



Stainless Steel 'Smart' Valve Controller



Exd flameproof

Valvescan Type VSD CF8M (316) stainless steel ATEX / IECEx dual Certified Ex d valve controller is an integrated valve information device for Emergency Shutdown (ESD) valves. Combining valve position monitoring and full stroke test (FST) or partial stroke test (PST) functionality, the VSD unit is an information hub for the ESD valve, enabling plant operators to verify the capabilities of the most critical valves in their installations without having to significantly modify existing operating methodologies



IP.66/67 CF8M (316) stainless steel enclosure for superior corrosion protection and mechanical resistive properties (Optional: CF3M (316L) stainless steel and coated anodised aluminium).

ATEX / IECEx Dual Certified II 2 GD / Ex d (ia) IIC T4/6 flameproof for zone 1 & 2 hazardous areas.

Valve position by a continuous feedback transmitter and/or discrete switches / sensors (mechanical or proximity).

Full or partial stroke test functionality with local or remote initiation. Various protocols can be used to communicate with the VSD including HART, Modbus and Bluetooth (Optional: Foundation Fieldbus).

Up to 6 conduit entries for easy connection options.

Smart calibration allows easy installation and configuration.

Stored valve stroke profile (initial 'as new' signature and 'last operation' signature) allows a predictive maintenance regime to be effected (Optional: Extended memory for storing all ESD valve signatures).

Low power requirements.

IEC 61508 / 61511 functional safety certified SIL1 to 4.

A screw-on cover ensures secure isolation of electrical components.

Compact design provides considerable space saving over similar equipment without compromising the ease of installation or maintenance.

High visibility red/green position indicator providing clear local indication of the current valve / actuator position.

Simplified mounting arrangements allow quick and secure mounting to most types of pneumatic actuators including VDI/VDE.3845 topworks actuators.

Ex marking:

II 2 GD

Ex d (ia) IIC T4/T6 Gb

Ex tb IIIC T135°C / T85°C Db

T_{amb} = -40°C to +60°C T6 / -40°C to +85°C T4

Notes:

- The input parameters markings for the intrinsically safe components shall be determined from their respective certificate numbers depending upon whether they are required for ATEX and/or IECEx.
- Care should be taken to ensure that the minimum and maximum temperature information on the intrinsically safe components used within the VSD valve controller is observed and satisfies the Tamb parameters and the T-class for the VSD units, respectively for ATEX/IECEx certificates as per relevance.
- The minimum ambient markings will depend on approved intrinsically safe components, if fitted, as will the parameters. Units will be marked accordingly at the point of manufacture in line with their individual intrinsically safe equipment approvals. However minimum permitted ambient in all cases is -40°C.

Certificate Number:

TRAC 13ATEX0005X

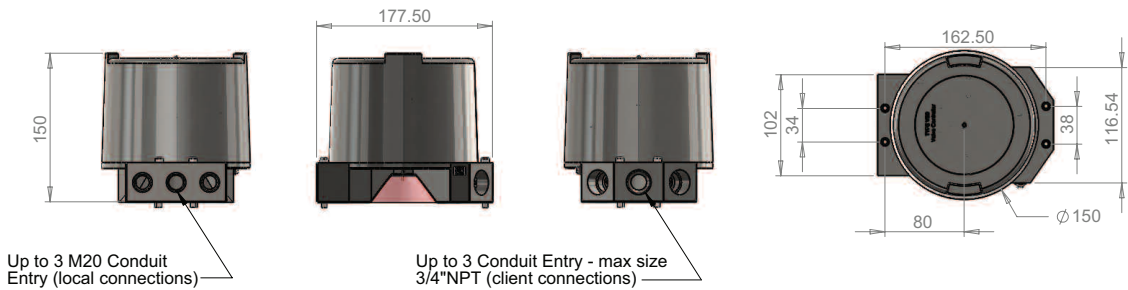
IECEx TRC 13.004X

TR CU RU C-GB-MI-062.B.00729



Modbus®





Stainless Steel 'Smart' Valve Controller

www.imtex-controls.com/vsd

Model Number Compilation (Drawing No. A190281-X)

