Analog Isolation Amplifier

flexible and precise

Analog isolation amplifier of the *cores* series

The *cores* series convinces with flexible use in process and industrial automation.

They ensure a defined separation of measurement and process signals from the control system. And it protects against voltage drops.

Analogue isolation amplifiers also convert signals into standardized signal levels.

cores combines a highly precise signal conversion with a very small housing and fulfils actual demands for such products.

The Advantages:

• Digital conversion (up to 16 Bit)

• Highest accuracy (0.1 %) and linearity

• Fastest reaction time (from 11 ms)

• 3 or 4 way galvanic isolation

• High isolation voltage

• Compact housing (also as thin as 6.2 mm)

• Universal functions settable

• Wide temperature range

Analog Isolation Amplifier

cores C1 UI-B

- Analog Isolation Amplifier
- 3 way isolation
- Input: voltage / current, output: voltage / current
- High accuracy by digital conversion
- Width 6.2 mm
- Spring clamp connection
- Wide temperature range

Type	Part No.
cores C1 UI-B	82.003.0110.0

Techncal data	
Input range (adjustable)	0/1 ... 5 V DC or 0/2 ... 10 V DC 0/4 ... 20 mA DC
Output range (adjustable)	0/1 ... 5 V DC or 0/2 ... 10 V DC 0/4 ... 20 mA DC or 20 ... 4/0 mA DC active or passive
Galvanic isolation	yes, 3 way isolation
Isolation voltage	1500 V AC
Accuracy	<0.1%, 14 Bit resolution
Supply voltage range	19.2 … 30 V DC
Power consumption	max. 500 mW
Connection type	Spring clamp
Wire range solid/fine-stranded	0.2 - 2.5 mm² (AWG 24–14)
Degree of protection / Mounting rail	IP 20 / TH 35 (EN60715)
Dimensions (mm) W x H x D	6.2 x 93.1 x 102.5
Temperature range	-20 … +65 °C
Approvals (pending)	CE c(UL)us

cores C1 PT-B

- Analog Isolation Amplifier
- 3 way isolation
- Input: PT 100, output: voltage / current
- High accuracy by digital conversion
- Width 6.2 mm
- Spring clamp connection
- Wide temperature range

Type	Part No.
cores C1 PT-B	82.003.0120.0

Technical data	
Input range (adjustable)	PT100 with 2-, 3- or 4 wire connection -150 … +650 °C
Output range (adjustable)	0/1 ... 5 V DC or 0 ... 10 V; 10 ... 0 V DC 0/4 ... 20 mA DC or 20 ... 4/0 mA DC
Galvanic isolation	yes, 3 way isolation
Isolation voltage	1500 V AC
Accuracy	<0.1%, 14 Bit resolution
Supply voltage range	19.2 … 30 V DC
Power consumption	max. 500 mW
Connection type	Spring clamp
Wire range solid/fine-stranded	0.2 - 2.5 mm² (AWG 24–14)
Degree of protection / Mounting rail	IP 20 / TH 35 (EN60715)
Dimensions (mm) W x H x D	6.2 x 93.1 x 102.5
Temperature range	-20 … +65 °C
Approvals (pending)	CE c(UL)us

cores C1 TC-B

- Analog Isolation Amplifier
- 3 way isolation
- Input: thermo coupler, output: voltage / current
- High accuracy by digital conversion
- Width 6.2 mm
- Spring clamp connection
- Wide temperature range

Type	Part No.
cores C1 TC-B	82.003.0130.0

Technical data	
Input range (adjustable)	Types of thermo coupler: J, K, E, N, S, R, B, T
Output range (adjustable)	0/1 ... 5 V DC oder 0 ... 10 V DC 0/4 ... 20 mA DC oder 20 ... 4/0 mA DC
Galvanic isolation	yes, 3 way isolation
Isolation voltage	1500 V AC
Accuracy	<0.1%, 14 Bit resolution
Supply voltage range	19.2 … 30 V DC
Power consumption	max. 500 mW
Connection type	Spring clamp
Wire range solid/fine-stranded	0.2 - 2.5 mm² (AWG 24–14)
Degree of protection / Mounting rail	IP 20 / TH 35 (EN60715)
Dimensions (mm) W x H x D	6.2 x 93.1 x 102.5
Temperature range	-20 … +65 °C
Approvals (pending)	CE c(UL)us

