MTN/1187IW Series

Intrinsically safe submersible 4-20mA output accelerometer for PLC interface
ATEX & IECEx Group II approved

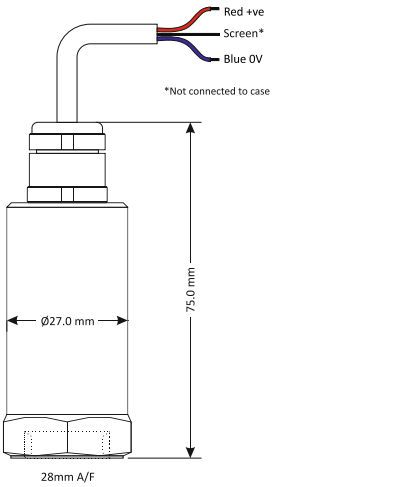
ATEX and IECEx Group II certified. Submersible, general purpose, top-entry accelerometer with DC output proportional to acceleration. Made from robust stainless steel throughout for continuous vibration monitoring in harsh underwater environments and areas with constant moisture or condensation. Sealed to IP68 with industry standard two wire 4-20mA output proportional to sensor range that can connect directly to PLC, DCS and other industrial controllers. Includes integral heavy duty polyurethane cable and is available with a wide range of mountings.

Applications

- Intrinsically safe data collector
- Oil and mining
- Submersible pumps, fans and compressors

MTN/1187IW

Dimensions



Technical

Output current	4-20mA DC proportional to rms acceleration (g rms)
Supply voltage	12-32V DC (4-20mA)
Frequency response	2Hz to 1kHz ±10 %
Mounted base resonance	5kHz (nominal)
Isolation	Base isolated
Dynamic range	50g peak
Transverse sensitivity	Less than 5%
Temperature range	-55°C ≤ Ta ≤ +65°C
Temperature sensitivity	0.08%/°C
Case material	Stainless steel
Cable[1]	Integral polyurethane - length to be specified at point of order
Maximum cable length	See system drawing ATX031
Mounting torque	8Nm
Weight	150g (nominal)
Sealing	IP68
Submersible depth	5m max (0.5 bar)

Certificate details

Group II[2]	BAS02ATEX1057X and IECEx BAS 08.0013X Ex ia IIC T6 Ga (-55°C ≤ Ta ≤ +65°C) Ex ia IIIC T85°C Da (-55°C ≤ Ta ≤ +65°C)
Terminal parameters	Ui = 28V, Ii = 93mA, Pi = 0.65W For Ci and Li see certificate
Barrier	MTL787S, BAS01ATEX7202 or P&FZ787, BAS01ATEX7005 or any other barrier that conforms to note 5 of ATX031 (Available on request)

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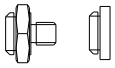
Studs and grub screws

Part #	From	To
MS036	¼"-28 UNF Male	M6 Male
MS039	¼"-28 UNF Male	10-32 UNF Male
MS067	¼"-28 UNF Male	M8 Male
MS068	¼"-28 UNF Male	¼"-28 UNF Male
MS124	¼"-28 UNF Male	M10 Male
MS132	¼"-28 UNF Male	M12 Male

Quick fit adapters



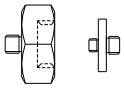
Part #	From	To
MS001	Q/F Male	Glue base
MS002	Q/F Male	M8 Male
MS003	Q/F Male	M10 Male
MS004	Q/F Male	¼"-28 UNF Male
MS006	Q/F Male	M6 Male

Options

- Various cable lengths
- Optional mountings
- Filters
- Other ranges (see below)

Part #	Mounting	xx = Optional acceleration (g rms)
MTN/1187IW-xx	¼"UNF Female	0-1 0-2 0-5 0-10 0-20
MTN/1187IWQ-xx	Q/F Female	

Mounting adapters

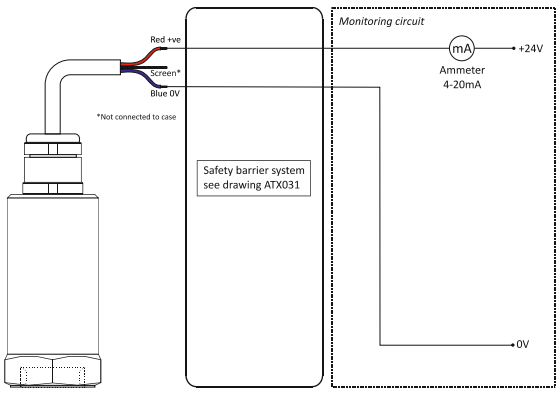


Part #	From	To
MS005	Q/F Male	¼"-28 UNF Female
MS007	Q/F Male	10-32 UNF Female
MS008	Q/F Male	M8 Female
MS011	¼"-28 UNF Male	Q/F Female
MS013	¼"-28 UNF Male	Glue base
MS033	¼"-28 UNF Male	Q/F Female
MS038	Q/F Male	M8 Conical Male
MS061	¼"-28 UNF Male	10-32 UNF Male
MS079	¼"-28 UNF Male	Q/F Female
MS106	Q/F Male	M10 Female

Isolation

Part #	From	To
MS034	¼"-28 UNF Male	¼"-28 UNF Female
MS093	Q/F Male	M8 Male

System connection



Note: Care should be taken not to install this in a high velocity dust laden atmosphere.

[1] This cable has additional hosing around it manufactured from PTFE plastic, which has a surface resistivity of greater than 1 GΩm and therefore poses a risk from electrostatic ignition.
[2] Warning ref Group II: The Ci and Li were previously lower. The installer must take account of the increase in internal capacitance and inductance present on this apparatus.

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