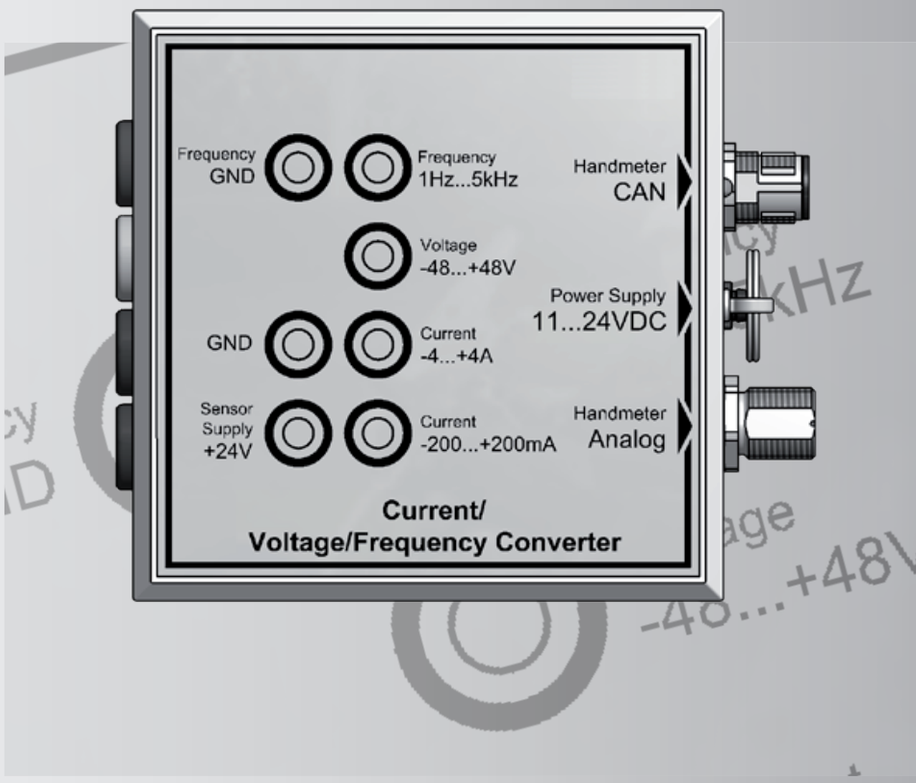
STAUFF®

Sensorconverter-
PPC



Sensorconverter-PPC

Operating Manual

Operating Manual
Current/Voltage/Frequency Converter Sensorconverter-PPC

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Version	Date	Amendment
1.1 EN	10/2026	Correction: GND Connection

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About this Operating Manual

- Before each step, read the corresponding information carefully and adhere to the sequence of steps described.
- Pay particular attention to Chapter 🕮 “Safety Information” on Page 44 and follow the instructions.

Safety and Hazard Symbols



ATTENTION!

This symbol indicates risks which could lead to property damage.

► Follow the instructions to avoid any risks!



This symbol indicates helpful tips and tricks.



This symbol indicates risks involved in using the Sensorconverter-PPC current/voltage/frequency converter.

► Follow the instructions to avoid any risks!



This symbol indicates a reference to other sections, documents or sources.

■ This symbol indicates a list.

► This symbol indicates a sequence of instructions.

1 Here you can find instructions in a specific order.



This symbol indicates results.

1. Product Description

The Sensorconverter-PPC current/voltage/frequency converter, in the following referred to as the converter, is used to measure currents, voltages, and frequencies, e. g.:

- Current consumption of a proportional valve
- Switch statuses of motors or pumps

The converter is also used for connecting external sensors to STAUFF handheld measuring devices, e.g. for:

- Force-path diagrams
- Torque/flow volume nominal lines

The converter is approved for voltages of up to ± 48 V, currents of up to ± 4 A, frequencies of up to 5 kHz, and for the supply of external sensors of up to 24 V/100 mA.

Supply Package and Accessories

Check the contents of the supply package and the accessories ordered. If anything is missing, please contact your sales outlet.

