

# IOA LM-DI/R/RUSIO/EX - Monitoring block



1048209

<https://www.phoenixcontact.com/us/products/1048209>

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Cable monitoring module for VIP I/O marshalling base elements. Enables cable fault monitoring when using standard switching contacts in safety applications. Both wire breaks and short circuits can be detected.

## Product description

Cable monitoring module for use in safety circuits. The module enables the detection of wire breaks and short circuits between IOA and I/O cards when using simple switching contacts. To do so, a 7.5 k $\Omega$  resistance connected in series to the measuring signal and a 15 k $\Omega$  resistor is also connected in parallel. The module is installed on a corresponding VIP I/O-Marshalling base element by means of plug-in contact. Installation in zone 2, "ec" type of protection is permitted.

## Commercial data

Item number	1048209
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	C480
Product key	DK115Z
GTIN	4055626651125
Weight per piece (including packing)	53.5 g
Weight per piece (excluding packing)	53.5 g
Customs tariff number	85371098
Country of origin	US

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## Technical data

### Product properties

Product type	Interface module
Product family	VIP I/O-Marshalling
Number of positions	1

### Insulation characteristics

Overvoltage category	II
Pollution degree	2

### Electrical properties

Operating voltage $U_{\max}$	$\leq 30$ V
Current	$\leq 6$ mA (Signal)

### Connection data

Connection method	Plug-in connection
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### Ex data

#### Safety data

Input voltage $U_i$	30 V
Input current $I_i$	6 mA
Inductance $L_i$	0 mH
Capacitance $C_i$	0 $\mu$ F
Max. output voltage $U_o$	$U_i$
Max. output current $I_o$	4 mA
Max. output power $P_o$	120 mW

### Dimensions

#### Item dimensions

Width	10.3 mm
Height	64.2 mm
Depth	72.9 mm

### Material specifications

Color	gray (RAL 7042)
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### Environmental and real-life conditions

#### Ambient conditions

Degree of protection	IP20
Ambient temperature (operation)	-40 °C ... 75 °C
Ambient temperature (storage/transport)	-40 °C ... 75 °C
Altitude	$\leq 2000$ m

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Permissible humidity (operation)	0 % ... 95 % (non-condensing)
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## Approvals

### ATEX

Identification	⊕ II 3G Ex ec IIC T4 Gc
	⊕ II 3G Ex ic IIC T4 Gc
Certificate	CSANe 20ATEX3152X

### IECEX

Identification	Ex ec IIC T4 Gc
	Ex ic IIC T4 Gc
Certificate	IECEX SIR 21.0005X

### UKEX

Identification	⊕ II 3G Ex ec IIC T4 Gc
	⊕ II 3G Ex ic IIC T4 Gc
Certificate	PxCIF23UKEX1048208X

### CSA, USA/Canada

Identification	Class I, Div. 2, Groups A, B, C, D
	Class I, Zone 2, AEx ic IIC T4 Gc
	ANIFW apparatus for connection to: Class I, II, III, Div. 2 Groups A, B, C, D, F, G
	Ex ic IIC T4 Gc
Ex ec IIC T4 Gc	
Certificate	CSA 21CA80047687X

## Standards and regulations

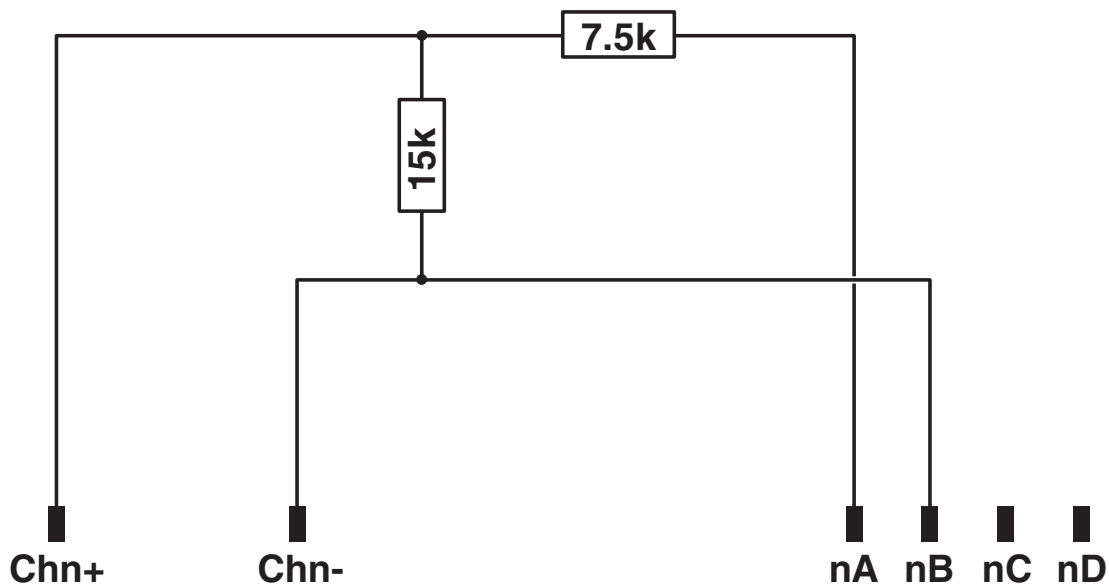
Standards/regulations	IEC 60664
	DIN EN 50178

## Mounting

Mounting type	Plug-in mounting
Assembly note	Plugs into VIP/...BASE...
Mounting position	any

## Drawings

Circuit diagram



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## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1048209>

### Functional Safety

Approval ID: PHO 1609035



### IECEX

Approval ID: IECEx SIR 21.0005X



### ATEX

Approval ID: CSANe 20ATEX3152X



### CSA

Approval ID: 80047687



### CSAus

Approval ID: 80047687

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## Classifications

### ECLASS

ECLASS-13.0	27141152
ECLASS-15.0	27141152

### ETIM

ETIM 10.0	EC002780
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### UNSPSC

UNSPSC 21.0	39121400
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## Environmental product compliance

### EU RoHS

Fulfills EU RoHS substance requirements	Yes
Exemption	7(c)-I

### China RoHS

Environment friendly use period (EFUP)	EFUP-50
	An article-related China RoHS declaration table can be found in the download area for the respective article under "Manufacturer declaration". For all articles with EFUP-E, no China RoHS declaration table issued and required.

### EU REACH SVHC

REACH candidate substance (CAS No.)	No substance above 0.1 wt%
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