



Flow Control

**Tyco Valves
& Controls**

The AVID® (Automated Valve Interface Devices) range of position monitors represents the latest technology for the monitoring and control of automated 1/4 turn valves.

Features

- All AVID® products are suitable for NAMUR mounting to actuators.

EasiFix® Switch Adjustment

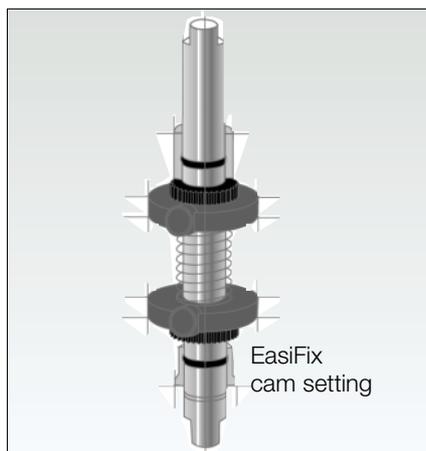
- Vibration resistant self-locking cams are fastened to a splined shaft and can be set by hand in seconds. Since there are no set screws, the cams will never slip out of adjustment.

ModMount® Assembly

- All AVID® Position Monitors are directly mounted to the actuator by a low-profile mounting assembly.
- An easy access terminal block having two extra points for solenoid valve integration provides for simplicity of wiring and economy of space.

HiVue® Local Visual Indicator

- The ER model has robust, corrosion resistant and transparent screwed cover giving clear local indication.
- Models XA, ZR and ZR Plus are fitted with a HiVue® impact and corrosion resistant beacon, capable of displaying exact valve position from any quadrant at distances of up to 50 metres.



**The range
ER Position Monitor**

Corrosion resistant IP66 Valve Position Monitor.

XA Position Monitor

Flameproof CENELEC approved EExd IIB T6 position monitor for Hazardous Area applications.

ZR Position Monitor

Corrosion resistant CENELEC approved Position Monitor for General Purpose, Hazardous Area and Intrinsically Safe applications.

ZR Plus Control Position Monitor

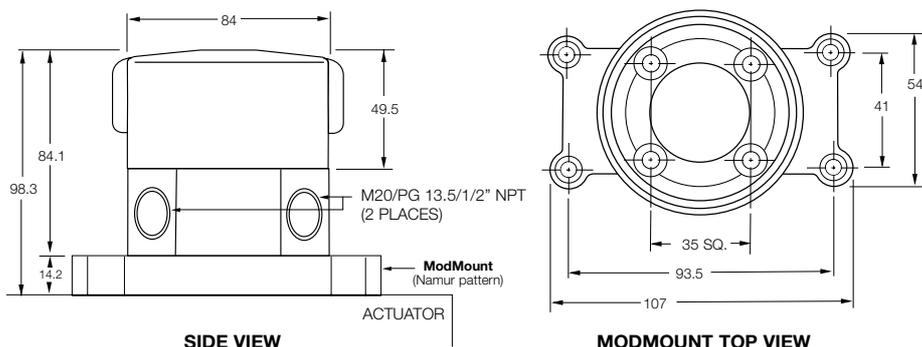
Integrated monitoring and control of automated valves in a single CENELEC approved package.

Tyco AVID® Position Monitors

Model ER Position Monitor



Dimensions (mm)



Micro-Switch V3 (mechanical)

Electrical Version	SPDT form C
Electrical Rating	15 amps/125/250 VAC 6 amps/24 VDC .5 amps/125 VDC .25 amps/250 VDC 5 amps/125 VAC 'L'
Operating Temp.	-25°C to +148°C

Area Classification & Approvals

Weatherproof	IP66
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Enclosure

Conduit Entries	2 x M20 2 x PG 13.5 / 1/2" NPT
Terminal Strip	8 Points
Temperature range	-25°C to +80°C

