

**MFS-15, MTS / MFN-15-3G, MTN-15-3G Magnetic Field Detector, battery-operated**
**M.S-15**

- For detection of magnetic scrapers (Molch)
- Applicable in high-tension (H.T.) areas and hazardous locations Zone 2
- Consist of the sensing device type (MFS/MFN) and the optical data emitter type (MTS/MTN)
- POF connection: Phoenix QUICK-FSMA
- Short response time
- Applicable with optical data receivers types: ODS, FRS/FRN-SO-LWL and MES/MEN-SO-LWL

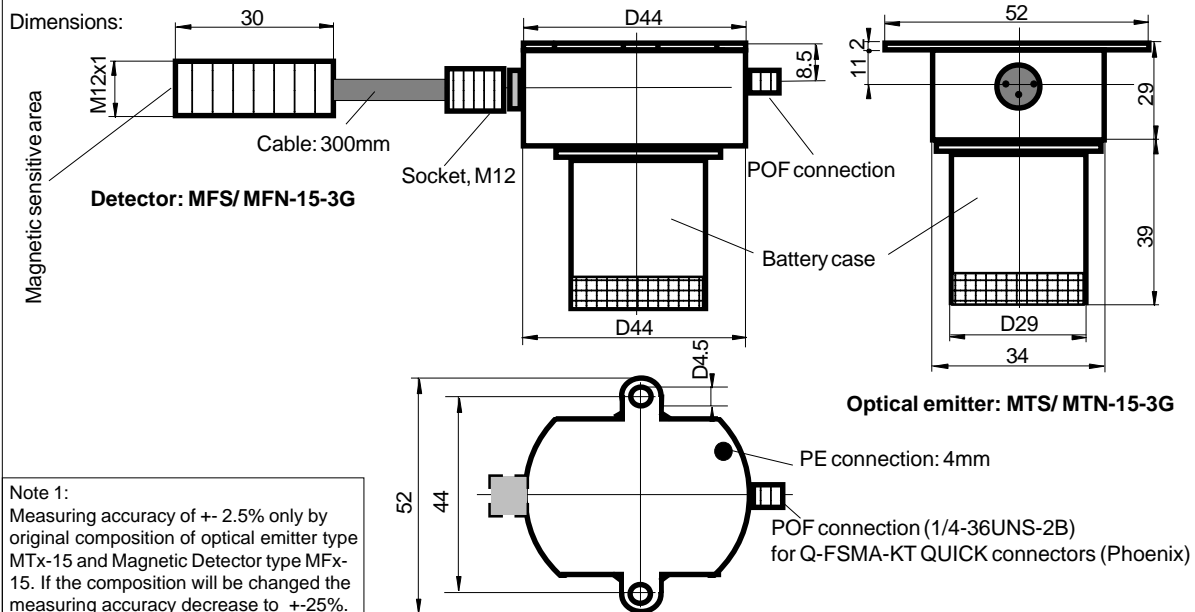

**M.N-15-3G**

**II 3 G  
EEx nA II T6**

Technical data	Type	MFS-15 and MTS-15	MFN-15-3G and MTN-15-3G
Type of Ex protection		None	II 3 G EEx nA II T6
Applicable in EX hazardous location		None	Zone 2
Housing		Brass Ms58, nickel plated	
Protection degree, with fixed POF, at EN 60529		IP65	IP67
Ambient working temperature TA		-20°C < TA < +70°C	
Battery life cycle		> 1 Year	
Technical data, Magnet Detection Device	Type	MFS-15	MFN-15-3G
Range		15mm +2.5% (on magnet with flux density 90 Gauss) <sup>Note1</sup>	
Housing		Brass Ms58, nickel plated, M12 x 30mm	
Technical data, Optical Emitter Device	Type	MTS-15	MTN-15-3G
Supply voltage		Lithium Battery, 3.6V, Size C, 7200mAh	
Current consumption		700uA	
Maximum power dissipation		ca. 1.9mW	
Response time		2.1ms	
Optical output		POF-connection for PHOENIX Q-FSMA connectors (Phoenix Article-No.: 18 85 99 4)	
Radiant optical power		ca. 20uW (coupled into plastic fibre)	
Accessories, MTx-15-3G (included)		- 1x Battery	
Accessories, MFN-15-3G		- 1x Safety lock device, mount at the cable connection, for locking the connection. - 1x Warning plate "WARNING - Explosion Hazard - Do Not Open Unless Area Is Known To Be Non-Hazardous", self-sealing, for gluing on the cable connector.	
Accessories (not included)		- Stand-by battery type SL-770/S - POF, single or multiple faser, D2.2mm/1mm - Q-FSMA POF-connector - Dual data receiver ODS (DIN rail) - Dual data receiver M30: FRS-SO-LWL or FRN-G-SO-LWL - Single data receiver M18: MES-SO-LWL or MEN-SO-LW-G	

