

MACX MCR-UI-UI-NC

Order No.: 2811446

<http://eshop.phoenixcontact.co.uk/phoenix/treeViewClick.do?UID=2811446>

Configurable 3-way isolating amplifier with safe electrical isolation, 24 V, power bridging. DIP switches on the front, over 1600 signal conversions can be set. Standard configuration (IN 0 ... 10 V/OUT 0 ... 20 mA), screw connection, SIL.

**SIL 2****Ex n**

Commercial data

EAN	4046356288927
Pack	1
Customs tariff	85437090
Weight/Piece	150.00 g
Country of Origin	DE
Catalog page information	Page 250 (NTK-2010)

Product notes

WEEE/RoHS-compliant since:
05/03/2010



Please note that the data given here has been taken from the online catalog. For comprehensive information and data, please refer to the user documentation at <http://www.download.phoenixcontact.com>. The General Terms and Conditions of Use apply to Internet downloads.

Technical data

Input data

Voltage input signal	0 mV ... 50 mV
----------------------	----------------

	0 mV ... 60 mV
	0 mV ... 75 mV
	0 mV ... 100 mV
	0 mV ... 120 mV
	0 mV ... 150 mV
	0 mV ... 200 mV
	0 mV ... 300 mV
	0 mV ... 500 mV
	0 V ... 1 V
	0 V ... 1.5 V
	0 V ... 2 V
	0 V ... 3 V
	0 V ... 5 V
	0 V ... 10 V (please indicate any different setting when ordering)
	0 V ... 15 V
	0 V ... 20 V
	0 V ... 30 V
	0 V ... 50 V
	0 V ... 100 V
	-50 mV ... 50 mV
	-60 mV ... 60 mV
	-75 mV ... 75 mV
	-100 mV ... 100 mV
	-120 mV ... 120 mV
	-150 mV ... 150 mV
	-200 mV ... 200 mV
	-300 mV ... 300 mV
	-500 mV ... 500 mV
	-1 V ... 1 V
	-1.5 V ... 1.5 V
	-2 V ... 2 V
	-3 V ... 3 V
	-5 V ... 5 V
	-10 V ... 10 V
	-15 V ... 15 V
	-20 V ... 20 V
	-30 V ... 30 V
	-50 V ... 50 V
PHOENIX CONTACT Ltd http://www.phoenixcontact.co.uk	-100 V ... 100 V
	1 V ... 5 V
	2 V ... 10 V

Current input signal	0 mA ... 1 mA
	0 mA
	0 mA ... 2 mA
	0 mA ... 3 mA
	0 mA ... 5 mA
	0 mA ... 10 mA
	0 mA ... 15 mA
	0 mA ... 20 mA
	0 mA ... 30 mA
	0 mA ... 50 mA
	0 mA ... 100 mA
	-1 mA ... 1 mA
	-1.5 mA ... 1.5 mA
	-2 mA ... 2 mA
	-3 mA ... 3 mA
	-5 mA ... 5 mA
	-10 mA ... 10 mA
	-15 mA ... 15 mA
	-20 mA ... 20 mA
	-30 mA ... 30 mA
	-50 mA ... 50 mA
	-100 mA ... 100 mA
	1 mA ... 5 mA
	2 mA ... 10 mA
	4 mA ... 20 mA
Max. input voltage	± 100 V
Max. input current	± 100 mA
Input resistance of voltage input	Approx. 1 MΩ (± 1 V DC ... ± 100 V DC)
Input resistance current input	Approx. 10 Ω (± 10 mA DC ... ± 100 mA DC)
Output data	
Configurable/programmable	Yes, can be switched

Voltage output signal	0 V ... 10 V
	0 V ... 5 V
	2 V ... 10 V
	1 V ... 5 V
	-10 V ... 10 V
	-5 V ... 5 V
	0 V ... 2.5 V
	0.5 V ... 2.5 V
	-2.5 V ... 2.5 V
Current output signal	0 mA ... 5 mA
	0 mA ... 10 mA
	0 mA ... 20 mA (please indicate any different setting when ordering)
	1 mA ... 5 mA
	2 mA ... 10 mA
	4 mA ... 20 mA
	-5 mA ... 5 mA
	-10 mA ... 10 mA
	-20 mA ... 20 mA
Load/output load voltage output	$\geq 1 \text{ k}\Omega$ (10 V)
Load/output load current output	active: $\leq 600 \Omega$ (20 mA)
	(passive: $\leq (U_B - 2 \text{ V}) / I_{\text{outmax}}$)

Power supply

Range of supply voltages	12 V DC ... 24 V DC (-20% / +25%)
--------------------------	-----------------------------------

Connection data

Type of connection	Screw connection
Conductor cross section solid min.	0.2 mm ²
Conductor cross section solid max.	2.5 mm ²
Conductor cross section stranded min.	0.2 mm ²
Conductor cross section stranded max.	2.5 mm ²
Conductor cross section AWG/kcmil min.	24
Conductor cross section AWG/kcmil max	14
Stripping length	8 mm
Screw thread	M3

