

PipeMonit® Swarm®
– Real-time erosion and
corrosion monitoring

FDL
– Field Data Logger and Junction Box



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PRODUCT SPECIFICATIONS

TECHNICAL DATA	FDL – FIELD DATA LOGGER	JUNCTION BOX
Output data	Digital Wall Thickness Raw Data, Temperature, Sensor ID, Battery Status	Digital Wall Thickness Raw Data, Temperature, Sensor ID
Operating temperature	-40 to +60 °C [-40 to +140 °F]	-40 to +60 °C [-40 to +140 °F]
Repeatability (standard deviation)	2.5 µm (0.1 mils)	2.5 µm (0.1 mils)
Absolute accuracy	0.1 mm (4 mils)	0.1 mm (4 mils)
Dimensions (in mm)	(WxHxD) 300x 370x 280	(WxHxD) 300x 370x 280
Weight	17 kg	14 kg
Cable length to Swarm	< 500 m	< 500 m
Cable length (USB)	< 1.5 m	< 1.5 m
Material	316SS	316SS
Protection	IP66	IP66
Ex rating:	No	No
GPS	Yes (optional)	No
ELECTRICAL DATA		
Power supply	12-24 VDC, Battery, 110-240 VAC, Solar	Powered by the PDL
Battery options	Alkaline battery package, High performance Lithium battery package	NA
Typical power consumption	< 6 W	NA
Communication options	GSM (GPRS/3G), Bluetooth, USB, RS 485, RS 232, Ethernet*	USB
PipeMonit® unit compatibility	PDL (Portable Data Logger), Swarm® S1 and PipeView® and PipeView® PC/Server	PDL (Portable Data Logger) and Swarm® S1

FIELD DATA LOGGER

The PipeMonit® Field Data Logger – FDL – is hard wired (RS 485) to the Swarm® using a two pair instrumentation cable. In semi-automated mode the FDL performs daily logging of the Swarm® and stores the data locally. With one reading a day the storage capacity will be 6 months for a 24 S1 Sensor Swarm®.

In fully automated mode the FDL performs daily readings of the Swarm® and communicates the data online and real-time over Ethernet, WiFi, GSM or RS 485 RTU. One FDL can operate multiple daisy chained Swarm®, limited upwards to a total of 250 Swarm® S1 sensors. The FDL is powered by battery or via hard wire 12/24 VDC or 110/230 VAC. Maximum total cable length between the FDL and the Swarm® is 500 meters.

JUNCTION BOX

The PipeMonit® Junction Box provides a USB interface. To perform a reading of the Swarm®, simply connect the PDL to the Junction box. The Swarm® is powered and operated through the PDL's USB port. With the S1 sensors fixed to the pipe wall, the Swarm® provides the operator with high resolution corrosion and erosion rates with just one reading per month.