Double isolation amplifier SC22

2 galvanically separated signal inputs
Built-in supply for external transmitter
Galvanically isolation between input and output
20-30 V DC supply, isolated from the inputs
4 standard input- and output ranges
Made in accordance with the CE and EMC regulations

The C-mac® double isolation amplifier SC22 is used for signal convertion/isolation between different input- and output signals.
The 2 input circuits are galvanically isolated from supply and output circuits.
The 2 output signals has the same reference as the supply voltage, making the module particularly suitable as an interface for PLC's or other monitoring electronics, where you want to ensure that the input signals are isolated from the PLC.

The unit contains a 24 VDC supply for each input circuit, which can be used to supply external transmitters.

The unit is available with 4 different input ranges, and 4 output ranges.

Technical data:

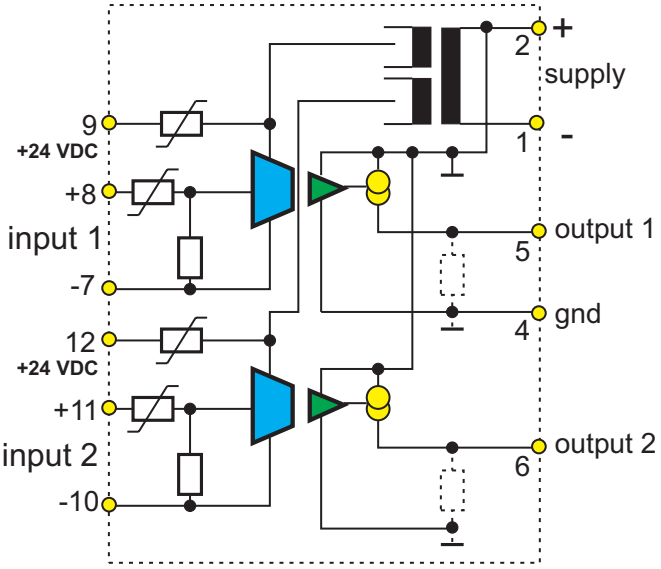
Supply voltage:	20-30 VDC The supply voltage is galvanically isolated from the input curcuits (Test voltage 2 kV AC)
Power consumption:	max. 4 W (160 mA @ 24 V)
Accuracy:	0,3%
Operation temp.:	-20°C to +60°C
Humidity:	0 - 90% RH, non-condensing
Storage temp.:	-35°C to +85°C
Temp. coefficient:	0,01% / °C
Transducer supply:	24 VDC, max. 30 mA
Indications:	none
Adjustments:	Fine adj. +/- 5% of zero and span. The adjustment potentiometers are placed behind the front plate.

EMC and safety regulations.

Emmision:	EN 50 081 - 1
Immunity:	EN 50 082 - 2
Safety:	EN 60 730

Approvals: The units are produced in accordance with the CE og low voltage regulations.

Block diagram:



Input and output metering ranges:

0 - 20 mA, input resistance R_{in} = 50 Ω
4 - 20 mA, input resistance R_{in} = 50 Ω
0 - 10 V input resistance R_{in} = 200 kΩ
0 - 1 V input resistance R_{in} = 20 kΩ

Max. output load, current outputs: 500Ω

Please note, that there is an internal resistor (R_O)on voltage outputs, which means the accuracy of the unit is dependent on the external load resistance.

Ex: With 0-10 V output and load resistance 100 kΩ, the error caused by the load is 0,5%. With load resistance 10 kΩ, the error is 5%.

