

MM 3012 - 800 DB AC (DC)

Intrinsically safe power supply of IIB and I class
12V/0.8 A or 16 V/0.8 A version

ISKROBEZPIECZNE
SYSTEMY
BEZPIECZEŃSTWA



DEVICE FEATURES:

- Universal intrinsically safe power supply - single channel with increased efficiency
 - Supply voltage 90 - 250 V DC, 265 V AC
 - Output voltage 12 V, 15 V (12 V/0.8 A, 15 V/0.8 A)
 - Explosion-proof housing Ex d..
- Classification for chemical applications - II 2G..
- Explosion-proof enclosure Ex d..
- Classification for mines applications - I M2..
- Short-circuit resistance
 - Quick start (recovery)
 - Installation outside the Ex-zone or in a metal housing

AVAILABLE MODELS:

- MM 3012-800 DB AC - 12 V / 0.8 A output
- MM 3016-800 DB AC - 16 V / 0.8 A output
- MM 3012-800 DB/d X103 HM - in fixed housing
- MM 3016-800 DB/d X103 HM - in fixed housing
- MM 3012-800 DB/d X450 D2 - in fixed housing
- MM 3016-800 DB/d X450 D2 - in fixed housing
- MM 3016-800 DB/d X450 D2 - in fixed housing

ENVIRONMENTAL CLASS:

- II (1) G [Ex ia Ga] IIB
- I (M1) [Ex ia Ma] I

ATEX:

- FTZU 14 ATEX 0197

FIXED HOUSING CLASS - MINES:

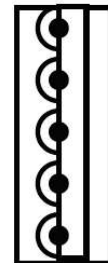
- I M2 Ex de I Mb

FIXED HOUSING CLASS - GASES:

- II 2G Ex de IIB T6 Gb at $-20^{\circ}\text{C} < T_a < +55^{\circ}\text{C}$
- II 3D Ex tc IIIB T78°C Dc at $-20^{\circ}\text{C} < T_a < +55^{\circ}\text{C}$

