Product information

E.A.S.Y.Bus®
Product information E.A.S.Y.Bus®

System
○ E.A.S.Y.Bus®

System components
○ Sensor modules without measuring data memory
○ Sensor modules with measuring data memory
○ Centralized measuring, regulating and displaying devices
○ Decentralized measuring and regulating devices
○ Interface converters

System features
○ Low-cost cabling with twisted 2-pole wires (polarity-free) in ring, star or tree form; freely combinable
○ Bus line is used both for power supply and signal transmission
○ Wire length up to 1000 m, extendable with repeaters
○ Automatic start-up installation
○ Sensor modules can be changed, removed or added during running operation.
○ Up to 240 sensor modules connectable
○ Very high data integrity due to CRC check
○ Handling of up to 20 measuring values/sec. possible via bus system
○ Response time within E.A.S.Y.Bus® system: 1 second with decentralized regulating: 20 ms

E.A.S.Y.Bus® hardware
○ E.A.S.Y.Bus® hardware based on hardware for M-Bus
○ Polarity-free bus connection
○ Bus voltage 36 V DC, minimal 24 V DC
○ Maximal permissible voltage loss at bus line: 12 V DC
○ Master-/slave- system; slaves respond only on request

Advantages
○ Minimal installation and planning effort
○ Economic monitoring and regulating systems for multiple measuring points at unbeatable price/performance ratio
○ Flexible: changes and extensions possible without difficulty
○ Modern and future-proof technology due to digital signal transmission
○ Centralized sensor data acquisition, even over long distances

Characteristics

Applications
○ Temperature monitoring and regulating
cold storage houses / storage rooms / laboratory + technology
○ Relative humidity / dew point / temperature
monitoring storage rooms / heating, ventilation, climate, museums, collections, libraries, lab + technology
○ Relative humidity / air pressure, CO₂ monitoring
production rooms, storage rooms, offices (ambient air quality), greenhouses
○ CO monitoring
underground and parking garages, automobile trade, garages, go-kart circuits

System components
○ Numerous sensor modules
(with or without measuring value memory)
○ Centralized measuring, regulating and displaying devices
○ Decentralized measuring and regulating devices
○ Interface converters
○ PC with E.A.S.Y.Bus® software (data acquisition and archiving)
○ Further components, e.g. for remote acquisition systems
○ Wide range of accessories

Available E.A.S.Y.Bus® sensor modules
○ Temperature (Pt100, Pt1000, thermocouples)
○ Humidity / temperature / pressure (relative humidity, dew point temperature, absolute humidity, ...)
○ Carbon dioxide (CO₂), carbon monoxide (CO)
○ Frequency, rotation speed, flow, switching state, ...
○ Quantity (up- / down-counter)
○ Data logger
○ Standard signal module for any sensors
(4..20 mA, 0..20 mA, 0..50 mV, 0..1 V, 0..2 V, 0..10 V)
The E.A.S.Y.-Bus® System

**Level converter**
- EBW 1: for max. 14 bus loads
- EBW 3: for max. 2 bus loads
- EBW 64: for max. 64 bus loads
- EBW 250: for max. 250 bus loads

**Centralized data collection**
- Display and monitoring device (regulation of 4 level converters), max. 20 channels addressable, max. 30 bus loads.
- Temperature logger
- Climate logger (humidity/temperature/atmospheric pressure)

**Sensor modules including measured data storage (data logging functionality)**
- Sensor modules with data logging
- Temperature sensor
- Humidity and temperature sensor
- CO₂ sensor
- CO sensor
- CO sensor + standard signal sensor
- User-defined sensor + standard signal sensor

**Sensor modules without measured data storage**
- Sensor modules without data logging
- Standard signal logger
- Pulse logger
- State logger
- Peripheral controlling system
  - For a fast response time we recommend a local solution inside the EASYBus system (e.g., via GIA 20 EB, GIR 2002...)

**Computer incl. software or SPS (PLC)**
- Direct data request system
- Remote operation system
- Monitoring
- PC
Sample Applications / Solutions

### Alarm control (i.e. storerooms)

- **Computer (optionally)** or SPS (PLC)
- Not necessary!
- **Sensor modules**
  - max. 20 channels addressable / max. 30 bus loads

### Climate control

- **Computer incl. software** or SPS (PLC)
- Data logging and data storage (if required)
- **Central climate controlling**
  - 1 = Heating
  - 2 = Cooling
  - 3 = Humidification
  - 4 = Dehumidification
  - 5 = Monitoring (min./max.)

### Indoor humidity optimization (i.e. greenhouses)

- **Humidity and temperature**
- Measuring of humidity deviation indoor / outdoor and ventilation control
Sample Applications / Solutions

**EASYBus system with local sub-assembly groups**

- Computer incl. software
  - Central data logging
- or SPS (PLC)
- EBW 1
  - max. 14 bus loads
- max. 20 channels addressable / max. 30 bus loads
- (12 remaining bus loads)
## Device overview

