for such an overvoltage at 24V without a suppressor module. There are also two curves with a suppressor module; one with a varistor type suppressor & one with an RC type suppressor.



Next you will see a block diagram of the test set-up.

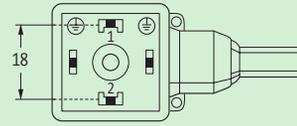


In the test setup you can see the break spark from a motor relay without (left side) & with (right side) a suppressor module in real time & in slow motion. You can still see the break spark but with less energy than without a suppressor module.

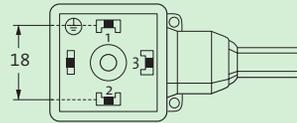


To learn more, scan the QR code to visit our YouTube® channel and view our “Extreme Testing” video and see a suppression module in action.

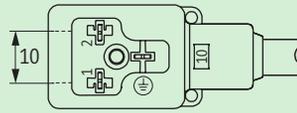
## CONTACT LAYOUTS



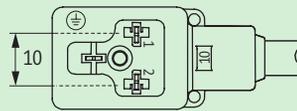
Form A  
(18mm)



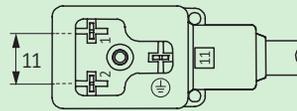
Form A  
Pressure Switch



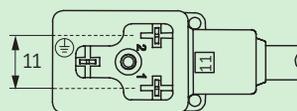
Form B  
(10mm)



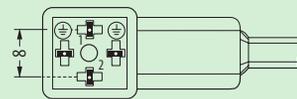
Form B  
180°



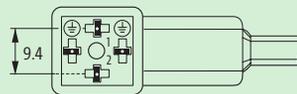
Form BI  
(11mm)



Form BI  
180°



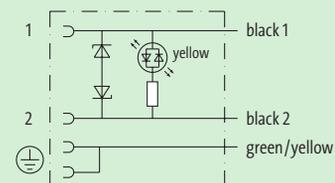
Form C  
(8mm)



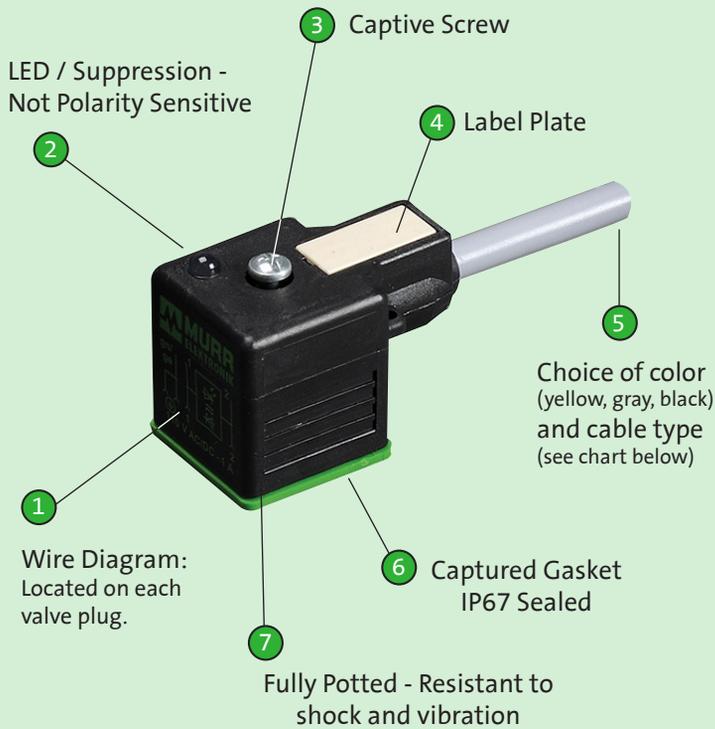
Form CI  
(9.4mm)

## POLARITY

Wiring to our over-molded valve DIN connectors is not polarity sensitive. We use a circuit that allows for connection and protection independent of the polarity connections.



