

# E25 Series, 1/4", 5/2 or 5/3 Function Solenoid Valve



Valve assembly illustrated with an plug & socket coil for reference only

## DESCRIPTION

Pilot operated solenoid valve.

Hazardous area approved pilot operators (ExnA, Ex e mb, Exd and Exia) are available with various international approvals – ATEX, IECEx, CCCEX, FM/CSA, GOST CU TR (Russia).

Body material available in

- Aluminium (standard)
- Stainless Steel
- Brass

Seal kit available – VSK200

## FEATURES

- Internal or external pilot air connection
- Single coil spring return function or double coil stay put function
- Convenient fixing holes to enable bracket mounting
- Pilot exhaust dust caps fitted as standard
- Interchangeable CNOMO interface coil units, including hazardous area options
- SIL 2 Capable (De-energise to trip @ HFT=0) SIL 3 Capable (De-energise to trip @ HFT=1) (5/2 Solenoid/Spring Function Only)
- (Our manual override options are **NOT** currently covered by SIL Certification)

**PRODUCT CODE:** **E 2 5** **C** **0** **A** **B** **R**

OPERATOR COIL VOLTAGE OPTIONS 2

SEE BELOW FOR PRODUCT CODE DETAILS  
Any of the below options that are not required enter '0' in relevant box.

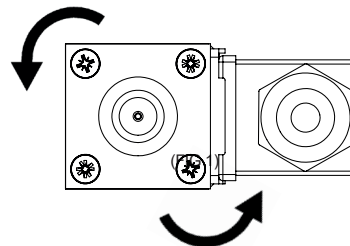
Operator	Coil	Options 1	Standard Voltage	Designator	Options 2
<p><b>1 8</b> Spring return, internal pilot air feed</p> <p><b>8 0</b> Spring return, external pilot air connection</p> <p><b>1 9</b> Double solenoid, internal pilot air feed</p> <p><b>9 0</b> Double solenoid, external pilot air connection</p> <p><b>1 4</b> 5/3 All ports sealed mid position, internal pilot air feed</p> <p><b>4 0</b> 5/3 All ports sealed mid position, external pilot air connection</p> <p><b>1 5</b> 5/3 Inlet sealed open exhaust mid position, internal pilot air feed</p> <p><b>5 0</b> 5/3 Inlet sealed open exhaust mid position, external pilot air connection</p>	<p><b>A</b> Exia</p> <p><b>B</b> Terminal Box</p> <p><b>D</b> Exd</p> <p><b>H</b> Plug &amp; Socket Exia</p> <p><b>K</b> MC30 Plug &amp; Socket</p> <p><b>L</b> MC30 Plug &amp; Socket with LED</p> <p><b>P</b> Plug &amp; Socket</p> <p><b>S</b> Exia Stainless Steel Housing</p> <p><b>Y</b> ExnA Plug &amp; Socket</p> <p><b>4</b> Stainless Steel Housing</p> <p><b>5</b> ExnA Stainless Steel Housing</p> <p><b>8</b> Ex e mb Stainless Steel Housing</p>	<p><b>C</b> Lever manual override</p> <p><b>D</b> Push button manual override</p> <p><b>S</b> Screw driver override</p> <p><b>0</b> No option required</p> <p><b>* Not SIL approved with manual override options</b></p>	<p><b>B</b> 24v DC</p> <p><b>H</b> 24v DC Low Power <sup>(1)</sup></p> <p><b>R</b> 24v AC (50/60 Hz)</p> <p><b>T</b> 110v AC (50/60 Hz)</p> <p><b>U</b> 240v AC (50/60 Hz)</p> <p><b>* A comprehensive range of non-standard voltages available on request</b></p>	<p><b>A</b> ATEX / IECEx / CCCEX <sup>(2)</sup></p> <p><b>B</b> ATEX / IECEx / CCCEX (10mA) <sup>(2)</sup></p> <p><b>F</b> FM / CSA</p> <p><b>J</b> ATEX Ex e mb</p> <p><b>R</b> GOST CU TR <sup>(3)</sup></p>	<p><b>B</b> Valve body brass</p> <p><b>C</b> Valve body brass and NPT ports</p> <p><b>D</b> Valve body brass, NPT ports and 1/2" NPT electrical connection</p> <p><b>E</b> 1/2" NPT electrical connection</p> <p><b>L</b> Low temperature duty -40°C</p> <p><b>M</b> NPT ports and 1/2" NPT electrical connection</p> <p><b>N</b> NPT ports</p> <p><b>P</b> Valve body stainless steel, NPT ports and 1/2" NPT electrical connection</p> <p><b>R</b> Valve body stainless steel and NPT ports</p> <p><b>S</b> Valve body stainless steel</p> <p><b>* A comprehensive range of non-standard options available on request</b></p>

### Note:

- (1) "H" option not available with Exia solenoids  
(2) IECEx & CCCEX only available with Exia and Exd Solenoids  
(3) GOST CU TR only available with Exd solenoids

## COIL ORIENTATION

The coil itself can be rotated in 90° steps by releasing the four securing screws. (FIG 1) When rotating the coil care should be taken to ensure the core assembly (core, spring, seal and washer) remains intact and aligned correctly. This is easily achieved by only lifting the coil the small amount required to clear the screws enabling the coil to be rotated.