<table>
<thead>
<tr>
<th>Type</th>
<th>System component</th>
<th>Model type</th>
<th>Measuring range and further information</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>EBT - IF 1</td>
<td>Sensor module without data memory</td>
<td>Temperature probe</td>
<td>-30.0..+100.0 °C</td>
<td>8</td>
</tr>
<tr>
<td>EBT - IF 2</td>
<td>Sensor module without data memory</td>
<td>Temperature probe</td>
<td>-30.0..+100.0 °C</td>
<td></td>
</tr>
<tr>
<td>EBT - IF 3</td>
<td>Sensor module without data memory</td>
<td>Temperature module</td>
<td>-70.0..+400.0 °C</td>
<td></td>
</tr>
<tr>
<td>EBT - AP1</td>
<td>Sensor module without data memory</td>
<td>Temperature module</td>
<td>-50.0..+150.0 °C</td>
<td>9</td>
</tr>
<tr>
<td>EBT - AP2</td>
<td>Sensor module without data memory</td>
<td>Temperature module</td>
<td>-50.0..+400.0 °C</td>
<td></td>
</tr>
<tr>
<td>EBT - AP3</td>
<td>Sensor module without data memory</td>
<td>Temperature module</td>
<td>-50.0..+150.0 °C</td>
<td></td>
</tr>
<tr>
<td>EBT - AP4</td>
<td>Sensor module without data memory</td>
<td>Temperature module</td>
<td>-199.9..+650.0 °C</td>
<td></td>
</tr>
<tr>
<td>EBT - AP5</td>
<td>Sensor module without data memory</td>
<td>Temperature module</td>
<td>-25.0..-70.0 °C</td>
<td></td>
</tr>
<tr>
<td>EBT - 2R</td>
<td>Sensor module without data memory</td>
<td>Temperature module</td>
<td>-50.0..+150.0 °C</td>
<td></td>
</tr>
<tr>
<td>EBT - 2RE</td>
<td>Sensor module without data memory</td>
<td>Humidity / temperature module</td>
<td>0.0..100 % r.F. / -25.0..+70.0 °C</td>
<td>12</td>
</tr>
<tr>
<td>EBHT - 2R</td>
<td>Sensor module without data memory</td>
<td>Humidity / temperature module</td>
<td>0.0..100 % r.F. / -40.0..+120.0 °C</td>
<td></td>
</tr>
<tr>
<td>EBHT - 1K</td>
<td>Sensor module without data memory</td>
<td>Humidity / temperature module</td>
<td>0.0..100 % r.F. / -40.0..+120.0 °C</td>
<td></td>
</tr>
<tr>
<td>EBHT - 1R</td>
<td>Sensor module without data memory</td>
<td>Humidity / temperature module</td>
<td>0.0..100 % r.F. / -40.0..+120.0 °C</td>
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<tr>
<td>EBHT - 2K</td>
<td>Sensor module without data memory</td>
<td>Humidity / temperature module</td>
<td>0.0..100 % r.F. / -40.0..+120.0 °C</td>
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</tr>
<tr>
<td>EBT - 2R</td>
<td>Sensor module without data memory</td>
<td>Carbon dioxide module</td>
<td>0..2000 ppm CO₂</td>
<td>15</td>
</tr>
<tr>
<td>EBT - AP1</td>
<td>Sensor module without data memory</td>
<td>Carbon dioxide module</td>
<td>0..300 ppm CO</td>
<td></td>
</tr>
<tr>
<td>EBT - AP2</td>
<td>Sensor module without data memory</td>
<td>Carbon dioxide module</td>
<td>-1999..+9999 Digit</td>
<td></td>
</tr>
<tr>
<td>EBT - AP3</td>
<td>Sensor module without data memory</td>
<td>Carbon dioxide module</td>
<td>-1999..+9999 Digit</td>
<td></td>
</tr>
<tr>
<td>EBT - AP4</td>
<td>Sensor module without data memory</td>
<td>Carbon dioxide module</td>
<td>-1999..+9999 Digit</td>
<td></td>
</tr>
<tr>
<td>EBT - AP5</td>
<td>Sensor module without data memory</td>
<td>Carbon dioxide module</td>
<td>-1999..+9999 Digit</td>
<td></td>
</tr>
<tr>
<td>EBT - 2R</td>
<td>Sensor module without data memory</td>
<td>Carbon dioxide module</td>
<td>-1999..+9999 Digit</td>
<td></td>
</tr>
<tr>
<td>EBT - 2RE</td>
<td>Sensor module without data memory</td>
<td>Carbon dioxide module</td>
<td>-1999..+9999 Digit</td>
<td></td>
</tr>
<tr>
<td>EASYLog 80CL</td>
<td>Sensor module with data memory</td>
<td>Humidity / temperature logger</td>
<td>0.0..100 % r.F. / -25.0..+60.0 °C / 300.0..1100.0 hPa</td>
<td>17</td>
</tr>
<tr>
<td>EASYLog 80CL-E</td>
<td>Sensor module with data memory</td>
<td>Humidity / temperature logger</td>
<td>0.0..100 % r.F. / -25.0..+60.0 °C / 300.0..1100.0 hPa</td>
<td></td>
</tr>
<tr>
<td>EASYLog 80CL-AFK</td>
<td>Sensor module with data memory</td>
<td>Humidity / temperature logger</td>
<td>0.0..100 % r.F. / -25.0..+60.0 °C / 300.0..1100.0 hPa</td>
<td></td>
</tr>
<tr>
<td>GIA 2000</td>
<td>Sensor module without data memory</td>
<td>Universal display device</td>
<td>Standard signal, resistance thermometer, thermocouples, frequency, flow, rotation speed, counter</td>
<td>19</td>
</tr>
<tr>
<td>GIR 2002 PID</td>
<td>Sensor module with decentralized regulating</td>
<td>Universal measuring and regulating device</td>
<td>Standard signal, Pt100, Pt1000, thermocouples, frequency, flow, rotation speed, up/down counter, serial interface</td>
<td>20</td>
</tr>
<tr>
<td>GIR 2002 PID</td>
<td>Sensor module with decentralized regulating</td>
<td>Universal measuring and regulating device</td>
<td>Standard signal, Pt100, Pt1000, thermocouples, frequency, flow, rotation speed, up/down counter, serial interface</td>
<td>20</td>
</tr>
<tr>
<td>GIA 20 EB</td>
<td>Sensor module with decentralized regulating</td>
<td>Universal measuring and regulating device</td>
<td>Standard signal, Pt100, Pt1000, thermocouples, frequency, flow, rotation speed, up/down counter, serial interface</td>
<td>20</td>
</tr>
<tr>
<td>EBB .. OUT / ..</td>
<td>Sensor module for decentralized regulating</td>
<td>Switching module</td>
<td>2 or 4 bi-stable switching contacts self supplied or with 12 V power supply</td>
<td>25</td>
</tr>
<tr>
<td>EASYLog 80NS W</td>
<td>Sensor module with data memory</td>
<td>Climate logger</td>
<td>-1999..+9999 Digit</td>
<td></td>
</tr>
<tr>
<td>EASYLog 80NS K</td>
<td>Sensor module with data memory</td>
<td>Climate logger</td>
<td>-1999..+9999 Digit</td>
<td></td>
</tr>
<tr>
<td>EB 3000</td>
<td>Centralized data acquisition</td>
<td>EASYBus device for regulating, displaying and monitoring</td>
<td>max. 20 bus loads / max. 20 Module addressable</td>
<td>26</td>
</tr>
<tr>
<td>EBW 1</td>
<td>Interface converter</td>
<td></td>
<td>max. 14 bus loads (PC: RS232 / sensor: EASYBus)</td>
<td>27</td>
</tr>
<tr>
<td>EBW 3</td>
<td>Interface converter</td>
<td></td>
<td>max. 2 bus loads (PC: USB / sensor: EASYBus)</td>
<td></td>
</tr>
<tr>
<td>EBW 64</td>
<td>Interface converter</td>
<td></td>
<td>max. 64 bus loads max. 250 bus loads (PC: RS232, USB, Ethernet / sensor: EASYBus)</td>
<td></td>
</tr>
<tr>
<td>EBW 250</td>
<td>Interface converter</td>
<td></td>
<td>max. 250 bus loads max. 250 bus loads (PC: RS232, USB, Ethernet / sensor: EASYBus)</td>
<td></td>
</tr>
<tr>
<td>GW 110 PB</td>
<td>Interface converter</td>
<td></td>
<td>PROFIBUS auf EASYBus</td>
<td>28</td>
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## Device overview

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<td>DFM 232 SET</td>
<td>Remote inquiry system</td>
<td>Radio modem set</td>
<td></td>
<td>28</td>
</tr>
<tr>
<td>LAN 3200 + WLAN 3200</td>
<td>Remote inquiry system</td>
<td>Serial-to-ethernet converter</td>
<td></td>
<td>29</td>
</tr>
<tr>
<td>EASYBus-Configurator</td>
<td>Software</td>
<td>Configuration software</td>
<td></td>
<td>29</td>
</tr>
<tr>
<td>EBS 20M EBS 60M</td>
<td>Software</td>
<td>Measuring data acquisition software</td>
<td></td>
<td>30</td>
</tr>
<tr>
<td>EASYControl net</td>
<td>Software</td>
<td>Monitoring and displaying software</td>
<td></td>
<td>30</td>
</tr>
<tr>
<td>EASYBus.dll</td>
<td>Software</td>
<td>Function library</td>
<td></td>
<td>31</td>
</tr>
<tr>
<td>GSOFT 40K</td>
<td>Software</td>
<td>Visualization software</td>
<td></td>
<td>31</td>
</tr>
<tr>
<td><strong>Accessories</strong></td>
<td></td>
<td></td>
<td></td>
<td>32</td>
</tr>
<tr>
<td>● GWH 10</td>
<td></td>
<td></td>
<td>Wall mounting for Data logger</td>
<td></td>
</tr>
<tr>
<td>● GWH 40K</td>
<td></td>
<td></td>
<td>Wall mounting with lock for Data logger connection cables</td>
<td></td>
</tr>
<tr>
<td>● EBSK ...</td>
<td></td>
<td></td>
<td>Wall mounting with lock for Data logger connection cables</td>
<td></td>
</tr>
<tr>
<td>● VSL 2P</td>
<td></td>
<td></td>
<td>special cables</td>
<td></td>
</tr>
<tr>
<td>● AKL 1P</td>
<td></td>
<td></td>
<td>Special branch terminal</td>
<td></td>
</tr>
<tr>
<td>● USB-Adapter</td>
<td></td>
<td></td>
<td>Adapter RS 232 &lt;=&gt; USB</td>
<td></td>
</tr>
<tr>
<td>● EBUW 232 A</td>
<td></td>
<td></td>
<td>Independent alarm monitoring</td>
<td></td>
</tr>
</tbody>
</table>

