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Type Examination Certificate

for Electrical Equipment used in Potentially Explosive Atmosphere

Issued by Eurofins E&E CML Limited, Newport Business Park, New Port Road, Ellesmere Port CH65 4LZ, UK	
Applicant	GM International S.R.L. Via G. Mameli, 53/55, 20852 Villasanta (MB), Italy
Manufacturer name	GM International S.R.L. Via G. Mameli, 53/55, 20852 Villasanta (MB), Italy
Product name	Isolation Barrier
Type/model code	D5072S, D5072D, D5072S-xxx, D5072D-xxx, D5072S-087, D5072D-087, D5072S-096, D5072D-096, D5072S-099, D5072DS-099 D5273S, D5273S-xxx
Type of protection	Increased Safety, Intrinsic Safety, Type of Protection "n"
Group, Temperature Class and EPL	IIC T4 Gc IIIC
The equipment shall be marked with the following	See Attachment 1
Ratings	See Attachment 2
Special condition for safe use	See Attachment 3
Certificate number	CML 22JPN2118X
Term of validity	From 23-05-2022 to 22-05-2025 

This is to certify that the equipment specified above complies with the requirements stipulated in Ordinance on Examination of Machines and Other Equipment of the Ministry of Health, Labour and Welfare, Japan.

Issue date: 23-05-2022

Signature of chief examiner:



Attachment 1: Marking

Temperature converter types D5072S, D5072D, D5072S-xxx, D5072D-xxx, D5072S-087, D5072D-087, D5072S-096, D5072D-096, D5072S-099, D5072DS-099:

Ex ec [ia Ga] IIC T4 Gc
[Ex ia Da] IIIC
-40 °C to +70 °C

Temperature converter with trip amp types D5273S, D5273S-xxx:

Ex ec nC [ia Ga] IIC T4 Gc
[Ex ia Da] IIIC
-40 °C to +70 °C

Attachment 2: Ratings

Non-intrinsically safe circuits:

Power supply

DIN Rail Isolator version	Voltage		Power
	Un	Um	Pn
	DC [V]	AC [V]	[W]
D5072S, D5072S-087, D5072S-099, D5072S-xxx	24	253	≤ 0.9
D5072S-096	24	253	≤ 0.75
D5072D, D5072D-087, D5072D-099, D5072D-xxx	24	253	≤ 1.4
D5072D-096	24	253	≤ 1
D5273S, D5273S-xxx	24	253	≤ 2.4

Input / output signal circuits: Voltage Um = AC 253 V

Intrinsically safe circuits [Ex ia IIC / IIB / IIA / IIIC]:

Single channel parameters	DIN Rail Isolator type				
	D5072S, D5072S-xxx, D5072S-087, D5072S-099	D5072S-096	D5072D, D5072D-xxx, D5072D-087, D5072D-099	D5072D-096	D5273S, D5273S-xxx
Device marking	Ex ec [ia Ga] IIC T4 Gc [Ex ia Da] IIIC				Ex ec nC [ia Ga] IIC T4 Ga [Ex ia Da] IIIC
1	7-8-9-10	7-8	7-8-9	7-8	13-14-15-16



Single channel parameters		DIN Rail Isolator type				
		D5072S, D5072S-xxx, D5072S-087, D5072S-099	D5072S-096	D5072D, D5072D-xxx, D5072D-087, D5072D-099	D5072D-096	D5273S, D5273S-xxx
Channel / Terminals	2	n/a	n/a	10-11-12	11-12	n/a
Voltage Uo		DC 7.2 V	DC 7.2 V	DC 7.2 V	DC 7.2 V	DC 7.2 V
Current Io		23 mA	23 mA	16 mA	16 mA	23 mA
Power Po		40 mW	40 mW	27 mW	27 mW	40 mW
Voltage Ui		DC 12.8 V	DC 12.8 V	DC 12.8 V	DC 12.8 V	DC 12.8 V
Current Ii		n/a	n/a	n/a	n/a	n/a
Power Pi		n/a	n/a	n/a	n/a	n/a
Effective internal capacitance Ci		0 nF	0 nF	0 nF	0 nF	0 nF
Effective internal inductance Li		0 nH	0 nH	0 nH	0 nH	0 nH
Maximum external capacitance Co	IIC	13.5 uF	13.5 uF	13.5 uF	13.5 uF	13.5 uF
	IIB	240 uF	240 uF	240 uF	240 uF	240 uF
	IIIC	240 uF	240 uF	240 uF	240 uF	240 uF
Maximum external inductance Lo	IIA	1000 uF	1000 uF	1000 uF	1000 uF	1000 uF
	IIC	67.2 mH	67.2 mH	138 mH	138 mH	67.2 mH
	IIB	268.8 mH	268.8 mH	555 mH	555 mH	268.8 mH
Maximum L/R ratio Lo / Ro	IIIC	537.7 mH	537.7 mH	1111 mH	1111 mH	537.7 mH
	IIC	0.875 mH/Ω	0.875 mH/Ω	1.29 mH/Ω	1.29 mH/Ω	0.875 mH/Ω
	IIB	3.5 mH/Ω	3.5 mH/Ω	5.16 mH/Ω	5.16 mH/Ω	3.5 mH/Ω
	IIA	7 mH/Ω	7 mH/Ω	10.33 mH/Ω	10.33 mH/Ω	7 mH/Ω
Characteristics		Linear	Linear	Linear	Linear	Linear
Ambient temperature range		-40 °C ≤ Ta ≤ +70 °C				

Attachment 3: Special conditions for safe use

- i. Group II gas applications: DIN Rail Isolators of type series D5**** and D5****-xxx shall be installed in an area of at least pollution degree 2. When installed in a hazardous area, DIN Rail Isolators of type series D5**** and D5****-xxx shall be installed in an Ex enclosure with an ingress protection rating of at least IP54.
- ii. Group III dust applications: DIN Rail Isolators of type series D5**** and D5****-xxx shall be installed outside the hazardous area or, alternatively, in an Ex enclosure providing a suitable type of protection.



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Issue: 0

- iii. General: The installation of DIN Rail Isolators of type series D5**** and D5****-xxx shall be carried out in such a way that the clearances of un-insulated conductors of intrinsically safe circuits to grounded metal parts of the enclosure are at least 3 mm, and un-insulated conductors of non-intrinsically safe circuits of other apparatus are situated at least 50 mm from terminals for external intrinsically safe circuits, or are separated from them by an appropriate insulating barrier.