

EXPLOSION PROOF/FLAME PROOF (Ex D) SENSORS FOR HAZARDOUS AREA NOW AVAILABLE IN MX-SERIES



Introduction

The **MX-SERIES** range of oval gear flow meters feature:

- High precision billet construction for enhanced material integrity and process reliability.
- Programmable digital displays and numerous pulse output options.
- Various threaded and flanged process connections.

Macnaught is proud to now extend its range of pulse output options to include Ex D flame proof approved sensors for hazardous areas.

Specifications

Our **MX-SERIES** flow meters with Ex D pulse output features:

- Pressure ratings up to 2000psi/138 bar.
- 316 stainless steel or 6061 anodized aluminium flow meter body and oval gear rotor construction, with FEP seals.
- 303 stainless steel sensor body construction.
- Supply voltage: 5-27Vdc @ $\leq 15\text{mA}$.
- Output voltage: 0-Vs NPN (25mA max. sinking current). Reverse polarity protected.
- 22 AWG lead wires, 0.3m/12" length. M20x1.5 conduit thread.
- Accuracy of $\pm 0.5\%$ of reading, and $\pm 0.03\%$ repeatability.

Certifications

- ATEX & IECEx:
 - II 2 G Ex db IIC T6...T3 Gb
 - FM16ATEX0086X & IECEx FMG 16.0035X
 - T3 @ $-55^{\circ}\text{C} \leq T_{\text{amb}} \leq +140^{\circ}\text{C}$
 - T4 @ $-55^{\circ}\text{C} \leq T_{\text{amb}} \leq +112^{\circ}\text{C}$
 - T5 @ $-55^{\circ}\text{C} \leq T_{\text{amb}} \leq +77^{\circ}\text{C}$
 - T6 @ $-55^{\circ}\text{C} \leq T_{\text{amb}} \leq +62^{\circ}\text{C}$
- CE:
 - Compliance with EN55011, EN50082-2
- USA & Canada:
 - Class 1, Division 1**
 - GROUP ABCD T6...T3
 - Class 1, Zone 1, AEx/Ex dbIIC T6...T3 Gb
 - FM16US0288X & FM16CA0147X
 - T3 @ $-50^{\circ}\text{C} \leq T_{\text{amb}} \leq +140^{\circ}\text{C}$
 - T4 @ $-50^{\circ}\text{C} \leq T_{\text{amb}} \leq +112^{\circ}\text{C}$
 - T5 @ $-50^{\circ}\text{C} \leq T_{\text{amb}} \leq +77^{\circ}\text{C}$
 - T6 @ $-50^{\circ}\text{C} \leq T_{\text{amb}} \leq +62^{\circ}\text{C}$

Refer to certificates for appropriate certification information.

MX25P-1TC

MX PORT SIZE	
06	1/4"
09	1/4"
12	1/2"
19	3/4"
25	1"
40	1 1/2"
50	2"
75	3"
100	4"

MATERIALS OF CONSTRUCTION CATEGORY (METER/ROTOR/SEAL)	
S	AL/SS/FEP
P	SS/SS/FEP

PORT CONNECTION	
1	G
2	NPT
3	ANSI 150
4	JIS 10K
5	DIN PN16

ROTOR	
S	Standard
T	High Temperature
V	High Viscosity

OUTPUT TYPE	
X	No Output
A	Standard Output
B	Ex Approved (Ex ia)
C	Ex Approved (Flameproof Ex D)
D	PR (LCD 12mm display)
E	PRA (LCD 12mm display)
F	ER (LCD 17mm display)
G	ERA (LCD 17mm display)
H	ERB (LCD 17mm display)
N	Ex Approved (Ex ia NAMUR)
T	High Temperature
I	Reed Switch x2
J	Hall Effect x2
K	High Resolution

MX25

P

1

T

C

MX	PORT SIZE	STANDARD FLOW RATES	
		L/min	GPM
06	1/4"	0.5-100	0.13-26
09	1/4"	15-500	4-132
12	1/2"	2-30	0.5-8
19	3/4"	3-80	0.8-21
25	1"	6-120	1.6-32
40	1 1/2"	10-250	2.6-66
50	2"	15-500	4-130
75	3"	20-733	5-194
100	4"	120-1200	31.7-317

MATERIALS OF CONSTRUCTION		
	CATEGORY (METER/ROTOR/SEAL)	MODELS
F	AL/PPS/FKM	MX06-50
	AL/AL/FKM	MX75-100
P	SS/PPS/FEP	MX06-50
S	AL/SS/FEP	MX06-25
	AL/AL/FEP	MX40-100

	PORT CONNECTIONS	MODELS
1	G	All models*
2	NPT	
3	ANSI 150	MX25-100
4	JIS 10K	
5	DIN PN16	

*For 100 sized flow meters, threaded connections are 3"

	ROTOR	MODELS
S	Standard	As per category
T	High Temperature	MX06P-MX50P
V	High Viscosity	S and P Category, MX09 to MX100
H	High Viscosity PPS	F and P Category, MX09 to MX50

	OUTPUT	MODELS
X	No Output	All models
A	Standard Output	All models
B	Ex approved (Ex ia)	Consult Macnaught technical support before ordering
C	Ex approved (Flameproof ExD)	Consult Macnaught technical support before ordering
D	PR (LCD 12mm display)	All models
E	PRA (LCD 12mm display)	All models
F	ER (LCD 17mm display)	All models
G	ERA (LCD 17mm display)	All models
H	ERB (LCD 17mm display)	All models
N	Ex approved (Ex ia NAMUR)	Consult Macnaught technical support before ordering
T	High Temperature	S and P Category. 'T' type rotors must be used
I	Reed/Reed	Consult Macnaught technical regarding availability
J	Hall effect/Hall effect	
K	High Resolution	