

μ-Gard®

μ-Gard MA



2 - 10 V

4 – 20 mA
ADC.

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 -
 - 4 – 20 mA
 - 2 - 10 V
- ()
- ()

MA-X_Transmitter	
1	24 VDC
2	4..20 mA/2-10V DC
3	0 VDC

GAS ALARM SYSTEMS

	MA-0 CO	MA-9 O ₂	MA-9 NO	MA-2 NO ₂	MA-5 SO ₂	MA-2 NH ₃	MA-2 Ex	MA-2 NH ₃	MA-3 NH ₃	MA-4 Freon	MA-4 Ex	MA-3 ETO	
t_{90} (s)	≤ 50	≤ 15	≤ 45	≤ 25	≤ 15	≤ 120	(Pellistor)		≤ 10 (Methane)	≤ 100	≤ 50	≤ 30 Meth.	≤ 50
&	± 3 ppm	± 0,1 vol. %	± 0,2 ppm	± 0,2 ppm	0,2 ppm	<± 20 ppm	± 1% of reading		---	---	---	---	
(% of reading)	± 3 %	---	---	± 2 %	± 2 %	---	---		---	---	---	---	
reading/	< 5%	---	< 0,3 ppm	< 0,2 ppm	< 0,2 ppm	---	± < 6% LEL (Methane)		---	---	---	---	
(% reading/)	---	< 4% /12	< 5% /12	< 2% /1	< 2% /1	< 2% /1	± < 1,5% Methane		---	---	---	---	
()	5	2	2	2	2	2	3		5				
Max.	6						12						
non-condensing	15 – 90 % RH						15 – 90 % RH		15 – 95 % RH				
	-10 to + 50°C				-30 to + 50 °C		-15 to + 50°C		-15 to + 50 °C				
	5 C to + 40 °C						0 to + 50 °C		0 to + 50 °C				
	±10%												
	18 - 28 VDC ()												
	: 22 mA, max. 0,6 VA												
	Pellistor/ : 35 mA, max. 0.85 VA												
F	GW Plast 75 GWT												
	UL 94: V0												
	RAL 7032 (-)												
	(d x H) 87 x 45,5 mm												
	Approx. 0.2 kg												
	IP 43												
	3 pieces												
	. 0.25 mm ² (24 AWG) max. 2.5 mm ² (14 AWG)												
	Max. loop resist. 500 Ω (= wire resistor + controller input resistor)												
: 4-20 mA	Proportional, 4 – 20 mA, load ≤ 500 Ω overload and short-circuit proofed												
: 2-10 V	Proportional, 2 – 10 V, load 50 kΩ overload and short-circuit proofed												
	EMC- Directive 2004/108/EEC, CE												
	12 ()												



GAS ALARM SYSTEMS

MA-X-XXXX-F-X

4	0 – 20 ppm ^{5, 6}
6	0 – 50 ppm ^{1, 5, 8}
7	0 – 100 ppm ¹
8	0 – 150 ppm ¹
9	0 – 200 ppm ¹
A	0 – 250 ppm ¹
B	0 – 300 ppm ^{1, 2, 19 to 24}
C	0 – 400 ppm ¹
D	0 – 500 ppm ¹
E	0 – 1000 ppm ^{1, 2}
F	20 – 2000 ppm ^{12 to 25, 34}
K	0 – 25 vol % ⁷
L	0 – 50% LEL ³⁶
M	0 – 100 % LEL ^{3, 30, 31, 35}
Q	30 – 300 ppm ⁴

F	(87 x 45.5 mm) IP43
F1	(87 x 45,5 mm) IP44
A	(130 x 94 x 57 mm) IP65
D	(65 x 94 x 57 mm) IP43
D1	(65 x 94 x 57 mm) IP54
5	

¹ 0-1110	Carbon monoxide	CO
² 5-1120	Ammonia	NH ₃ El.Chem.
³ 2-1120	Ammonia	NH ₃ Pellistor
⁴ 3-1120	Ammonia	NH ₃ Semiconductor sensor
⁵ 9-1129	Nitrogen monoxide	NO
⁶ 2-1130	Nitrogen dioxide	NO ₂
⁷ 9-1195	Oxygen	O ₂
⁸ 5-1196	Sulphur dioxide	SO ₂
¹² 4-2070	Freon	R 22
¹³ 4-2071	Freon	R 401a
¹⁴ 4-2072	Freon	R 401b
¹⁵ 4-2073	Freon	R 402a
¹⁶ 4-2074	Freon	R 402b
¹⁷ 4-2075	Freon	R 408a
¹⁸ 4-2076	Freon	R 409a
¹⁹ 4-2077	Freon	R 134a
²⁰ 4-2078	Freon	R 404a
²¹ 4-2079	Freon	R 416a
²² 4-2069	Freon	R 507
²³ 4-2068	Freon	R 410a
²⁴ 4-2067	Freon	R 411a
²⁵ 4-2064	Freon	R 123
³⁰ 2-3400	Methane	CH ₄
³¹ 2-3480	Propane	C ₃ H ₈
³⁶ 4-3H55	Methane	CH ₄ (Semiconductor sensor)
³⁵ 4-3H80	Propane/ LPG	C ₃ H ₈ (Semiconductor sensor)
³⁴ 3-2089	Ethylene	C ₂ H ₄ (Semiconductor sensor)

2000ppm,

: Freon R134a,
: MA-4-2077-F-F

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