Power Supply MM 3012-800 AC - DB

Intrinsic safety output



+ Ucc
+ Ucc
NC
- Ucc
- Ucc

I.S. Power

Overload

CE 1026

ATEX: FTZU 14 ATEX 0197

Ex I (M1) [Ex ia Ma] I

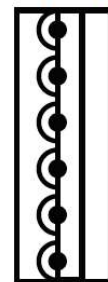
Ex II (1G) [Ex ia Ga] IIB

Uo	12.8 V
Io	0,9 A
Po	24,32 W
Co	10 uF
Lo	200 uH

P./N: MMG9990

Ta = -20°C do $+80^{\circ}\text{C}$

Input power



Sw
Sw
NC
Pe
N
L

Power

Power supply input
Umax 265 V AC/250 V DC

MM GROUP, s.r.o.
Úzká 13, Havířov
Czech Republic



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tel. +48 693 345 823



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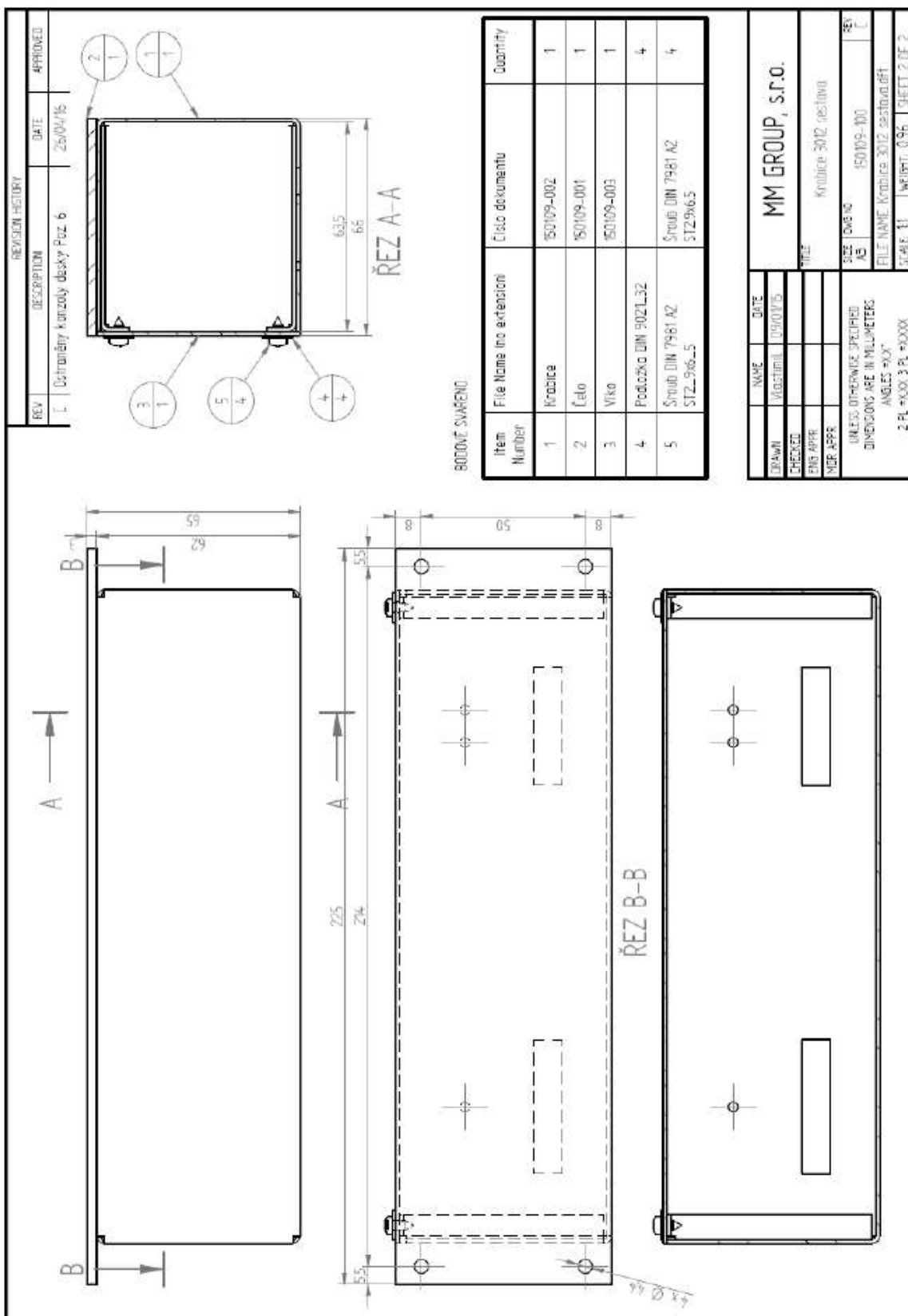
TECHNICAL DATA:

Number of channels	1	
Short-circuit resistance	YES	
Recovery/boot time	500 μ s	
Maximum voltage	U_{MAX} : 265 V/50 Hz lub 250 V _{DC}	
Power supply voltage	U_{AC} : 90 V - 265 V or U_{DC} : 90 - 250 V, 9 - 18 V, 18 - 36 V, 36 - 72 V	
Power consumption	< 50 VA	
Output voltage	12 V	16 V
Output current	0.8 A	0.8 A
Class IIB parameters	C_o - 2 μ F, L_o - 200 μ H for all types	
Class I parameters	C_o - 10 μ F, L_o - 200 μ H for all types	
Operation Temperature Range	-20° to +80°	
Enviromental Class	klasyfikacja II (1)G [Ex ia Ga] IIB, I (M1) [Ex ia Ma] I	
Terminal connection	Terminal connection may vary	
IP Rating	Electronics housing > IP54	Terminals IP20
Dimensions	225 mm x 66 mm x 65 mm (HxWxD)	
Connection terminals	Rastr - 5.08 mm	
Connector type	Spring clamp, Push-in,	
Color of the terminals	Green	
Contact surface	Cin	
Max. wire diameter	2.5 mm ²	
LED Indication		
Power Supply	Green	
Output voltage	Blue	
Overload (output voltage drop)	Red	
ATEX Certificates		
Intrinsically safe	FTZU 14 ATEX 0197	
Fixed Housing - Mines	FTZU 02 ATEX 0197X	
Fixed Housing - Gases	FTZU 02 ATEX 0198X	