Materials of Construction

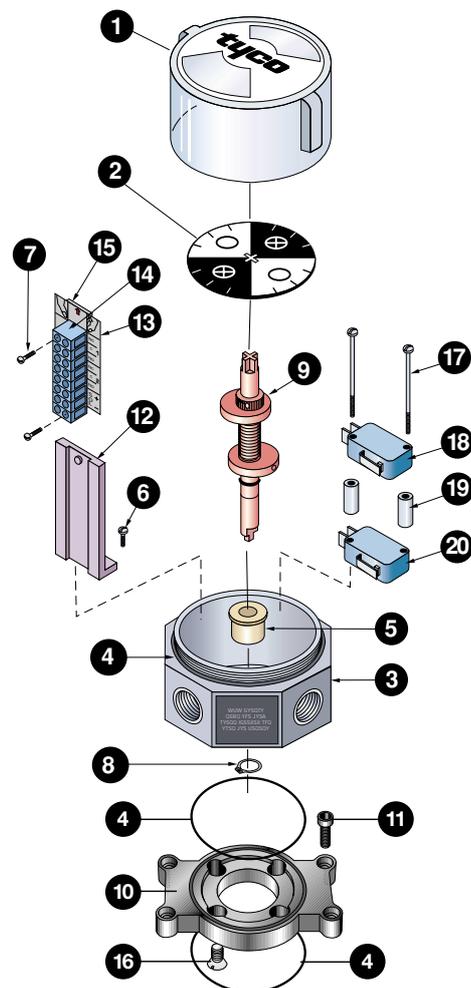
Part	Description	Material Specification
1	Enclosure Cover	Copolyester
2	Visual Indicator	Vinyl
3	Enclosure Housing	ABS633
4	O-rings	Buna N
5	Housing Bush	SAE841 Bronze
6/7/16/17	Screws and Fasteners	Stainless Steel
8	Circlips	Stainless Steel
9	Shaft/Cam Assembly	Delrin 900
10	Actuator Mounting Pad	Nylon 66
11	Fastener	Stainless Steel
12	Terminal Block Mounting Bracket	Delrin 900
13	Terminal Block Marker	Lexan
14	Terminal Block	Polyamide
15	Terminal Block Mounting Plate	Delrin 900
18	Switch Upper	Phenolic
19	Switch Spacers	Nylon
20	Switch Lower	Phenolic

General Description

The ER represents a universal entry level product for the Tyco AVID® range of position monitors.

Features

- An IP66 engineered resin enclosure assures both strength and corrosion resistance. Extra conduit entrance allows for electrical integration of solenoid valves.
- 8 point slide-out terminal strip for electrical integration of solenoid valves and ease of wiring.
- High-current mechanical switches having SPDT Form C contacts are considered "Simple Apparatus" for I.S. applications.
- Approvals: FM, CSA.



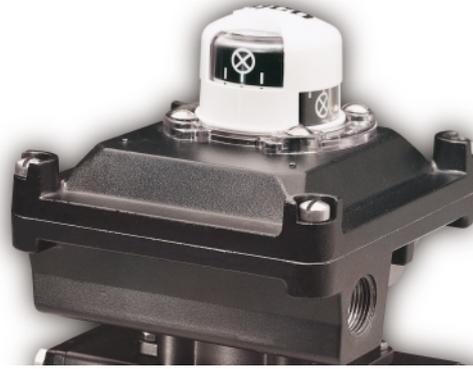
General Description

Flameproof CENELEC approved EExd IIB T6 position monitors for Hazardous Area applications.

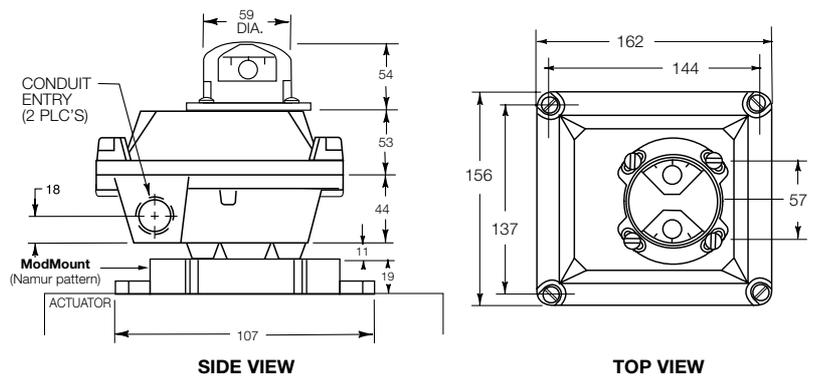
Features

- Flameproof EExd IIB T6 rated aluminium enclosure, equipped with 2 or 4 mechanical switches.
- Conform to CENELEC EN50014/50018 for use in Group IIA and IIB, Zone 1 & 2 Flammable Atmospheres.
- All units are manufactured to IP67 and Nema 4, 4x weatherproof ratings.
- Approvals: CENELEC, UL, FM, CSA.
- Monitors available with proximity sensors.
- 0 to 100% Re-transmission signal.

Model XA Position Monitor - Hazardous Areas



Dimensions (mm)



Micro-Switch V3 (mechanical)

Electrical Version	SPDT form C
Electrical Rating	15 amps/125/250 VAC 6 amps/24 VDC .5 amps/125 VDC .25 amps/250 VDC 5 amps/125 VAC 'L'
Operating Temp.	-25°C to +148°C

Inductive Proximity Sensors

The XA Position Monitor is also available with 2 & 3-wire DC PNP/NPN (NO/NC) inductive proximity sensors (%-36 VDC) and 2-wire AC/DC inductive proximity sensors (20-140 AC/10-140 DC).

