

# Frequency transducer - MINI MCR-SL-UI-F - 2864082

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Analog frequency transducers for converting analog standard signals into frequency signals or PWM signals, configurable via DIP switch, with screw connection

## Product Description

The 6.2 mm wide configurable analog frequency transducer MINI MCR-SL-UI-F... is used for converting analog standard signals into frequency signals or into pulse width modulated (PWM) signals. On the input side, there are the analog signals 0...20 mA, 4...20 mA, 0...10 mA, 2...10 mA, 0...10 V, 2...10 V, 0...5 V or 1...5 V. The DIP switches are accessible on the side of the housing and allow the following parameters to be configured: - Input signal, - Output signal, - Output behavior in case the measuring range is exceeded or undershot and - Filter type (for eliminating malfunctions in the input signal). Voltage (19.2 V DC to 30 V DC) can be supplied through connection terminal blocks on the modules or in conjunction with the DIN rail connector.

## Product Features

- Power supply possible via the foot element (T-connector)
- Error indication via diagnostic LED and analog signal
- PWM output of 5 ... 95%
- Highly-compact analog-to-frequency transducer for electrical isolation, amplification, conversion, and filtering of standard signals to create frequencies or PWM signals
- Input and output signals can be configured via DIP switches
- Configurable interference filter
- 3-way isolation



## Key commercial data

package_quantity	1
GTIN	4046356046435

## Technical data

Note:

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

Width	6.2 mm
Height	93.1 mm
Depth	102.5 mm

## Ambient conditions

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## Technical data

### Ambient conditions

<b>Ambient temperature (operation)</b>	-20 °C ... 65 °C
<b>Ambient temperature (storage/transport)</b>	-40 °C ... 85 °C
<b>Degree of protection</b>	IP20

### Input data

<b>Configurable/programmable</b>	Yes
<b>Current input signal</b>	0 mA ... 20 mA
<b>Current input signal</b>	4 mA ... 20 mA
<b>Current input signal</b>	0 mA ... 10 mA
<b>Current input signal</b>	2 mA ... 10 mA
<b>Input resistance current input</b>	approx. 50 Ω
<b>Voltage input signal</b>	0 V ... 5 V
<b>Voltage input signal</b>	1 V ... 5 V
<b>Voltage input signal</b>	0 V ... 10 V
<b>Voltage input signal</b>	2 V ... 10 V
<b>Input resistance of voltage input</b>	approx. 110 kΩ

### Power supply

<b>Nominal supply voltage</b>	24 V DC
<b>Supply voltage range</b>	19.2 V DC ... 30 V DC (The T 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))
<b>Max. current consumption</b>	< 10 mA (at 24 V DC)
<b>Power consumption</b>	< 200 mW

### Connection data

<b>Connection method</b>	Screw connection
<b>Conductor cross section solid min.</b>	0.2 mm <sup>2</sup>
<b>Conductor cross section solid max.</b>	2.5 mm <sup>2</sup>
<b>Conductor cross section stranded min.</b>	0.2 mm <sup>2</sup>
<b>Conductor cross section stranded max.</b>	2.5 mm <sup>2</sup>
<b>Conductor cross section AWG/kcmil min.</b>	26
<b>Conductor cross section AWG/kcmil max</b>	12
<b>Stripping length</b>	12 mm
<b>Screw thread</b>	M3

### General

<b>Maximum transmission error</b>	≤ 0.1 % (> 7 kHz ≤ 0.2%)
<b>Maximum temperature coefficient</b>	< 0.02 %/K
<b>Electrical isolation</b>	Basic insulation according to EN 61010
<b>Surge voltage category</b>	II
<b>Pollution degree</b>	2
<b>Rated insulation voltage</b>	50 V AC/DC
<b>Test voltage, input/output/supply</b>	1.5 kV (50 Hz, 1 min.)

