

# Monitoring and Communication Systems for Integrated Valve Control



## Type SLR



The type SLR Valve Position Monitor has evolved to meet the latest requirements of the general and process industries. The IP67 enclosure design comes with a unique quick access lockable cover allowing for reduced installation costs and space requirements whilst ensuring rugged reliability in the most testing environments.

### Materials

Enclosure – Polycarbonate Resin  
Shaft – Stainless Steel

### Electrical Functions

16,17,33,40,42,43,92,93,94,95,96,97

### Hazardous Area Certification/Approvals

(See Reverse Side for Electrical Functions)  
Ex ia IIB T6

## Type SRX



The type SRX Valve Position Monitor provides a high integrity system with protection from corrosive or environmental attack found offshore and in typical process plants. The IP66 enclosure has a bolt-on cover and top mounted high visibility open / close position indicator.

### Materials

Enclosure – Anodised Aluminium Epoxy Coated or CF8M Stainless Steel  
Shaft – Stainless Steel

### Electrical Functions

14,16,17,25,33,40,42,43,52,53,55,56,58,59,70

### Hazardous Area Certification/Approvals –

(See Reverse Side for Electrical Functions)  
Ex ia IIC T4/5/6  
Ex d IIB T6

## Type AQ, IQ, & SQ



The types AQ, IQ & SQ Valve Position Monitors provide a system ideally suited for hazardous area applications onshore or offshore. The IP66/67 enclosure has a screw-on cover and is supplied with a high visibility open / close position indicator all designed to minimise the total size of the automated valve package.

### Materials

Enclosure – Anodised Marine Grade Aluminium Epoxy or Urethane Coated (Type AQ & SQ Only) or CF8M Stainless Steel (Type AQ & IQ Only)  
Optional: Polycarbonate Cover  
Shaft – Stainless Steel

### Electrical Functions

14,16,17,25,40,42,43,52,53,55,56,58,59,70,71,74, 92,93,94,95,96,97

### Hazardous Area Certification/Approvals

(See Reverse Side for Electrical Functions)  
Ex ia IIC T4/5/6 (Type AQ) ATEX Only  
Ex d IIC T4/6 (Type IQ)  
Ex d IIC T5 (Type SQ) ATEX Only



## Type AMI



The type AMI Valve Communication & Control device incorporates an advanced high accuracy position sensor system with push button settings that may be made quickly and conveniently. The integral pneumatic pilot valve operated by the universal burnout-proof solenoid (single or dual coil operation available) offers contemporary features which further enhance the operating performance of the automated valve system.

### Materials

Enclosure – Epoxy Coated Anodised Aluminium Housing with Polycarbonate Cover & Visual Indicator (Optional – Stainless Steel Housing)

### Electrical Functions

33,44,92,93,94,95,96,97

### Hazardous Area Certification/Approvals

(See Reverse Side for Electrical Functions)  
Ex ia IIC T5  
Ex nA nC IIC T5

## Type EC



The type EC Valve Position Monitor is a unique system that mounts directly to pneumatic actuators with topworks according to VDI/VDE.3845 thus allowing for a cost efficient and highly compact installation. Using solid state sensing technology for position feedback and LED indication (red for closed and green for open), the IP67 enclosure also allows for the backwiring termination of an auxiliary solenoid valve. (Optional – IP68 version.)

### Materials

Enclosure – Polycarbonate Resin

### Electrical Functions

33,34,44,92,93,94,95,96,97

### Hazardous Area Certification/Approvals

(See Reverse Side for Electrical Functions)  
Ex ia IIC T5

## Valvescan Bus Communication



Using the VCT (Valve Communication Terminal) Dual Module which integrates solid state position sensing, communication electronics, power outputs, auxiliary inputs and wire termination into a single compact package, all mechanical platforms listed can be connected on a bus communication network. Systems can be supplied to operate with the most popular bus protocols providing significant cost savings for installation and maintenance downtime when compared with conventional analogue systems.

### Electrical Functions

70,92,93,94,95,96,97

### Hazardous Area Certification/Approvals

(See Reverse Side for Electrical Functions)  
Ex ia IIC T4/5/6 (Type AQ) ATEX Only  
Ex d IIC T4/6 (Type IQ)  
Ex d IIC T5 (Type SQ) ATEX Only  
Ex nA nC IIC T5 (Type AMI) ATEX Only



## Electrical Functions - Standard Options\*\*

### Mechanical Switch

14 (2)	<b>DPDT</b> Rating 4.5 Amps @ 125/250 VAC
16 (2) & 55 (4)	<b>V3 SPDT</b> Rating 10 Amps @ 125/250 VAC, 0.5 Amps @ 125 VDC
17 (2)	<b>V3 SPDT Gold Plated Contacts</b> Rating 1 Amp @ 125 VAC, 0.5 Amps @ 30 VDC

### Reed Type Proximity Switch

25 (2) & 58 (4)	<b>SPDT Maxx-Guard</b> Rating – Volts Max. 500 V AC/DC, Current Max. 3 Amps, Power Max. 100 Watts/VA, Min. 3 Watts
40 (2) & 59 (4)	<b>SPST Maxx-Guard</b> Rating 0.15 Amps @ 30 VDC

