

■ **Integral MagMaster Transmitter for hazardous locations and remote mount for general purpose use**

- integral mount reduces installation time and reduces wiring cost

■ **Hazardous area approvals (Applied for)**

- FM, CSA: Class I Div 1
- CENELEC: Zone 1

■ **Rugged, aluminium housing rated to IP68 (NEMA 6P)**

- insures suitability for use on difficult hazardous area applications and in flooded locations

■ **Designed, manufactured and calibrated to internationally accepted standards**

- ISO 9001; CENELEC; FM; CSA.
- insures reliable, maintenance-free operation

■ **Three internal totalizers: forward, reverse, net; Forward and reverse flowrates and comprehensive range of outputs : current, pulse, data, HART**

- single package satisfying all user display requirements

■ **Integral keypad for total programming flexibility without opening cover**

- insures compatibility with user's display and control system requirements

■ **HART and Keypad combined package**

■ **Two-year warranty standard**



MagMaster – bringing unsurpassed flowmetering performance to Industry

Hazardous Area Approval

The integral FH MagMaster transmitter is a metal housed unit for use in hazardous areas, such as chemical, pharmaceutical and oil industries wherever metering of conductive liquids is required. Approvals applied for include:

- FM CLASS I DIV 1, DIV 2, Zone 1 and general purpose
- CSA CLASS I DIV 1, DIV 2, Zone 1 and general purpose
- CENELEC Zone 1

The integral transmitter facilitates installation, reduces wiring costs and is ideal for applications and installation where local display and/or control is required on the meter.

Total Industry Coverage

The FH transmitter can be used with all the industry specific versions of MagMaster sensors in sizes 1/8 in. to 72 inches.

The rugged construction of the transmitter coupled with its IP68 (NEMA 6P) environmental rating ensures that it is equally suitable for difficult industrial applications and in the waste water industry for chambers which are liable to occasional flooding and may require an explosion-proof rating.

Continued High Standards

The FH transmitter, when used with the wide range of MagMaster sensors available, provides continuing unsurpassed flowmetering standards and performance for the waste water, pulp and paper, and mining industries. Approval, as applied for, permits use of the transmitter in hazardous areas.

The specification, features and user benefits offered by these ranges are based on ABB's worldwide experience in these industries, and are all specifically targeted to each industry's requirement.

Fully Featured Transmitter

A wide range of features and user benefits are built into the transmitter:

- bi-directional flow
- comprehensive test mode
- universal switch mode power supply (a.c. or d.c.)
- self-diagnostics
- programmable multiple alarm capability

These features help to ensure that the transmitter completely satisfies the user's requirements. The transmitter provides display, configuration and communications to suit the application. Standard features give forward, reverse and net flow totals, flow rate, alarm monitoring, and automatic self diagnostics to ensure integrity. All data and values are in customer-defined units of measurement. System compatibility is assured with a choice of current, pulse and Smart HART communications.

The standard keypad provides total programming / reprogramming flexibility and, with its menu driven configuration, is easy to use.

The software features multi-level password protection capability to prevent inadvertent program changes. Data is stored in nonvolatile memory for 10 year retention.

Assured Quality

The MagMaster transmitter is designed and manufactured in accordance with ISO 9001 international quality procedures to provide the user with complete assurance of quality and performance. An indication of the quality is the 2 year warranty which is offered as standard.

SS MAG.FH SUNSTAR自动化 <http://www.sensor-ic.com/> TEL: 0755-83376489 FAX: 0755-83376182 E-MAIL: szss20@163.com

SPECIFICATIONS

Programming Options

- **HART**
- **Local hand held configurator or laptop computer** (safe area)
- **Fully configurable.** A choice of engineering parameters in engineering units e.g. flowrate, flow units, all outputs etc.
- **Empty Pipe Detection.** Ensures units read zero on empty pipe.
- **Self diagnostics.** Ensures transmitter and sensor integrity.
- **Test mode.** Powerful commissioning aid. Exercises all outputs and displays even without a connected sensor.
- **Multilingual.** English, French, Spanish. Others on application.