## What makes a Murrelektronik Valve Plug a Murrelektronik Valve Plug...



## CABLE TYPES

Properties	PVC (Type 1)	PUR/PVC (Type 2)	PUR (Type 3)	PUR (Type 5)
Flame Retardant	✓	✓	✓	✓
Chemical Resistant	✓	✓	✓	✓
Oil Resistant		✓	✓	✓
Weld Slag Resistant				✓
C-Track Flex Rating		2 million	5 million	10 million
Torsion Rating			±180°	±360°
UV Resistant			✓	✓
Halogen Free			✓	✓
Temperatures	-5 to 80°C 23 to 176°F		-25 to 80°C -13 to 176°F	-25 to 90°C -13 to 194°F
Application Examples	Packaging Food & Bev. Assembly & Production Lines	Packaging Handling Assembly & Production Lines	Machine Tools Swivel Tables Metal Cutting	Machine Tools Industrial Robots Metal Cutting

## CABLE CODES

	PVC (Type 1)	PUR/PVC (Type 2)	PUR (Type 3)	PUR (Type 5)
Yellow - Single Valve	016	026	036	056
Yellow - Double Valve	017	027	037	057
Gray - Single Valve	216	226	236	256
Gray - Double Valve	217	227	237	257
Black - Single Valve	616	626	636	656
Black - Double Valve	617	627	637	657

## CONNECTION EFFICIENCY

**Wiring Effort:**  
High

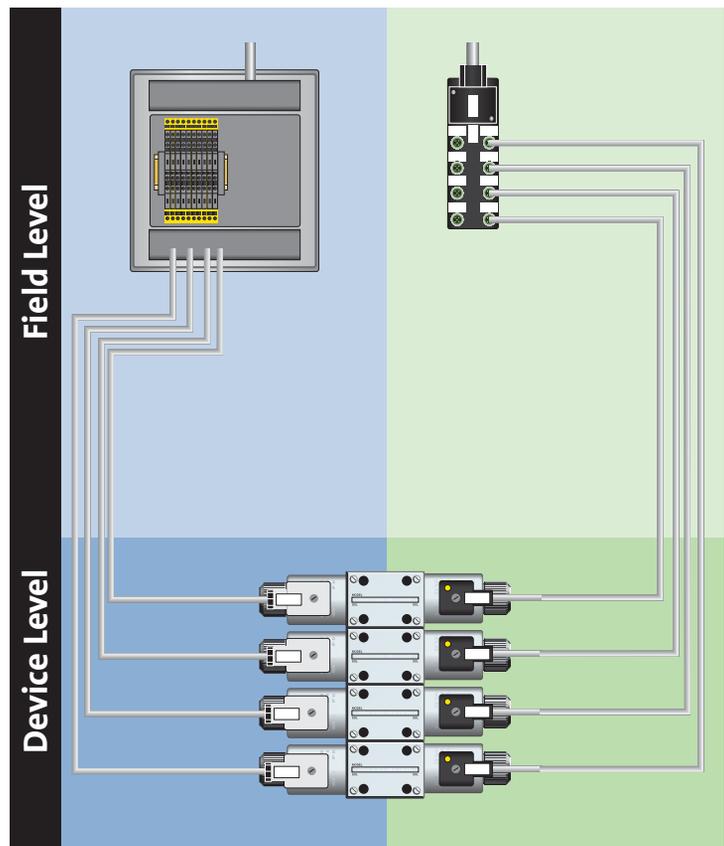
**Time to Install:**  
66 min

**Labor Cost:**  
\$56.83

**Wiring Effort:**  
Low

**Time to Install:**  
4 min

**Labor Cost:**  
\$1.67



- IP54 Seal
- Untested Connections
- Troubleshooting requires Multimeter
- Many Components to Order & Track
- Increased Labor

- IP67 Seal
- Factory Tested Connections
- LED Indicators for Diagnostics
- Reduced size for Compact Installations
- Reduced Number of Components
- Label Plates
- Quick/Easy Installation

Cable Colors:



**SINGLE**

Cable Colors:



Connector Sizes:



**M8/12 CABLE**

Cable Colors:



**DOUBLE**

Connector Sizes:

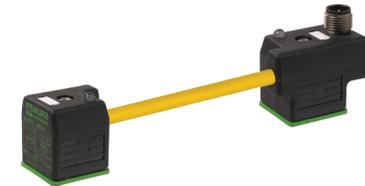


**M8/12**

Cable Colors:



Connector Sizes:



**DOUBLE M8/12**



SVS



SVS Eco



SVS Eco LED

**FIELD WIREABLE**

Cable Colors:



Connector Sizes:



**XTREME**

**| DISTRIBUTION BOXES**



EXACT12 distribution boxes offer solutions for an array of applications.

