DIN rail top-hat rail-mounted devices for measurements in heavy current systems




Camille Bauer Metrawatt offers a wide range of high-quality measuring instruments for all tasks in heavy current systems.
With our DIN rail top-hat rail-mounted devices of the SIRAX series, we complement the portfolio of unifunctional measuring transducers for a very good price-performance ratio.
These devices have the basic functionalities of a measuring transducer and are used as cost-effective standard solutions for safe acquisition of a measured variable in a one-phase or three-phase heavy current system.
They convert a heavy current variable such as current, voltage, frequency or power, respectively, into a low-voltage signal (current or voltage).
The devices feature an LCD display and may be programmed by the buttons on-site or decentrally via RS485 Modbus RTU and the CB-Configurator software. In addition, the measured values may be visualised, stored and evaluated via SMARTCOLLECT. The SIRAX transducer series is designed for universal use in industrial machines and plants of automation and energy engineering.

# TECHNICAL DATA

| | BT5100 | BT5200 |
|---|---|---|
| Type | Voltage | Current |
| Connection types | One-phase | One-phase |
| **INPUTS** | | |
| Nominal voltage [$U_N$] | 57...500 V | – |
| Voltage converter primary value [PT] | 57...400 kV | – |
| Nominal current [$I_N$] | – | 1...5 A |
| Current transformer primary value [CT] | – | 1...9999 A |
| Nominal frequency | 45...65 Hz | 45...65 Hz |
| Power consumption | < 0.6 VA | < 0.2 VA |
| Overload capability | 1.2 x $U_N$ permanent<br>2 x $U_N$, 10x1 s, 10 min. | 1.2 x $I_N$ permanent<br>10 x $I_N$, 5x3 s, 5 min.<br>50 x $I_N$, 1x1 s, 1 h |
| **POWER SUPPLY** | 60...300 V AC/DC ±5 %<br>24...60 V AC/DC ±10 % | 60...300 V AC/DC ±5 %<br>24...60 V AC/DC ±10 % |
| **MEASUREMENT UNCERTAINTY** | | |
| Measurement uncertainty | 0.2 x C | 0.2 x C |
| Measurement uncertainty phase angle, power factor | – | – |
| **ANALOG OUTPUTS** | | |
| Linearization | Linear / kinked | Linear / kinked |
| Range | 0...20 mA / 4...20 mA or 0...10 V | 0...20 mA / 4...20 mA or 0...10 V |
| **COMMUNICATION** | Standard RS485: Modbus/RTU | Standard RS485: Modbus/RTU |
| **ENVIRONMENTAL CONDITIONS** | | |
| Operating temperature | 0 ... 23 ... 45 °C | 0 ... 23 ... 45 °C |
| Storage temperature | -40...70 °C | -40...70 °C |
| Temperature influence | ± 0.2% / 10 °C | ± 0.2% / 10 °C |
| Relative humidity | ≤ 75% | ≤ 75% |
| Operating altitude | ≤ 2000 m above sea level | ≤ 2000 m above sea level |
| **SAFETY** | | |
| Protection class | II (protection insulation acc. to EN61010) | II (protection insulation acc. to EN61010) |
| Pollution degree | 2 | 2 |
| Measuring category | CATIII | CATIII |
| Protection according to EN 60529 | IP40 housing, IP20 terminals | IP40 housing, IP20 terminals |
| **MECHANICAL PROPERTIES** | | |
| Display | LCD | LCD |
| Housing material | Lexan 940 (polycarbonate) | Lexan 940 (polycarbonate) |
| Flammability class | V-0 acc. to UL94, self-extinguishing, non-dripping, free of halogen | V-0 acc. to UL94, self-extinguishing, non-dripping, free of halogen |
| Weight | approx. 400 g | approx. 400 g |
| Dimensions [W x H x D] | 43.75 x 65.5 x 106.5 mm | 43.75 x 65.5 x 106.5 mm |
| **ORDER CODE** | 175267 [60...300 V AC/DC]<br>194985 [24...60 V AC/DC] | 175283 [60...300 V AC/DC]<br>194993 [24...60 V AC/DC] |

| BT5300 | BT5400 |
|---|---|
| Frequency<br>One-phase | Power<br>One-phase<br>3-phase 3-wire balanced or unbalanced load<br>3-phase 4-wire balanced or unbalanced load |
| 57 ... 500 V<br>–<br>–<br>–<br>45...55 Hz, 48...52 Hz, 55...65 Hz, 45...65 Hz<br>< 0,6 VA<br>1.2 x $U_N$ permanent<br>2 x $U_N$, 10x1 s, 10 min. | 100...500 V<br>100...692 kV<br>1...5 A<br>1...9999 A<br>25...60 Hz<br>< 0,6 VA (voltage) / < 0,2 VA (current)<br>1.2 x $U_N$ / $I_N$ permanent<br>2 x $U_N$, 10x1 s, 10 min. / 10 x $I_N$, 5x3 s, 5 min.<br>50 x $I_N$, 1x1 s, interval 1 h |
| 60...300 V AC/DC ±5 %<br>24...60 V AC/DC ±10 % | 60...300 V AC/DC ±5 %<br>24...60 V AC/DC ±10 % |
| 0.2 x C<br>– | 0.2 x C<br>0.5 x C |
| Linear / kinked<br>0...20 mA / 4...20 mA or 0...10 V | Linear / kinked<br>Unipolar 0...20 mA / 4...20 mA or 0...10 V<br>Bipolar -20...0...+20 mA or -10...0...+10 V |
| Standard RS485: Modbus/RTU | Standard RS485: Modbus/RTU |
| 0 ... 23 ... 45 °C<br>-40...70 °C<br>± 0.2% / 10 °C<br>≤ 75%<br>≤ 2000 m above sea level | 0 ... 23 ... 45 °C<br>-40...70 °C<br>± 0.2% / 10 °C<br>≤ 75%<br>≤ 2000 m above sea level |
| II (protection insulation acc. to EN61010)<br>2<br>CATIII<br>IP40 housing, IP20 terminals | II (protection insulation acc. to EN61010)<br>2<br>CATIII<br>IP40 housing, IP20 terminals |
| LCD<br>Lexan 940 (polycarbonate)<br>V-0 acc. to UL94, self-extinguishing, non-dripping, free of halogen<br>approx. 400 g<br>43.75 x 65.5 x 106.5 mm | LCD<br>Lexan 940 (polycarbonate)<br>V-0 acc. to UL94, self-extinguishing, non-dripping, free of halogen<br>approx. 400 g<br>78.5 x 65.5 x 106.5 mm |
| 175308 [60...300 V AC/DC]<br>195001 [24...60 V AC/DC] | 175316 [60...300 V AC/DC]<br>195009 [24...60 V AC/DC] |