Power Supply (fully isolated)

- 85 to 250 V a.c.; 47 to 440 Hz; < 2.0 VA
- 11 to 40 V d.c.; < 2.0 VA

Environmental Protection

IP68 (NEMA 6P) to 6.6 ft. (2m) depth for 10 days

EMC Specification

Conforms to : EMC Directive 89/336/EEC to 10V/m

Enclosure

LM25 Aluminium Alloy with glass window

Electrical Connections

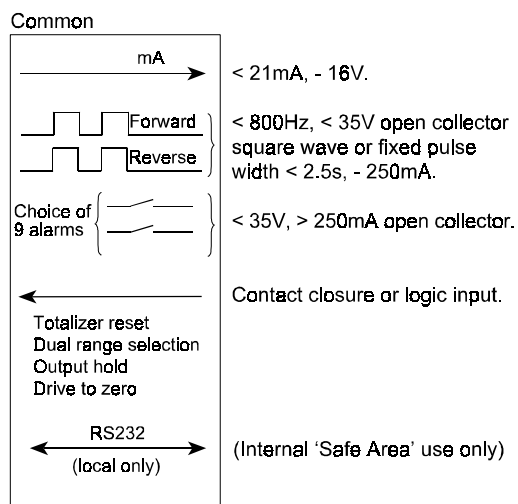
- Hazardous area : 0.5 in. NPT tapped and blanked
- Non-hazardous area : 0.5 in. NPT tapped and blanked

Hazardous Area Approvals (applied for)

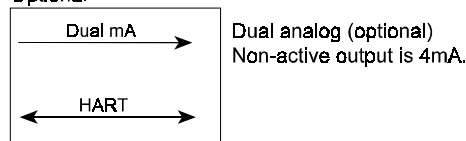
- FM and CSA CLASS I DIV 1 Groups A,B,C,D.
- FM and CSA CLASS I DIV 2 Groups A,B,C,D.
- FM and CSA Zone 1 d m e ia IIC T4 - T1
- FM and CSA General Purpose
- CENELEC Zone 1 EEx d m e ia IIC T4 - T1

Outputs/Inputs

Galvanic separation to 50Vd.c. between analog, pulse/ alarm and earth/ground.



Optional



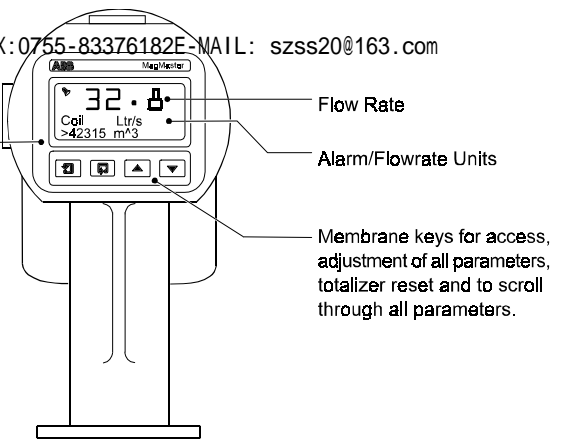
Remote Mounted Transmitter

SUNSTAR 传感与控制 <http://www.sensor-ic.com/> TEL:0755-83376549 FAX:0755-83376182E-MAIL: szss20@163.com

The pipe mounted remote style transmitter for non hazardous locations is available with up to 50 feet (15 m) of cable.

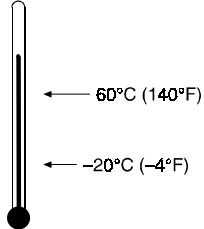
DISPLAY

Forward Flow Total
Reverse Flow Total
Net Flow Total
Alarms
Flow Velocity in m/s or ft/s
Flow Rate % of Range