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## Technical data

### General

<b>Electromagnetic compatibility</b>	Conformance with EMC Directive 2004/108/EC
<b>Noise emission</b>	EN 61000-6-4
<b>Noise immunity</b>	EN 61000-6-2 When being exposed to interference, there may be minimal deviations.
<b>Color</b>	green
<b>Housing material</b>	PBT
<b>Mounting position</b>	Any
<b>Conformance</b>	CE-compliant
<b>ATEX</b>	# II 3 G Ex nA IIC T4 Gc X
<b>UL, USA / Canada</b>	UL 508 Recognized
<b>UL, USA / Canada</b>	Class I, Div. 2, Groups A, B, C, D T5 applied for
<b>GL</b>	GL EMC 2 D

### EMC data

<b>Name</b>	Electromagnetic RF field
<b>Standards/regulations</b>	EN 61000-4-3
<b>Typical deviation from the measuring range final value</b>	2 %
<b>Name</b>	Fast transients (burst)
<b>Standards/regulations</b>	EN 61000-4-4
<b>Typical deviation from the measuring range final value</b>	2 %
<b>Name</b>	Conducted interferences
<b>Standards/regulations</b>	EN 61000-4-6
<b>Typical deviation from the measuring range final value</b>	2 %

## classifications

### eCl@ss

<b>eCl@ss 4.0</b>	27210120
<b>eCl@ss 4.1</b>	27210120
<b>eCl@ss 5.0</b>	27210120
<b>eCl@ss 5.1</b>	27210120
<b>eCl@ss 6.0</b>	27210120
<b>eCl@ss 7.0</b>	27210120
<b>eCl@ss 8.0</b>	27210120

### ETIM

<b>ETIM 2.0</b>	EC001485
<b>ETIM 3.0</b>	EC001485
<b>ETIM 4.0</b>	EC001485
<b>ETIM 5.0</b>	EC002299

### UNSPSC

<b>UNSPSC 6.01</b>	30211506
<b>UNSPSC 7.0901</b>	39121008

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## classifications

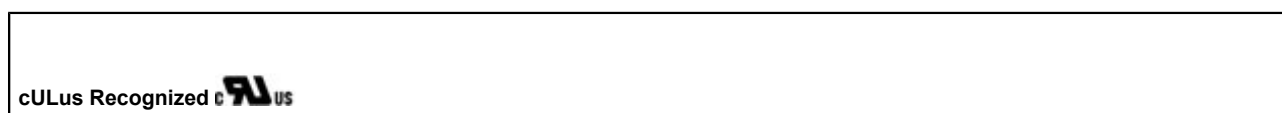
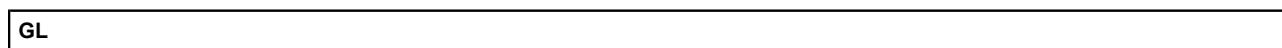
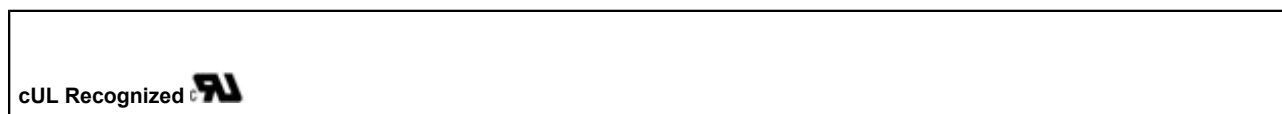
### UNSPSC

UNSPSC 11	39121008
UNSPSC 12.01	39121008
UNSPSC 13.2	39121008

## approvals

ATEX / UL Recognized / cUL Recognized / GL / cULus Recognized /

### Approval details



## accessories

### DIN rail connector

ME 6,2 TBUS-2 1,5/5-ST-3,81 GN - 2869728



## Power module

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### accessories

MINI MCR-SL-PTB - 2864134



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MINI MCR-SL-PTB-SP - 2864147



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### Power supply

MINI-SYS-PS-100-240AC/24DC/1.5 - 2866983



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MINI-PS-100-240AC/24DC/1.5/EX - 2866653