### Inductive Proximity Sensor

33 (2)	<b>SST Dual Module Normally Open</b> Rating 0.3 Amps @ 125 V AC/DC
34 (2)	<b>SST Dual Module Normally Closed</b> Rating 0.3 Amps @ 125 V AC/DC
42 (2) & 52 (4)	<b>2-Wire or 3-Wire V3</b> E.g. 2-Wire Namur – Current Rating Target On : < 1 mA Target Off : > 3 mA, Nominal Voltage 8 VDC / 3-Wire PNP or NPN – Rating 100 mA @ 60 VDC
43 (2)	<b>2-Wire or 3-Wire Cylindrical</b> E.g. 2-Wire Namur – Current Rating Target On : < 1 mA Target Off : > 3 mA, Nominal Voltage 8 VDC / 3-Wire PNP or NPN – Rating 100 mA @ 60 VDC
44 (2)	<b>SST Namur Dual Module</b> Current Rating Target On : < 1 mA Target Off : > 3 mA, Voltage Range 6 to 29 VDC

### Position Transmitter

70 (1)	<b>4 to 20 mA Output Loop Powered (Resistive or Non-contact)</b> Supply Voltage 8 to 28 VDC, Linearity Error <1% of Full Scale Option – HART Protocol <b>Digital Output Bus Powered (Resistive Type) – FOUNDATION Fieldbus / Profibus PA</b> Supply Voltage 9 to 32 VDC
71 (1)	<b>4 to 20 mA Output Loop Powered (Capacitive Type)</b> Supply Voltage 12 to 30 VDC
74 (1)	<b>4 to 20 mA Output Loop Powered (High Performance Resistive Type)</b> Supply Voltage 8 to 28 VDC, Linearity Error <0.5% of Full Scale

### Bus Communication

92	<b>DeviceNet Module</b> 2 x Discrete Inputs, Open & Closed / 2 x Power Outputs (Solenoids) 24 VDC, 4 Watts / 1 x 4 to 20 mA Auxiliary Input
93 & 94	<b>FOUNDATION Fieldbus Module</b> Function 93 (Bus Powered) - 2 x Discrete Inputs, Open & Closed / 2 x Discrete Outputs (Piezo) 2mA @ 6.5 VDC each Function 94 (Externally Powered) - 2 x Discrete Inputs, Open & Closed / 2 x Power Outputs (Solenoids) 4 Watts Total Combined, Current Limited to 200mA
95	<b>Modbus Module</b> 2 x Discrete Inputs – Open & Closed / 2 x Power Outputs (Solenoids) 10 to 24 VDC / 1 x 4 to 20 mA Auxiliary Input
96 & 97	<b>AS-Interface Module</b> Function 96 (31 Devices per Network) - 2 x Sensor Inputs – Open & Closed / 2 x Auxiliary Inputs / 2 x Power Outputs (Solenoids) 25 to 30 VDC, 4 Watts Function 97 w/Extended Addressing (62 Devices per Network) - 2 x Sensor Inputs – Open & Closed / 2 x Auxiliary Inputs / 1 x Power Outputs (Solenoids) 25 to 30 VDC, 4 Watts

\*\*Other Functions Available On Request



Protection Concept	Monitor Type	Standard	Zones	Certificate Number	Marking	Electrical Functions	
Intrinsically Safe	AMI	EN60079-11	0, 1 & 2	FM07ATEX0047X	II 1 G / Ex ia IIC T5	44	
	AQ	EN60079-11		Sira 10ATEX2060X	II 2 G / Ex ia IIC T4/5/6	17,40,42,43,52,53,56,59,70	
	EC	EN60079-11		FM08ATEX0015X	II 1 G / Ex ia IIC T5	44	
	SLR	EN 50020		DEMKO 04 ATEX 136983	II 2 G / EEx ia IIB T6	17,40,42,43	
	SRX	EN60079-11 IEC60079-11		Sira 09ATEX2162X IECEX SIR 09.0066X	II 2 G / Ex ia IIC T4/5/6 II 2 G / Ex ia IIC T4/5/6	17,40,42,43,52,53,56,59,70	
Flameproof	IQ	EN60079-1	1 & 2	Sira 08ATEX1266X	II 2 GD / Ex d IIC T4/6	14,16,17,25,40,42,43,52,53,55,56,58,59,70,92,93,94,95,96,97	
		EN61241-1 IEC60079-1 IEC61241-1		IECEX SIR 08.0099X	II 2 GD / Ex d IIC T4/6		
	SQ SRX	EN60079-1		FM08ATEX0008X	II 2 G / Ex d IIC T5		16,17,25,40,42,55,70,96
		EN60079-1 IEC60079-1		Sira 10ATEX1219X IECEX SIR 10.0106X	II 2 G / Ex d IIB T6 II 2 G / Ex d IIB T6		14,16,17,25,40,42,43,52,53,55,56,58,59,70
		AMI	EN60079-15	2	FM08ATEX0040X		II 3 G / Ex nA nC IIC T5



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