



Translation

**Type Examination Certificate**

(1)

(2)

**- Directive 94/9/EC -  
Equipment and protective systems intended for use  
in potentially explosive atmospheres**

(3)

**BVS 10 ATEX E 114**

(4)

**Equipment: DIN Rail Isolator type D5\*\*\*\*, D5\*\*\*\*-XXX**

(5)

**Manufacturer: GM International S.R.L.**

(6)

**Address: 20058 Villasanta (MI), Italy**

(7)

The design and construction of this equipment and any acceptable variation thereto are specified in the appendix to this type examination certificate.

(8)

The certification body of DEKRA EXAM GmbH certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design of Category 3 equipment intended for use in potentially explosive atmospheres, given in Annex II to the Directive.  
The examination and test results are recorded in confidential test and assessment report BVS PP 10.2216 EG.

(9)

The Essential Health and Safety Requirements are assured by compliance with:

EN 60079-0:2009 General requirements  
EN 60079-15:2005 Type of protection 'n'

(10)

If the sign "X" is placed after the certificate number, it indicates that the equipment is subject to special conditions for safe use specified in the appendix to this certificate.

(11)

This Type Examination Certificate relates only to the design, examination and tests of the specified equipment in accordance to Directive 94/9/EC.  
Further requirements of the Directive apply to the manufacturing process and supply of this equipment. These are not covered by this certificate.

(12)

The marking of the equipment shall include the following:



**II 3G Ex nA nC IIC T4 Gc**

**DEKRA EXAM GmbH**

Bochum, dated 22. September 2010

Signed: Simanski

\_\_\_\_\_  
Certification body

Signed: Dr. Eickhoff

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Special services unit

(13) Appendix to

(14) **Type Examination Certificate**

**BVS 10 ATEX E 114**

(15) 15.1 Subject and type

DIN Rail Isolators type series D5\*\*\*\*, D5\*\*\*\*-xxx comprising the following models

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

S = single channel                      S-xxx = single channel

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

15.2 Description

The DIN Rail Isolators of type series D5\*\*\*\*, D5\*\*\*\*-xxx are designed as electrical apparatus, suitable for applications requiring SIL level (according to EN 61508) in safety related systems for high risk industries.

Compliance with EN 61508 is not subject to this Type Examination Certificate.

Electronic components of DIN Rail Isolators are arranged on printed-circuit-boards (PCB) packaged in plastic enclosures suitable for installation on T35 DIN Rails.

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 provide 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 provide 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.

SPST = Single-Pole Single-Throw

### 15.3 Parameters

#### 15.3.1 Power supply

DIN Rail Isolator version	Voltage	Power
	$U_n$	$P_n$
	DC [V]	[W]
D5090S, D5090S-xxx, D5091S, D5091S-xxx	24	≤ 1.2
D5290S, D5290S-xxx, D5291S, D5291S-xxx	24	≤ 2.0
D5293S, D5293S-xxx	24	≤ 2.0
D5294S, D5294S-xxx	24	≤ 2.7

#### 15.3.2 Relay Output Module type D5090S, D5090S-xxx, D5091S, D5091S-xxx Relay Output Module type D5290S, D5290S-xxx, D5291S, D5291S-xxx

Single channel; contact rating	Device	D5090*	D5091*	D5290*	D5291*
	Terminals				
contact status when the relay is energized	closed	7-8 ) <sup>1</sup>	7-8 ) <sup>1</sup>	13-14	13-14
	open	9-10 ) <sup>1</sup>	9-10 ) <sup>1</sup>	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 ) <sup>2</sup>		10 A ) <sup>2</sup>		
rated DC Power	120 W		300 W		
Ambient temperature range	-40 °C ≤ T <sub>a</sub> ≤ +70 °C				
Remarks: ) <sup>1</sup> 7+9 common circuit ) <sup>2</sup> Derating curve for DC Voltage					

#### 15.3.3 Relay Output Module type D5293S, D5293S-xxx, D5294S, D5294S-xxx

Single channel; contact rating	Device	D5293*	D5294*
	Terminals		
2-wire load power connection	in	15 (+) -16 (-) ) <sup>1</sup>	15 (+) -16 (-) ) <sup>1</sup>
	out	13 (+) -14 (-) ) <sup>1</sup>	13 (+) -14 (-) ) <sup>1</sup>
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 ) <sup>2</sup>		10 A ) <sup>2</sup>
rated DC Power	300 W		300 W
Ambient temperature range	-40 °C ≤ T <sub>a</sub> ≤ +70 °C		
Remarks: ) <sup>1</sup> DC as specified, or AC ) <sup>2</sup> Derating curve for DC Voltage			

(16) Test report

Nr. BVS PP 10.2216 EG, dated 22.09.2010

(17) Special conditions for safe use

None

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We confirm the correctness of the translation from the German original.  
In the case of arbitration only the German wording shall be valid and binding.

44809 Bochum, 22.09.2010  
BVS-Scha/Her A 20100877

DEKRA EXAM GmbH



Certification body



Special services unit