Area Classification & Approvals

Weatherproof	IP67, EExd IIB T6
UL, FM & CSA	Nema 4, 4X Cl. Grps. C & D, Cl. II, Grp E, F & G, Div. 1 & 2

Enclosure

Conduit Entries	2 x M20 2 x PG 13.5 / 1/2" NPT
Terminal Strip	8 or 16 points
Temperature Range	EExd Approved at Ambient -20°C to +40°C

Materials of Construction

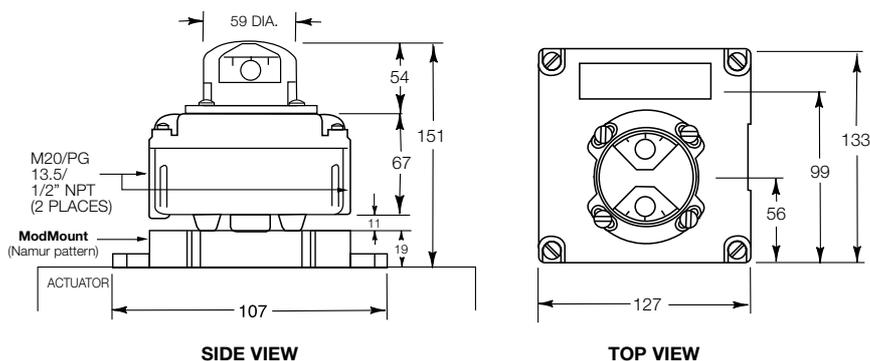
Item	Material
Housing	Aluminium
Cover	Aluminium
Shaft	Stainless Steel
Fasteners	Stainless Steel
HiVue	Copolyester
ModMount	Nylon



Model ZR Position Monitor - Intrinsically Safe



Dimensions (mm)



General Description

A highly corrosion resistant, IP67 resin enclosure suitable for General Purpose, Hazardous Area and Intrinsically Safe, Zone 0, 1 and 2 areas.

Features

- High-impact, engineered resin enclosure compatible with many corrosive environments
- Position sensors are available in mechanical and inductive proximity configurations
- Mechanical switches (SPDT capability)
- Inductive sensors are internationally approved for intrinsically safe applications as are mechanical sensors under their classification as 'Simple Apparatus'
- Two conduit entries and an easy access terminal block having two extra points for solenoid valve integration
- 0 to 100% Re-transmission signal
- Suitable for Hazardous Area Zones 1 and 2, when fitted with a T-Sensor

Area Classification & Approvals

Weatherproof	IP67
CENELEC	EExia IIC T6
	EEx m e II T6

Enclosure

Conduit Entries	2 x M20
	2 x PG 13.5 / 1/2" NPT
Terminal Strip	8 points
Temperature Range	
ZR with V3 Mech.	-40°C to +80°C
ZR with NJ2-V3-N	-25°C to +80°C

Micro-Switch V3 (mechanical)

Electrical Version	SPDT form C
Electrical Rating	15 amps/125/250 VAC
	6 amps/24 VDC
	.5 amps/125 VDC
	.25 amps/250 VDC
	5 amps/125 VAC 'L'
Operating Temp.	-25°C to +148°C

Proximity Type (Inductive), Intrinsically Safe

Sensing range	2 - 4 mm
Electrical Version	D.C. voltage 2 wire in accordance with EN 60947-5-6
Hysteresis	Approx. 5%
Switching Frequency	1.0 KHz
Nominal Voltage	8 VDC
Input Voltage Range	5 - 25 VDC
Output/Current	
Consumption	≥ 1mA, ≤ 3mA
Operating Temp.	-25°C + 100°C

T-Sensor for EEx m e Classification

Electrical Version	SPDT Form C Normally Open
Contacts	Rhodium
Electrical Rating	2A / 120VAC, 1.5A / 24VDC, 1.0A / 230VAC
Contact Resistance	0.08 Ohms
Seal	Encapsulation
Temperature Rating	-40°C to +150°C

Proximity Type (Inductive)

The ZR position monitor is also available with 2 and 3-wire DC PNP/NPN (NC/NO) inductive proximity sensors (5-36 DC) and 2-wire AC/DC inductive proximity sensors (20-140 AC/10-140 DC).

Materials of Construction

Item	Material
Housing	Engineered Resin
Cover	Clear Polycarbonate
Shaft	Stainless Steel
Fasteners	Stainless Steel
HiVue	Copolyester
ModMount	Nylon



General Description

Providing integrated monitoring and control of automated process valves, the ZR Plus is designed for General Purpose or Intrinsically Safe applications.