1 Current/voltage/frequency converter Sensorconverter-PPC

2 Operating Manual Current/Voltage/Frequency Converter Sensorconverter-PPC

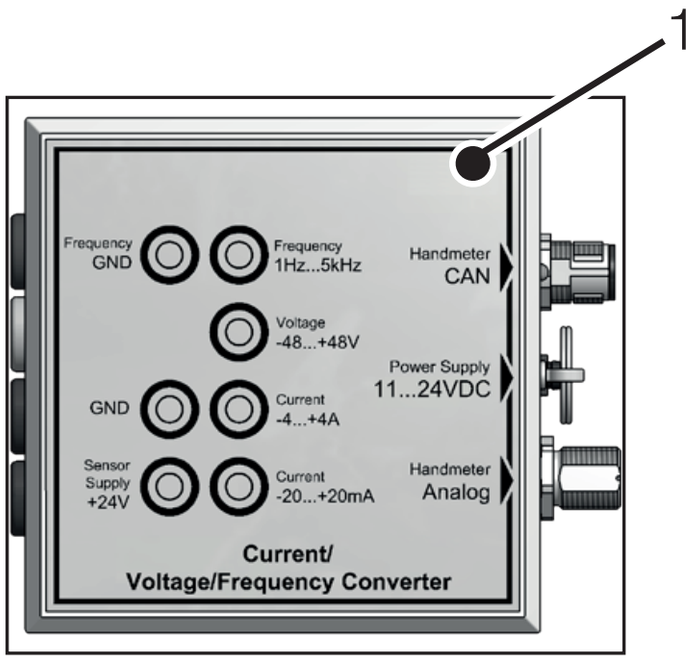


Fig. 1: Equipment supplied

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2. Safety Information

Before starting to work with the converter, read this operating manual and observe the instructions. Failure to observe the instructions provided, particularly those related to safety, can lead to risks to human beings, the environment, equipment and the system.

The converter has been produced according to state-of-the-art technology with regard to accuracy, principles of operation and safe operation of the equipment.

2.1 Intended Use

The converter is designed for measuring currents, voltages, and frequencies as well as for connecting external sensors to STAUFF handheld measuring devices. The converter is approved for currents of up to 4 A, voltages of up to 48 V, and frequencies of up to 5 kHz.

Any use of the converter beyond these limits is not permitted, can cause accidents or destruction of the converter, and immediately renders void any warranty or compensation claims against the manufacturer.

Improper Use

The converter does not comply with Directive 94/9/EC and must therefore not be used in potentially explosive atmospheres.

2.2 Technical Personnel

This operating manual is intended for properly trained technical personnel who are familiar with the applicable regulations and standards regarding the area of use. Technical personnel assigned to starting up and operating the device must produce evidence of the necessary qualification. Qualification can be obtained through participation in a relevant training course or receiving applicable instruction.

Technical personnel must comprehend the content of this operating manual and have access to it at all times.

2.3 General Safety Information


Always observe all the relevant national regulations regarding accident prevention and industrial safety when performing any work!


Observe the IP protection rating when using the converter in wet areas. 📖”Technical Data” on Page 66


Only trained technical personnel may connect up the converter.


Avoid any application of force to the converter.


Never expose the converter to direct sunlight over an extended period of time.


Never use a damaged or defective converter.


Avoid electrical short-circuiting.


Always ensure you connect the converter up correctly. 📖”Technical Data” on Page 66

2.4 Safety-Related Warnings

Throughout this operating manual, warnings which relate to specific, individual functional processes or activities are provided directly preceding the corresponding instructions.

