IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION
IEC Certification Scheme for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.:	IECEx BVS 10.0072X issue No.:0	Certificate history:
Status:	**Current**	
Date of Issue:	**2010-10-20**	Page 1 of 3

Applicant: **GM International S.R.L.**
Via San Fiorano 70
20058 Villasanta (MI)
Italy

Electrical Apparatus: **DIN Rail Isolator type D5****, D5****-xxx**
Optional accessory:

Type of Protection: **Intrinsic safety "i"; Type of Protection "n"; Equipment with equipment protection level (EPL) Ga; Intrinsic safety "iD"**

Marking: **Ex nA [ia Ga] IIC T4 Gc, [Ex ia Da] IIIC, [Ex ia Ma] I**
Ex nA nC [ia Ga] IIC T4 Gc, Ex nA nC IIC T4 Gc

Approved for issue on behalf of the IECEx Certification Body: H.-Ch. Simanski

Position: Head of Certification Body

Signature:
(for printed version)

Date: 20/10/2010

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2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting the Official IECEx Website.

Certificate issued by:

DEKRA EXAM GmbH
Dinnendahlstrasse 9
44809 Bochum
Germany

DEKRA
DEKRA EXAM GmbH

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Certificate No.: IECEx BVS 10.0072X

Date of Issue: **2010-10-20** Issue No.: **0**

Manufacturer: **GM International S.R.L.**
Via San Fiorano 70
20058 Villasanta (MI)
Italy

Manufacturing location(s):

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements. This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended.

STANDARDS:
The electrical apparatus and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards:

IEC 60079-0 : 2007-10 Edition: 5	Explosive atmospheres - Part 0:Equipment - General requirements
IEC 60079-11 : 2006 Edition: 5	Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
IEC 60079-15 : 2005-03 Edition: 3	Electrical apparatus for explosive gas atmospheres Part 15: Construction, test and Marking of Type of Protection "n" electrical apparatus
IEC 60079-26 : 2006 Edition: 2	Explosive atmospheres - Part 26: Equipment with equipment protection level (EPL) Ga
IEC 61241-11 : 2005 Edition: 1	Electrical apparatus for use in the pressence of combustible dusts - Part 11: Protection by intrinsic safety 'iD'

*This Certificate **does not** indicate compliance with electrical safety and performance requirements other than those expressly included in the Standards listed above.*

TEST & ASSESSMENT REPORTS:
A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in

Test Report:

DE/BVS/ExTR10.0103/00

Quality Assessment Report:
NO/DNV/QAR07.0005/03

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Schedule

EQUIPMENT:
Equipment and systems covered by this certificate are as follows:

Description
See Annex

Type Code
See Annex

Ratings
See Annex

CONDITIONS OF CERTIFICATION: YES as shown below:

1. Group I application:
DIN Rail Isolators of type series D5****, D5****-xxx shall be installed outside the hazardous area or alternatively in an enclosure providing a suitable type of protection according to separate certification.

2. Group II application:
DIN Rail Isolators of type series D5****, D5****-xxx shall be installed:
- outside the hazardous area, or
- shall be mounted inside an enclosure, which is in accordance with IEC 60079-15 in case of alternative installation in areas requiring EPL Gc equipment.

3. Group III application:
DIN Rail Isolators of type series D5****, D5****-xxx shall be installed outside the hazardous area.

4. General
The installation of DIN Rail Isolators of type series D5****, 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 insulating barrier according to clause 6.2.1 of IEC 60079-11:2006.

Annexe: BVS_10_0072X_GM_Annex.pdf

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Certificate No.: **IECEx BVS 10.0072X**
Annex

Description:

Repeater Power Supply type D5011S, D5011S-xxx, D5011D, D5011D-xxx
Repeater Power Supply type D5011*, D5011*-xxx provides a fully floating single or dual channel intrinsically safe DC supply for energizing conventional 2 wires 4 - 20 mA transmitters located in a hazardous area, and repeats the current in floating circuit to drive a safe area load.

Repeater Power Supply type D5014S, D5014S-xxx, D5014D, D5014D-xxx
Repeater Power Supply type D5014*, D5014*-xxx provides a fully floating single or dual channel DC supply for energizing conventional 2/3 wires 0/4-20 mA, active or passive, transmitters located in a hazardous area, and repeats the current in floating circuit to drive a safe area load.
Available versions: single channel: type D5014S, D5014S-xxx; dual channel: type D5014D, D5014D-xxx.

Powered Isolating Driver type D5020S, D5020S-xxx, D5020D, D5020D-xxx
Isolating Driver Type D5020*, D5020*-xxx provides single or dual channel intrinsically safe power supply for valve positioners or I/P-converters and repeats a non intrinsically safe 4 - 20 mA analogue signal from a controller located in safe area to a load up to 700 Ω. Available versions: single channel: type D5020S, D5020S-xxx; dual channel: type D5020D, D5020D-xxx.

Switch/Proximity Detector Repeater type D5030S, D5030S-xxx, D5030D, D5030D-xxx
The single and dual channel Switch/Proximity Detector Repeater D5030*, D5030*-xxx is a device that can be configured for switch or proximity detector (EN60947-5-6, NAMUR), NO or NC and for NE or ND SPST (D5030D, D5030D-xxx) or SPDT (D5030S, D5030S-xxx) relay output contact.
Each channel enables a safe area load to be controlled by a switch, or a proximity detector, located in a hazardous area.
Available versions of the Switch/Proximity Detector Repeater: single channel: type D5030S, D5030S-xxx. dual channel: type D5030D, D5030D-xxx.

Switch/Proximity Detector Repeater type D5031S, D5031S-xxx, D5031D, D5031D-xxx
The single and dual channel Switch/Proximity Detector Repeater D5031*, D5031*-xxx is a device that can be configured for switch or proximity detector (EN60947-5-6, NAMUR),
NO or NC and for NO or NC optocoupled open collector transistor output.
Each channel enables a safe area load to be controlled by a switch, or a proximity detector, located in a hazardous area.
Available versions of the Switch/Proximity Detector Repeater: single channel: type D5031S, D5031S-xxx. dual channel: type D5031D, D5031D-xxx.

Switch/Proximity Detector Repeater type D5032S, D5032S-xxx, D5032D, D5032D-xxx
The single and dual channel Switch/Proximity Detector Repeater D5032*, D5032*-xxx is a device that can be configured for switch or proximity detector (EN60947-5-6, NAMUR),
NO or NC and for NE or ND SPST (D5032D, D5032D-xxx) or SPDT (D5032S, D5032S-xxx) relay output contact
Each channel enables a safe area load to be controlled by a switch, or a proximity detector, located in a hazardous area.
Available versions of the Switch/Proximity Detector Repeater: single channel: type D5032S, D5032S-xxx. dual channel: type D5032D, D5032D-xxx.

Switch/Proximity Interface type D5034S, D5034S-xxx, D5034D, D5034D-xxx
Switch/Proximity Interface types D5034*, D5034*-xxx provide single or dual channel intrinsically safe power supply for switch / proximity switch circuits and repeat the status of contacts or proximity switches in non intrinsically safe output circuits.
Available versions of the Switch/Proximity Interface: single channel: type D5034S, D5034S-xxx. dual channel: type D5034D, D5034D-xxx.

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Annex

Digital Output type D5048S, D5048S-xxx, type D5049S, D5049S-xxx,
Digital Output Type D504*S, D504*S-xxx provides single channel intrinsically safe remote outputs to operate solenoid valves, LEDs or audible alarms driven by non intrinsically safe digital remote signals. The versions type D5048S, D5048S-xxx, type D5049S, D5049S-xxx provide different electrical parameters.

Relay output type D5090S, D5090S-xxx, D5091S, D5091S-xxx
Relay output type D5290S, D5290S-xxx, D5291S, D5291S-xxx
Relay modules type D5*9*S, D5*9*S-xxx provides single channel isolation between input and output contacts in different configuration of the contacts with regard to switching of safety related circuits.
The relay modules are designed as EPL Gc equipment, not providing any IS circuits.

Relay module type D5293S, D5293S-xxx, D5294S, D5294S-xxx
Relay module type D529*S, D529*S-xxx provides single channel isolation between input and output contacts.
D5293S, D5293S-xxx provide 1+1 SPST contact for normally energized load. Three voltage free relay contacts in series are inserted in an external 2-wire supply circuit.
D5294S, D5294S-xxx has 2+2 SPST relay contacts connected in series and then in parallel to avoid spurious trip and to increase availability.
The relay modules are designed as EPL Gc equipment, not providing any IS circuits.