Space saving and maintenance friendly, they offer up to a 40% cost reduction compared to junction boxes and can be installed in less than a quarter of the time.



Parched fields with swirling dust, icy streets treated with salt, wet forest soil.

All of these are all harsh environments where heavy equipment has to deal with messy conditions. With distribution boxes from the XTREME series, Murrelektronik offers reliable and uncomplicated installation solutions for these environments.



One homerun cable instead of eight single cables

Prior to the introduction of MVP12 Metal, individual cables had to be routed through a system. Now a single homerun cable replaces the individual ones reducing material costs along with the amount of wiring and space required. MVP12 Metal is installed close to the process so valves and sensors are connected with the shortest possible cables.

Circuit	Form					
	A 18mm	B 10mm	BI 11mm	C 8mm	CI 9.4mm	
Standard						
24V	LED	18001	10001	11001	80001	94001
	LED + Supp	18021	10021	11021	80021	94021
	LED + Supp, PE@180		10081	11081		
	Pressure Switch with LED	18121 18141				
110V	LED	18011			80011	
	LED + Supp, PE@180	18041	10041	11041	80041	94041
230V	LED + Supp	18061		11051		
	Without Comp.	18081	10061	11061	80061	94061
	Pressure Switch Without Comp.	18111			80141	94141
Special Applications						
24V	LED + Supp - Tall				80031	94031
	Energy Saving	18211 18221				
	Rectified with LED	18031				
110V	LED + Supp - Tall					94051
	Rectified with LED	18311				
230V	LED + Supp, PE@180			11091		
	Without Comp. - Tall					94071
	Without Comp. PE@180			11071		
Rectified with LED	18321					

Circuit	Form					
	A 18mm	B 10mm	BI 11mm	C 8mm	CI 9.4mm	
M12						
24V	LED + Supp	40881	41001	40961	41081	41041
	LED + Supp - Tall				41091	41051
	LED + Supp, PE@180		41002	40962		
	LED + Supp, 90° M12	40901	41021	40981	41101	41061
	Pressure Switch with LED	40921 40931				
	Pressure Switch with LED, 90° M12	40941 40951				
110V	LED + Supp	40891		40971		41042
	LED + Supp, 90° M12	40911				
	Without Comp.	40885		40965	41085	
Without Comp. 90° M12	40905					
M8						
24V	LED + Supp - 3-pole	88701	88741	88781	88421	88415
	LED + Supp - 4-pole	88711	88751	88791	88431	88461
	LED + Supp - 3-pole 90° M8	88721	88761	88801	88441	88481
	LED + Supp - 4-pole 90° M8	88731	88771	88811	88451	88491

Circuit	Form					
	A 18mm	B 10mm	BI 11mm	C 8mm	CI 9.4mm	
M12 Top Mount						
24V	LED + Supp	41301	41901	42021	42811	42851
	LED + Supp, Span = 100mm	58021	58221	58121	58411	58441
	LED + Supp, Span = 150mm	58041	58241	58141	58421	58451
	Pressure Switch with LED	41321 41323				
	LED + Supp, Span = 200mm	41302				
110V	LED + Supp, Span = 300mm	58081				
	LED + Supp, Span = 100mm	58005		41981		58435
M12 Rear Mount						
24V	LED + Supp	41421	41961	42081	42831	42871
	LED + Supp, PE@180		41971	42091		
	LED	41401	41941	42061		
	LED, PE@180		41951	42071		
110V	Pressure Switch with LED	41441				
	LED + Supp	41431				
	Without Comp.	41381	41921	42041		
230V	Without Comp. PE@180		41931	42051		
	LED + Supp, Span = 100mm	58002				
24V	LED + Supp, Span = 150mm	58022				
	LED + Supp, Span = 200mm	58042				
	LED + Supp, Span = 100mm	41571		41811		42945
24V	LED + Supp, Span = 150mm	41591				42955
	LED + Supp, Span = 200mm	41611				
	LED + Supp, Span = 100mm	41511				
24V	LED + Supp, Span = 150mm	41531				
	LED + Supp, Span = 200mm	41551				
	LED + Supp, Span = 100mm	88905	88925	88945	88965	88985
24V	LED	88903	88923	88943		
	Without Comp.	88901	88921	88941		
24V	LED + Supp	88915	88935	88955	88975	88995
	LED	88913	88933	88953		
	Without Comp.	88911	88931	88951		