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3. Design and Function

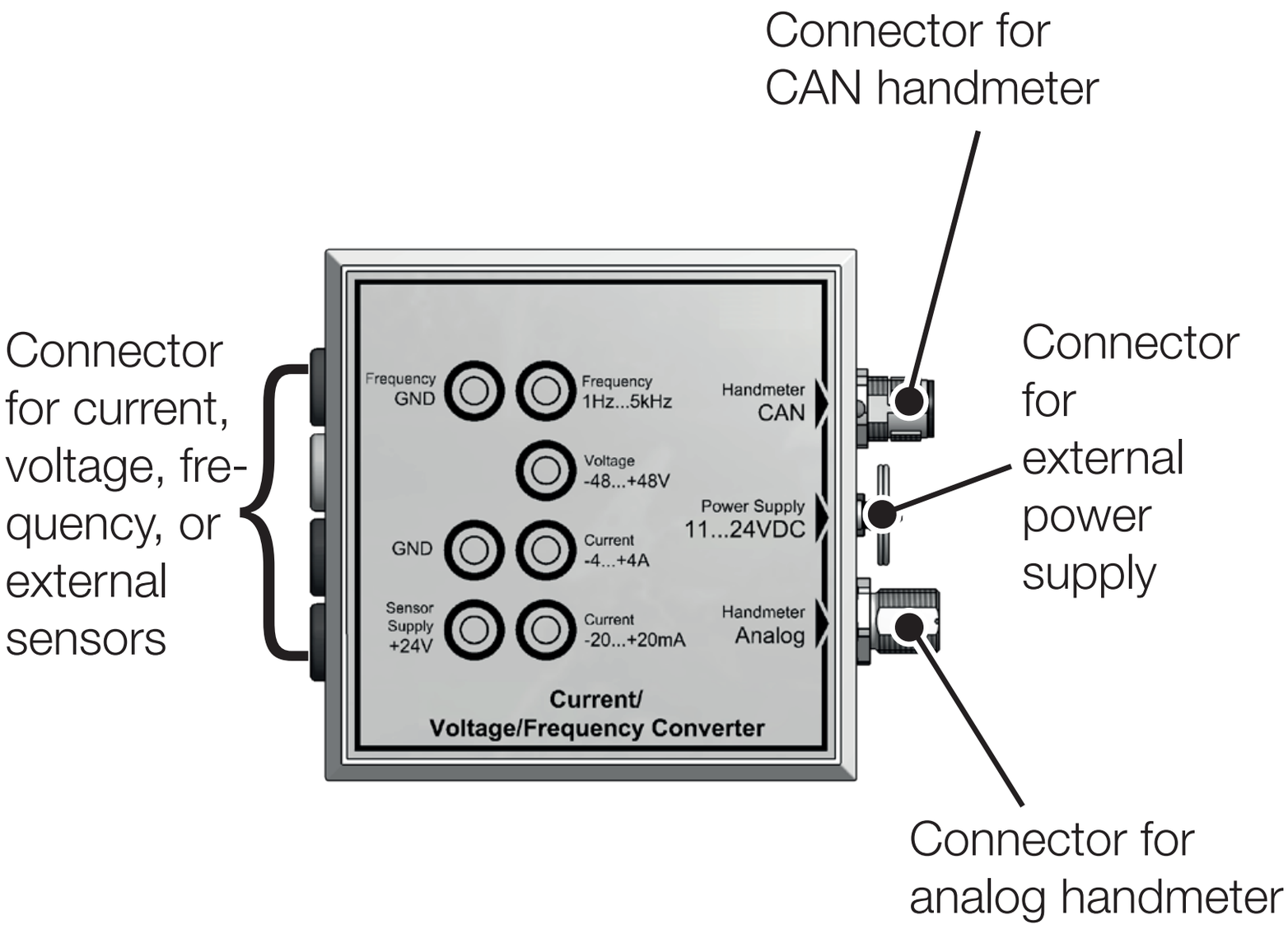


Fig. 2: Design and Function

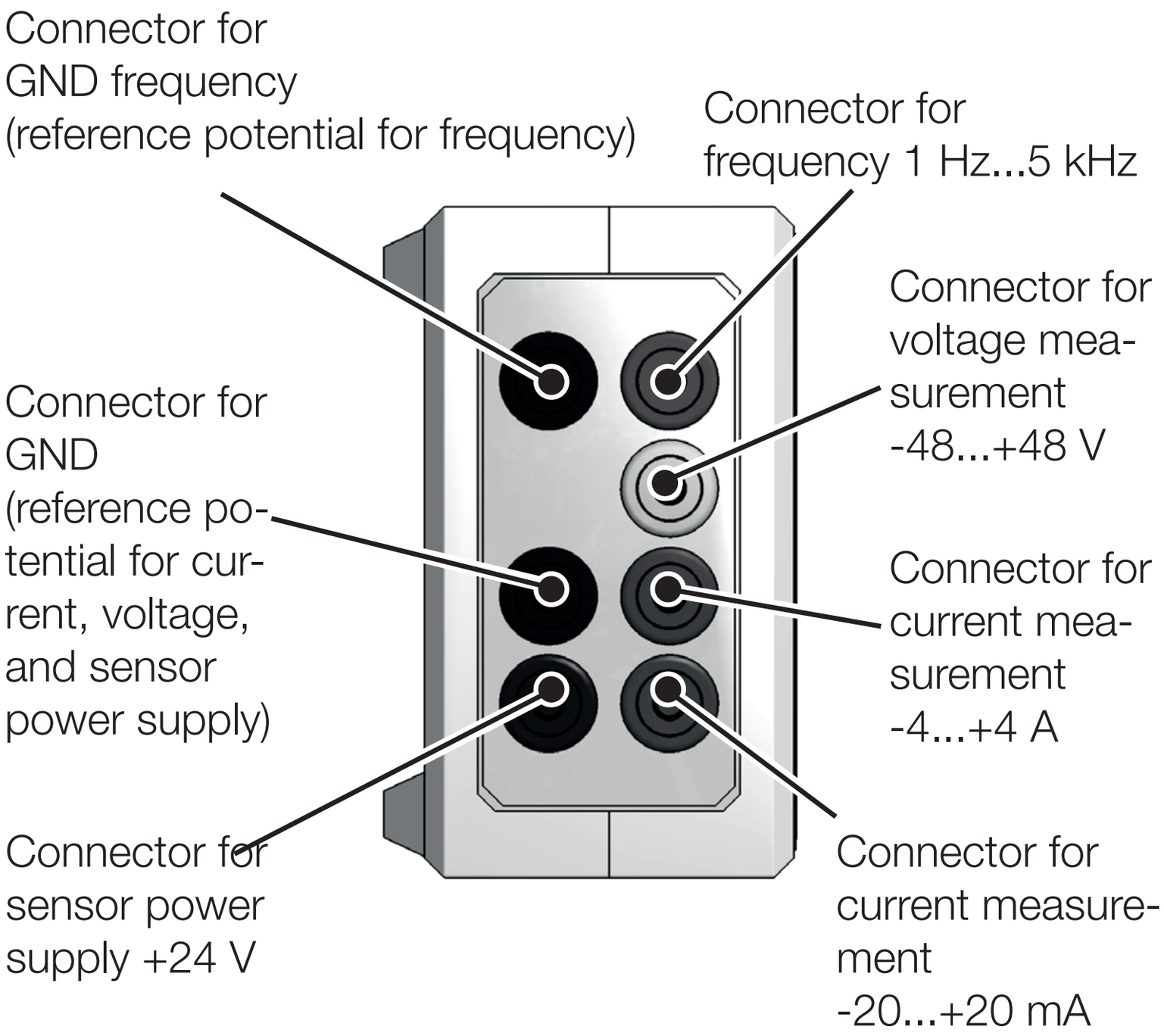


Fig. 3: Connectors for current, voltage, and frequency

Function

Connect a STAUFF handheld measuring device to the CAN handmeter connector or the analog handmeter connector on the converter. The analog or the CAN handheld measuring device supply the converter with current. Any connected sensors are supplied by the converter. If the current consumption of the connected sensors exceeds 50 mA, an additional power supply unit must be connected to the converter's external current supply connector.