Short cut explanation

NO = Normal Open	ND = Normal De-energized
NC = Normal Closed	SPST = Single-Pole Single-Throw
NE = Normal Energized	SPDT = Single-Pole Double-Throw

Type Code

Repeater Power Supply	type	D5011*, D5011*-xxx
Repeater Power Supply	type	D5014*, D5014*-xxx
Powered Isolating Driver	type	D5020*, D5020*-xxx
Switch/Proximity Detector Repeater	type	D5030*, D5030*-xxx
Switch/Proximity Detector Repeater	type	D5031*, D5031*-xxx
Switch/Proximity Detector Repeater	type	D5032*, D5032*-xxx
Switch/Proximity Interface	type	D5034*, D5034*-xxx
Digital Output	type	D5048S, D5048S-xxx, D5049S, D5049S-xxx
Relay Output Module	type	D5090S, D5090S-xxx, D5091S, D5091S-xxx
Relay Output Module	type	D5290S, D5290S-xxx, D5291S, D5291S-xxx
Relay Output Module	type	D5293S, D5293S-xxx, D5294S, D5294S-xxx

In the full designation the "*" is replaced by letters marking details of construction as follows:

S	= single channel	S-xxx	= single channel
D	= dual channel	D-xxx	= dual channel

(Option 'xxx' = non Ex -relevant details of function)

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Certificate No.: IECEx BVS 10.0072X
Annex

Ratings:

1 Non intrinsically safe circuits

1.1 Power supply

DIN Rail Isolator version	Voltage		Power
	U_n	U_m	P_n
	DC [V]	AC [V]	[W]
D5011S, D5011S-xxx	24	250	≤1.35
D5011D, D5011D-xxx	24	250	≤2.90
D5014S, D5014S-xxx,	24	250	≤1.35
D5014D, D5014D-xxx	24	250	≤2.70
D5020S, D5020S-xxx,	24	250	≤1.00
D5020D, D5020D-xxx	24	250	≤2.00
D5030S, D5030S-xxx	24	250	≤0.50
D5030D, D5030D-xxx	24	250	≤1.00
D5031S, D5031S-xxx	24	250	≤0.35
D5031D, D5031D-xxx	24	250	≤0.70
D5032S, D5032S-xxx	24	250	≤0.50
D5032D, D5032D-xxx	24	250	≤1.00
D5034S, D5034S-xxx,	24	250	≤0.40
D5034D, D5034D-xxx	24	250	≤0.80
D5048S, D5048S-xxx	24	250	≤1.80
D5049S, D5049S-xxx	24	250	≤1.80
D5090S, D5090S-xxx, D5091S, D5091S-xxx	24	N / A	≤1.20
D5290S, D5290S-xxx, D5291S, D5291S-xxx	24	N / A	≤2.00
D5293S, D5293S-xxx	24	N / A	≤2.00
D5294S, D5294S-xxx	24	N / A	≤2.70
Remark: N / A = not applicable			

1.2 Input / output signal circuits (General, refers to devices providing IS circuits)

Voltage U_m = AC 250 V

1.3 Relay Output Module D5** / D5****-xxx**

1.3.1 Relay Output Module type D5090S, D5090S-xxx, D5091S, D5091S-xxx
Device marking: Ex nA nC IIC T4 Gc

1.3.2 Relay Output Module type D5290S, D5290S-xxx, D5291S, D5291S-xxx
Device marking: Ex nA nC IIC T4 Gc

Single channel; contact rating	Device	D5090*	D5091*	D5290*	D5291*
		Terminals			
contact status when the relay is energized	closed	7-8)[1]	7-8)[1]	13-14	13-14
	open	9-10)[1]	9-10)[1]	13-15	13-15
rated AC voltage		250 V		250 V	
rated AC current		4 A		10 A	
rated AC Power		1000 VA		2500 VA	
rated DC voltage		250 V		250 V	
rated DC Current		4 A)[2]		10 A)[2]	
rated DC Power		120 W		300 W	
Ambient temperature range		$-40\ °C \le T_a \le +70\ °C$			

Remark:
)[1] 7+9 common circuit
)[2] Derating curve for DC Voltage

1.3.3 Relay Output Module type D5293S, D5293S-xxx, D5294S, D5294S-xxx
Device marking: Ex nA nC IIC T4 Gc

Single channel; contact rating	Device	D5293*	D5294*
		Terminals	
2-wire load power connection	in	15 (+) -16 (-))[1]	15 (+) -16 (-))[1]
	out	13 (+) -14 (-))[1]	13 (+) -14 (-))[1]
rated AC voltage		250 V	250 V
rated AC current		10 A	10 A
rated AC Power		2500 VA	2500 VA
rated DC voltage		250 V	250 V
rated DC Current		10 A)[2]	10 A)[2]
rated DC Power		300 W	300 W
Ambient temperature range		$-40\ °C \le T_a \le +70\ °C$	

Remark:
)[1] DC as specified, or AC
)[2] Derating curve for DC Voltage

2 Intrinsically safe circuits level of protection Ex ia IIC / IIB / IIA / I

2.1 Repeater Power Supply D5**** / D5****-xxx

2.1.1 Repeater Power Supply type D5011*, D5011*-xxx

Device marking: Ex nA [ia Ga] IIC T4 Gc, [Ex ia Da] IIIC, [Ex ia Ma] I

Single channel parameters		Terminals		
Channel	1	7-8)[1]		
	2	9-10)[1]		
Voltage U_o		DC 25.9 V		
Current I_o		92 mA		
Power P_o		594 mW		
Voltage U_i		N / A		
Current I_i		N / A		
Power P_i		N / A		
Effective internal capacitance C_i		N / A		
Effective internal inductance L_i		N / A		
Max. external capacitance C_o	IIC	100 nF		
	IIB iaD	770 nF		
	IIA	2.63 µF		
	I	4.02 µF		
Max. external inductance L_o	IIC	4.2 mH		
	IIB iaD	16.8 mH		
	IIA	33.7 mH		
	I	55.2 mH		
Max. inductance / resistance ratio L_o/R_o	IIC	59.9 µH/Ω		
	IIB iaD	239.7 µH/Ω		
	IIA	479.4 µH/Ω		
	I	786.6 µH/Ω		
Characteristics		linear		
Ambient temperature range		-40 °C ≤ T_a ≤ +70 °C		

Remarks:

)[1] 2-wire circuit "T*+", "T*-" parameters of supply circuit

N / A = not applicable

2.1.2 Repeater Power Supply type D5014*, D5014*-xxx
Device marking: Ex nA [ia Ga] IIC T4 Gc, [Ex ia Da] IIIC, [Ex ia Ma] I

Single channel parameters		Terminals		
Channel	1	7-8)[1]	7-11)[3]	8-11)[2]
	2	9-10)[1]	9-12)[3]	10-12)[2]
Voltage U_o		DC 25.9 V		DC +/- 1.1 V
Current I_o		92 mA		56 mA
Power P_o		594 mW		16 mW
Voltage U_i		N / A		DC 30 V
Current I_i		N / A		128 mA
Power P_i		N / A		N / A
Effective internal capacitance C_i		N / A		0 nF
Effective internal inductance L_i		N / A		0 mH
Max. external capacitance C_o	IIC	100 nF		100 µF
	IIB iaD	770 nF		1000 µF
	IIA	2.63 µF		1000 µF
	I	4.02 µF		1000 µF
Max. external inductance L_o	IIC	4.2 mH		11.5 mH
	IIB iaD	16.8 mH		46.0 mH
	IIA	33.7 mH		92.1 mH
	I	55.2 mH		151.1 mH
Max. inductance / resistance ratio L_o/R_o	IIC	59.9 µH/Ω		2327.2 µH/Ω
	IIB iaD	239.7 µH/Ω		9309.0 µH/Ω
	IIA	479.4 µH/Ω		18618.1µH/Ω
	I	786.6 µH/Ω		30545.4 µH/Ω
Characteristics		linear		linear
Ambient temperature range		-40 °C ≤ T_a ≤ +70 °C		

Remarks:

)[1] 2-wire circuit "T*+", "T*-" parameters of supply circuit
)[2] 2-wire circuit "-I*+", "I*-" parameters of input circuit
)[3] 3-wire circuit "T*+" "I*+", "I*-" not used

