

Instrument Datasheet

ClampOn EMAT transducer (WT 8 mm – 30 mm)

1 General		Note
1.1 Model description	Non-invasive topside EMAT transducer	
1.2 Explosion protection principle(s)	Encapsulation, Ex m Non-incendive, NI	1
1.3 Part number	Various depending on model type and mechanical configuration	
1.4 Serial number	Unique for each unit	

2 Physical		
2.1 Dimensions (ø x h)	25.4 mm x 41 mm [1.0 in x 1.6 in]	
2.2 Enclosure material	PEEK and stainless steel 316L	2
2.3 Enclosure protective coating	None, not certified with any type of coatings	
2.4 Weight	500 g (±50 g) [1.1 lb (±0.11 lb)]	3
2.5 Ambient temperature	See "Approvals & certification"	
2.6 Ingress protection	IP67, in accordance with IEC 60529	
2.7 Equipment marking	Serial number and part number engraved	
2.8 Cable type	Tray cable, 2 conductors (+ screen) 18 AWG	
2.9 Cable length	5 m [16.4 ft]	4



3 Operation		
3.1 Manner of operation	Real-time wall thickness trending	5
3.2 Technology	Electromagnetic acoustic transducer (EMAT)	
3.3 Wall thickness range	8 mm to 30 mm [0.3 in to 1.2 in]	
3.4 Transducer lift-off	<1 mm [0.04 in]	6
3.5 Minimum pipe OD	114 mm [4 inch NPS] with no limitation in maximum pipe diameter	
3.6 Pipe material	Metals and alloys	
3.7 Flow conditions	Any	

4 Installation		
4.1 Mounting	Clamped to outside of pipe	7
4.2 Mechanical protection	Use only clamping bands, flex protection covers and other installation accessories supplied by ClampOn. See installation instructions for further details.	7

5 Approvals & certification		
5.1 Hazardous area location approval	Zone 1, 2 for ATEX/IECEX, and Division 2 for cUL_{us} (NEC/CEC)	
5.2 ATEX marking	Ex II 2 G Ex e mb IIC T6... T3 Gb	8, 9
5.3 ATEX certificate	DEMKO 16 ATEX 1530X	10
5.4 ATEX ambient temperature range	$-40\text{ °C} \leq T_{amb} \leq +180\text{ °C}$	
5.5 IECEX marking	Ex e mb IIC T6... T3 Gb	8, 9
5.6 IECEX certificate	IECEX ULD 16.0024X	10
5.7 IECEX ambient temperature range	$-40\text{ °C} \leq T_{amb} \leq +180\text{ °C}$	
5.8 cUL_{us} marking	Class I, Division 2, Groups A, B, C, D, T6... T3	9
5.9 cUL_{us} certificate	E354507	10
5.10 cUL_{us} ambient temperature range	$-40\text{ °C} \leq T_{amb} \leq +180\text{ °C}$	

Notes	
1.	Ex m explosion protection principle for ATEX/IECEX installations and non-incendive (NI) explosion protection principle for cUL_{us} (NEC/CEC) installations.
2.	Transducer front is PEEK and remaining metallic components are stainless steel 316L.
3.	Weight including 5 meter [16.4 feet] cable. Cable weight is 76 g [2.7 oz] per 1 meter [3.3 feet] when longer cables are utilized.
4.	Cable is pre-fitted (non-replaceable) to transducer, with flying lead in other end. Up to 15 meter [19.2 feet] cable can be pre-fitted.
5.	Transducer only to be operated by a ClampOn CEM® Corrosion-Erosion Monitor.
6.	Insulation/coating material must be clarified before ClampOn can confirm its suitability.
7.	The transducer cable is laid in a cable tray and protected by a flexible stainless steel conduit. Entire transducer assembly is protected by a flex protection cover.
8.	Temperature class is given at maximum ambient temperature (including any external source of heating, typically process temperature, where applicable).
9.	Head unit is T5 classified at listed T_{amb} while the EMAT transducers are T6... T3 classified depending on T_{amb} . See certificate and/or installation instructions for correlation between T_{amb} and temperature class.
10.	See certificate and/or installation instructions for specific conditions of use.