Apart from the signals, devices such as pressure sensors or flow meters can be connected to the connectors for current, voltage, and frequency. The converter transmits the signal from the connected device to the handheld measuring device. The handheld measuring device displays the current, voltage, and frequency values. The display on analog handheld measuring devices can also be configured to the original input variable of the sensors.



The evaluation is restricted to one measurement connector. Simultaneous evaluation of several measurement connectors is not possible.

The converter automatically selects the measurement connector.

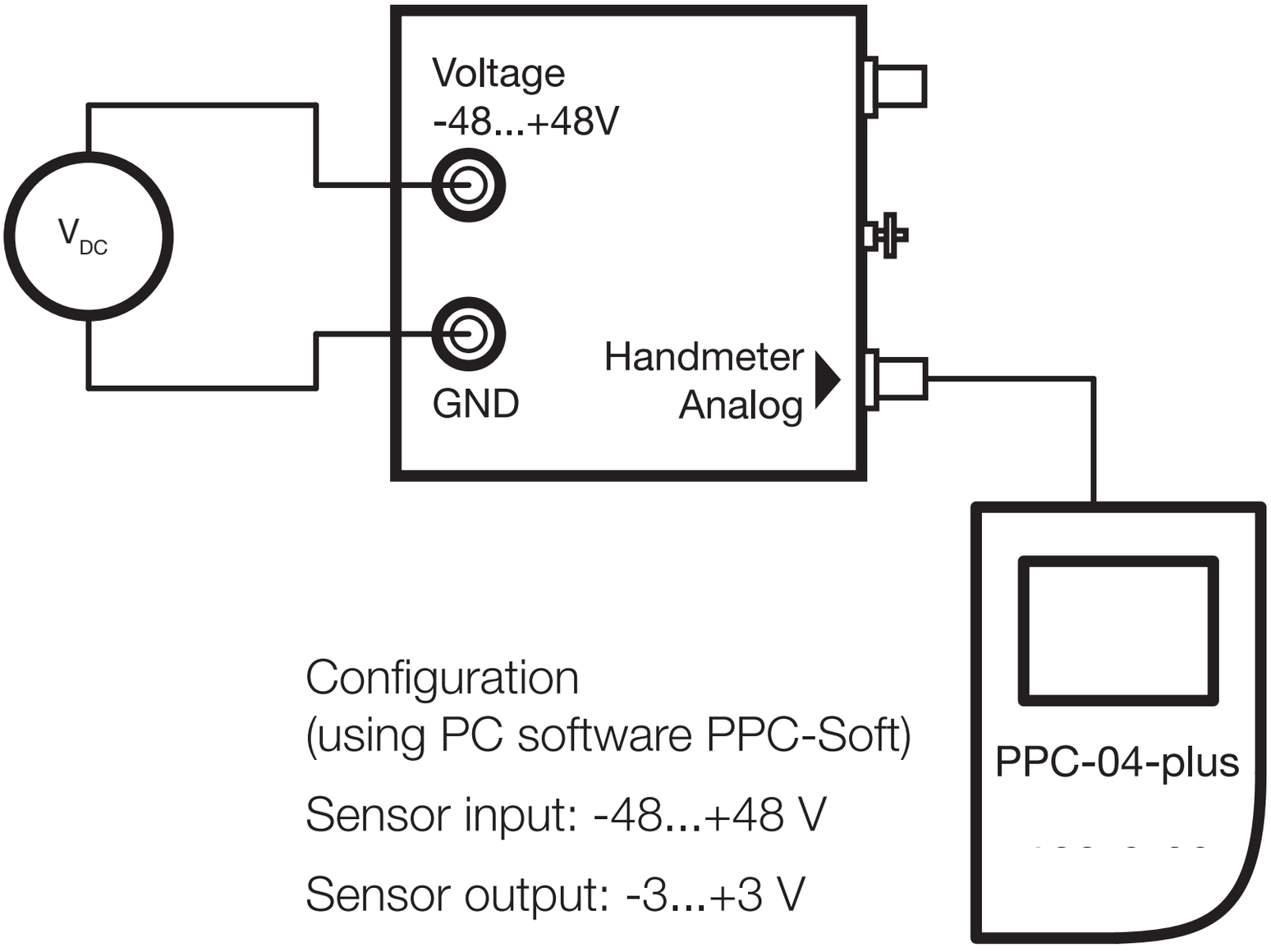
The converter features a galvanic isolation. This means several converters can safely be used in parallel.