## MATERIAL SPECIFICATIONS

### STANDARD

Body And End Caps	Black Anodised Aluminium (Dural)
Spool	Hard Anodised Aluminium PTFE Impregnated
Jet	Brass
Spacers	Glass Filled Acetal
Seals	Nitrile (Alternative Seals Available)
Spring	Music Wire

## VALVE SPECIFICATIONS

### STANDARD

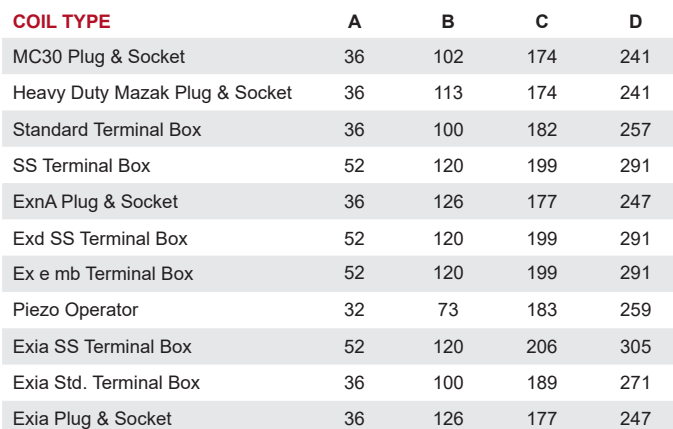
Port Connection Size	1/4" BSP
Working Pressure Internal Pilot Version	3 to 10 bar
Working Pressure External Pilot Version	3 to 10 bar
Minimum External Pilot Pressure	3 bar
Cv Factor	1.2
Flow Rate (at 6 bar with 1 bar pressure drop)	1246 l/min
Maximum Ambient Temperature	+80 °C
Minimum Working Temperature	-20 °C

## COIL DETAILS

Coil Type	Plug & Socket	Terminal Box	ExnA	Exd	Ex e mb	Exia
Area Class	Safe	Safe	Zone 2	Zones 1 & 2	Zones 1 & 2	Zone 0, 1 & 2
Area Category	N/A	N/A	Ex nA II T4-T6	Exd IIC T3-T6	Ex e mb IIC T4	Exia IIC T6
Ingress Protection	IP65	IP65	IP65	IP66	IP66	IP65
Cable Entry	PG.9	M20 x 1.5	M20 x 1.5 or PG.9	M20 x 1.5	M20 x 1.5	M20 x 1.5
Ambient Temperature	-20 to +80 °C	-20 to +80 °C	-20 to +60 °C	-20 to +80 °C	-20 to +65 °C	-20 to +65 °C
Magnetic Wire Class	H	H	H	H	H	H

**\* FURTHER SOLENOID OPTIONS AVAILABLE ON REQUEST**

## 5/2 Position



The drawing shows a 2-way 3-position solenoid valve. The top view (A-A) shows the valve body with two solenoid coils, each 40 units high. The distance between the centers of the coils is 136 units. The distance from the center of each coil to the nearest end face is 31 units. The total width of the valve body is 25.4 units. The distance between the centers of the two solenoid coils is 136 units. The distance from the center of each coil to the nearest end face is 31 units. The total width of the valve body is 25.4 units. The distance between the centers of the two solenoid coils is 136 units. The distance from the center of each coil to the nearest end face is 31 units. The total width of the valve body is 25.4 units.

The side view (B-B) shows the valve body with two solenoid coils, each 40 units high. The distance between the centers of the coils is 136 units. The distance from the center of each coil to the nearest end face is 31 units. The total width of the valve body is 25.4 units. The distance between the centers of the two solenoid coils is 136 units. The distance from the center of each coil to the nearest end face is 31 units. The total width of the valve body is 25.4 units.

COIL TYPE	A	B	D
MC30 Plug & Socket	36	102	287
Heavy Duty Mazak Plug & Socket	36	113	287
Standard Terminal Box	36	100	303
SS Terminal Box	52	120	337
ExnA Plug & Socket	36	126	293
Exd SS Terminal Box	52	120	337
ExnA SS Terminal Box	52	120	337
Ex e mb SS Terminal Box	52	120	337
Piezo Operator	32	73	305
Exia SS Terminal Box	52	120	351
Exia Std. Terminal Box	36	100	317
Exia Plug & Socket	36	126	293