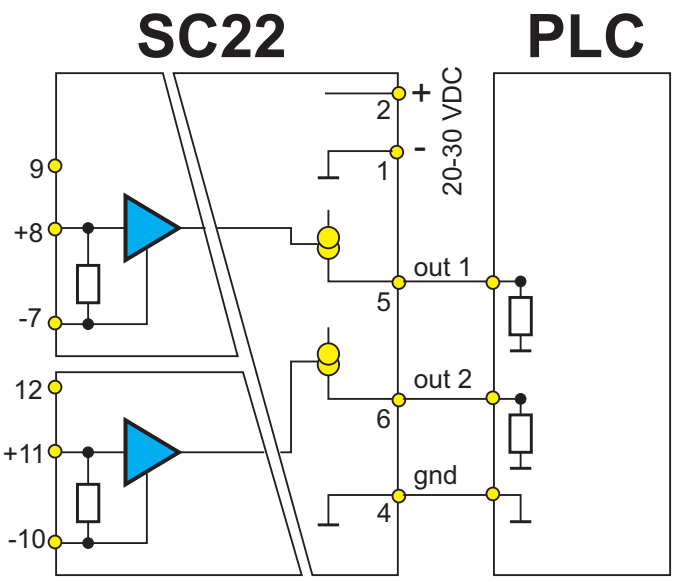
Input connections (channel 2 in brackets):

Active current- or voltage signals:
plus to pin 8 (11), minus to pin 7 (10)

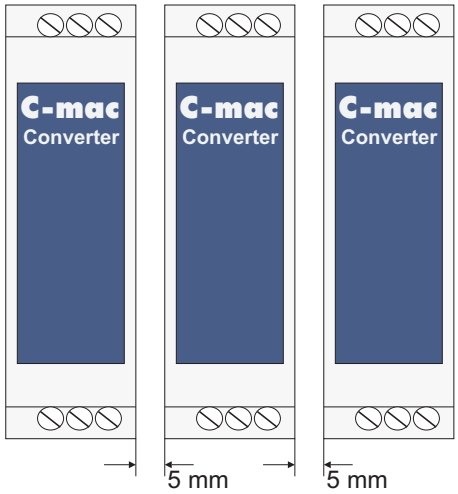
2-wire transducer:
plus to pin 9 (12), minus to pin 8 (11)

3-wire transducer:
plus to pin 9 (12), minus to pin 7 (10), output to pin 8 (11)

Connection example:



Panel installation:



Please note, that the units must be installed with minimum 5 mm gap, because of the internal heat generation.

Ordering guide:

SC22-x-y

x = Input metering range

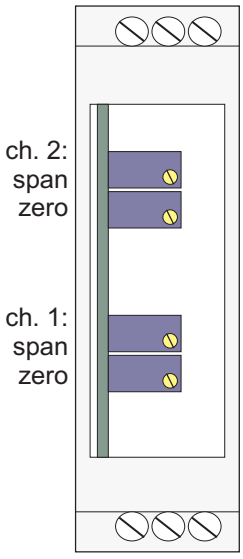
y = Output metering range

Input ranges:	Output ranges:
1 = 0 - 20 mA	1 = 0 - 20 mA
2 = 4 - 20 mA	2 = 4 - 20 mA
3 = 0 - 10 V	3 = 0 - 10 V
4 = 0 - 1 V	4 = 0 - 1 V

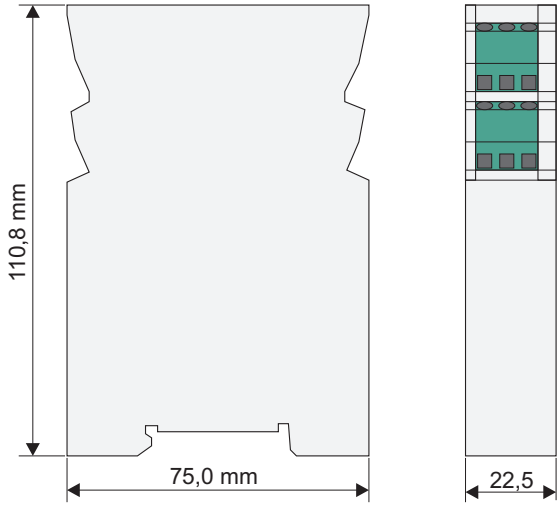
Ordering example: SC22-1-2

(input range 0-20 mA, output range 4-20 mA)

Fine adjustments:



Mechanical dimensions:



Materials and weight:

Housing:	Polycarbonate (30% GFR), grey, self-extinguishing
Terminal block:	Polycarbonate UL94 V-2, green,, self-extinguishing
Terminals:	Nickel-plated brass
Weight:	130 g