4. Connecting up the Converter

Connect up the converter as shown in the examples below.

For the external power supply, you can use the power supply unit of a STAUFF handheld measuring device.

4.1 Connection Example Voltage Measurement



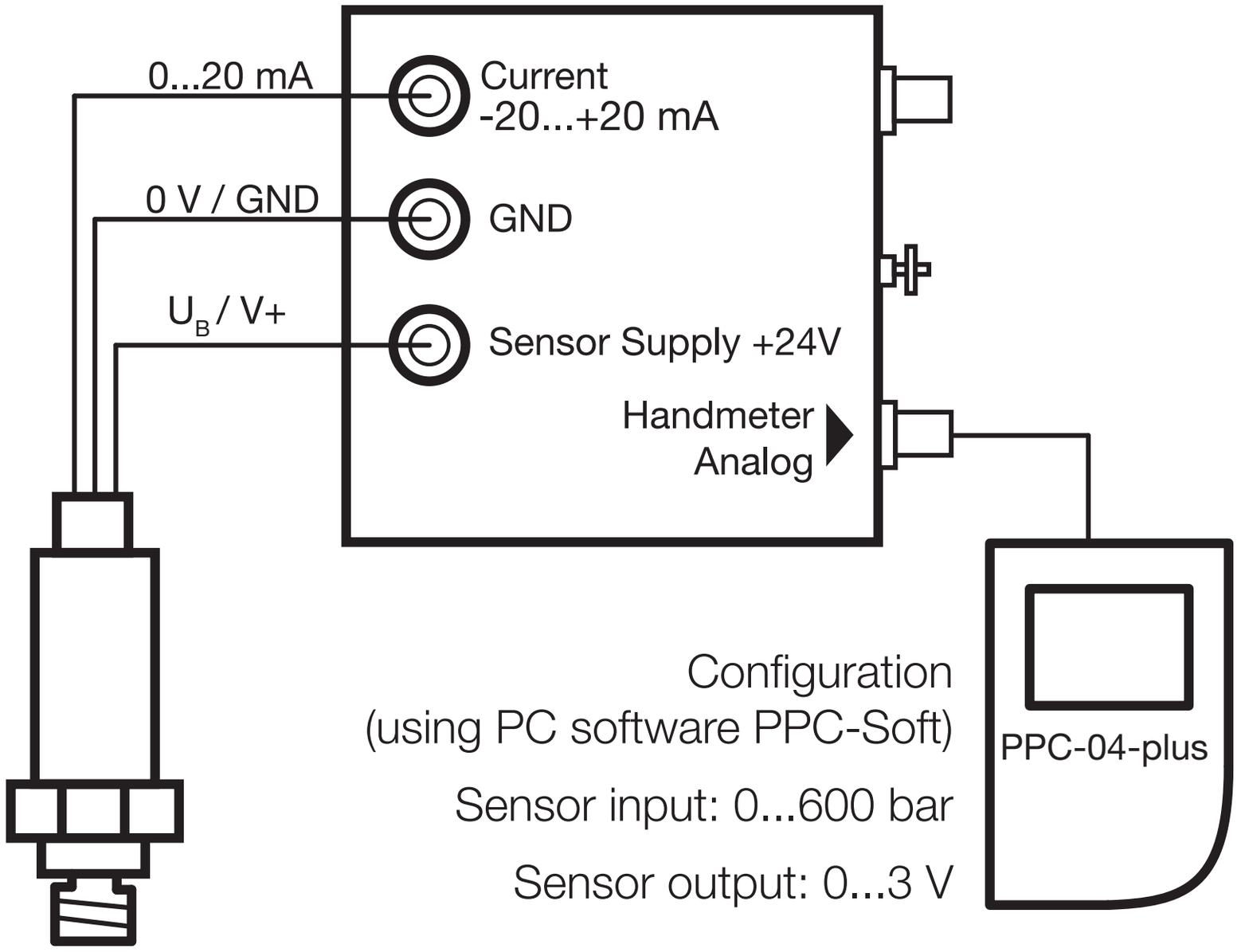
Configuration
(using PC software PPC-Soft)