N / A = not applicable

2.2 Powered Isolating Driver D5**** / D5****-xxx

2.2.1 Powered Isolating Driver type D5020*, D5020*-xxx

Device marking: Ex nA [ia Ga] IIC T4 Gc, [Ex ia Da] IIIC, [Ex ia Ma] I

Single channel parameters		Terminals		
Channel	1	7-8)[1]		
	2	9-10)[1]		
Voltage U_o		DC 25.9 V		
Current I_o		93 mA		
Power P_o		595 mW		
Voltage U_i		N / A		
Current I_i		N / A		
Power P_i		N / A		
Effective internal capacitance C_i		N / A		
Effective internal inductance L_i		N / A		
Max. external capacitance C_o	IIC	100 nF		
	IIB iaD	770 nF		
	IIA	2.63 µF		
	I	4.02 µF		
Max. external inductance L_o	IIC	4.1 mH		
	IIB iaD	16.7 mH		
	IIA	33.5 mH		
	I	54.9 mH		
Max. inductance / resistance ratio L_o/R_o	IIC	59.7 µH/Ω		
	IIB iaD	239.0 µH/Ω		
	IIA	478.1 µH/Ω		
	I	784.5 µH/Ω		
Characteristics		linear		
Ambient temperature range		-40 °C ≤ T_a ≤ +70 °C		

Remarks:

)[1] 2-wire circuit "O*+", "O*-" parameters of supply circuit

N / A = not applicable

2.3 Switch/Proximity Detector Repeater / Switch/Proximity Interface D5** / D5****-xxx**

2.3.1 Switch/Proximity Detector Repeater type D5030*, D5030*-xxx
Device marking: Ex nA nC [ia Ga] IIC T4 Gc, [Ex ia Da] IIIC, [Ex ia Ma] I

2.3.2 Switch/Proximity Detector Repeater type D5031*, D5031*-xxx
Device marking: Ex nA [ia Ga] IIC T4 Gc, [Ex ia Da] IIIC, [Ex ia Ma] I

2.3.3 Switch/Proximity Detector Repeater type D5032*, D5032*-xxx
Device marking: Ex nA nC [ia Ga] IIC T4 Gc, [Ex ia Da] IIIC, [Ex ia Ma] I

Single channel parameters	Device	D5030*	D5031*	D5032*
		Terminals		
Channel	1	7-8)[1]	7-8)[1]	7-8)1
	2	9-10)[1]	9-10)[1]	9-10)1
Voltage U_o		DC10.5 V	DC10.5 V	DC10.5 V
Current I_o		22 mA	22 mA	22 mA
Power P_o		56 mW	56 mW	56 mW
Voltage U_i		N / A	N / A	N / A
Current I_i		N / A	N / A	N / A
Power P_i		N / A	N / A	N / A
Effective internal capacitance C_i		1.1 nF	1.1 nF	1.1 nF
Effective internal inductance L_i		N / A	N / A	N / A
Max. external capacitance C_o	IIC	2.41 µF	2.41 µF	2.41 µF
	IIB iaD	16.8 nF	16.8 nF	16.8 nF
	IIA	75 µF	75 µF	75 µF
	I	66 µF	66 µF	66 µF
Max. external inductance L_o	IIC	78.3 mH	78.3 mH	78.3 mH
	IIB iaD	313.4 mH	313.4 mH	313.4 mH
	IIA	626.9 mH	626.9 mH	626.9 mH
	I	1028.6 mH	1028.6 mH	1028.6 mH
Max. inductance / resistance ratio L_o/R_o	IIC	635.9 µH/Ω	635.9 µH/Ω	635.9 µH/Ω
	IIB iaD	2543.9 µH/Ω	2543.9µH/Ω	2543.9 µH/Ω
	IIA	5087.9 µH/Ω	5087.9µH/Ω	5087.9 µH/Ω
	I	8347.4 µH/Ω	8347.4µH/Ω	8347.4 µH/Ω
Characteristics		linear	linear	linear
Ambient temperature range		-40 °C ≤ T_a ≤ +70 °C		

Remarks:

)[1] 2-wire circuit "I*+", "I*-" parameters of supply circuit

N / A = not applicable

2.3.4 Switch/Proximity Interface type D5034*, D5034*-xxx
Device marking: Ex nA [ia Ga] IIC T4 Gc, [Ex ia Da] IIIC, [Ex ia Ma] I

Single channel parameters		Terminals		
Channel	1	7-8)[1]		
	2	9-10)[1]		
Voltage U_o		DC10.5 V		
Current I_o		15 mA		
Power P_o		39 mW		
Voltage U_i		N / A		
Current I_i		N / A		
Power P_i		N / A		
Effective internal capacitance C_i		N / A		
Effective internal inductance L_i		N / A		
Max. external capacitance C_o	IIC	2.41 µF		
	IIB iaD	16.8 nF		
	IIA	75 µF		
	I	66 µF		
Max. external inductance L_o	IIC	163.2 mH		
	IIB iaD	652.8 mH		
	IIA	1305.6 mH		
	I	2142.0 mH		
Max. inductance / resistance ratio L_o/R_o	IIC	918.2 µH/Ω		
	IIB iaD	3672.9 µH/Ω		
	IIA	7345.8 µH/Ω		
	I	12051.8 µH/Ω		
Characteristics		linear		
Ambient temperature range		-40 °C ≤ T_a ≤ +70 °C		

Remarks:

)[1] 2-wire circuit "T*+", "T*-" parameters of supply circuit

N / A = not applicable

2.4 Digital Output Driver D5** / D5****-xxx**

2.4.1 Digital Output Driver type D5048S, D5048S-xxx
Device marking: Ex nA [ia Ga] IIC T4 Gc, [Ex ia Da] IIIC, [Ex ia Ma] I

2.4.2 Digital Output Driver type D5049S, D5049S-xxx
Device marking: Ex nA [ia Ga] IIC T4 Gc, [Ex ia Da] IIIC, [Ex ia Ma] I

Single channel parameters		Terminals		
Channel	1	7-10)[1]	8-10)[2]	9-10)[3]
	2	N / A	N / A	N / A
Voltage U_o		DC 24.8 V	DC 24.8 V	DC 24.8 V
Current I_o		147 mA	108 mA	93 mA
Power P_o		907 mW	667 mW	571 mW
Voltage U_i		N / A	N / A	N / A
Current I_i		N / A	N / A	N / A
Power P_i		N / A	N / A	N / A
Effective internal capacitance C_i		N / A	N / A	N / A
Effective internal inductance L_i		N / A	N / A	N / A
Max. external capacitance C_o	IIC	113 nF	113 nF	113 nF
	IIB iaD	860 nF	860 nF	860 nF
	IIA	3.05 µF	3.05 µF	3.05 µF
	I	4.35 µF	4.35 µF	4.35 µF
Max. external inductance L_o	IIC	1.65 mH	3.07 mH	4.19 mH
	IIB iaD	6.63 mH	12.30 mH	16.79 mH
	IIA	13.27 mH	24.60 mH	33.58 mH
	I	21.78 mH	40.36 mH	55.09 mH
Max. inductance / resistance ratio L_o/R_o	IIC	39.2 µH/Ω	53.3 µH/Ω	62.3 µH/Ω
	IIB iaD	156.8 µH/Ω	213.5 µH/Ω	249.4 µH/Ω
	IIA	313.6 µH/Ω	427.0 µH/Ω	498.9 µH/Ω
	I	514.6 µH/Ω	700.6 µH/Ω	818.5 µH/Ω
Characteristics		linear	linear	linear
Ambient temperature range		-40 °C ≤ T_a ≤ +70 °C		

Remarks:

)[1] 2-wire circuit 'Out A' "O1+", "O-" parameters of supply circuit
)[2] 2-wire circuit 'Out B' "O2+", "O-" parameters of supply circuit
)[3] 2-wire circuit 'Out C' "O3+", "O-" parameters of supply circuit
"O-" = common ground for "O*+"
'Out A / B / C' are used exclusive or only

N / A = not applicable

IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION
IEC Certification Scheme for Explosive Atmospheres
for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.:	IECEx BVS 10.0072X issue No.:1	Certificate history: Issue No. 1 (2013-10-28) Issue No. 0 (2010-10-20)
Status:	Current	
Date of Issue:	2013-10-28	Page 1 of 4

Applicant: **GM International S.R.L.**
Via San Fiorano 70
20852 Villasanta (MB)
Italy

Electrical Apparatus: **DIN Rail Isolator type D5****, D5****-xxx**
Optional accessory:

Type of Protection: **Equipment protection by intrinsic safety "i", Equipment protection by intrinsic safety "i", Equipment protection by type of protection "n", Equipment with equipment protection level (EPL) Ga**

Marking: Ex nA [ia Ga] IIC T4 Gc, [Ex ia Da] IIIC, [Ex ia Ma] I
Ex nA nC [ia Ga] IIC T4 Gc, Ex nA nC IIC T4 Gc

Approved for issue on behalf of the IECEx Certification Body: H.-Ch. Simanski

Position: Head of Certification Body

Signature: (for printed version)

Date: 28.10.2013

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting the Official IECEx Website.