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MM 3012-800 DE AC (DC)

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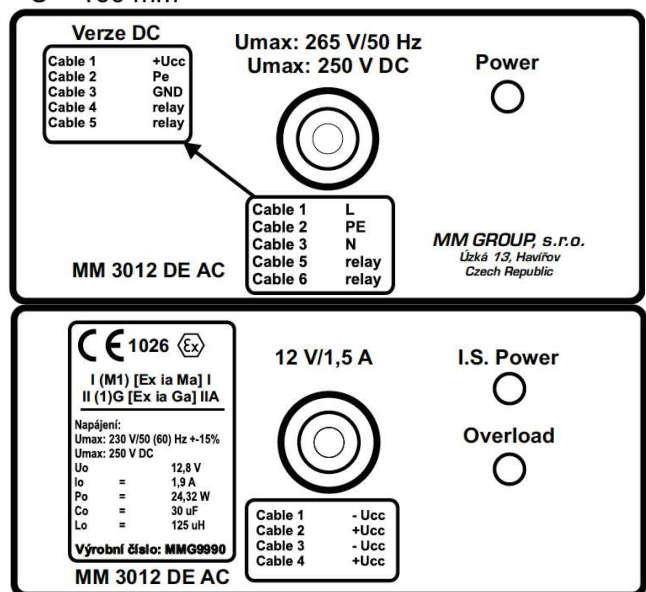
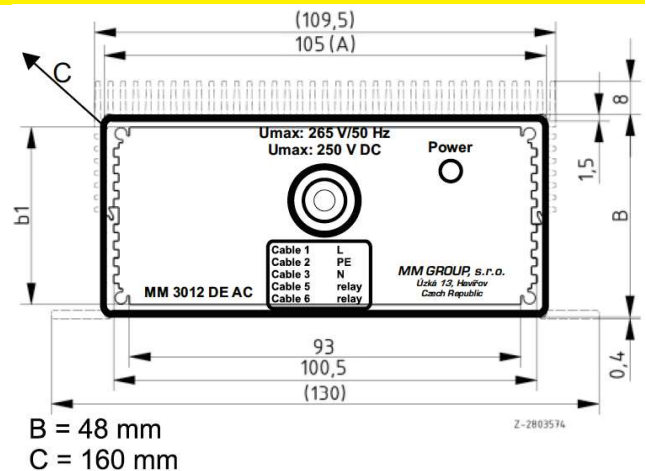


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ENVIROMENTAL CLASS:

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FIXED HOUSING CLASS - MINES:

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- II 3D Ex tc IIIB T78°C Dc at -20°C < Ta < +55°C



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Power supply voltage	U_{AC} : 90 V - 265 V or U_{DC} : 90 - 250 V, 9 - 18 V, 18 - 36 V, 36 - 72 V	
Power consumption	< 50 VA	
Output voltage	12 V	16 V
Output current	0.8 A	0.8 A
Class IIB parameters	C_o - 2 μ F, L_o - 200 μ H for all types	
Class I parameters	C_o - 10 μ F, L_o - 200 μ H for all types	
Operation Temperature Range	-20° to +80°	
Enviromental Class	klasyfikacja II (1)G [Ex ia Ga] IIB, I (M1) [Ex ia Ma] I	
Terminal connection	Terminal connection may vary	
IP Rating	Electronics housing > IP54	Terminals IP20
Dimensions	160 mm x 130 mm x 48 mm (HxWxD)	
Connection	Cable	
LED Indication		
Power Supply	Green	
Output voltage	Bue	
Overload (output voltage drop)	Red	
ATEX Certificates		
Intrinsically safe	FTZU 14 ATEX 0197	
Fixed Housing - Mines	FTZU 02 ATEX 0197X	
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Filotec enclosures with cooling fins on one half-shell and continuous profiled wall brackets on the other half-shell