Type	Electrical Function	Material of Construction	Conduit Size	Output Drive	Visual Indicator	Communication	Power	Feature
VSD	16	S	Y	S	R	1	P	100

Code	Electrical Function
01	Base Model Only No additional switches/sensors
xxP	Positioner Variant of Electronics 'P' added after feature number indicates that the positioner variant of the electronics board is used
xxL	Line Break Variant of Electronics 'L' added after feature number indicates that the line break variant of the electronics board is used
14	DPDT Mechanical Switch up to 10 amps @ 125/250 VAC up to 0.5 amps @ 125 VDC Not Recommended for I.S. Circuits
16	SPDT Mechanical Switch up to 10 amps @ 125/250 VAC up to 0.5 amps @ 125 VDC Not Recommended for I.S. Circuits
17	SPDT Gold Contact Mechanical Switch up to 1 amp @ 125 VAC up to 0.5 amps @ 30VDC Suitable for I.S. Circuits - See I.S. Parameters on Unit
25	SPDT Reed Switch Max Current: 3 Amps Max Power: 100 Watts/VA Suitable for I.S. Circuits - See I.S. Parameters on Unit
40	SPST Reed Switch 0.15 Amps @ 125VAC/30VDC Suitable for I.S. Circuits - See I.S. Parameters on Unit
42	V3 Style Proximity Sensor Op Voltages (sensor dependent) 10 to 60VDC 10 to 250VAC Op Current (sensor dependent) 2 to 400mA Some Sensors Suitable for I.S. Circuits - See I.S. Parameters on Unit
43	Non V3 Style Proximity Sensor Op Voltages (sensor dependent) 10 to 60VDC 10 to 250VAC Op Current (sensor dependent) 2 to 400mA Some Sensors Suitable for I.S. Circuits - See I.S. Parameters on Unit
70	Position Transmitter 4-20mA @ 10 - 40 VDC monitor may include up to 2 additional switch/sensors from functions 16, 17, 25, 40, 42 or 43 Transmitter Suitable for I.S. Circuits - See Criteria on Unit
90	Non V3 Style Proximity Senso With Fieldbus Communication Not Suitable for I.S. Circuits

Code	Material of Construction (Enclosure)
S	316SS Cover & Housing
L	316L SS Cover & Housing
9	Anodised Aluminium Powder Coated
Conduit Size	
Z	(6) M20 x 1.5
Y	(3) M25 x 1.5 & (3) M20 x 1.5
X	(2) M25 x 1.5 & (4) M20 x 1.5
W	(1) M25 x 1.5 & (5) M20 x 1.5
V	(6) 1/2" NPT
U	(3) 3/4" NPT & (3) 1/2" NPT
T	(2) 3/4" NPT & (4) 1/2" NPT
S	(1) 3/4" NPT & (5) 1/2" NPT
Output Drive	
S	2 Pin Drive
N	NAMUR Drive
Visual Indicator*	
R	Red (Closed) / Green (Open)
B	Blue (Closed) / White (Open)
E	Red (Closed) / Yellow (Open)
Y	Red (Closed) / Green (Open)
O	No Visual Indicator
*ABS material of construction	
Communication	
0	No Additional Comms
1	Foundation Fieldbus
2	HART
3	Bluetooth
4	Wireless HART
5	Modbus
6	Other (use Feature)
Unit Power	
P	Internal (SOV Parasite)
E	External Power Supply
C	Additional Capacitor
Feature	
Ixx	Exd ia Feature Designator Non I.S. Components See Note ¹
Axx	Exd ia Feature Designator ATEX Only See Note ¹
Bxx	Exd ib Feature Designator ATEX and IECEx See Note ¹

NOTES

- The exact detail of switches/sensors/transmitters fitted in the monitor is not fully specified by the basic part number. The 'feature designator' provides a mechanism for cross-referencing to a centralised log establishing the make Op Voltages (sensor dependent) 10 to 60VDC and model of parts fitted in a given unit.
- The 'base' VSD Unit comprises a main board with electronics. The VSD variant normally includes a separate, internally wired 4-20mA transmitter.