Certificate issued by:

DEKRA EXAM GmbH
Dinnendahlstrasse 9
44809 Bochum
Germany

DEKRA EXAM GmbH

IECEx Certificate of Conformity

Certificate No.: IECEx BVS 10.0072X

Date of Issue: **2013-10-28** Issue No.: **1**

Manufacturer: **GM International S.R.L.**
Via San Fiorano 70
20852 Villasanta (MB)
Italy

Additional Manufacturing location (s):

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements. This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended.

STANDARDS:
The electrical apparatus and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards:

IEC 60079-0 : 2011 Edition: 6.0	Explosive atmospheres - Part 0: General requirements
IEC 60079-11 : 2011 Edition: 6.0	Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
IEC 60079-15 : 2010 Edition: 4	Explosive atmospheres - Part 15: Equipment protection by type of protection "n"
IEC 60079-26 : 2006 Edition: 2	Explosive atmospheres - Part 26: Equipment with equipment protection level (EPL) Ga

*This Certificate **does not** indicate compliance with electrical safety and performance requirements other than those expressly included in the Standards listed above.*

TEST & ASSESSMENT REPORTS:
A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in

Test Report:
DE/BVS/ExTR10.0103/01

Quality Assessment Report:

NO/DNV/QAR07.0005/04

IECEx Certificate of Conformity

Certificate No.: IECEx BVS 10.0072X

Date of Issue: **2013-10-28** Issue No.: **1**

Schedule

EQUIPMENT:
Equipment and systems covered by this certificate are as follows:

Type Code

(no extension)

Description:
DIN Rail Isolators have been subjected optionally to some minor changes not affecting IS parameters.

Ratings:
Parameters specified in previous issue 00 remain valid without change.
Lo, Co and Lo/Ro parameters specified for Group IIB in previous issue 00 apply in addition for Group IIIC.

CONDITIONS OF CERTIFICATION: YES as shown below:

1. Group I application:
DIN Rail Isolators of type series D5****, D5****-xxx shall be installed outside the hazardous area or alternatively in an enclosure providing a suitable type of protection according to separate certification.

2. Group II application:
DIN Rail Isolators of type series D5****, D5****-xxx shall be installed:
- outside the hazardous area, or
- shall be mounted inside an enclosure, which is in accordance with IEC 60079-15 in case of alternative installation in areas requiring EPL Gc equipment.

3. Group III application:
DIN Rail Isolators of type series D5****, D5****-xxx shall be installed outside the hazardous area or alternatively in an enclosure providing a suitable type of protection according to separate certification.

4. General
The installation of DIN Rail Isolators of type series D5****, 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 insulating barrier according to clause 6.2.1 of IEC 60079-11:2011.

IECEx Certificate of Conformity

Certificate No.: IECEx BVS 10.0072X

Date of Issue: **2013-10-28** Issue No.: **1**

DETAILS OF CERTIFICATE CHANGES (for issues 1 and above):

DIN Rail Isolators have been subjected to some minor changes not affecting IS parameters.

IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION
IEC Certification Scheme for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.:	IECEx BVS 10.0072X issue No.:2	Certificate history: Issue No. 2 (2014-4-11) Issue No. 1 (2013-10-28) Issue No. 0 (2010-10-20)
Status:	**Current**	
Date of Issue:	**2014-04-11** Page 1 of 4	

Applicant: **GM International S.R.L.**
Via San Fiorano 70
20852 Villasanta (MB)
Italy

Electrical Apparatus: **DIN Rail Isolator type D5****, D5****-xxx**
Optional accessory:

Type of Protection: **Equipment protection by type of protection "n"**

Marking: Ex nA nC IIC T4 Gc

Approved for issue on behalf of the IECEx Certification Body: H.-Ch. Simanski

Position: Head of Certification Body

Signature:
(for printed version)

Date: 11.4.2014

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3. The Status and authenticity of this certificate may be verified by visiting the Official IECEx Website.

Certificate issued by:

DEKRA EXAM GmbH
Dinnendahlstrasse 9
44809 Bochum
Germany

DEKRA EXAM GmbH

IECEx Certificate of Conformity

Certificate No.: IECEx BVS 10.0072X

Date of Issue: **2014-04-11** Issue No.: **2**

Manufacturer: **GM International S.R.L.**
Via San Fiorano 70
20852 Villasanta (MB)
Italy

Additional Manufacturing location (s):

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements. This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended.

STANDARDS:
The electrical apparatus and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards:

IEC 60079-0 : 2011 Edition: 6.0	Explosive atmospheres - Part 0: General requirements
IEC 60079-15 : 2010 Edition: 4	Explosive atmospheres - Part 15: Equipment protection by type of protection "n"

*This Certificate **does not** indicate compliance with electrical safety and performance requirements other than those expressly included in the Standards listed above.*

TEST & ASSESSMENT REPORTS:
A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in

Test Report:
DE/BVS/ExTR10.0103/02

Quality Assessment Report:

NO/DNV/QAR07.0005/05

IECEx Certificate of Conformity

Certificate No.: IECEx BVS 10.0072X

Date of Issue: **2014-04-11** Issue No.: **2**

Schedule

EQUIPMENT:
Equipment and systems covered by this certificate are as follows:

Type Code

Relay Output Module type D5290S-078 and D5290S-078-xxx
(Option 'xxx' = non Ex -relevant details of function)

Description

The Relay Modules type series D5*9*S, D5*9*S-xxx, providing single channel isolation between supply-input and output contacts have been extended with new models D5290S-078 and D5290S-078-xxx.
The Relay Output Modules type D5290S-078 and D5290S-078-xxx is designed as EPL Gc equipment, not providing any IS circuits.
Electronic components of the Relay Output Module are arranged on printed-circuit-boards (PCB) packaged in plastic enclosures suitable for installation on T35 DIN Rails.

1 Power supply circuit

Relay Output Module type	Voltage U_n DC [V]	Power Dissipation P_n [W]
D5290S-078, D5290S-078-xxx	24	≤ 1.5

2 Relay contacts

Contact Rating			
Voltage U_n	AC 250 V	DC 250 V	DC 30 V
Current I_{load})[1]	≤ 5 A	≤0,2 A)[2]	≤ 5 A
Power)[1]	≤ 1250 VA	)[2]	≤ 175 W
)[1] resistive load	)[2] see detailed data sheet		

3 Ambient temperature range -40 °C ≤ Ta ≤ +70 °C

CONDITIONS OF CERTIFICATION: YES as shown below:

The Relay Output Module type D5290S-078 / type D5290S-078-xxx shall be installed inside an enclosure, which is in accordance with IEC 60079-15.

IECEx Certificate of Conformity

Certificate No.: IECEx BVS 10.0072X

Date of Issue: **2014-04-11** Issue No.: **2**

DETAILS OF CERTIFICATE CHANGES (for issues 1 and above):

The Relay Modules type series D5*9*S, D5*9*S-xxx, providing single channel isolation between supply-input and output contacts have been extended with new models D5290S-078 and D5290S-078-xxx.

IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION
IEC Certification Scheme for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.:	IECEx BVS 10.0072X	issue No.:3	Certificate history: Issue No. 3 (2015-2-4) Issue No. 2 (2014-4-11) Issue No. 1 (2013-10-28) Issue No. 0 (2010-10-20)
Status:	**Current**		
Date of Issue:	**2015-02-04**	Page 1 of 5	

Applicant: **G.M. International S.R.L.**
Via San Fiorano 70
20852 Villasanta (MB)
Italy

Electrical Apparatus: **DIN Rail Isolator (extention: Relay Output Module) type D5****, D5****-xxx (extention: D529*S / D529*S-xxx; '*' = 3, 4, 5)**

Optional accessory:

Type of Protection: **Equipment protection by type of protection "n"**

Marking: Ex nA nC IIC T4 Gc

Approved for issue on behalf of the IECEx Certification Body: H.-Ch. Simanski

Position: Head of Certification Body

Signature:
(for printed version)

Date: 4.2.2015

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3. The Status and authenticity of this certificate may be verified by visiting the Official IECEx Website.

Certificate issued by:

DEKRA EXAM GmbH
Dinnendahlstrasse 9
44809 Bochum
Germany

DEKRA
DEKRA EXAM GmbH

IECEx Certificate of Conformity

Certificate No.: IECEx BVS 10.0072X

Date of Issue: **2015-02-04** Issue No.: **3**

Manufacturer: **G.M. International S.R.L.**
Via San Fiorano 70
20852 Villasanta (MB)
Italy

Additional Manufacturing location (s):

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements. This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended.

STANDARDS:
The electrical apparatus and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards:

IEC 60079-0 : 2011 Edition: 6.0	Explosive atmospheres - Part 0: General requirements
IEC 60079-15 : 2010 Edition: 4	Explosive atmospheres - Part 15: Equipment protection by type of protection "n"

*This Certificate **does not** indicate compliance with electrical safety and performance requirements other than those expressly included in the Standards listed above.*

TEST & ASSESSMENT REPORTS:
A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in

Test Report:
DE/BVS/ExTR10.0103/03

Quality Assessment Report:

NO/DNV/QAR07.0005/05

IECEx Certificate of Conformity

Certificate No.: IECEx BVS 10.0072X

Date of Issue: **2015-02-04** Issue No.: **3**

Schedule

EQUIPMENT:
Equipment and systems covered by this certificate are as follows:

Type Code

Relay Output Module: type D5293S / type D5293S-xxx, type D5294S / type D5294S-xxx
type D5295S / type D5295S-xxx
(Option 'xxx' = non Ex-relevant details of construction or function)

Description

The Relay Output-Modules type D5293S / type D5293S-xxx, type D5294S / type D5294S-xxx may be subjected to minor change optionally and enhanced with models Relay Output-Module type D5295S / type D5295S-xxx.
The Relay Output Module type D5295S / type D5295S-xxx is designed as EPL Gc equipment, not providing any IS circuits.
Electronic components of the Relay Output-Module type D5295S / type D5295S-xxx are arranged on printed-circuit-boards (PCB) packaged in plastic enclosures suitable for installation on T35 DIN Rails.

CONDITIONS OF CERTIFICATION: YES as shown below:

The Relay Output Module type type D5293S / type D5293S-xxx, type D5294S / type D5294S-xxx type D5295S / type D5295S-xxx shall be installed inside an enclosure, which is in accordance with IEC 60079-15.

IECEx Certificate of Conformity

EQUIPMENT(continued):

Rating

1 Power supply circuit

Relay Output Module type	Voltage U_n DC [V]	Power dissipation P_n [W]
D5293S, D5293S-xxx	24	≤ 1.2
D5294S, D5294S-xxx D5295S, D5295S-xxx	24	≤ 1.45

2 Relay contacts

Contact rating			
Voltage U_n	AC 250 V	DC 250 V	DC 30 V
Current I_{load} [1]	≤ 4 A	≤ 0.2 A [2]	≤ 4 A
Power [1]	≤ 1000 VA	[2]	≤ 120 W
[1] resistive load	[2] see detailed data sheet		

3 Ambient temperature range -40 °C ≤ T_a ≤ +70 °C

IECEx Certificate of Conformity

Certificate No.: IECEx BVS 10.0072X

Date of Issue: **2015-02-04** Issue No.: **3**

DETAILS OF CERTIFICATE CHANGES (for issues 1 and above):

Models subjected to change: type D5293S / D5293S-xxx, type D5294S / D5294S-xxx
Extension with new models: type D5295S / D5295S-xxx
(Option 'xxx' = non Ex-relevant details of construction or function)

IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION
IEC Certification Scheme for Explosive Atmospheres

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Certificate No.:	IECEx BVS 10.0072X	issue No.:4
Status:	**Current**	
Date of Issue:	**2015-07-16**	Page 1 of 4

Certificate history:
Issue No. 4 (2015-7-16)
Issue No. 3 (2015-2-4)
Issue No. 2 (2014-4-11)
Issue No. 1 (2013-10-28)
Issue No. 0 (2010-10-20)

Applicant: **G.M. International S.R.L.**
Via San Fiorano 70
20852 Villasanta (MB)
Italy

Electrical Apparatus: **Switch Repeater type D5093S, D5093S-xxx, D5093D and D5093D-xxx**
Optional accessory:

Type of Protection: **Equipment protection by type of protection "n"**

Marking: Ex nA IIC T4 Gc

Approved for issue on behalf of the IECEx Certification Body: H.-Ch. Simanski

Position: Head of Certification Body

Signature:
(for printed version)

Date: 6.7.2015

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting the Official IECEx Website.

Certificate issued by:

DEKRA EXAM GmbH
Dinnendahlstrasse 9
44809 Bochum
Germany

DEKRA
DEKRA EXAM GmbH

IECEx Certificate of Conformity

Certificate No.: IECEx BVS 10.0072X

Date of Issue: **2015-07-16** Issue No.: **4**

Manufacturer: **G.M. International S.R.L.**
Via San Fiorano 70
20852 Villasanta (MB)
Italy

Additional Manufacturing location (s):

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements. This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended.

STANDARDS:
The electrical apparatus and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards:

IEC 60079-0 : 2011 Edition: 6.0	Explosive atmospheres - Part 0: General requirements
IEC 60079-15 : 2010 Edition: 4	Explosive atmospheres - Part 15: Equipment protection by type of protection "n"

*This Certificate **does not** indicate compliance with electrical safety and performance requirements other than those expressly included in the Standards listed above.*

TEST & ASSESSMENT REPORTS:
A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in

Test Report:
DE/BVS/ExTR10.0103/04

Quality Assessment Report:

NO/DNV/QAR07.0005/05

IECEx Certificate of Conformity

Certificate No.: IECEx BVS 10.0072X

Date of Issue: **2015-07-16** Issue No.: **4**

Schedule

EQUIPMENT:
Equipment and systems covered by this certificate are as follows:

Type Code

Switch Repeater type: D5093S, D5093S-xxx, D5093D and D5093D-xxx.
(Option 'xxx' = non Ex-relevant details of construction or function)

Description

The Switch Repeater type: D5093S, D5093S-xxx, D5093D or D5093D-xxx is designed as EPL Gc equipment, not providing any IS circuits and intended for installation inside enclosures, complying with IEC 60079-15.
Electronic components of the Switch Repeater are arranged on a printed-circuit-board (PCB) packaged in a plastic enclosure suitable for installation on T35 DIN Rails.

Rating

,
Switch Repeater type: D5093S, D5093S-xxx, D5093D and D5093D-xxx

Power supply circuit

Switch Repeater module type	Voltage	Power Dissipation
	U_n	P_n
	DC/AC [V]	[W]
D5093S, D5093S-xxx	18...250	≤ 0.75
D5093D, D5093D-xxx	18...250	≤ 1.5

Switch Output: U_n DC 35 V; I_n 50 mA

Ambient temperature range -40 °C ≤ T_a ≤ +70 °C

CONDITIONS OF CERTIFICATION: YES as shown below:

The Switch Repeater type: D5093S, D5093S-xxx, D5093D and D5093D-xxx shall be installed inside an enclosure, which is in accordance with IEC 60079-15.
Conditions of Use dealing with previous models, subject to issue 00, issue 01, issue 02, issue 03 remain valid without change.

IECEx Certificate of Conformity

Certificate No.: IECEx BVS 10.0072X

Date of Issue: **2015-07-16** Issue No.: **4**

DETAILS OF CERTIFICATE CHANGES (for issues 1 and above):

Examination of the Switch Repeater type D5093S, D5093S-xxx, D5093D and D5093D-xxx in accordance with the standards listed above.
Previous issues of the CoC and subjects thereto remain valid without change.

IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION
IEC Certification Scheme for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.:	IECEx BVS 10.0072X	issue No.:5	Certificate history: Issue No. 5 (2015-12-14) Issue No. 4 (2015-7-16) Issue No. 3 (2015-2-4) Issue No. 2 (2014-4-11) Issue No. 1 (2013-10-28) Issue No. 0 (2010-10-20)
Status:	**Current**		
Date of Issue:	**2015-12-14**	Page 1 of 5	
Applicant:	**G.M. International S.R.L.** Via Mameli, 53-55 20852 Villasanta (MB) **Italy**		

Electrical Apparatus: **DIN Rail Isolator (extention: Relay Output, Switch/Proximity Detector repeaters) type D5****, D5****-xxx (extention: D5090S-086, D5036*-* / D5037*-*)**

Optional accessory:

Type of Protection: **Equipment protection by type of protection "n"**

Marking: Ex nA nC [ia Ga] IIC T4 Gc; [Ex ia Da] IIIC; [Ex ia Ma] I
Ex nA [ia Ga] IIC T4 Gc; Ex nA nC IIC T4 Gc

Approved for issue on behalf of the IECEx Certification Body: H.-Ch. Simanski

Position: Head of Certification Body

Signature:
(for printed version)

Date: 14.12.2015

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting the Official IECEx Website.

Certificate issued by:

DEKRA EXAM GmbH
Dinnendahlstrasse 9
44809 Bochum
Germany

DEKRA
DEKRA EXAM GmbH

IECEx Certificate of Conformity

Certificate No.: IECEx BVS 10.0072X

Date of Issue: **2015-12-14** Issue No.: **5**

Manufacturer: **G.M. International S.R.L.**
Via Mameli, 53-55
20852 Villasanta (MB)
Italy

Additional Manufacturing location (s):

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements. This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended.

STANDARDS:
The electrical apparatus and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards:

IEC 60079-0 : 2011 Edition: 6.0	Explosive atmospheres - Part 0: General requirements
IEC 60079-11 : 2011 Edition: 6.0	Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
IEC 60079-15 : 2010 Edition: 4	Explosive atmospheres - Part 15: Equipment protection by type of protection "n"

*This Certificate **does not** indicate compliance with electrical safety and performance requirements other than those expressly included in the Standards listed above.*

TEST & ASSESSMENT REPORTS:
A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in

Test Report:
DE/BVS/ExTR10.0103/05

Quality Assessment Report:

NO/DNV/QAR07.0005/06

IECEx Certificate of Conformity

Schedule

EQUIPMENT:
Equipment and systems covered by this certificate are as follows:

General product information:

DIN Rail Isolators of D5*** / D5****-xxx type series have been extended with a new relay output and new Switch/Proximity Detector Repeaters.

Type Code

Relay output:	type D5090S-086
Switch/Proximity Detector Repeater:	type D5036* / type D5036*-xxx, type D5037* / type D5037*-xxx

In the full designation the "*" is replaced by letters marking details of construction as follows:

S = single channel	S-xxx = single channel
D = dual channel	D-xxx = dual channel

(Option 'xxx' = non Ex-relevant details of construction or function)

CONDITIONS OF CERTIFICATION: YES as shown below:

1. Group I application:
   DIN Rail Isolators of type series D5****, D5****-xxx shall be installed outside the hazardous area or alternatively in an enclosure providing a suitable type of protection according to separate certification.

2. Group II application:
   DIN Rail Isolators of type series D5****, D5****-xxx shall be installed:
   - outside the hazardous area, or
   - shall be mounted inside an enclosure, which is in accordance with IEC 60079-15 in case of alternative installation in areas requiring EPL Gc equipment.

3. Group III application:
   DIN Rail Isolators of type series D5****, D5****-xxx shall be installed outside the hazardous area or alternatively in an enclosure providing a suitable type of protection according to separate certification.

4. General
   The installation of DIN Rail Isolators of type series D5****, 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 insulating barrier according to clause 6.2.1 of IEC 60079-11:2011.

IECEx Certificate of Conformity

EQUIPMENT(continued):

Description

Relay Output type D5090S-086
The Relay Output type D5090S-086 provides single channel isolation between remote input and output contact; configuration three contacts in series.
Electronic components of the new relay output model are arranged on a printed-circuit-board (PCB) packaged in a plastic enclosure suitable for installation on T35 DIN Rails (or on termination board).
The relay output is designed as EPL Gc equipment, not providing any IS circuits.

Switch/Proximity Detector Repeater type D5036S, D5036S-xxx, D5036D, D5036D-xxx
The single and dual channel Switch/Proximity Detector Repeater D5036*, D5036*-xxx generates fully floating intrinsically safe power supply for proximity sensor field devices or for voltage free contacts of field devices and repeats the operation status of the proximity sensors / voltage free contacts on the non-intrinsically safe side by means of voltage free relay contacts.
Each channel enables a safe area load to be controlled by a switch, or a proximity detector, located in a hazardous area.
The Switch/Proximity Detector Repeater D5036*, D5036*-xxx is designed for installation on T35 DIN Rail only.

Switch/Proximity Detector Repeater type D5037S, D5037S-xxx, D5037D, D5037D-xxx
The single and dual channel Switch/Proximity Detector Repeater D5037*, D5037*-xxx generates fully floating intrinsically safe power supply for proximity sensor field devices or for voltage free contacts of field devices and repeats the operation status of the proximity sensors / voltage free contacts on the non- intrinsically safe side by means of voltage free opto-isolator outputs.
Each channel enables a safe area load to be controlled by a switch, or a proximity detector, located in a hazardous area.
The Switch/Proximity Detector Repeater D5037*, D5037*-xxx is designed for installation on T35 DIN Rail or on Termination Board.
Electronic components of the new Switch/Proximity Detector Repeater models are arranged on a printed-circuit-board (PCB) packaged in a plastic enclosure suitable for installation on T35 DIN Rails (or on termination board).
Switch/Proximity Detector Repeaters of D5036*-* / D5037*-* type series provide safe galvanic separation between intrinsically safe circuits and non-intrinsically safe signal circuits / non-intrinsically safe power supply on the PCB up to a sum of peak values of rated voltages of 375 V.

Listing of all components used, referring to older standards:
N / A

Rating:

See Annex

IECEx Certificate of Conformity

Certificate No.: IECEx BVS 10.0072X

Date of Issue: **2015-12-14** Issue No.: **5**

DETAILS OF CERTIFICATE CHANGES (for issues 1 and above):

See Annex

Annex: BVS_10_0072X_GMInternational_Annex.pdf

IECEx Certificate of Conformity

Certificate No.: **IECEx BVS 10.0072X issue No.: 5**
Annex

Details of change

Refers to the following previous models, subject to issue 00 / issue 01 of the Test Report and extension with new models:

- Switch/Proximity Detector Repeater type D5030*, D5030*-xxx, D5031*, D5031*-xxx, D5032*, D5032*-xxx
  Switch/Proximity Interface type D5034*, D5034*-xxx:
  Correction of printing mistake C_o parameter 16.8 nF to 16.8 µF referring to Group IIB and IIIC
- Relay Output type D5090S, D5090S-xxx, D5091S, D5091S-xxx
  Extension of rated AC and DC current from 4 A to 5 A
- Relay Output type D5293S, D5293S-xxx,
  type D5294S, D5294S-xxx, D5295S, D5295S-xxx
  type D5093S, D5093S-xxx, D5093D, D5093D-xxx

Optional revision / omitting of components in the non-IS circuitry

- extension of Relay Output Modules with new version type D5090S-086.
- extension of Switch/Proximity Detector Repeaters with new models type D5036*, D5036*-xxx, type D5037*, D5037*-xxx.

Previous issues 00 to 04 of the CoC, dealing with DIN Rail Isolators of D5*** / D5****-xxx type series not listed as subject to 'Details of change' remain valid without change.