Mistakes reserved, technical specifications subject to change without notice.
Temperature Probe
EBT - IF1 / EBT - IF2 / EBT - IF3

- Internal Pt1000 sensor
- Housing made of stainless steel
- Long-term temperature monitoring

Characteristics
The EBT - IF is used for long-term temperature monitoring. The temperature sensor as well as the EASYBus electronics are integrated in the compact probe.

The temperature is measured by the internal Pt1000 sensor, the measuring values and min-/max- values can be read out via EASYBus interface.

The housing of the probe is made of stainless steel to guarantee optimal corrosion protection. The measuring range, fitting length, probe tube diameter and other parameters of the probes can be modified according to customer preferences. The probes can be configured by means of the EASYBus-Configurator software.

Technical data

<table>
<thead>
<tr>
<th>Measuring range</th>
<th>EBT - IF1</th>
<th>EBT - IF2</th>
<th>EBT - IF3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Measuring sensor</td>
<td>Pt1000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Accuracy</td>
<td>sensor: DIN class B electronics: ±0.2 % of m.v. ±0.2 °C</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Working temperature</td>
<td>-25..+70 °C (electronics in cable sleeve)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interface</td>
<td>EASYBus interface, fixed 2-pole cable, cable length: 2 m</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Probe tube D</td>
<td>Ø 6 mm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Process connection (standard)</td>
<td>—</td>
<td>thread G ½</td>
<td>thread G ½</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Fitting length (standard)</th>
<th>EL = 100 mm</th>
<th>EL = 100 mm</th>
<th>EL = 50 mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Neck tube length (standard)</td>
<td>—</td>
<td>—</td>
<td>HL = 100 mm</td>
</tr>
<tr>
<td>Housing</td>
<td>stainless steel (V4A)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Protection class</td>
<td>IP67</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bus load</td>
<td>1.5</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Dimensions
Cable sleeve: Ø 15 x 35 mm (without thread)

Ordering code

EBT 1. 2. 3. 4. 5. 6.

1. Design type
IF1 without thread
IF2 with thread
IF3 with thread and neck tube

2. Measuring range
MB1 -30.0..+100.0 °C (standard IF1 / IF2)
MB2 -70.0..+400.0 °C (standard IF3)
MBx state desired measuring range separately (e.g.: -50..200 °C)
max. possible meas. range: -200..+500 °C

3. Fitting length EL
050 50 mm (standard IF3)
100 100 mm (standard IF1 and IF2)
xxx any EL in mm (e.g. 075 = 75 mm)

4. Probe diameter D
D4 Ø 4 mm
D5 Ø 5 mm
D6 Ø 6 mm (standard)
D8 Ø 8 mm

5. Thread (only at design type IF2 and IF3)
G1 G ⅛ (standard)
G2 G ¼
G3 G ⅜
G4 G ⅜
G5 G ⅝
G8 G 14
M4 M14

6. Neck tube length HL (only at design type IF3)
100 100 mm (standard)
xxx any HL in mm (e.g. 050 = 50 mm)
Temperature Module

- Internal Pt1000 sensor
- Robust ABS housing
- Long-term temperature monitoring

Characteristics
The EBT - AP is used for long-term temperature monitoring. The sensor module is particularly suitable for industrial applications due to its robust design.

The temperature is measured by the internal Pt1000 sensor, the measuring values and min-/max-values can be read out via EASYBus interface.

The housing of the module is made of robust ABS. For example fitting length or probe tube diameter of the probes can be modified according to customer preferences. Direct configuration is possible for devices with option VO (on-site display). Additionally there is the possibility to configure the modules by means of the EASYBus-Configurator software.

Design types
<table>
<thead>
<tr>
<th>EBT - AP1</th>
<th>EBT - AP2</th>
<th>EBT - AP3</th>
<th>EBT - AP4</th>
<th>EBT - AP5</th>
</tr>
</thead>
<tbody>
<tr>
<td>with thread G for direct screw-in</td>
<td>for higher temperatures, with thread G in distance to housing, with neck tube length HL</td>
<td>indoor / outdoor module for wall mounting (varnished electronics necessary for outdoor application)</td>
<td>duct probe with centrally mounted sensor tube pointing downwards</td>
<td>Transmitter for already existing Pt1000 sensors or if housing has do be in distance to sensor (e.g. due to very high ambient temperatures or constructional necessities)</td>
</tr>
</tbody>
</table>

Technical data

<table>
<thead>
<tr>
<th>EBT-AP1</th>
<th>EBT-AP2</th>
<th>EBT-AP3</th>
<th>EBT-AP4</th>
<th>EBT-AP5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Measuring range [°C]</td>
<td>-50.0..+150.0</td>
<td>-50.0..+400.0</td>
<td>-50.0..+150.0</td>
<td>-50.0..+150.0</td>
</tr>
<tr>
<td>Sensor</td>
<td>Pt1000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Accuracy</td>
<td>sensor: DIN class B (optional: 1/3 DIN class B) electronics: ±0.2 % of m.v. ±0.2 °C</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sensor connection</td>
<td>2-wire</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Working temperature</td>
<td>0..70 °C (electronics)</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Electric connection</td>
<td>elbow-type plug EN 175301-803/A</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Process connection (standard)</td>
<td>thread G ½</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Fitting length (standard)</td>
<td>EL = 100 mm</td>
<td>EL = 100 mm</td>
<td>EL = 50 mm</td>
<td>EL = 100 mm</td>
</tr>
<tr>
<td>Neck tube length (standard)</td>
<td>—</td>
<td>HL = 50 mm</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Diameter Ø (Standard)</td>
<td>D = 6 mm</td>
<td>D = 6 mm</td>
<td>D = 3 mm</td>
<td>D = 6 mm</td>
</tr>
<tr>
<td>Housing</td>
<td>ABS; probe V4A</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Protection class</td>
<td>IP65</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Bus load</td>
<td>1.5</td>
<td></td>
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</tbody>
</table>