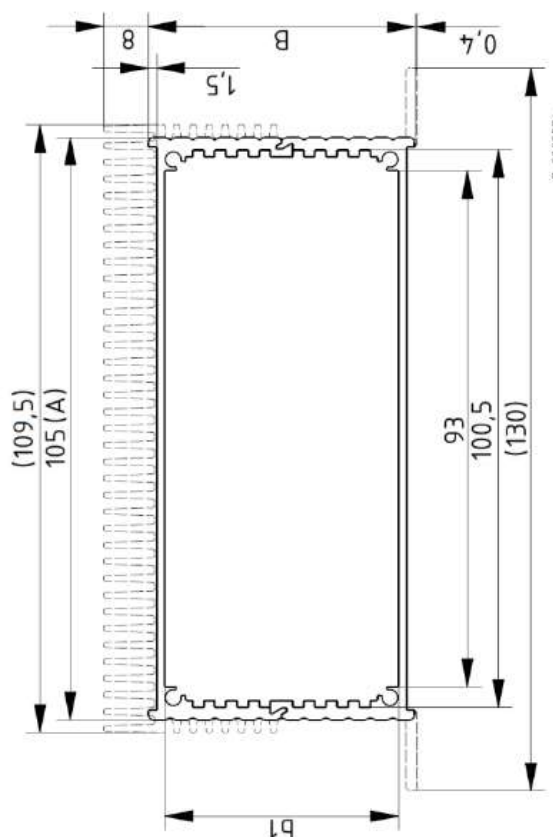
Model	Order no.	A	B	C	b1
F 1048-80 KWL	97418080	130	48	80	42
F 1048-100 KWL	97418100	130	48	100	42
F 1048-160 KWL	97418160	130	48	160	42
F 1048-220 KWL	97418220	130	48	220	42
F 1048-1000 KWL	97418000**	130	48	1000	42

Scope of delivery: 2 enclosure half shells, 8 screws for mounting cover

Note: C = profile length, special lengths on request. Covers: See following pages. Please order separately.

** = supplied without wall fitting holes and screw accessory pack. Please order fixing screws (1 piece) separately: 59000175.

F 10.. (K/WL)



Appendix for: MM 3012-800 DB (DE) AC (DC)

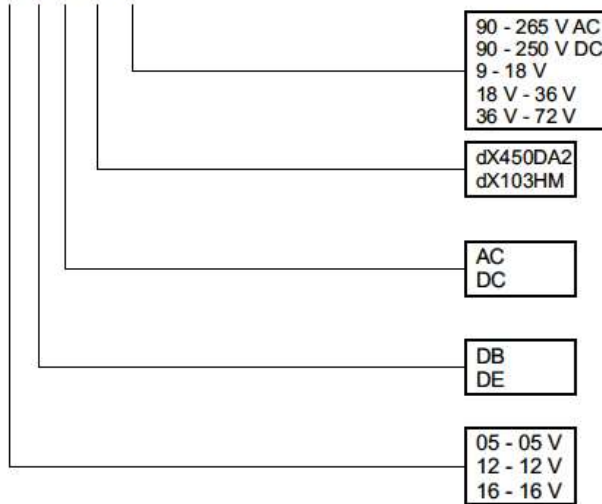
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MARKING:

MM 30... .. /... /...