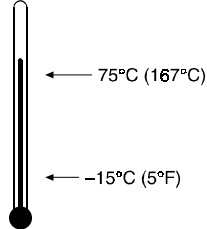


Temperature Range

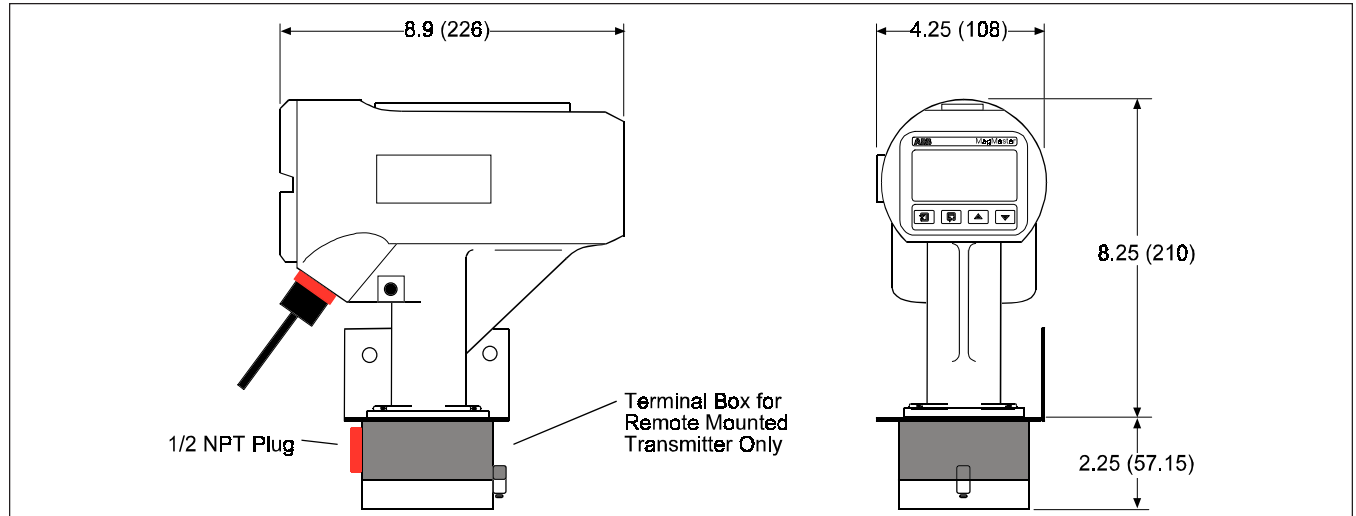
Operating



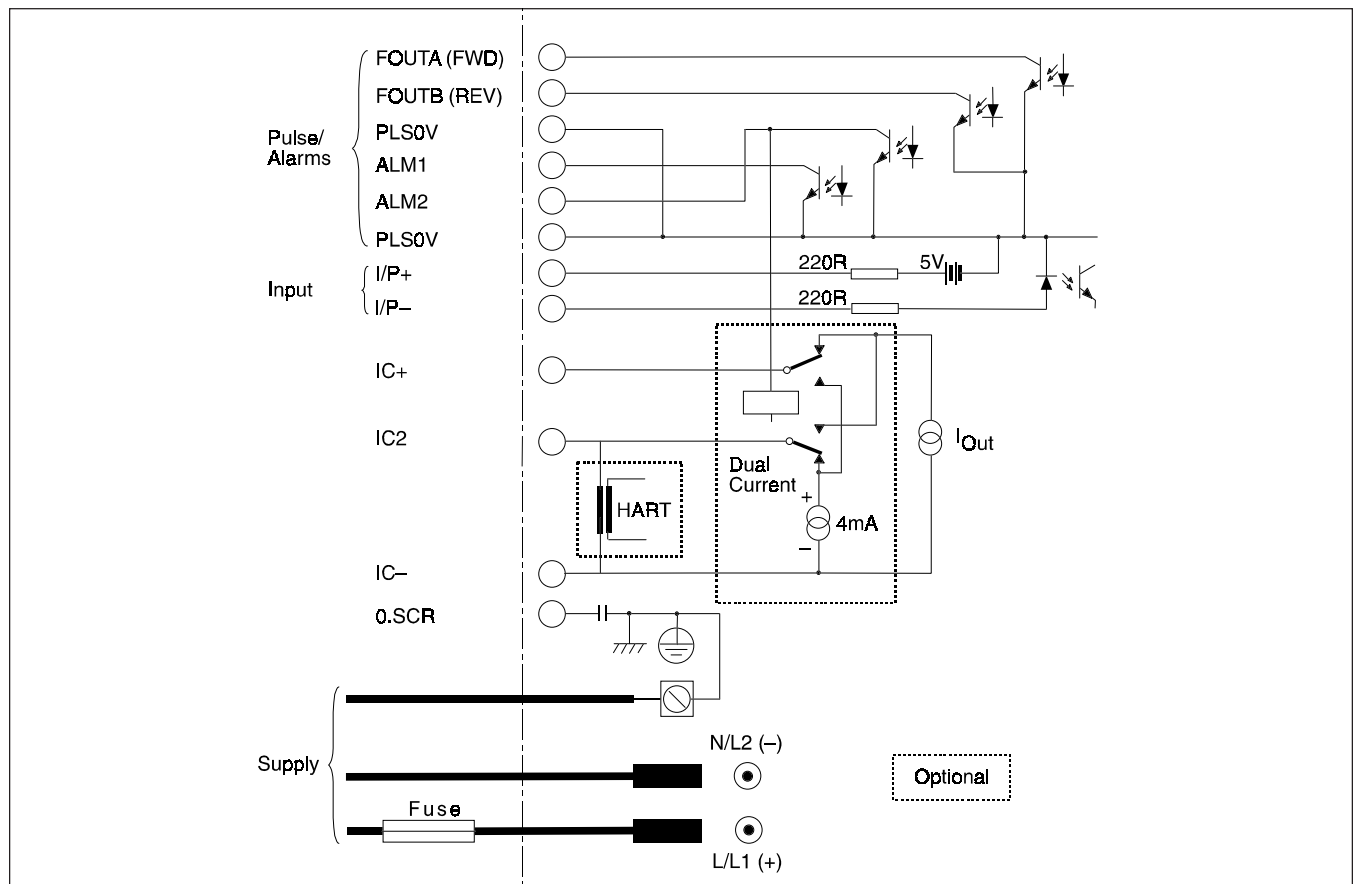
Storage



DIMENSIONS



CONNECTIONS



ORDERING INFORMATION
MagMaster Hazardous Area Transmitter

Select character(s) from each category and specify complete catalog number for transmitter as per sample below. Select sensor from applicable specification sheets.

Code No.	Description
	BASE NUMBER - 1 st through 3 rd Characters
MFE	MagMaster Transmitter
	GLANDING - 4 th character
4	0.5 in. NPT Conduit entry. No Glands or Adapters supplied.
	TRANSMITTER TYPE - 5 th and 6 th Characters
FH	Sensor mounted MagMaster Hazardous Area Transmitter
FR	Remote mounted MagMaster Hazardous Area Transmitter (order cable with sensor, maximum of 50 ft)
	POWER SUPPLY - 7 th Character
1	85V to 265V a.c., 47 to 440Hz
3	11V to 40V d.c., (maximum)
	DISPLAY - 8 th Character
4	3-Line display with keypad
0	None
	OUTPUT OPTIONS - 9 th Character
0	Standard outputs
1	Dual Current output
2	HART communications
	TRANSMITTER BUILD STANDARD - 10 th Character
1	General Purpose (no FM, CSA approval)
2	General Purpose (no FM, CSA approval) - Slurry Applications
3	FM, CSA General (PENDING)
4	FM, CSA General (PENDING) - Slurry Applications