Sensor input: -48...+48 V

Sensor output: -3...+3 V

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4.2 Connection Example Pressure Sensor 600 bar, 0...20 mA



Configuration
(using PC software PPC-Soft)

Sensor input: 0...600 bar

Sensor output: 0...3 V

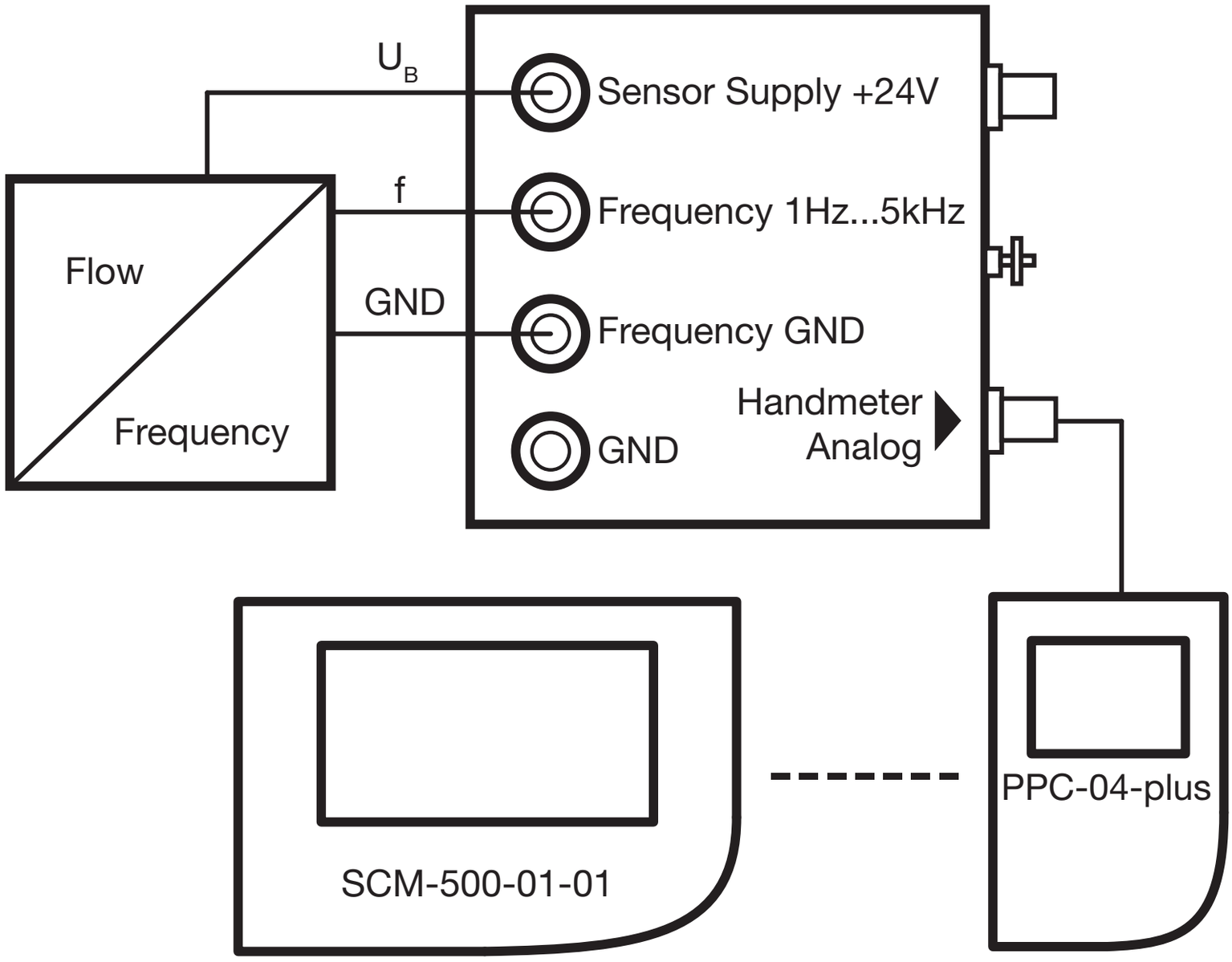
Calculation

Sensor: 0...600 bar ≙ 0...20 mA

Converter/PPC-04-plus: 0...20 mA ≙ 0...600 bar

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4.3 Connection Example Flow Meter 160 l/min, 1 kHz