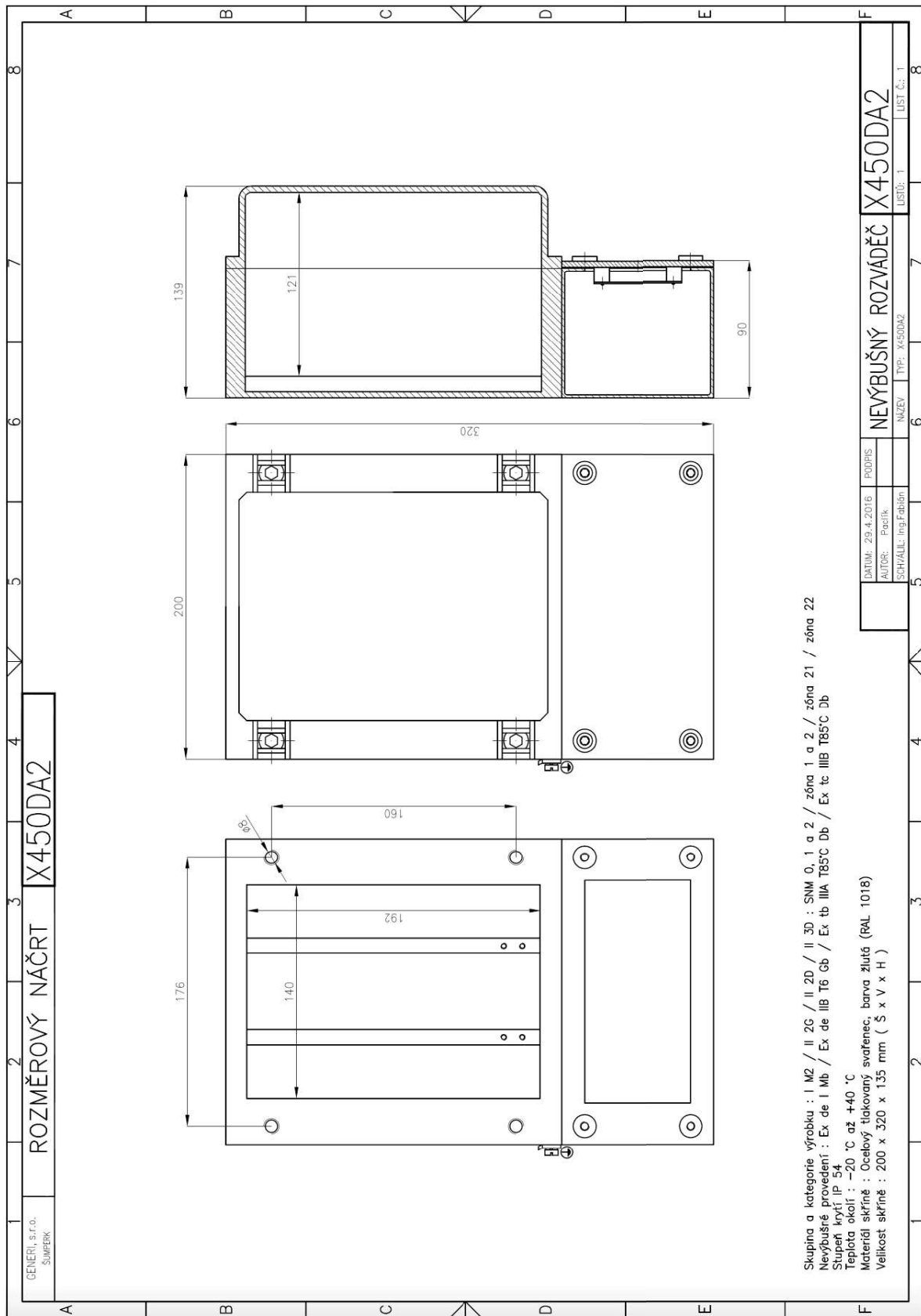
PARTS NUMBERS:

Model	IP Rating	Operation Temperature Range	Finish Material	Enviromental Class
MM 3012 DE AC (DC), 3005, 3015	IP 66	-20°C do +80°C	Aluminium	I (M1) [Ex ia Ma] I, II (2)G [Ex ia Ga] IIA
MM 3012 DE ../d X 450 DA 2	IP 66	-20°C do +60°C	Welded steel 11373, RAL GREY	I M2 Ex de I Mb (SNM, SNP), II 2G Ex de IIB T6 Gb (Zone 1, 2), II 2D Ex tb IIIA T85°C Db (Zone 21, 22), II 3D Ex tc IIIB T85°C Dc (Zone 22) Output: I (M1) [Ex ia Ma] I II (2)G [Ex ia Ga] IIA
MM 3012 DB AC (DC), 3005, 3015	IP 66, terminal IP20	-20°C do +80°C	Stainless steel	I (M1) [Ex ia Ma] I, II (2)G [Ex ia Ga] IIA
MM 3012 DB ../d X 103 HM	IP 66	-20°C do +40°C	Aluminium	II 2G Ex de IIB T6 Gb, II 3D Ex tc IIIB T6 T78°C Dc, Output: I (M1) [Ex ia Ma] I, II (2)G [Ex ia Ga] IIA

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