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### System adapter

MINI MCR-SL-V8-FLK 16-A - 2811268



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### Marking material

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accessories

MINI MCR DKL - 2308111

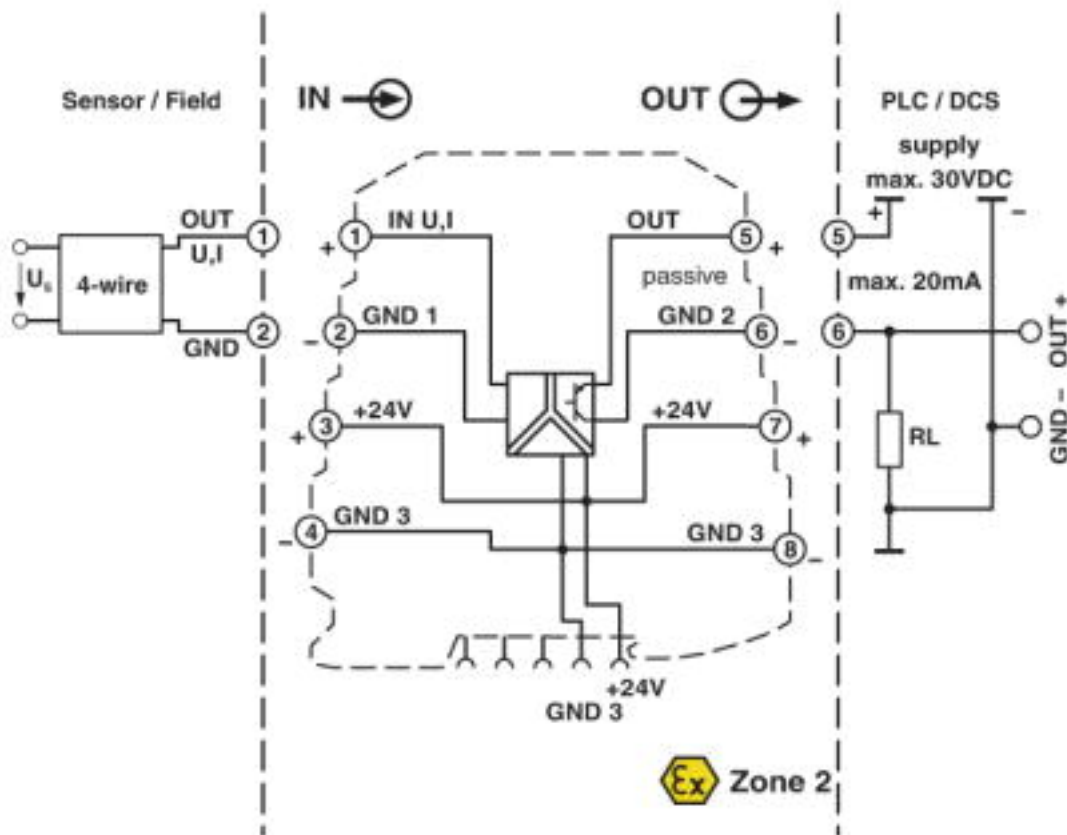


MINI MCR-DKL-LABEL - 2810272



## Drawings

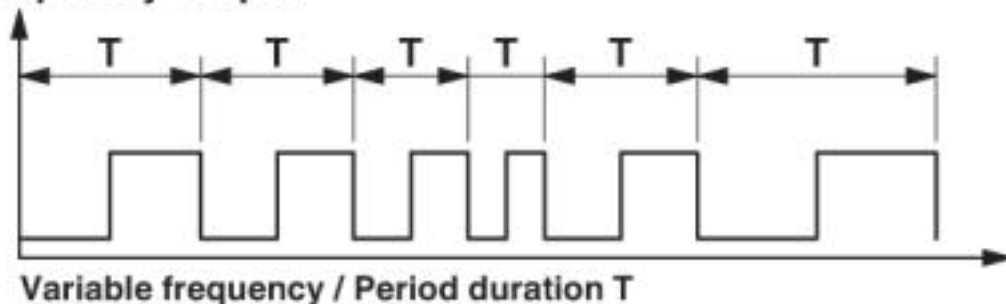