**ATEX RELATED MARKINGS ON THE DEVICES**

CE Manufacturer with address  
 Device type II 3 G  
 TA: -20° < TA < +70° Electrical data according to the chart  
 Production date: Numbers 4 to 7 of the serial number


**Operating manual / CE Declaration of conformity:**

**INSTALLATION INSTRUCTIONS FOR HAZARDOUS LOCATIONS:**  
 "WARNING - EXPLOSION HAZARD - WHEN IN HAZARDOUS LOCATIONS, DO NOT OPEN THE BATTERY CASE". It is necessary to take into consideration the valid international and national rules and regulations (En 60079-14). The detector type MFN-15-3G and the optical emitter type MTN-15-3G are only applicable for the Ex zone 2.

**Function:**  
 The magnetic field detector MFx-15, with the optical emitter MTx-15 is applicable for the detection of scrapers, with magnetic cores, in hose pipes. The optical emitter unit, with the battery case, transfers the detection status over a POF at the optical receiver, located out of the H.T. area. A Low Battery status also will be transferred and indicated by the data receiving unit. The detector unit MFx-15 will be actuated on the north and the south pole of the permanent magnet inside the scraper. Attention: Exact centered positioned magnets will not be detected. (No magnetic flux at this position).

**Mounting the POF**  
 For mounting the POF a quick connector type Q-FSMA-KT (Phoenix No.: 1885994) will be required. (Not included in the package). POF specifications: Core diameter: 1mm, Cladding diameter: 2.2mm. Fix the connector Q-FSMA-KT at the emitter unit MTx-15. Cut the POF with the special cutter carefully and push them through the quick connector inside the optical emitter well set. Rigid fasten the locking nut at the quick connector. Do not use optical fibres longer than 10m. The functional safety of the data receiver is given by the working up of the optical fibres. Specially near the sensor, the fibre

optics must not be buckled or laid with a small radius. Buckled or bad laid fibre optics results to a strong decrease of performance. Avoid performance decreasing and failures caused by wear, by a functional mounting of the fibre optics.

**Safety Informations**  
 When installing and operating with the sensor, it is necessary to take into consideration the relevant international and other national regulations. ATEX 118a, ElexV, TRbF, TRD, UVV, EX-RL(BGR 104), BetrSichV(Atex137), single directive 1999/92/EG. Standards met: EN 50014, EN 50021; EN 61000-6-1/-2, EN 61000-6-3/4, EN 60529/ Ex protection: 94/9/EG (ATEX 100a) / Machine directive: 98/37/EG / Low voltage directive: 73/23/EWG, 93/68/EWG / EMV 89/336/EWG, 91/263/EWG, 92/31/EWG, 93/68/EWG / RoHS 2002/95/EG / Tech File: AN-EX-MSX

**General Notes**  
 We reserve the right to modify our equipment. Our equipment is designed in accordance with the RoHS directive. It neither emit or contain any damaging or siliconized substances and use a minimum of energy and resources. No longer usable or irreparable units must be disposed of in accordance with local waste disposal regulations.

**Declaration of Conformity**  
 The conformity of the devices with the EC standards and directives and the observation of the Quality Safety System ISO 9001:2000 with the ATEX module "Production", declares: Hans Bracher