Dimensions

continued on next page
### Ordering code

<p>| | | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
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</thead>
<tbody>
<tr>
<td>1. Design type</td>
<td>2. Fitting length EL (only for types AP1, AP2, AP3, AP4)</td>
<td>3. Probe diameter D (only for types AP1, AP2, AP3, AP4)</td>
<td>4. Thread (only for types AP1 and AP2)</td>
<td>5. Length of neck tube HL (only for types AP2)</td>
<td>6. Option (combination of multiple options upon request)</td>
</tr>
<tr>
<td>AP1</td>
<td>AP2</td>
<td>AP3</td>
<td>AP4</td>
<td>AP5</td>
<td>AP6</td>
</tr>
<tr>
<td>with thread, without neck tube</td>
<td>with thread, with neck tube</td>
<td>indoor / outdoor probe</td>
<td>duct design</td>
<td>for connection of external probes</td>
<td>without option</td>
</tr>
<tr>
<td>03</td>
<td>04</td>
<td>05</td>
<td>06</td>
<td>07</td>
<td>08</td>
</tr>
<tr>
<td>Ø 3 mm (standard AP3)</td>
<td>Ø 4 mm</td>
<td>Ø 5 mm</td>
<td>Ø 6 mm (standard AP1/2/4)</td>
<td>Ø 7 mm</td>
<td>Ø 8 mm</td>
</tr>
<tr>
<td>050</td>
<td>100</td>
<td>xxx</td>
<td>xxx</td>
<td>xxx</td>
<td>xxx</td>
</tr>
<tr>
<td>50 mm (standard for AP3)</td>
<td>100 mm (standard for AP1, AP2, AP4)</td>
<td>any EL in mm (e.g., 070 = 70 mm)</td>
<td>any HL in mm (e.g., 100 = 100 mm)</td>
<td>any HL in mm (e.g., 100 = 100 mm)</td>
<td>any HL in mm (e.g., 100 = 100 mm)</td>
</tr>
<tr>
<td>VO</td>
<td>LACK</td>
<td>1/3B</td>
<td>without option</td>
<td>on-site display (display + operating buttons)</td>
<td>board varnished on both sides (for outdoor usage)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- **EBT - AP4**
- **EBT - AP5**
Temperature Module
EBT - 2R / EBT - 2RE

- Internal or external sensor
- Robust ABS housing
- Indoor climate monitoring

Characteristics
The EBT - 2R / 2RE is used for long-term temperature monitoring, indoor climate monitoring and monitoring of storage rooms.

The temperature is measured by the internal Pt1000 sensor (EBT - 2R) or external Pt1000 probe (EBT - 2RE), the measuring values and min-/max-values can be read out via EASYBus interface.

The housing of the module is made of robust ABS. Modules are available with or without on-site display. The modules can be configured by means of the EASYBus-Configurator software. Additional direct configuration is possible for devices with option VO (on-site display). The control panel is accessible when the cover is removed.

Technical data

<table>
<thead>
<tr>
<th>EBT - 2R</th>
<th>EBT - 2RE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Temperature probe</td>
<td>Integrated in housing</td>
</tr>
<tr>
<td>Measuring range</td>
<td>-25.0..+70.0 °C</td>
</tr>
<tr>
<td>Sensor element</td>
<td>Pt1000</td>
</tr>
<tr>
<td>Accuracy</td>
<td>sensor: DIN class B electronics: ±0.4 % of m.v. ±0.3 °C</td>
</tr>
</tbody>
</table>
### Humidity / Temperature Module

**EBHT - 1K / 1R / 2K**

**EBHT - KABEL / SHUT**

---

#### Characteristics

The EBHT is used for long-term monitoring, indoor climate monitoring and monitoring of storage rooms. The sensor module is particularly suitable for industrial applications due to its robust surface-mounted housing.

The EASYBus sensor modules EBHT measure the temperature and relative humidity in air or non corrosive / non ionizing gases. Humidity and temperature are measured by a capacitive polymer humidity sensor and a Pt1000 sensor, the measuring values and min-max values can be read out via EASYBus interface.

The housing of the module is made of robust ABS. Modules are available with or without on-site display. Direct configuration is possible for devices with option VO (on-site display). Additionally there is the possibility to configure the modules by means of the EASYBus-Configurator software.

#### Design types

<table>
<thead>
<tr>
<th>Design type</th>
<th>1K</th>
<th>1R</th>
<th>2K</th>
<th>KABEL</th>
<th>SHUT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surface design</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Duct design</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Surface design</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Duct design</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Surface design</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Duct design</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Length of probe / cable / hat</td>
<td>EL = 220 mm</td>
<td>EL = 220 mm</td>
<td>EL = 220 mm</td>
<td>1 m Teflon cable, in distance to housing</td>
<td>Hat = 82 mm</td>
</tr>
<tr>
<td>Outlet probe / cable / hat</td>
<td>on the side</td>
<td>on the side</td>
<td>bottom</td>
<td>on the side</td>
<td>bottom</td>
</tr>
</tbody>
</table>

#### Other features

- **1K / 1R / 2K**: unscrewable protective cap with gauze filter insert made of stainless steel
- **KABEL**: includes high humidity sensor (HO) and varnished board (LACK) by default
- **SHUT**: weather protection shield made of plastic, reduces distortions by sun or rain, includes high humidity sensor (HO) and varnished board (LACK)

#### Technical data

<table>
<thead>
<tr>
<th>Measuring ranges</th>
<th>Humidity:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Standard</td>
</tr>
<tr>
<td></td>
<td>High humidity</td>
</tr>
<tr>
<td>Humidity:</td>
<td>0.0..100.0 % RH</td>
</tr>
<tr>
<td></td>
<td>recomm. measuring range: 30..80 % RH</td>
</tr>
<tr>
<td></td>
<td>recomm. measuring range: 5..95 % RH</td>
</tr>
<tr>
<td>Temperature</td>
<td>-40.0..+120.0 °C</td>
</tr>
<tr>
<td>Measuring sensors</td>
<td>capacitive polymer humidity sensor and Pt1000</td>
</tr>
<tr>
<td>Accuracy Humidity</td>
<td>±2.5 % RH (at recomm. measuring range)</td>
</tr>
<tr>
<td>Accuracy Temperature</td>
<td>sensor: DIN class B</td>
</tr>
<tr>
<td></td>
<td>electronics: ±0.4 % of m.v. ±0.2 °C</td>
</tr>
<tr>
<td>Working temperature</td>
<td>-25..+50 °C (electronics)</td>
</tr>
<tr>
<td></td>
<td>-40..+100 °C, briefly up to 120 °C</td>
</tr>
<tr>
<td>Electric connection</td>
<td>elbow-type plug EN 175301-803/A, output 2-wire, max. 1.5 mm² each</td>
</tr>
<tr>
<td>Housing</td>
<td>ABS</td>
</tr>
<tr>
<td>Protection class</td>
<td>IP65 (housing)</td>
</tr>
<tr>
<td>Bus load</td>
<td>1.5</td>
</tr>
</tbody>
</table>

---

**Dimensions**

EBHT - 1K / 1R / 2K : 82 x 80 x 55 mm (H x W x D)
Product information E.A.S.Y.Bus®

Ordering code

1. Design type
   - 1K Surface / duct design
   - 1R Surface design
   - 2K Duct design

2. Option (sensor)
   - 00 standard sensor (standard for 1K, 1R and 2K) (recomm. measuring range: 30..80 % RH)
   - HO high humidity (standard for KABEL and SHUT) (recomm. measuring range: 5..95 % RH)

3. Fitting length EL
   - 000 without fitting length (for KABEL / SHUT)
   - 050 length = 50 mm (standard for type 1R)
   - 220 length = 220 mm (standard for type 1K / 2K)
   - 300 length = 300 mm
   - 400 length = 400 mm
   - 500 length = 500 mm

4. Option (general) (combination of multiple options possible)
   - 00 without option
   - VO on-site display (display + operating buttons)
   - LACK board varnished on both sides (for outdoor usage) standard for types KABEL and SHUT
   - UNI selectable humidity display unit Instead of displaying and output the standard humidity value you can change to one of the following values via interface or VO-display:
     - wet bulb temperature
     - dew point temperature
     - enthalpy
     - atmospheric humidity
     - absolute humidity

Ordering example:
EBHT-KABEL-HO-000-VO-LACK
Humidity / Temperature Module
EBHT - 2R

- Capacitive polymer humidity sensor
- Robust ABS housing
- Indoor climate monitoring

Characteristics
The EBHT - 2R is used for long-term monitoring, indoor climate monitoring and monitoring of storage rooms.