Calculation

Flow meter: 0...160 l ≙ 0...1 kHz

Converter/PPC-04-plus: 0...5 kHz ≙ 0...800 l/min

Configuration PPC-04-plus (using PC software PPC-Soft): sensor input: 0...800 l/min, sensor output: 0...3 V

Configuration PPC-PAD (only using PPC-PAD): Unit: 0...800 l/min, define signal type: 0...3 V

5. Configuring STAUFF Handheld Measuring Devices

Configure the following values in the connected STAUFF hand-held measuring device in order to display signals.

5.1 PPC-04-plus



	Analog		CAN
From firmware	No restriction		1.08
Measuring range	Sensor Input	Sensor Output	Auto-matic sensor recogni-tion
-48...+48 V	-48...+48 V	-3...+3 V	
-20... +20 mA	-20... +20 mA	-3...+3 V	
-4...+4 A	-4...+4 A	-3...+3 V	
1 Hz...5 kHz	0...5 kHz	0...3 V	

Configuration is only possible using the PC software PPC-Soft.

5.2 PPC-06/08-plus



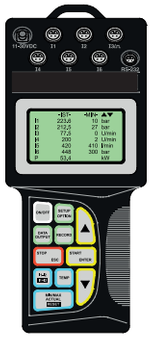
From firmware	No restriction
Measuring range	Ext. sensor
-48...+48 V	0...48 V
-20...+20 mA	0...20 mA
-4...+4 A	0...4 A
1 Hz...5 kHz	0...5 kHz

5.3 PPC-PAD



	Analogue		CAN
From firmware	No restriction		L102
Measuring range	Unit	Define signal type	Automatic sensor recognition
-48...+48 V	-48...+48 V	-3...+3 V	
-20... +20 mA	-20... +20 mA	-3...+3 V	
-4...+4 A	-4...+4 A	-3...+3 V	
1 Hz...5 kHz	0...5 kHz	0...3 V	

5.4 PPC-06/08



From firmware	No restriction	
Measuring range	Units	Signal
-48...+48 V	-48...+48 V	-10...10 V
-20...+20 mA	-20...+20 mA	-10...10 V
-4...+4 A	-4...+4 A	-10...10 V
1 Hz...5 kHz	0...5 kHz	0...10 V
Can only be operated with an external power supply unit		

6. Troubleshooting



ATTENTION!

Risk of material damage through improperly performed repair work.

- ▶ Never open the converter.
- ▶ Never attempt to perform repair work yourself.
- ▶ If the converter is defective, return it to the manufacturer.

Service/Repairs

Please contact your sales outlet if the measuring devices needs to be repaired or calibrated.

7. Maintenance and Cleaning

Maintenance

The converter is maintenance-free and cannot be repaired by the user. In case of a defect, return the converter to the manufacturer for repair.

Cleaning

Clean the outer surface of the converter with a dry or slightly moist, lint-free cloth.



ATTENTION!

Risk of material damage through aggressive and corrosive substances.

- ▶ Never use abrasives or volatile cleaners!
- ▶ Never use sharp objects or aggressive cleaning agents!

8. Disposal



The converter is composed of various materials and must not be disposed of with normal household waste.

What can we do for you?

We can provide you with the option of returning your old device to us for disposal at no extra cost. We then initiate recycling and disposal according to the applicable legal framework.

What do you have to do?

After your device has reached the end of its service life, simply send it (packed in a box) via a parcel service to the sales outlet which provides your support. We then carry out any recycling and disposal measures required. This is easy and free of charge for you.

Any further questions?

If you have any further questions, please contact your sales outlet.