B	FM, CSA Class I, Div. 1 (PENDING)
C	FM, CSA Class I, Div. 1(PENDING) - Slurry Applications
D	FM, CSA Class I, Div. 2 (PENDING)
E	FM, CSA Class I, Div. 2(PENDING) - Slurry Applications
F	FM, CSA Zone 1 (PENDING)
G	FM, CSA Zone 1 (PENDING) - Slurry Applications
H	CENELEC Zone 1 (PENDING)
I	CENELEC Zone 1 (PENDING) - Slurry Applications
	DISPLAY ORIENTATION - 11 th Character
1	Standard
	LANGUAGE - 12 th Character
1	English
2	French
4	Spanish
MFE4FH140111 - Sample MagMaster Transmitter Catalog Number	

IM/MAGMAS

OPTIONS (specify as separate item on order)

Instruction Manual for MagMaster (one included with each meter purchased).



The Company's policy is one of continuous product improvement and the right is reserved to modify specifications contained herein without notice.

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SS MAG.FH 98.1

ABB Instrumentation Inc.
 P.O. Box 20550
 Rochester, New York 14602
 Tel: (716) 292-6050
 Fax: (716) 273-6207

ABB Kent-Taylor Ltd.
 St. Neots Cambs.
 England, PE19 3EU
 Tel: (01480) 475321
 Fax: (01480) 217948

ABB Kent-Taylor Ltd.
 Stonehouse Glos.
 England, GLIO 37A
 Tel: (01453) 826661
 Fax: (01453) 862358

ABB Kent-Taylor SpA
 22016 Lenno
 Como, Italy
 Tel: (0344) 58111
 Fax: (0344) 56278