The EASYBus sensor modules EBHT - 2R measure the temperature and relative humidity in air or non corrosive / non ionizing gases. Humidity and temperature are measured by a capacitive polymer humidity sensor and a Pt1000 sensor, the measuring values and min-/max-values can be read out via EASYBus interface.

The housing of the module is made of robust ABS. Modules are available with or without on-site display. Direct configuration is possible for devices with option VO (on-site display). Additionally there is the possibility to configure the modules by means of the EASYBus-Configurator software.

Technical data

<table>
<thead>
<tr>
<th>Measurement</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Humidity: Standard</td>
<td>0.0..100.0 % RH</td>
</tr>
<tr>
<td></td>
<td>recomm. range: 30..80 % RH</td>
</tr>
<tr>
<td>High humidity</td>
<td>-25.0..+70.0 °C</td>
</tr>
<tr>
<td>Temperature</td>
<td></td>
</tr>
<tr>
<td></td>
<td>capacitive polymer humidity sensor and Pt1000</td>
</tr>
<tr>
<td>Accuracy Humidity</td>
<td>±2.5 % RH</td>
</tr>
<tr>
<td>(at recomm. measuring range)</td>
<td></td>
</tr>
<tr>
<td>Accuracy Temperature</td>
<td>sensor: DIN class B electronics: ±0.4 % of m.v. ±0.3°C</td>
</tr>
<tr>
<td>Working temperature</td>
<td>-25..+50 °C (electronics)</td>
</tr>
</tbody>
</table>

Ordering code

<table>
<thead>
<tr>
<th>1. Option (sensor)</th>
<th>2. Option (general)</th>
</tr>
</thead>
<tbody>
<tr>
<td>00 standard sensor</td>
<td>00 without option</td>
</tr>
<tr>
<td>(recomm. measuring range: 30..80 % RH)</td>
<td>UNI selectable humidity display unit</td>
</tr>
<tr>
<td>HO high temperature sensor</td>
<td>VO on-site display (display + operating buttons)</td>
</tr>
<tr>
<td>(recomm. measuring range: 5..95 % RH)</td>
<td>Instead of displaying and output the standard humidity value you can change to one of the following values via interface or VO-display:</td>
</tr>
<tr>
<td>UNI selectable humidity display unit</td>
<td>• wet bulb temperature</td>
</tr>
<tr>
<td></td>
<td>• dew point temperature</td>
</tr>
<tr>
<td></td>
<td>• enthalpy</td>
</tr>
<tr>
<td></td>
<td>• atmospheric humidity</td>
</tr>
<tr>
<td></td>
<td>• absolute humidity</td>
</tr>
</tbody>
</table>
**Carbon Dioxide Module**
**EBG - CO2 - 1R**

- Infrared principle (NDIR)
- Long-term stability
- Monitoring the CO₂-limit

**Characteristics**
The EBG - CO2 - 1R is used for ventilation control, indoor air quality monitoring and measurement of carbon dioxide in greenhouses. The EASYBus sensor modules EBG - CO2 - 1R measure the carbon dioxide content of air. The sensor functions on the infrared principle (NDIR), the measuring values can be read out via EASYBus interface. Min-/max- values are stored at the device memory.

The housing of the module is made of robust ABS. The modules have a display by default, showing the current CO₂ concentration and min-/max- values. Additionally it can be used for optical alarm displaying.

The module is configured directly via device’s buttons.

**Technical data**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Measuring range</td>
<td>0..2000 ppm CO₂</td>
</tr>
<tr>
<td>Measuring method</td>
<td>infrared principle (NDIR)</td>
</tr>
<tr>
<td>Accuracy</td>
<td>±50 ppm ±2 % of measuring value</td>
</tr>
<tr>
<td>Working temperature</td>
<td>-10..+40 °C</td>
</tr>
<tr>
<td>Power supply</td>
<td>12..30 V DC, max. 600 mA</td>
</tr>
<tr>
<td>Interface</td>
<td>EASYBus interface</td>
</tr>
<tr>
<td>Electric connection</td>
<td>elbow-type plug EN 175301-803/A, max. cable cross section 1.5 mm²</td>
</tr>
<tr>
<td>Housing</td>
<td>ABS</td>
</tr>
<tr>
<td>Protection class</td>
<td>IP20</td>
</tr>
<tr>
<td>Bus load</td>
<td>1</td>
</tr>
</tbody>
</table>

**Dimensions**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Housing</td>
<td>82 x 80 x 55 mm (H x W x D)</td>
</tr>
</tbody>
</table>

**Ordering code**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>EBG-CO2-1R</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>00</td>
<td>without option</td>
</tr>
<tr>
<td>5000</td>
<td>Measuring range: 0..5000 ppm CO₂</td>
</tr>
</tbody>
</table>

---

**Carbon Monoxide Module**
**EBG - CO - 1R**

- Electrochemical measuring cell
- Automatic offset correction
- Monitoring of CO limits

**Characteristics**
The EBG - CO - 1R is used for monitoring of carbon monoxide in underground and parking garages, boiler plants, heating systems, garages as well as in ambient air. The EASYBus sensor modules EBG - CO - 1R measure the carbon oxide content of air. The measuring values are continuously collected by an electrochemical measuring cell and can be read out via EASYBus interface.

The housing of the module is made of robust ABS. The modules can be optionally equipped with a display.

**Technical data**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Measuring range</td>
<td>0..300 ppm CO</td>
</tr>
<tr>
<td>Measuring method</td>
<td>electrochemical principle, continuous measurement</td>
</tr>
<tr>
<td>Linearity error</td>
<td>±2 % of 300 ppm CO (acc. to VDI 2053)</td>
</tr>
<tr>
<td>Working temperature</td>
<td>-10..+50 °C</td>
</tr>
<tr>
<td>Power supply</td>
<td>12..30 V DC, max. 50 mA</td>
</tr>
<tr>
<td>Interface</td>
<td>EASYBus interface</td>
</tr>
<tr>
<td>Electric connection</td>
<td>elbow-type plug EN 175301-803/A, max. cable cross section 1.5 mm²</td>
</tr>
<tr>
<td>Housing</td>
<td>ABS</td>
</tr>
<tr>
<td>Protection class</td>
<td>IP20</td>
</tr>
<tr>
<td>Bus load</td>
<td>2</td>
</tr>
</tbody>
</table>

**Dimensions**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Housing</td>
<td>82 x 80 x 55 mm (H x W x D)</td>
</tr>
</tbody>
</table>

**Ordering code**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>EBG-CO-1R</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>00</td>
<td>without option</td>
</tr>
<tr>
<td>VO</td>
<td>on-site display (display + operating buttons)</td>
</tr>
</tbody>
</table>
Standard Signal Module
EBN / K and EBN / W

For standard signals: 0..2V / 0..10V / 0..20mA / 4..20mA
Long-term monitoring

Characteristics

The EBN / W and EBN / K are used for long-term monitoring of standard signals. With the help of the norm signals further measurands like pressure or conductivity can be processed.