Rating:

1 Non intrinsically safe circuits

1.1 Power supply

Device	Voltage		Power
	U_n	U_m	P_n
	DC [V]	AC [V]	[W]
D5090S-086	24	N / A	≤ 1.2
D5036S, D5036S-xxx	24	250	≤ 0.5
D5036D, D5036D-xxx	24	250	≤ 1
D5037S, D5037S-xxx	24	250	≤ 0.35
D5037D, D5037D-xxx	24	250	≤ 0.7
Remark: N / A = not applicable			

1.2 Input / output signal circuits (General, refers to devices providing IS circuits)
Voltage U_m = AC 250 V

IECEx Certificate of Conformity

Certificate No.: **IECEx BVS 10.0072X issue No.: 5**
Annex

1.3 Relay Contacts of Relay Outputs

Single channel; contact rating	Device	D5090S D5090S-086 D5091S	D5290S D5291S
		Terminals	
contact status when the relay is energized	closed	7-8 [1])	13-14
	open	9-10 [1])	13-15
rated AC voltage		250 V	250 V
rated AC current		5 A	10 A
rated AC Power		1250 VA	2500 VA
rated DC voltage		250 V	250 V
rated DC Current		5 A [2])	10 A [2])
rated DC Power		140 W	300 W
Ambient temperature range		$-40\ °C \le T_a \le +70\ °C$	
Remark: [1]) 7+9 common circuit [2]) Derating curve for DC Voltage			

2 Intrinsically safe circuits level of protection Ex ia IIC / IIB / IIA / I

2.1 Switch/Proximity Detector Repeater / Switch/Proximity Interface D503** / D503**-xxx

2.1.1 Switch/Proximity Detector Repeater type D5030*, D5030*-xxx
Device marking: Ex nA nC [ia Ga] IIC T4 Gc, [Ex ia Da] IIIC, [Ex ia Ma] I

2.1.2 Switch/Proximity Detector Repeater type D5031*, D5031*-xxx
Device marking: Ex nA [ia Ga] IIC T4 Gc, [Ex ia Da] IIIC, [Ex ia Ma] I

2.1.3 Switch/Proximity Detector Repeater type D5032*, D5032*-xxx
Device marking: Ex nA nC [ia Ga] IIC T4 Gc, [Ex ia Da] IIIC, [Ex ia Ma] I

Single channel parameters	Device	D5030*	D5031*	D5032*
		Terminals		
Channel	1	7-8 [1])	7-8 [1])	7-8 [1])
	2	9-10 [1])	9-10 [1])	9-10 [1])
Voltage U_o		DC10.5 V	DC10.5 V	DC10.5 V
Current I_o		22 mA	22 mA	22 mA
Power P_o		56 mW	56 mW	56 mW
Voltage U_i		N / A	N / A	N / A
Current I_i		N / A	N / A	N / A
Power P_i		N / A	N / A	N / A
Effective internal capacitance C_i		1.1 nF	1.1 nF	1.1 nF
Effective internal inductance L_i		N / A	N / A	N / A
Max. external capacitance C_o	IIC	2.41 µF	2.41 µF	2.41 µF
	IIB, IIIC	16.8 µF	16.8 µF	16.8 µF
	IIA	75 µF	75 µF	75 µF
	I	66 µF	66 µF	66 µF
Max. external inductance L_o	IIC	78.3 mH	78.3 mH	78.3 mH
	IIB, IIIC	313.4 mH	313.4 mH	313.4 mH
	IIA	626.9 mH	626.9 mH	626.9 mH
	I	1028.6 mH	1028.6 mH	1028.6 mH
Max. inductance / resistance ratio L_o/R_o	IIC	635.9 µH/Ω	635.9 µH/Ω	635.9 µH/Ω
	IIB, IIIC	2543.9 µH/Ω	2543.9µH/Ω	2543.9 µH/Ω
	IIA	5087.9 µH/Ω	5087.9µH/Ω	5087.9 µH/Ω
	I	8347.4 µH/Ω	8347.4µH/Ω	8347.4 µH/Ω
Characteristics		linear	linear	linear
Ambient temperature range		$-40\ °C \le T_a \le +70\ °C$		

IECEx Certificate of Conformity

Certificate No.: **IECEx BVS 10.0072X issue No.: 5**
Annex

Remarks:
[1]) 2-wire circuit "I*+", "I*-" parameters of supply circuit
N / A = not applicable

2.1.4 Switch/Proximity Interface type D5034*, D5034*-xxx
Device marking: Ex nA [ia Ga] IIC T4 Gc, [Ex ia Da] IIIC, [Ex ia Ma] I

2.1.5 Switch/Proximity Detector Repeater type D5036*, D5036*-xxx
Device marking: Ex nA nC [ia Ga] IIC T4 Gc, [Ex ia Da] IIIC, [Ex ia Ma] I

2.1.6 Switch/Proximity Detector Repeater type D5037*, D5037*-xxx
Device marking: Ex nA [ia Ga] IIC T4 Gc, [Ex ia Da] IIIC, [Ex ia Ma] I

Single channel parameters	Device	D5034*	D5036*	D5037*
		Terminals		
Channel	1	7-8 [1])	7-8 [1])	7-8 [1])
	2	9-10 [1])	9-10 [1])	9-10 [1])
Voltage U_o		DC10.5 V	DC10.5 V	DC10.5 V
Current I_o		15 mA	22 mA	22 mA
Power P_o		39 mW	56 mW	56 mW
Voltage U_i		N / A	N / A	N / A
Current I_i		N / A	N / A	N / A
Power P_i		N / A	N / A	N / A
Effective internal capacitance C_i		N / A	1.1 nF	1.1 nF
Effective internal inductance L_i		N / A	N / A	N / A
Max. external capacitance C_o	IIC	2.41 µF	2.41 µF	2.41 µF
	IIB, IIIC	16.8 µF	16.8 µF	16.8 µF
	IIA	75 µF	75 µF	75 µF
	I	66 µF	66 µF	66 µF
Max. external inductance L_o	IIC	163.2 mH	78.3 mH	78.3 mH
	IIB, IIIC	652.8 mH	313.4 mH	313.4 mH
	IIA	1305.6 mH	626.9 mH	626.9 mH
	I	2142.0 mH	1028.6 mH	1028.6 mH
Max. inductance / resistance ratio L_o/R_o	IIC	918.2 µH/Ω	635.9 µH/Ω	635.9 µH/Ω
	IIB, IIIC	3672.9 µH/Ω	2543.9µH/Ω	2543.9 µH/Ω
	IIA	7345.8 µH/Ω	5087.9µH/Ω	5087.9 µH/Ω
	I	12051.8 µH/Ω	8347.4µH/Ω	8347.4 µH/Ω
Characteristics		linear	linear	linear
Ambient temperature range		-40 °C ≤ T_a ≤ +70 °C		

Remarks:
[1]) 2-wire circuit "I*+", "I*-" parameters of supply circuit
N / A = not applicable

IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION
IEC Certification Scheme for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.:	IECEx BVS 10.0072X issue No.:6	Certificate history: Issue No. 6 (2016-9-22) Issue No. 5 (2015-12-14) Issue No. 4 (2015-7-16) Issue No. 3 (2015-2-4) Issue No. 2 (2014-4-11) Issue No. 1 (2013-10-28) Issue No. 0 (2010-10-20)
Status:	Current	
Date of Issue:	2016-09-22 Page 1 of 4	
Applicant:	**G.M. International S.R.L.** Via G. Mameli 53/55 20852 Villasanta (MB) **Italy**	
Equipment: *Optional accessory:*	**Relay Output (extension of DIN Rail Isolator type series) type D5094S, D5094S-xxx, D5095S or D5095S-xxx, D5096S, D5096S-xxx, D5097S or D5097S-xxx**	
Type of Protection:	**Equipment protection by type of protection "n"**	
Marking:	Ex nA nC IIC T4 Gc	
Approved for issue on behalf of the IECEx Certification Body:	J. Koch	
Position:	Head of Certification Body	
Signature: *(for printed version)*		
Date:	22.9.16	

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting the Official IECEx Website.

Certificate issued by:

DEKRA EXAM GmbH
Dinnendahlstrasse 9
44809 Bochum
Germany

DEKRA
On the safe side.

IECEx Certificate of Conformity

Certificate No.: IECEx BVS 10.0072X

Date of Issue: **2016-09-22** Issue No.: **6**

Manufacturer: **G.M. International S.R.L.**
Via G. Mameli 53/55
20852 Villasanta (MB)
Italy

Additional Manufacturing location(s):

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements. This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended.