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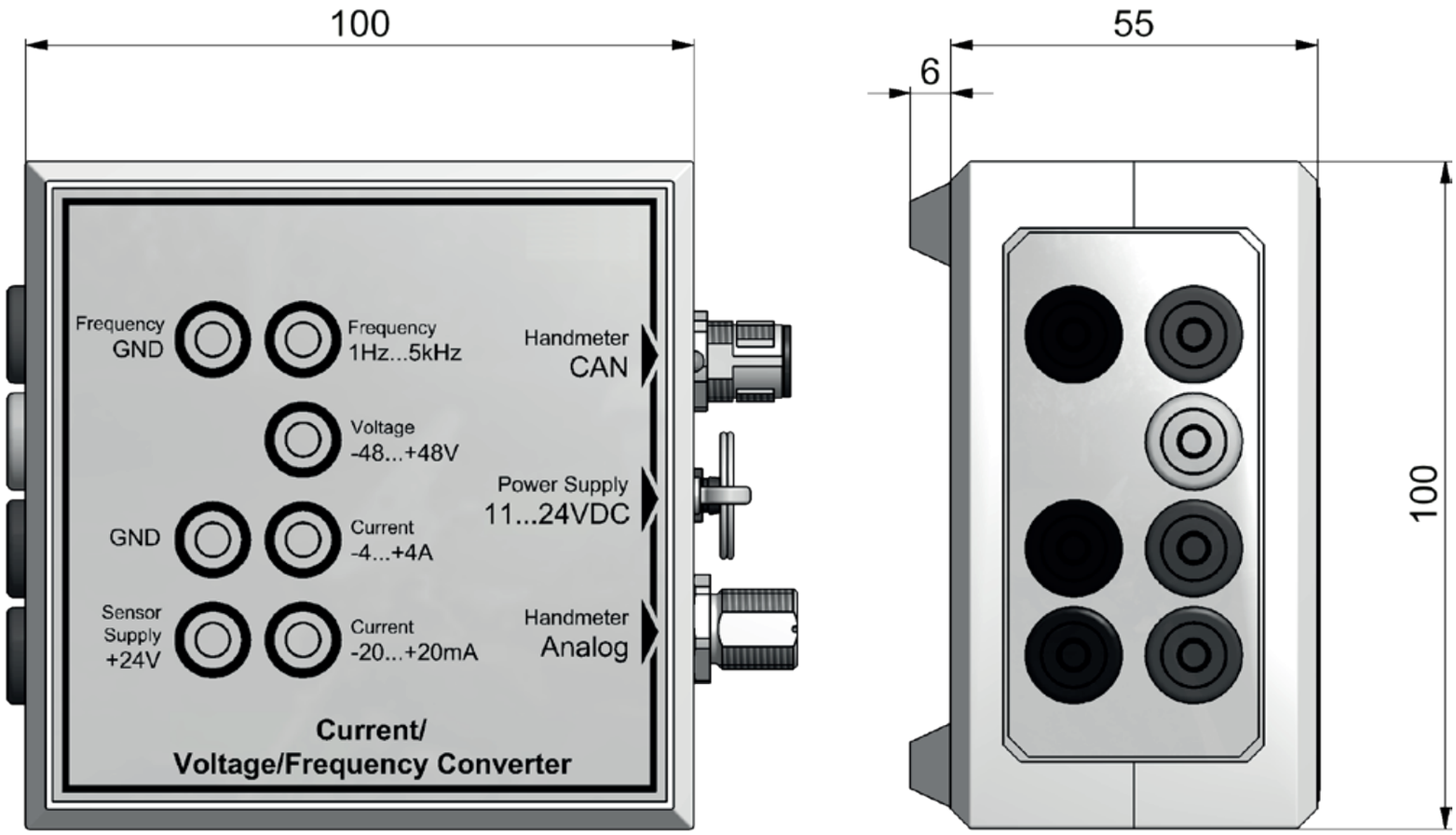
9. Technical Data

Input values (FS=FullScale)	
Voltage (DC)	-48 V...+48 V CAN: ± 0,5 % FS; Analog: ± 1 % FS
Current (DC)	-20 mA...+20 mA CAN: ± 0,5 % FS; Analog: ± 1 % FS
Current (DC)	-4...+4 A ± 1.5 % FS
Frequency	1...5000 Hz; 100 mV...24 V CAN: ± 0,1 % FS @ < 100 Hz CAN: ± 0,5 % FS @ > 100 Hz Analog: ± 1 % FS @ > 100 Hz
Long-term stability	0.1 % volt/a

Voltage supply to external sensor (galvanically isolated)	
Voltage	24 VDC ± 2 V
Current without power supply unit	max. 50 mA
Current with power supply unit	max. 100 mA
External power supply	
Power supply	11...30 VDC
Connections	
Measurement inputs	4 mm banana jacks
Analog output	5 pin, push-pull
CAN output	5 pin, M12x1, SPEEDCON®, plug
External power supply	3-pin, female

Ambient conditions	
Operating temperature	0...+60 °C
Storage temperature	-20...+85 °C
Rel. humidity	< 80 %
Protection	IP40 (EN60529)
Housing	
Dimensions (W x H x D)	100 x 100 x 61 mm
Material	ABS
Weight	
Weight	240 g
Order code	
Order code	Sensorconverter-PPC

Dimensional Drawings



Operating Manual Sensorconverter-PPC

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