The standard signals (0..2 V / 0..10 V / 0..20 mA / 4..20 mA) are measured by means of an input resistor. By the use of measurand transducer with norm signal exit arbitrary measurands can be tied into the EASYBUS system.

The housing of the module is made of robust ABS.

The modules can be configured by means of the EASYBus-Configurator software.

Technical data

<table>
<thead>
<tr>
<th></th>
<th>EBN / K - ...</th>
<th>EBN / W - ...</th>
</tr>
</thead>
<tbody>
<tr>
<td>Measuring range</td>
<td>-1999..+9999 digit (freely scalable)</td>
<td></td>
</tr>
<tr>
<td>Input signal</td>
<td>0..2 V / 0..10 V / 0..20 mA / 4..20 mA (only one range possible, either .. or ..) not galvanically separated</td>
<td></td>
</tr>
<tr>
<td>Accuracy</td>
<td>±0.5 % FS (at nominal temperature)</td>
<td></td>
</tr>
<tr>
<td>Working temperature</td>
<td>-25..+60 °C</td>
<td></td>
</tr>
<tr>
<td>Interface</td>
<td>EASYBus interface, fixed 2-pole cable, cable length = 1 m</td>
<td></td>
</tr>
<tr>
<td>Electric connection</td>
<td>Via 0.5 m cable for connection to standard signal source, loose ends elbow-type plug (EN 175301-803/A) for plug-between</td>
<td></td>
</tr>
<tr>
<td>Housing</td>
<td>ABS</td>
<td></td>
</tr>
<tr>
<td>Protection class</td>
<td>IP65</td>
<td></td>
</tr>
<tr>
<td>Bus load</td>
<td>2</td>
<td></td>
</tr>
</tbody>
</table>

Dimensions

| Housing | 48.5 x 48.5 x 35.5 mm (H x W x D) (without elbow-type plug / cable) |

Ordering code

<table>
<thead>
<tr>
<th>1. Design type</th>
<th>2. Input signal</th>
<th>3. Option</th>
</tr>
</thead>
<tbody>
<tr>
<td>K</td>
<td>cable connection</td>
<td></td>
</tr>
<tr>
<td>W</td>
<td>elbow-type plug</td>
<td></td>
</tr>
<tr>
<td>E1</td>
<td>0..2 V</td>
<td></td>
</tr>
<tr>
<td>E2</td>
<td>0..10 V</td>
<td></td>
</tr>
<tr>
<td>E3</td>
<td>0..20 mA</td>
<td></td>
</tr>
<tr>
<td>E4</td>
<td>4..20 mA</td>
<td></td>
</tr>
<tr>
<td>00</td>
<td>Without option</td>
<td></td>
</tr>
<tr>
<td>VO</td>
<td>on-site display (display)</td>
<td></td>
</tr>
</tbody>
</table>

1. Design type
2. Input signal
3. Option
Climate Logger
EASYLog 80CL

- High battery capacity for long recording duration
- Data memory for 250,000 data sets
- Long-term monitoring of climate data

Characteristics
The logger EASYLog 80CL is designed for long-term monitoring of climate data, particularly for monitoring of greenhouses or for the usage at heating engineering, ventilation technology and air conditioning.

Besides temperature, relative humidity and air pressure the following units can be displayed: wet bulb temperature, dew point temperature, enthalpy and atmospheric humidity.

Up to 250,000 measuring values can be saved for each unit (altogether 1,000,000 values)

Both, the low power consumption and the high battery capacity ensure long recording time. The LCD display shows 2 different measuring values (e.g. temperature and humidity at the same time) or the operating mode of the logger. The device has a splash-proof industrial housing.

Technical data

<table>
<thead>
<tr>
<th>Measuring and display range</th>
<th>0.0...100 % RH (recomm.: 10...90 % RH) -25.0...+60.0 °C 300.0...1100.0 hPa</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accuracy</td>
<td>±2 % (humidity) ±0.3 °C ± 0.017 x (T-25 °C) (temperature) ±1.0 hPa (air pressure)</td>
</tr>
<tr>
<td>Working temperature</td>
<td>-25...+60 °C (electronics)</td>
</tr>
<tr>
<td>Measuring sensors</td>
<td>humidity/temp.: sensor mounted in tube air pressure: sensor integrated in housing</td>
</tr>
<tr>
<td>Additional available display units</td>
<td>wet bulb temperature dew point temperature enthalpy atmospheric humidity absolute humidity</td>
</tr>
<tr>
<td>Probe tube design</td>
<td>polyamide, Ø15 mm, fixed to unscrewable plastic protection head for fast response</td>
</tr>
</tbody>
</table>

Storage capacity 250,000 data sets (in max. 64 recording sequences)
Recording interval: 4 sec. to 5 h
Display two 4½-digit LCD displays
Power supply battery operation, service life approx. 6 years (at 15 min recording interval)
Interface EASYBus interface, 3-pin mini built-in plug
Housing ABS
Protection class housing: IP65 protection head: IP40
Bus load 2

Dimensions
Housing : 48.5 x 48.5 x 35.5 mm (H x W x D) (without sensor / cable)

Ordering code

1. 

1. Option
00 without option
ALARM additional alarm output open-collector-output, 4-pin mini built-in plug (IP65) incl. 1 m connection cable, max. switching power: 28 V, 50 mA

Necessary accessories
The EASYLog 80CL is programmed, started and read via its EASYBus interface. Following accessories are required:
- interface converter RS232 – EASYBus: EBW 1, EBW 64, EBW 240 or USB – EASYBus: EBW 3
- GSOFT 40K (as of Version 5.0) to start logger and read logger data incl. 1x EBSK 01 connection cable
- EBSK 01 / EBSK 03 (1m or 3m): connection cable from interface converter to EASYLog

Note: 1x EBSK 01 (1m) is in scope of delivery of software software GSOFT 40K.
### Standard Signal Logger

**EASYLOG 40NS K**

**EASYLOG 40NS W**

- High battery capacity for long recording duration
- Data memory for 48,000 values
- Long-term monitoring of standard signals

### Characteristics

The logger EASYLog 40NS .. (4..20 mA, 0..20 mA, 0..2 V or 0..10 V) are designed for long-term monitoring of standard signals. It can be used for example as replacement expensive recorders.

Up to 48,000 measuring values can be stored in the memory. The data stays saved even in case of battery defect.

Both, the low power consumption and the high battery capacity ensure long recording time. The LCD display shows the current measuring value and the operating mode of the logger. The device has a splash-proof industrial housing.