General data

Width	12.5 mm
Height	99 mm
Depth	114.5 mm
Transmission error, max.	≤ 0.1 % (Compared to the final value)
Maximum temperature coefficient	0.0075 %/K
Limit frequency (3 dB)	10 kHz (Can be switched to 30 Hz)
Alignment zero	± 4 %
Alignment span	± 4 %
Step response (10-90%)	35 µs (at 10 kHz) 11 ms (At 30 Hz)
Protective circuitry	Transient protection
Ambient temperature (operation)	-20 °C ... 70 °C
Ambient temperature (storage/transport)	-40 °C ... 85 °C
Degree of protection	IP20
Surge voltage category	II
Pollution degree	2
Rated insulation voltage	300 V AC
Test voltage, input/output/supply	2.5 kV (50 Hz, 1 min.)
Color	green
Housing material	PA 66-FR
Mounting position	Any
Conformity	CE compliant
ATEX	Ex II 3 G Ex nA nL IIC T4
IECEX	Ex nA nL IIC T4
UL, USA / Canada	UL applied for
GL	GL applied for
Functional safety (SIL)	SIL 2 BVS Pb 01/10

Safety characteristic data

Integrity requirement	for IEC 61508 - Low demand
Designation	Input isolator (live zero signals)
Architecture	Single-channel, 1oo1
Equipment type	Type A
Safety integrity level (SIL)	Up to 2
SFF	83.43 %

MTBF	258 Years
λ_{SU}	3.16×10^{-7} (316 FIT)
λ_{SD}	0
λ_{DU}	6.28×10^{-8} (63 FIT)
λ_{DD}	0
Wahrscheinlichkeit eines gefahrbringenden Ausfalls pro Anforderung (PFD_{AVG})	$2,76 \times 10^{-4}$ (1 Jahr)
DC	0 %
Integrity requirement	for IEC 61508 - Low demand
Designation	Output isolator (live zero signals)
Architecture	Single-channel, 1oo1
Equipment type	Type A
Safety integrity level (SIL)	Up to 2
SFF	82.92 %
MTBF	258 Years
λ_{SU}	3.14×10^{-7} (314 FIT)
λ_{SD}	0
λ_{DU}	6.48×10^{-8} (65 FIT)
λ_{DD}	0
Wahrscheinlichkeit eines gefahrbringenden Ausfalls pro Anforderung (PFD_{AVG})	$2,84 \times 10^{-4}$ (1 Jahr)
DC	0 %
Integrity requirement	for IEC 61508 - High demand
Designation	Input isolator (live zero signals)
Architecture	Single-channel, 1oo1
Equipment type	Type A
Safety integrity level (SIL)	Up to 2
SFF	83.43 %
MTBF	258 Years
λ_{SU}	3.16×10^{-7} (316 FIT)
λ_{SD}	0
λ_{DU}	6.28×10^{-8} (63 FIT)
λ_{DD}	0
PFH	$6,28 \times 10^{-8}$
DC	0 %

Integrity requirement	for IEC 61508 - High demand
Designation	Output isolator (live zero signals)
Architecture	Single-channel, 1oo1
Equipment type	Type A
Safety integrity level (SIL)	Up to 2
SFF	82.92 %
MTBF	258 Years
λ_{SU}	3.14×10^{-7} (314 FIT)
λ_{SD}	0
λ_{DU}	6.48×10^{-8} (65 FIT)
λ_{DD}	0
PFH	$6,48 \times 10^{-8}$
DC	0 %

Certificates

Certification Ex: IECEx

Accessories

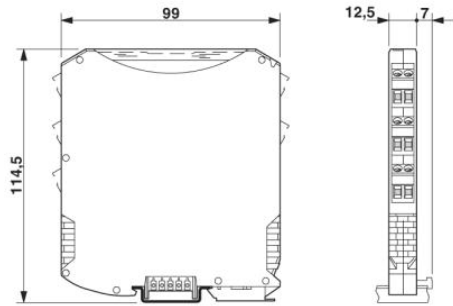
Item	Designation	Description
General		
2869728	ME 6,2 TBUS-2 1,5/5-ST-3,81 GN	DIN rail connector (T-BUS), 5-pos., for bridging the supply voltage, can be snapped onto NS 35/... DIN rails according to EN 60715

Additional products

Item	Designation	Description
General		
2865625	MACX MCR-PTB	Power and error message module
2924184	MACX MCR-PTB-SP	Power and error message module, spring-cage terminal blocks

Drawings

Dimensioned drawing



Address

PHOENIX CONTACT Ltd
Halesfield 13
Telford / Shropshire / TF7 4PG,England
Phone 01952 681 700
Fax 01952 681 799
<http://www.phoenixcontact.co.uk>



Phoenix Contact Ltd.
Technical modifications reserved;