Block diagram



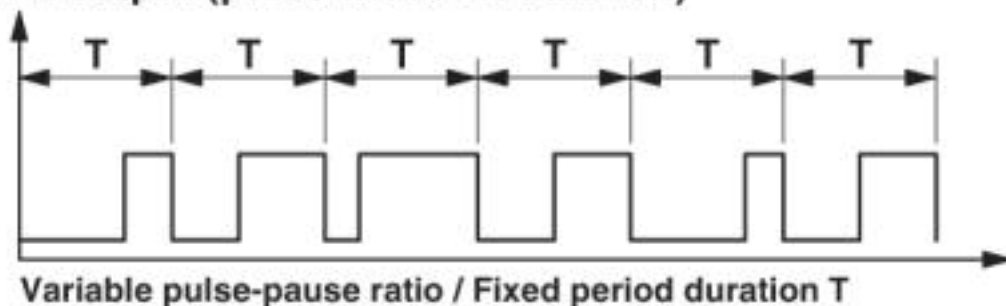
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Diagram

## Frequency output

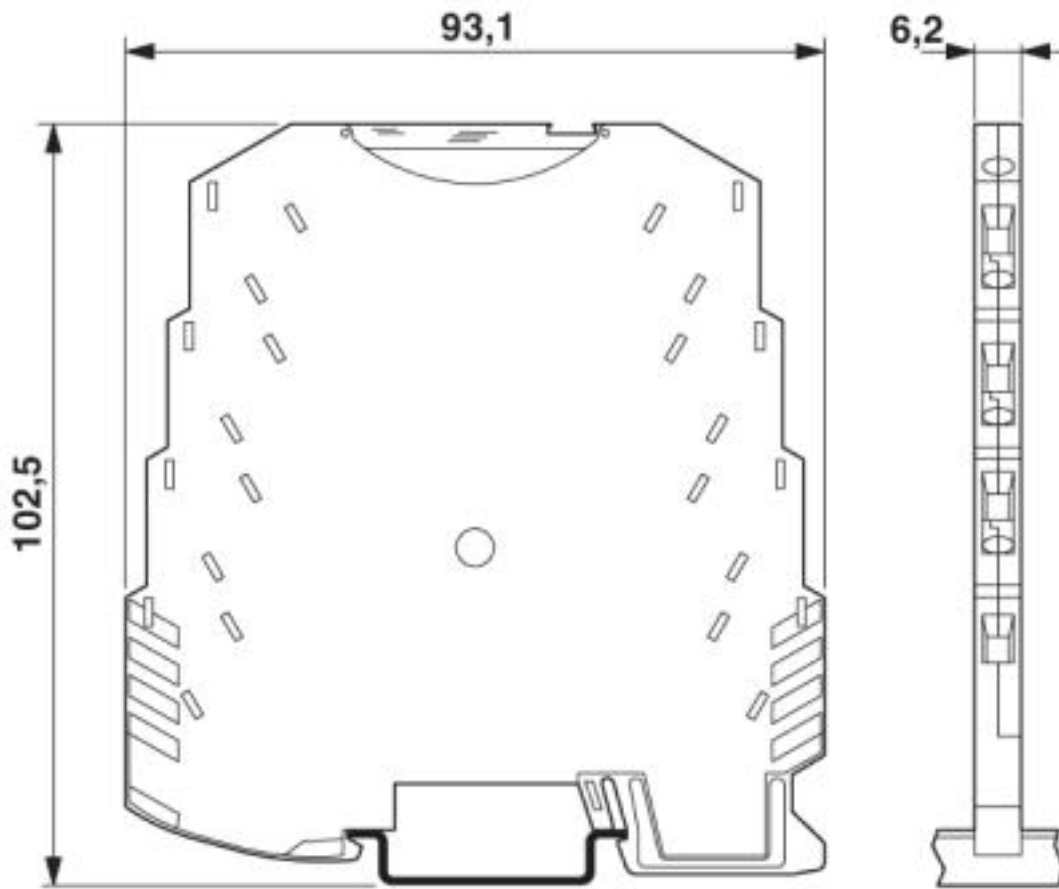


## PWM output (pulse width modulation)



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Dimensioned drawing



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