Circuit	Form					
	A 18mm	B 10mm	BI 11mm	C 8mm	CI 9.4mm	
M12 Top Mount						
24V	LED + Supp	41501	41621	41741	42881	42941
	LED + Supp, Span = 100mm	41521	41641	41761	42891	42951
	LED + Supp, Span = 150mm	41541	41661	41781	42901	42961
	Pressure Switch with LED	41321 41323				
	LED + Supp, Span = 200mm	41541	41661	41781	42901	42961
110V	LED + Supp, Span = 300mm	41561	41681	41801	42911	42971
	LED + Supp, Span = 100mm	41581	41701	41821	42921	42981
	LED + Supp, Span = 150mm	41601	41721	41841	42931	42991
24V	LED + Supp, Span = 100mm	41561	41681	41801	42911	42971
	LED + Supp, Span = 150mm	41581	41701	41821	42921	42981
	LED + Supp, Span = 200mm	41601	41721	41841	42931	42991
24V	LED + Supp	42401	42411	42421	42431	42441
	LED + Supp	42401	42411	42421	42431	42441
	LED + Supp	42401	42411	42421	42431	42441
24V	LED + Supp, Span = 100mm				89181	89241
	LED + Supp, Span = 150mm				89191	89251
	LED + Supp, Span = 200mm				89201	89261
24V	LED + Supp, Span = 100mm				89211	89271
	LED + Supp, Span = 150mm				89221	89281
	LED + Supp, Span = 200mm				89231	89291

Circuit	Form					
	A 18mm	B 10mm	BI 11mm	C 8mm	CI 9.4mm	
M12 Top Mount						
24V	LED + Supp	29001	29561	29801		
	LED + Supp, (Z-Diode)	29021	29581	29821		
	LED + Supp, (RC)	29041	29601	29841		
	M12 LED + Supp	43011				40881
	M12 90° LED + Supp	43161				43261
24V	LED + Amplifier	M16 PG9 29481 29501				
	Pressure Switch LED Gn/Ye	M16 PG9 29441 29461				
	Without Comp.	70001	70301	72011	18081	
110V	LED + Supp. (VDR)	M16 PG9 29081 29101	29641 29661	29881 29901		
	LED + Supp. (RC)	M16 PG9 29121 29141				
	Without Comp.	43001		43081	40885	
230V	M12 90° Prop. Valve	43151				43251
	M12 90° Without Comp.					43252
	M12 90° Prop. Valve					43252
Double DIN						
12V	LED + Supp, Span = 150mm					58021
	LED + Supp, Span = 150mm M12 + Cable					41591
	LED + Supp, M12 Y Cable					42401

Circuit	Form					
	A 18mm	B 10mm	BI 11mm	C 8mm	CI 9.4mm	
SVS						
24V	LED + Supp. (VDR)	29005	29565	29805	30105	30205
	LED + Supp. (VDR)	29085	29645	29885	30115	30215
	LED + Supp. (VDR)	29165	29685	29925	30125	
	Without Comp.	29245	29765	30005	30055	30155
	Pressure Switch W/O Comp.	29405				

**| BUILD YOUR ARTICLE NUMBER**



7000 - Standard  
7072 - xtreme

Form Number from one of the tables on this spread

Cable Type from the chart on the front  
Cable Length in Meters (See our Main Catalog for Standard lengths)

If applicable, if there is no cable, fill in these boxes with zeros (0000000).



*stay connected*

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