SIRAX BT5100


SIRAX BT5200


SIRAX BT5300

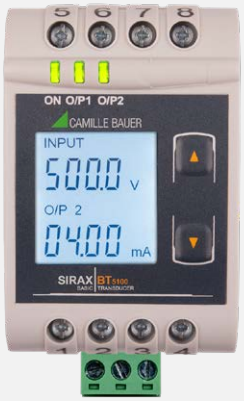

SIRAX BT5400

# VISUALISATION

## CLEAR REPRESENTATION OF MEASURED VALUES

The LCD display shows measured values directly on site.

- Display of input and output parameters
- High-contrast display with backlit for good reading of measurement values
- Clear and unambiguous display of measured data
- Simple navigation via two push buttons



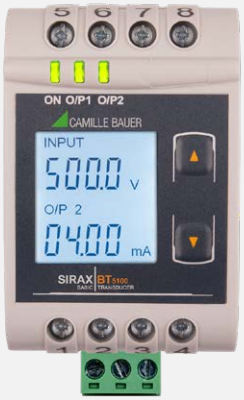




## SIMPLE ON-SITE PROGRAMMING OF MEASURED VALUES

The following parameters can be set directly on site by means of the LCD display and two push buttons.

- Network configuration
- Values of current and voltage transformers
- Input and output parameters
- Communication parameter Modbus RTU
- Password protection



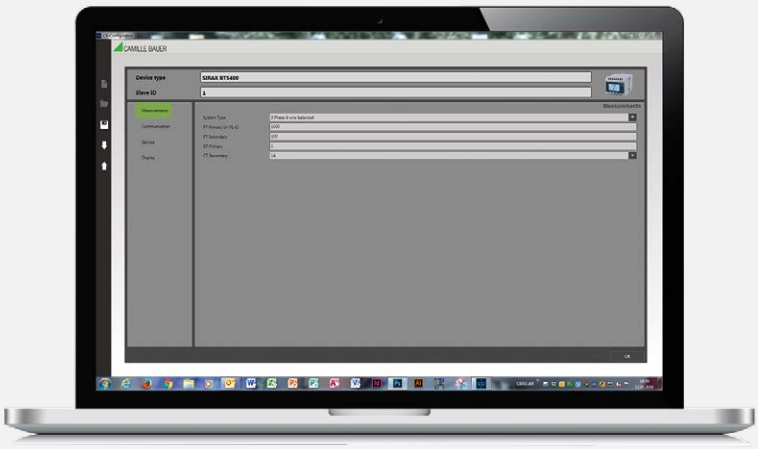




## ADDITIONAL PROGRAMMING OF MEASURED VALUES VIA CB-CONFIGURATOR SOFTWARE

Via RS485 (Modbus RTU) interface and the CB-Configurator software the measured values may be programmed even more easily.

- Devices may be selected directly in the software
- Setting of input and output parameters
- Offline parameterization of measured values
- Loading and storage of configuration
- Upload of predefined configurations to several devices at the same time
- Password protection

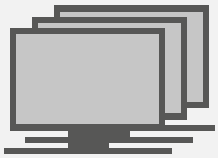


# SMARTCOLLECT® SC²



**Building management system and enterprise applications**

**Upstream**
Modbus/TCP
OPC UA
BACnet
SNMP
DNP3
IEC61850 MMS
RESTful API
DDE
etc.



**Multiple users**



**SMARTCOLLECT SC²**

**Downstream**
Modbus/TCP
Modbus/RTU
etc.

**Features**



Open platform



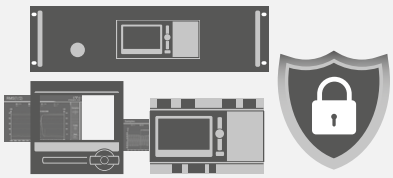
Web-based and secure including RBAC



Native cloud support



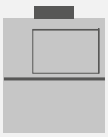
Operating system agnostic (Windows, Linux, MacOS)



Cyber secure Camille Bauer devices



Third-party devices



Gas meter



Energy meter



Flow



Temperature



Water meter




To see the benefits for yourself, visit our live page:
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