### Technical data

<table>
<thead>
<tr>
<th></th>
<th>EASYLog 40NS K</th>
<th>EASYLog 40NS W</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Power supply</strong></td>
<td>battery operation, service life approx. 6 years (at 15 min recording interval)</td>
<td></td>
</tr>
<tr>
<td><strong>Interface</strong></td>
<td>EASYBus interface, 3-pin mini built-in plug</td>
<td></td>
</tr>
<tr>
<td><strong>Housing</strong></td>
<td>ABS</td>
<td></td>
</tr>
<tr>
<td><strong>Protection class</strong></td>
<td>housing: IP65</td>
<td></td>
</tr>
<tr>
<td><strong>Bus load</strong></td>
<td>2</td>
<td></td>
</tr>
<tr>
<td><strong>Dimensions</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Housing</strong></td>
<td>48.5 x 48.5 x 35.5 mm (H x W x D)</td>
<td></td>
</tr>
<tr>
<td><strong>Power supply</strong></td>
<td>battery operation, service life approx. 6 years (at 15 min recording interval)</td>
<td></td>
</tr>
<tr>
<td><strong>Interface</strong></td>
<td>EASYBus interface, 3-pin mini built-in plug</td>
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</tr>
<tr>
<td><strong>Housing</strong></td>
<td>ABS</td>
<td></td>
</tr>
<tr>
<td><strong>Protection class</strong></td>
<td>housing: IP65</td>
<td></td>
</tr>
<tr>
<td><strong>Bus load</strong></td>
<td>2</td>
<td></td>
</tr>
</tbody>
</table>

### Ordering code

EASYLOG 40NS [ ] [ ] [ ]

1. **Design type**
   - K cable connection
   - W elbow-type plug

2. **Input signal**
   - E1 0..2 V
   - E2 0..10 V
   - E3 0..20 mA
   - E4 4..20 mA

3. **Options (combination of multiple options upon request)**
   - 00 without option
   - DBK double battery capacity (recommended for fast measuring rates)
   - ALARM additional alarm output open-collector-output, 4-pin mini built-in plug (IP65) incl. 1 m connection cable, max. switching power: 28 V, 50 mA

### Necessary accessories

The EASYLog 40NS .. is programmed, started and read via its EASYBus interface. Following accessories are required:

- interface converter RS232 – EASYBus: EBW 1, EBW 64, EBW 240 or USB – EASYBus: EBW 3
- GSOFT 40K (as of Version 5.0) to start logger and read logger data incl. 1x EBSK 01 connection cable
- EBSK 01 / EBSK 03 (1m or 3m): connection cable from interface converter to EASYLog

**Note:** 1x EBSK 01 (1m) is in scope of delivery of software GSOFT 40K.
Universal Display Device
GIA 2000

- Universal input for standard signals, frequency, Pt100/Pt1000 and thermocouples
- Electrically isolated power supply for transmitter
- Serial EASYBus interface

Characteristics
The GIA 2000 is microprocessor-controlled display device for universal use.

The device has a universal input for standard signals (0..20 mA, 4..20 mA, 0..50 mV, 0..1 V, 0..2 V and 0..10 V), resistance thermometers (Pt100 and Pt1000), thermocouples (type J, K, N, S and T) and frequency (TTL and switch contact). Additionally it provides functions like flow measurement, rotation speed measurement and counter.

The lowest and highest measured values are saved in the min-max value memory. The device can detect invalid operating states and display or system errors and displays the corresponding error code.

Technical data

Measuring inputs
- Standard signals: 0..20 mA, 4..20 mA, 0..50 mV, 0..1 V, 0..2 V and 0..10 V
- Resistance thermometer: Pt100 (3-wire), Pt1000 (2-wire)
- Thermocouples: type J, K, N, S, T
- Frequency, rotation speed
- Flow
- Up/down counter
- Serial interface

Display
- Display: LED display
- Height: 13 mm
- Display range: -9999..9999 digit, initial / final value and decimal point freely selectable

Operation
- via 4 buttons or via interface
- Power supply for transmitter: 24 V DC ±5 %, 22 mA, elec. isolated at DC-supply: 18 V DC
- Working temperature: -20..+50°C
- Electric connection: via screw / clamp terminals, cable cross section: 0.14..1.5 mm²
- Protection class: front IP54, with optional sealing: IP65
- Bus load: 1

Dimensions
- Housing Size: 48 x 96 mm (H x W)
- Mounting depth: 115 mm (incl. screw / clamp terminals)
- Panel mounting: by fixing clamps
- Panel cutout: 43.0 x 90.5 [±0.5 mm] (H x W)

Power supplies / outputs
- 230A: supply voltage: 230 V AC (standard)
- 012D: supply voltage: 12 V DC (11..14 V)
- 024D: supply voltage: 24 V DC (22..27 V)
- 024A: supply voltage: 24 V AC (±5 %)
- 115A: supply voltage: 115 V AC (±5 %)
- AA: analog output 0..20 mA, 4..20 mA (selectable)
- AV: analog output 0..10 V

Ordering code
- GIA2000 - - -
- 1. Supply voltage
- 2. Analog output
- 3. Option

Special design types (upon request)
- S1: Switchable scaling with input 0..10 V and control input 24 V. The device has a 0..10 V standard signal input and a 24 V control input. By means of the 24 V control input it can be switched between two freely programmable scalings.
- S2: Input ±10 V DC
- S3: Set-point device
  - The GIA 2000 with S3 is a universally applicable, microprocessor-controlled set-point device. The output value can be set by buttons 2 and 3.

Accessories
- EAK 36
  - Unit stickers (black with white characters), 36 different units, for labeling of display devices
Universal Measuring and Regulating Device
GIR 2002

- Microprocessor-controlled display, monitoring and regulating device
- Universal input for standard signals, frequency, Pt100/Pt1000 and thermocouples
- Switching outputs variably configurable

Characteristics
The GIR 2002 is particularly suitable for less complex control systems.

The GIR 2002 is a microprocessor-controlled displaying, monitoring and regulating device for universal use. It has a universal input for standard signals (0..20 mA, 4..20 mA, 0..50 mV, 0..1 V, 0..2 V and 0..10 V), resistance thermometers (Pt100 and Pt1000), thermocouples (type J, K, N, S and T) and frequency (TTL and switch contact). Additionally, it provides switching outputs whose switching functions can be configured variably.

The device has an EASYBus interface by default that makes the GIR 2002 a full-fledged EASYBus module. A separate interface converter allows communicating with a PC.

Technical data

Measuring inputs
Standard signals: 0..20 mA, 4..20 mA, 0..50 mV, 0..1 V, 0..2 V and 0..10 V
Resistance thermometer: Pt100 (3-wire), Pt1000 (2-wire)
Thermocouples: type J, K, N, S and T
Frequency, rotation speed
Flow
Up/down counter
Serial interface

Output functions
Control mode: On / OFF
Switching functions: display, 2-point, 3-point, 2-point with min-max-alarm, min-max-alarm

Display
Display: LED display
Height: 13 mm
Display range: -1999..+9999 digit, initial / final value and decimal point freely selectable
Operation: via 4 buttons or via interface


Power supply for transmitter: 24 V DC ±5 %, 22 mA, elec. isolated at DC-supply: 18 V DC
Working temperature: -20..+50 °C
Electric connection: via screw / clamp terminals
Protection class: front IP54, with optional sealing: IP65
Bus load: 1

Dimensions
Size: 48 x 96 mm (H x W)
Mounting depth: 115 mm (incl. screw / clamp terminals)
Panel mounting: by fixing clamps
Panel cutout: 43.0 x 90.5 ±0.5 mm (H x W)

Design types / options
230A supply voltage: 230 V AC (standard)
012D supply voltage: 12 V DC (11..14 V)
024D supply voltage: 24 V DC (22..27 V)
024A supply voltage: 24 V AC (±5 %)
115A supply voltage: 115 V AC (±5 %)
R1 output 1 = potential-free relay switching output (normally-open contact, 5 A / 250 V AC)
H1 output 1 = control output for external semiconductor relay (15 mA / 6 V DC)
R2 output 2 = potential-free relay switching output (change-over contact, 10 A / 250 V AC)
H2 output 2 = control output for external semiconductor relay (15 mA / 6 V DC)
R3 additional output 3 = potential-free relay switching output (change-over, 1 A / 40 V AC or 30 V DC)
H3 additional output 3 = control output for external semiconductor relay (5 mA / 14 V DC)
N3 additional output 3 = elec. isolated npn switching contact (max. 1 A / 30 V DC)
AA1 output 1 = freely scalable analog output 0(4)..20 mA no additional 3rd output possible
AV1 output 1 = freely scalable analog output 0(4)..20 mA
AA3 output 3 = freely scalable analog output 0(4)..20 mA
AV3 output 3 = freely scalable analog output 0..10 V
NS/DIF 2-channel differential controller
The GIR 2002 NS/DIF ... is a displaying, monitoring and regulating device for difference measurements. The measuring inputs are designed for following standard signals: (2x) 4..20 mA, (2x) 0..20 mA or (2x) 0..10 V Please state your desired input signal at order transaction.

