

Inline terminal - IB IL AO 2/UI-XC-PAC - 2701389

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Inline analog output terminal, version for extreme conditions, complete with accessories (connector connector and labeling field), 2 outputs, 0 - 20 mA, 4 - 20 mA, ± 20 mA, 0 - 10 V, ± 10 V, 2-conductor connection technology

Why buy this product

- 2 analog output channels
- Connection of actuators in 2-wire technology
- Current ranges: 0 mA ... 20 mA, 4 mA ... 20 mA, ± 20 mA
- Voltage ranges: 0 V ... 10 V, ± 10 V
- Diagnostic and status indicators
- Can be used under extreme ambient conditions
- Extended temperature range of -40°C ... $+70^{\circ}\text{C}$ (see "Tested successfully: use under extreme ambient conditions" in the data sheet)
- Coated PCBs



Key commercial data

Packing unit	1 pc
GTIN	 4 046356 743693
Weight per Piece (excluding packing)	66.0 g
Custom tariff number	85389091
Country of origin	Germany
Note	Made to Order (non-returnable)

Technical data

Note

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

Width	12.2 mm
Height	119.8 mm
Depth	71.5 mm
Note on dimensions	Housing dimensions

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Ambient conditions

Ambient temperature (operation)	-25 °C ... 55 °C
	-40 °C ... 70 °C (See "Tested successfully: use under extreme ambient conditions" in the data sheet.)
Ambient temperature (storage/transport)	-40 °C ... 85 °C
Permissible humidity (operation)	10 % ... 95 % (according to DIN EN 61131-2)
Permissible humidity (storage/transport)	10 % ... 95 % (according to DIN EN 61131-2)
Air pressure (operation)	70 kPa ... 106 kPa (up to 3000 m above sea level)
Air pressure (storage/transport)	70 kPa ... 106 kPa (up to 3000 m above sea level)
Degree of protection	IP20

General

Weight	66 g
Note on weight specifications	with connector
Mounting type	DIN rail
Protection class	III, IEC 61140, EN 61140, VDE 0140-1
Test section	7.5 V supply (bus logics)/24 V analog supply (analog I/O) 500 V AC 50 Hz 1 min
	7.5 V supply (bus logics) / functional earth ground 500 V AC 50 Hz 1 min
	24 V analog supply (analog I/O) / functional earth ground 500 V AC 50 Hz 1 min
Conformance with EMC directives	Noise immunity test in accordance with EN 61000-6-2 Electrostatic discharge (ESD) EN 61000-4-2/IEC 61000-4-2 Criterion B; 6 kV contact discharge, 8 kV air discharge
	Noise immunity test in accordance with EN 61000-6-2 Electromagnetic fields EN 61000-4-3/IEC 61000-4-3 Criterion A; Field intensity: 10 V/m
	Noise immunity test in accordance with EN 61000-6-2 Fast transients (burst) EN 61000-4-4/IEC 61000-4-4 Criterion B, 2 kV
	Noise immunity test in accordance with EN 61000-6-2 Transient surge voltage (surge) EN 61000-4-5/IEC 61000-4-5 Criterion B; DC: ±0.5 kV/ ±1 kV(symmetrical/unsymmetrical) supply cables; shielded I/O cables: ±1 kV
	Noise immunity test in accordance with EN 61000-6-2 Conducted interference EN 61000-4-6/IEC 61000-4-6 Criterion A; Test voltage 10 V
	Noise emission test according to EN 61000-6-3 Radio interference properties EN 55022 Class A
Diagnostics messages	Failure of the internal I/O supply I/O error message sent to the bus coupler
	I/O supply failure Message in the diagnostic code (in the IB IL format)
	Short circuit/overload of the outputs Message in the diagnostic code (in the IB IL format)
	Configuration invalid Message in the diagnostic code (in the IB IL format)

Interfaces

Designation	Inline local bus
Connection method	Inline data jumper
Transmission speed	500 kBit/s

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Technical data

Interfaces

Transmission physics	Copper
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Power supply for module electronics

Communications power U_L	7.5 V (via voltage jumper)
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Inline potentials