Analog Isolation Amplifier

cores C2 UI-A

- Analog Isolation Amplifier
- 3 way isolation
- Input: current, output: current
- High accuracy by digital conversion
- Width 17.5 mm
- Screw clamp pluggable
- Wide temperature range

Type	Part No.
cores C2 UI-A	82.003.0210.0

Technical data	
Input range (adjustable)	0 ... 20 mA DC active or passive
Output range (adjustable)	0 ... 20 mA DC active or passive
Galvanic isolation	yes, 3 way isolation
Isolation voltage	1500 V AC
Accuracy	<0.1%
Reaction time	<40 ms
Supply voltage range	9 … 40 V DC, 19 … 28 V AC
Power consumption	max. 2.5 W
Connection type	Screw clamp pluggable
Wire range solid/fine-stranded	0.14 - 2.5 mm² (AWG 26–14)
Degree of protection / Mounting rail	IP 20 / TH 35 (EN60715)
Dimensions (mm) W x H x D	17.5 x 100 x 112
Temperature range	-20 … +60 °C
Approvals (pending)	CE c(UL)us

cores C2 M-A

- Analog Isolation Amplifier
- 3 way isolation
- Input: voltage, current, thermo coupler, potentiometer, output: voltage, current
- High accuracy by digital conversion
- Width 17.5 mm
- Screw clamp pluggable
- Wide temperature range

Type	Part No.
cores C2 M-A	82.003.0200.0

Technical data	
Input range (adjustable)	75 mV ... 20 V in 9 ranges (bipolar) 0 … 20 mA (bipolar) J,K,R,S,T,B,E,N Thermo coupler Pt100, Pt500, Pt1000, Ni100. 3 or 4 wire 500 Ohm ... 10 kOhm Potentiometer 500 Ohm … 25 kOhm Rheostat
Output range (adjustable)	0 ... 20 mA oder 4 ... 20 mA 0...5V oder 0...10V oder 1...5V oder 2...10V
Galvanic isolation	yes, 3 way isolation
Isolation voltage	1500 V AC
Accuracy	<0.1%, 12 or 16 Bit resolution
Reaction time	<35 ms (at 12 Bit) and <140 ms (at 16 Bit)
Supply voltage range	10 … 40 V DC, 19 … 28 V AC
Power consumption	max. 2.5 W
Connection type	Screw clamp pluggable
Wire range solid/fine-stranded	0.14 - 2.5 mm² (AWG 26–14)
Degree of protection / Mounting rail	IP 20 / TH 35 (EN60715)
Dimensions (mm) W x H x D	17.5 x 100 x 112
Temperature range	-10 … +60 °C
Approvals (pending)	CE c(UL)us

cores C2 M2-A

- Analog Isolation Amplifier
- 4 way isolation
- 2 analogue outputs
- Input: voltage, current, thermo coupler, potentiometer, output: voltage, current
- High accuracy by digital conversion
- Width 17.5 mm
- Screw clamp pluggable
- Wide temperature range

Type	Part No.
cores C2 M2-A	82.003.0250.0

Technical data	
Input range (adjustable)	0 ... +10V 0 ... 20mA active or passive J, K, R, S, T, B, E, N Thermo coupler Pt100, Pt500, Pt1000, Ni100. 2, 3, 4 wire 1 ... 100 kOhm Potentiometer 500 Ohm ... 25 kOhm Rheostat
Output range (adjustable)	0 ... 20 mA or 4 ... 20 mA active or passive 0 … +10 V
Galvanic isolation	yes, 4 way isolation
Isolation voltage	1500 V AC
Accuracy	<0.1%, 14 Bit resolution
Reaction time	<11 ms
Supply voltage range	10 … 40 V DC, 19 … 28 V AC
Power consumption	max. 2 W
Connection type	Screw clamp pluggable
Wire range solid/fine-stranded	0.14 - 2.5 mm² (AWG 26–14)
Degree of protection / Mounting rail	IP 20 / TH 35 (EN60715)
Dimensions (mm) W x H x D	17.5 x 100 x 112
Temperature range	-10 … +65 °C
Approvals (pending)	CE c(UL)us