STANDARDS:
The electrical apparatus and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards:

IEC 60079-0 : 2011 Edition: 6.0	Explosive atmospheres - Part 0: General requirements
IEC 60079-15 : 2010 Edition: 4	Explosive atmospheres - Part 15: Equipment protection by type of protection "n"

*This Certificate **does not** indicate compliance with electrical safety and performance requirements other than those expressly included in the Standards listed above.*

TEST & ASSESSMENT REPORTS:
A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in

Test Report:
DE/BVS/ExTR10.0103/06

Quality Assessment Report:

NO/DNV/QAR07.0005/06

IECEx Certificate of Conformity

Schedule

EQUIPMENT:
Equipment and systems covered by this certificate are as follows:

Type Code

Relay Output type: D5094S, D5094S-xxx, D5095S or D5095S-xxx,
Relay Output with Diagnostic type: D5096S, D5096S-xxx, D5097S or D5097S-xxx.
(Option 'xxx' = non Ex-relevant details of construction or function)

Description

The Relay Outputs (without / with diagnostic) type D5094S, D5094S-xxx, D5095S, D5095S-xxx, D5096S, D5096S-xxx, D5097S, D5097S-xxx are designed as EPL Gc equipment, which does not provide any intrinsically safe circuits and are intended for installation inside enclosures, complying with
IEC 60079-15.
Electronic components of the Relay Outputs are arranged on a printed-circuit-board (PCB) packaged in a plastic enclosure suitable for installation on T35 DIN Rails or alternatively on Termination Boards.
Listing of all components used referring to older standards: not applicable.

Rating

Relay Output type	Voltage U_n DC [V]	Power dissipation P_n [W]
D5094S, D5094S-xxx	24 (21.6...27.6)	1.4
D5095S, D5095S-xxx		1.4
D5096S, D5096S-xxx		≤ 1.4 + 0.37
D5097S, D5097S-xxx		≤ 1.4 + 0.37

Relay contact circuit	U_n AC 250 V; I_n 5 A, P_n 1250 VA
	U_n DC 250 V; I_n 5 A, P_n 140 W
Fault signal output	U_n DC 35 V; I_n 100 mA (D5096S, D5096S-xxx, D5097S, D5097S-xxx only)
Ambient temperature range:	-40 °C ≤ T_a ≤ +70 °C

CONDITIONS OF CERTIFICATION: YES as shown below:

The Relay Outputs type D5094S, D5094S-xxx, D5095S, D5095S-xxx, D5096S, D5096S-xxx, D5097S, D5097S-xxx shall be installed inside an enclosure, which is in accordance with IEC 60079-15. Conditions of Use dealing with previous models, subject to issue 00 to issue 05 remain valid without change.

IECEx Certificate of Conformity

Certificate No.: IECEx BVS 10.0072X

Date of Issue: **2016-09-22** Issue No.: **6**

DETAILS OF CERTIFICATE CHANGES (for issues 1 and above):

The DIN Rail Isolator type series D5**** / D5****-xxx is extended with new models: Relay Outputs type D5094S, D5094S-xxx, D5095S, D5095S-xxx, D5096S, D5096S-xxx, D5097S, D5097S-xxx.
Previous issues of the Test Report and subjects thereto remain valid without change.

IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION
IEC Certification Scheme for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.:	IECEx BVS 10.0072X issue No.:7	Certificate history: Issue No. 7 (2017-6-6) Issue No. 6 (2016-9-22) Issue No. 5 (2015-12-14) Issue No. 4 (2015-7-16) Issue No. 3 (2015-2-4) Issue No. 2 (2014-4-11) Issue No. 1 (2013-10-28) Issue No. 0 (2010-10-20)
Status:	**Current**	
Date of Issue:	**2017-06-06** Page 1 of 4	
Applicant:	**G.M. International S.R.L.** Via G. Mameli 53/55 20852 Villasanta (MB) **Italy**	

Equipment: **Relay Output type D5293S(-xxx), D5294S(-xxx), D5295S(-xxx)**
Optional accessory:

Type of Protection: **Equipment protection by type of protection "n"**

Marking: Ex nA nC IIC T4 Gc

Approved for issue on behalf of the IECEx Certification Body: Jörg Koch

Position: Head of Certification Body

Signature:
(for printed version)

Date: 6.6.17

1. This certificate and schedule may only be reproduced in full.
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Certificate issued by:

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Dinnendahlstrasse 9
44809 Bochum
Germany

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IECEx Certificate of Conformity

Certificate No.: IECEx BVS 10.0072X

Date of Issue: **2017-06-06** Issue No.: **7**

Manufacturer: **G.M. International S.R.L.**
Via G. Mameli 53/55
20852 Villasanta (MB)
Italy

Additional Manufacturing location(s):

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements. This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended.

STANDARDS:
The electrical apparatus and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards:

IEC 60079-0 : 2011 Edition: 6.0	Explosive atmospheres - Part 0: General requirements
IEC 60079-15 : 2010 Edition: 4	Explosive atmospheres - Part 15: Equipment protection by type of protection "n"

*This Certificate **does not** indicate compliance with electrical safety and performance requirements other than those expressly included in the Standards listed above.*

TEST & ASSESSMENT REPORTS:
A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in

Test Report:
DE/BVS/ExTR10.0103/07

Quality Assessment Report:

NO/DNV/QAR07.0005/07

IECEx Certificate of Conformity

Certificate No.: IECEx BVS 10.0072X

Date of Issue: **2017-06-06** Issue No.: **7**

Schedule

EQUIPMENT:
Equipment and systems covered by this certificate are as follows:

Type Code

Relay Output with Diagnostic type: D5293S, D5293S-xxx, D5294S, D5294S-xxx, D5295S, D5295S-xxx, (Option 'xxx' = non Ex-relevant details of construction or function)

Description

The Relay Outputs with diagnostic type D5293S, D5293S-xxx, D5294S, D5294S-xxx, D5295S, D5295S-xxx, are designed as EPL Gc equipment, which does not provide any intrinsically safe circuits and are intended for installation inside enclosures, complying with IEC 60079-15.
Electronic components of the Relay Outputs are arranged on a printed-circuit-board (PCB) packaged in a plastic enclosure suitable for installation on T35 DIN Rails or alternatively on Termination Boards.
Listing of all components used referring to older standards: not applicable.

Rating

See Annex

SPECIFIC CONDITIONS OF USE: YES as shown below:

The Relay Outputs type D5293S, D5293S-xxx, D5294S, D5294S-xxx, D5295S, D5295S-xxx shall be installed inside an enclosure, which is in accordance with IEC 60079-15.
Conditions of Use dealing with previous models, subject to issue 00 to issue 06 remain valid without change.

IECEx Certificate of Conformity

Certificate No.: IECEx BVS 10.0072X

Date of Issue: **2017-06-06** Issue No.: **7**

DETAILS OF CERTIFICATE CHANGES (for issues 1 and above):

Circuitry of D5293S, D5293S-xxx, D5294S, D5294S-xxx, D5295S, D5295S-xxx has been subjected to some internal changes.
Previous issues of the CoC, dealing with models of type series DIN Rail Isolator D5*** / D5****-xxx other than D5293S, D5293S-xxx, D5294S, D5294S-xxx, D5295S, D5295S-xxx remain valid.

Annex: BVS_10_0072X_GM_Annex_Issue7.pdf

IECEx Certificate of Conformity

Certificate No.: **IECEx BVS 10.0072X, Issue 7**
Annex

Rating

1 Power supply circuit

Relay Output type	Voltage U_n DC [V]	Power consumption P_n [W]
D5293S, D5293S-xxx	24 (21.6...27.6)	1.1
D5294S, D5294S-xxx		1.2
D5295S, D5295S-xxx		1.2

2 Relay contacts

Contact rating D5293S, D5294S, D5295S [1])			
Voltage U_n	AC 250 V	DC 250 V	DC 30 V
Current I_{load} [2])	≤ 5 A	≤ 0.2 A [3])	≤ 4 A
Power [2])	≤ 1000 VA	[3])	≤ 120 W
Remarks: [1]) D529*S parameters refer also to D529*S-xxx models [2]) resistive load [3]) see detailed data sheet			

3 Fault signal output

Single channel contact rating	D5293S, D5294S, D5295S [1])	
	Output 1	Output 2
rated AC voltage	30 V	250 V
rated AC current	500 mA	3 A
rated AC Power	15 VA	750 VA
rated DC voltage	50 V	125 V
rated DC Current	500 mA	3 A
rated DC Power	25 W [2])	120 W [2])
Remarks: [1]) D529*S parameters refer also to D529*S-xxx models [2]) resistive load		

4 Ambient temperature range $-40\ °C \leq T_a \leq +70\ °C$