Communications power U_L	7.5 V DC (via voltage jumper)
Current consumption from U_L	typ. 55 mA
	max. 65 mA
I/O supply voltage U_{ANA}	24 V DC
Current consumption from U_{ANA}	typ. 24 mA (No-load)
	max. 30 mA (No-load)
	typ. 38 mA (Nominal voltage load ($U_{OUT1/2} = 10\text{ V}$, $R_L = 1\text{ k}\Omega$))
	max. 45 mA (Nominal voltage load ($U_{OUT1/2} = 10\text{ V}$, $R_L = 1\text{ k}\Omega$))
	typ. 65 mA (Nominal current load ($I_{OUT1/2} = 20\text{ mA}$, $R_L = 0\ \Omega$))
	max. 75 mA (Nominal current load ($I_{OUT1/2} = 20\text{ mA}$, $R_L = 0\ \Omega$))
Power consumption	typ. 1.32 W (Nominal voltage load ($U_{OUT1/2} = 10\text{ V}$, $R_L = 1\text{ k}\Omega$))
	typ. 1.97 W (Nominal current load ($I_{OUT1/2} = 20\text{ mA}$, $R_L = 0\ \Omega$))

Analog outputs

Number of outputs	2
Connection method	2-wire (shielded, twisted pair)
Output name	Analog outputs
D/A conversion time	typ. 10 μs
D/A resolution	12 bit
Type of protection	Short-circuit and overload protection
	Transient protection
Protective circuit/component	Electronic
	Suppressor diode
Data formats	IB IL, S7-compatible
Representation of output values	12 bits (11 bits + sign bit)
Process data update	bus-synchronous
Current output signal	0 mA ... 20 mA
	4 mA ... 20 mA
	-20 mA ... 20 mA
Load/output load current output	$\leq 450\ \Omega$
Voltage output signal	0 V ... 10 V
	-10 V ... 10 V
Load/output load voltage output	$> 1\text{ k}\Omega$
Precision	typ. 0.1 % (of output range final value)
	typ. 0.1 % (of output range final value)

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Technical data

Analog outputs

Permissible cable length	max. 250 m (The specifications refer to nominal operation after complying with installation instructions. The specifications refer to the following reference cable type: Shielded power station cable: LiYCY; 2 x 2 x 0,5 mm ² ; VDE0812)
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Classifications

eCl@ss

eCl@ss 4.0	27250303
eCl@ss 4.1	27250303
eCl@ss 5.0	27250303
eCl@ss 5.1	27242601
eCl@ss 6.0	27242601
eCl@ss 7.0	27242601

ETIM

ETIM 3.0	EC001596
ETIM 4.0	EC002498
ETIM 5.0	EC001596

UNSPSC

UNSPSC 6.01	43172015
UNSPSC 7.0901	43201404
UNSPSC 11	43172015
UNSPSC 12.01	43201404
UNSPSC 13.2	43201404

Approvals

Approvals

Approvals

UL Listed / cUL Listed / cULus Listed

Ex Approvals

Approvals submitted

Approval details

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Approvals

UL Listed

cUL Listed

cULus Listed

Accessories

Accessories

Installation terminal block

Connection terminal block - AKG 4 GNYE - 0421029



Connection terminal block, Connection method Screw connection, Load current : 41 A, Cross section: 0.5 mm² - 6 mm², Width: 7 mm, Color: green-yellow

Connection terminal block - AKG 4 BK - 0421032



Connection terminal block, Connection method Screw connection, Load current : 41 A, Cross section: 0.5 mm² - 6 mm², Width: 7 mm, Color: black

Neutral conductor rail

Neutral busbar - NLS-CU 3/10 SN 1000MM - 0402174



PEN conductor busbar, 3mm x 10 mm, length: 1000 mm

Pick-off terminal block

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Accessories

Connection terminal block - AK 4 - 0404017



Connection terminal block, Connection method Screw connection, Load current : 41 A, Cross section: 0.5 mm² - 6 mm², Width: 7 mm, Color: silver

Shield connection clamp

Shield connection terminal block - SK 8 - 3025163



Shield connection clamp, for shield on busbars, contact resistance < 1 mOhm

Shield connection terminal block - SK 14 - 3025176



Shield connection clamp, for shield on busbars, contact resistance < 1 mOhm

Shield connection terminal block - SK 20 - 3025189



Shield connection clamp, for shield on busbars, contact resistance < 1 mOhm

Shield connection terminal block - SK 35 - 3026463



Shield connection clamp, for shield on busbars, contact resistance < 1 mOhm

Support

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Accessories

Support bracket - AB-SK - 3025341

Support bracket for busbars



Support bracket - AB-SK 65 - 3026489

Support bracket, Bracket for busbars, set every 20 cm, Length: 95.5 mm, Width: 6.2 mm, Color: gray



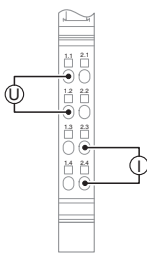
Support bracket - AB-SK/E - 3026476

Support bracket, Bracket for busbars, set every 20 cm, Length: 10 mm, Width: 56 mm, Height: 20 mm, Color: silver



Drawings

Connection diagram



Dimensioned drawing

