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Frequency transducer - MINI MCR-2-UI-FRO - 2902031

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The figure shows the MINI MCR-2-UI-FRO-PT version

Analog frequency transducer with limit value functionality and plug-in connection technology for converting standard signals into frequency or PWM signals. Configurable via DIP switch or software. Screw connection technology, standard configuration.

Product Description

Configurable, freely adjustable analog frequency transducer with additional switching output, limit value functionality, and plug-in connection technology for converting standard analog signals to frequency signals or to pulse width modulated signals (PWM signals). Current signals between 0 mA ... 24 mA and voltage signals between 0 V ... 12 V can be processed on the input side. Frequency signals between 0 ... 11 kHz and PWM signals between 0% … 100% are possible on the output side. In addition, the output can also be operated as a switching output, which means that two switching thresholds can be set independently of one another. The minimum measuring span is 1 mA and 0.5 V. Full accuracy is maintained with a measuring span greater than 10 mA and 5 V. You can configure the device using one of the free software solutions. Default settings can also be made directly on the device by simply using the DIP switches (see configuration table). The measuring transducer supports fault monitoring and NFC communication.

Key Commercial Data

Packing unit	1 STK
GTIN	4 046356 652032

Technical data

Note

Utilization restriction	EMC: class A product, see manufacturer's declaration in the download area

Dimensions

Width	6.2 mm
Height	110.5 mm
Depth	120.5 mm

Ambient conditions

Ambient temperature (operation)	-40 °C ... 70 °C
Ambient temperature (storage/transport)	-40 °C ... 85 °C

Frequency transducer - MINI MCR-2-UI-FRO - 2902031

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Ambient conditions

Degree of protection	IP20

Input data

Configurable/programmable	Yes
Voltage input signal	0 V ... 10 V (via DIP switch)
	2 V ... 10 V (via DIP switch)
	0 V ... 5 V (via DIP switch)
	1 V ... 5 V (via DIP switch)
	10 V ... 0 V (via DIP switch)
	10 V ... 2 V (via DIP switch)
	5 V ... 0 V (via DIP switch)
	5 V ... 1 V (via DIP switch)
	0 V ... 12 V (Can be set via software)
Current input signal	0 mA ... 0.02 A (via DIP switch)
	4 mA ... 0.02 A (via DIP switch)
	0 mA ... 0.01 A (via DIP switch)
	2 mA ... 0.01 A (via DIP switch)
	20 mA ... 0 A (via DIP switch)
	20 mA ... 0.004 A (via DIP switch)
	10 mA ... 0 A (via DIP switch)
	10 mA ... 0.002 A (via DIP switch)
	0 mA ... 0.024 A (Can be set via software)
Max. input voltage	12 V
Max. input current	24 mA
Input resistance of voltage input	> 120 kΩ
Input resistance current input	approx. 50 Ω

Switching output

Output name	Switching output
Number of outputs	1
Contact type	1 N/O contact
Minimum switching voltage	1 V
Maximum switching voltage	30 V DC
Min. switching current	100 µA
Max. switching current	100 mA (at 30 V)

Power supply

Nominal supply voltage	24 V DC
Supply voltage range	9.6 V DC ... 30 V DC (The DIN rail bus connector (ME 6,2 TBUS-2 1,5/5-ST-3,81 GN, Order No. 2869728) can be used to bridge the supply voltage. It can be snapped onto a 35 mm DIN rail according to EN 60715))
Typical current consumption	27 mA (12 V DC)

Frequency transducer - MINI MCR-2-UI-FRO - 2902031

Technical data

Power supply

	13.5 mA (24 V DC)
Power consumption	≤ 350 mW (9.6 V DC)

Connection data

Connection method	Screw connection
Single conductor/terminal point, solid, with ferrule, min.	0.2 mm²
Single conductor/terminal point, solid, with ferrule, max.	1.5 mm²
Single conductor/terminal point, solid, without ferrule, min.	0.2 mm²
Single conductor/terminal point, solid, without ferrule, max.	2.5 mm²
Conductor cross section flexible min.	0.2 mm²
Conductor cross section flexible max.	1.5 mm²
Min. AWG conductor cross section, flexible	24
Max. AWG conductor cross section, flexible	12
Stripping length	10 mm
Screw thread	M3

General

No. of channels	1
Maximum temperature coefficient	< 0.01 %/K
Temperature coefficient, typical	0.01 %/K
Electrical isolation	Reinforced insulation in accordance with IEC 61010-1
Overvoltage category	II
Degree of pollution	2
Rated insulation voltage	300 V (effective)
Test voltage, input/output/supply	3 kV (50 Hz, 1 min.)
Electromagnetic compatibility	Conformance with EMC Directive 2004/108/EC (valid until 19.04.2016) / 2014/30/EU (valid from 20.04.2016)
Noise emission	EN 61000-6-4
Noise immunity	EN 61000-6-2 When being exposed to interference, there may be minimal deviations.
Color	gray
Housing material	PBT
Mounting position	any
Assembly instructions	The T connector can be used to bridge the supply voltage. It can be snapped onto a 35 mm DIN rail according to EN 60715.
Conformance	CE-compliant
ATEX	# II 3 G Ex nA IIC T4 Gc X
UL, USA / Canada	UL 508 Listed
	Class I, Div. 2, Groups A, B, C, D T6
	Class I, Zone 2, Group IIC T6
GL	GL applied for

Standards and Regulations

Frequency transducer - MINI MCR-2-UI-FRO - 2902031

Technical data

Standards and Regulations

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	Class I, Div. 2, Groups A, B, C, D T6
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Classifications

eCl@ss

eCl@ss 4.0	27200206
eCl@ss 4.1	27200206
eCl@ss 5.0	27200206
eCl@ss 5.1	27200206
eCl@ss 6.0	27200206
eCl@ss 7.0	27200206
eCl@ss 8.0	27210120

ETIM

ETIM 3.0	EC001446
ETIM 4.0	EC001446
ETIM 5.0	EC002653

UNSPSC

UNSPSC 6.01	30211506
UNSPSC 7.0901	39121008
UNSPSC 11	39121008
UNSPSC 12.01	39121008
UNSPSC 13.2	39121008

Approvals

Approvals

Approvals

UL Listed / cUL Listed / cULus Listed

Frequency transducer - MINI MCR-2-UI-FRO - 2902031

Approvals

Ex Approvals

UL Listed / cUL Listed / cULus Listed

Approvals submitted

Approval details

UL Listed

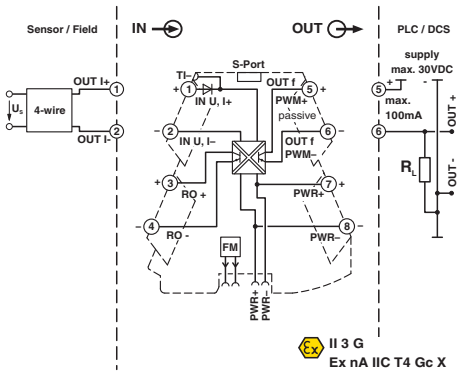
cUL Listed

cULus Listed

Drawings

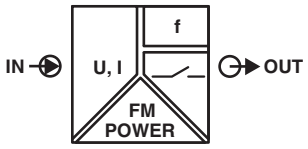
Pictogram

Block diagram



Frequency transducer - MINI MCR-2-UI-FRO - 2902031

Pictogram



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To access the product, click on the green button.

Product	Code	Reference	Product link
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