Eliminates the need for costly adaptors to mount solenoids onto Scotch Yoke type actuators.

Features

- Solenoid valves are pre-wired and integrated within the ZR Plus enclosure.
- High-impact, engineered resin enclosure.
- Position sensors are available in mechanical and inductive proximity configurations.
- 2 or 4 SPDT Form C Micro-switches or 2 or 4 proximity sensors.
- Solenoid valves, in both 3 and 4-way configurations are supplied in a variety of coil voltages and body materials.
- A Cv value of .7 is standard on all valves.
- Suitable for Hazardous Area Zones 1 and 2, when fitted with a T-Sensor and the appropriate solenoid coil.
- Solenoid valves available as standard with Manual Override

Solenoid Coils (standard)

General Purpose	24 VDC/110 VAC /230 VAC
Intrinsically Safe	24 VDC, 0.48 Watts

Solenoid Specifications

Body	Anodised Aluminium
Cv	.7
Pwr. Consumption	2 watts (VDC)
Tube Connection	1/4" NPT or G1/4 ISO228
Configuration:	
Mechanical	5/2 (3-way or 4-way)
Electrical	Normally Closed
Pressure Rating	3 to 8 bar
Operating Media	Air, inert gas
Temp. Class.	T6 (85°C)
Temp. Rating	-10° to 55°C
Operations	1,000,000 (typ)
Mounting	Any Position

Area Classification & Approvals

Weatherproof	IP67
CELENEC	EExia IIC T6 EEx m e II T6

Enclosure

Conduit Entries	1 x M20 1 x PG 13.5 / 1/2" NPT
Terminal Strip	8 Points
Temperature Range	
ZR+ with V3 Mech.	-40°C to +80°C

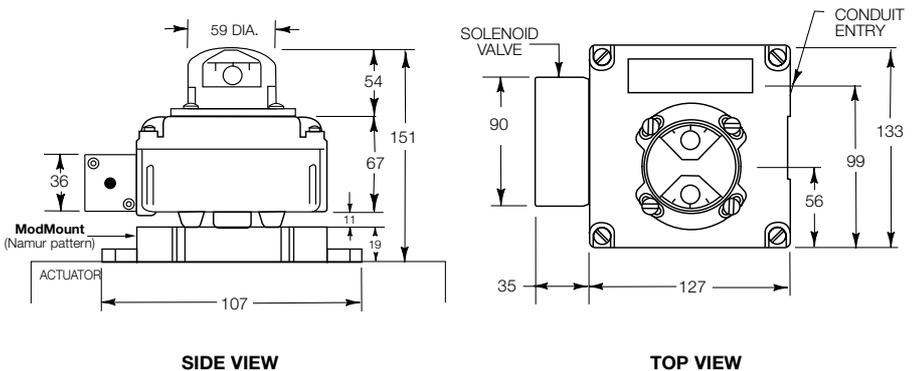
Materials of Construction

Housing	Engineered Resin
Cover	Clear Polycarbonate
Shaft	Stainless Steel
Fasteners	Stainless Steel
HiVue	Copolyester
ModMount	Nylon

Model ZR Plus Control Position Monitor



Dimensions (mm)



Micro-Switch V3 (mechanical)

Electrical Version	SPDT form C
Electrical Rating	15 amps/125/250 VAC 6 amps/24 VDC .5 amps/125 VDC .25 amps/250 VDC 5 amps/125 VAC 'L'
Operating Temp.	-25°C to +148°C

Proximity Type (Inductive), Intrinsically Safe

Sensing range	2 - 4 mm
Electrical Version	D.C. voltage 2 wire in accordance with EN 60947-5-6
Hysteresis	Approx. 5%
Switching Frequency	1.0 KHz
Nominal Voltage	8 VDC
Input Voltage Range	5 - 25 VDC
Output/Current	
Consumption	≥ 1mA, ≤ 3mA
Operating Temp.	-25°C + 100°C

T-Sensor for EEx m e Classification

Electrical Version	SPDT Form C Normally Open
Contacts	Rhodium
Electrical Rating	2A / 120VAC, 1.5A / 24VDC, 1.0A / 230VAC
Contact Resistance	0.08 Ohms
Seal	Encapsulation
Temperature Rating	-40°C to +150°C

Proximity Type (Inductive)

The ZR PLUS control position monitor is also available with 2 and 3-wire DC PNP/NPN (NC/NO) inductive proximity sensors (5-36 DC) and 2-wire AC/DC inductive proximity sensors (20-140 AC/10-140 DC).