SW Set-point controller
This design type uses the 0..10 V standard signal input as set-point input.

continued on next page
Ordering code

GIR2002 - - - -

1. Supply voltage
   - 230A: 230 V AC (standard)
   - 12D: 12 V DC
   - 24D: 24 V DC
   - 24A: 24 V AC
   - 115A: 115 V AC

2. Output 1
   - R1: output 1 = relay switching output, normally-open contact (standard)
   - H1: output 1 = control output for semiconductor relay
   - AA1: output 1 = analog output 0(4) .. 20 mA (no 3rd output possible)
   - AV1: output 1 = analog output 0 .. 10 V (no 3rd output possible)

3. Output 2
   - R2: output 2 = relay switching output, change-over contact (standard)
   - H2: output 2 = control output for semiconductor relay

4. Output 3
   - R3: output 3 = relay switching output, change-over contact
   - H3: output 3 = control output for semiconductor relay
   - AA3: output 3 = analog output 0(4) .. 20 mA
   - AV3: output 3 = analog output 0 .. 10 V

5. Options
   - D0: without option
   - NS/DIF: differential controller (please state meas. input)
   - 420: 4 .. 20 mA
   - 020: 0 .. 20 mA
   - 010: 0 .. 10 V
   - SW: set-point controller
   - JP: sealing to increase protection class to IP65

Accessories

- EAK 36
  Unit stickers (black with white characters), 36 different units, for labeling of display devices
Universal Measuring and Regulating Device
GIR 2002 PID

- PID control mode
- Universal input for standard signals, frequency, Pt100/Pt1000 and thermocouples
- Switching outputs variably configurable

Characteristics
The GIR 2002 PID is particularly suitable for less complex control systems which require PID control.

The GIR 2002 PIDs are microprocessor-controlled displaying, monitoring and regulating devices for universal use. It has a universal input for standard signals (0..20 mA, 4..20 mA, 0..50 mV, 0..1 V, 0..2 V and 0..10 V), resistance thermometers (Pt100 and Pt1000), thermocouples (type J, K, N, S and T) and frequency (TTL and switch contact). Additional it provides switching outputs whose switching functions can be configured variably.

The device has an EASYBus interface by default that makes the GIR 2002 PID to a full-fledged EASYBus module. A further interface converter allows communicating with a PC.

Technical data

| Measuring inputs | Standard signals : 0..20 mA, 4..20 mA, 0..50 mV, 0..1 V, 0..2 V and 0..10 V |
| Resistance thermometer : Pt100 (3-wire), Pt1000 (2-wire) |
| Thermocouples : type J, K, N, S and T |
| Frequency, rotation speed |
| Flow |
| Up/down counter |
| Serial interface |

Output functions

Control mode : PID
Switching functions : display, 2-point, 3-point, 2-point with min-/max-alarm, min-/max-alarm

Display

Display : LED display
Height : 13 mm
Display range : -1999..+9999 digit, initial / final value and decimal point freely selectable
Operation : via 4 buttons or via interface

Power supply for transmitter : 24 V DC ±5 %, 22 mA, elec. isolated at DC-supply: 18 V DC
Working temperature : -20..+50 °C
Electric connection : via screw / clamp terminals
Protection class : front IP54, with optional sealing: IP65
Bus load : 1

Dimensions

Size : 48 x 96 mm (H x W)
Mounting depth : 115 mm (incl. screw / clamp terminals)
Panel mounting : by fixing clamps
Panel cutout : 43.0 x 90.5 ±0.5 mm (H x W)

Design types / options

| 230A | supply voltage : 230 V AC (standard) |
| 012D | supply voltage : 12 V DC (11..14 V) |
| 024D | supply voltage : 24 V DC (22..27 V) |
| 024A | supply voltage : 24 V AC (±5 %) |
| 115A | supply voltage : 115 V AC (±5 %) |
| R1 | output 1 = potential-free relay switching output (normally-open contact, 5 A / 250 V AC) |
| H1 | output 1 = control output for external semiconductor relay (15 mA / 6 V DC) |
| R2 | output 2 = potential-free relay switching output (change-over contact, 10 A / 250 V AC) |
| H2 | output 2 = control output for external semiconductor relay (15 mA / 6 V DC) |
| R3 | additional output 3 = potential-free relay switching output (change-over, 1 A / 40 V AC or 30 V DC) |
| H3 | additional output 3 = control output for external semiconductor relay (5 mA / 14 V DC) |
| N3 | additional output 3 = elec. isolated npn switching contact (max. 1 A / 30 V DC) |
| AA3 | output 3 = freely scalable analog output 0(4)..20 mA |
| AV3 | output 3 = freely scalable analog output 0..10 V |
| SA1 | output 1 = continuous output 0(4)..20 mA |
| SV1 | output 1 = continuous output 0..10 V |
| SA3 | output 3 = continuous output 0(4)..20 mA |

continued on next page
Ordering code

GIR2002PID  ·  ·  ·  ·  ·

1. Supply voltage
   230A  230 V AC (standard)
   012D  12 V DC
   024D  24 V DC
   024A  24 V AC
   115A  115 V AC

2. Output 1
   R1  output 1 = relay switching output, normally-close contact (standard)
   H1  output 1 = control output for semiconductor relay
   SA1 output 1 = continuous output 0(4) .. 20 mA
     (no 3rd output possible)
   SV1 output 1 = continuous output 0 .. 10 V
     (no 3rd output possible)

3. Output 2
   R2  output 2 = relay switching output, change-over contact (standard)
   H2  output 2 = control output for semiconductor relay

4. Output 3
   00  no 3rd output (standard)
   R3  output 3 = relay switching output, change-over contact
   H3  output 3 = control output for semiconductor relay
   N3  output 3 = NPN switching output
   AA3 output 3 = analog output 0(4) .. 20 mA
   AV3 output 3 = analog output 0 .. 10 V
   SA3 output 3 = continuous output 0(4) .. 20 mA
   SV3 output 3 = continuous output 0 .. 10 V

5. Options
   00  without option
   PI  sealing to increase protection class to IP65

Accessories

- EAK 36
  Unit stickers (black with white characters), 36 different units,
  for labeling of display devices
Universal Measuring and Regulating Device
GIA 20 EB

- Microprocessor-controlled display, monitoring and regulating device
- For universal use
- Switching outputs variably configurable

Characteristics

The GIA 20 EB is particularly suitable for less complex control systems.

The GIA 20 EB is a microprocessor-controlled displaying, monitoring and regulating device for universal use. It has a universal input for standard signals (0..20 mA, 4..20 mA, 0..50 mV, 0..1 V, 0..2 V and 0..10 V), resistance thermometers (Pt100 and Pt1000), thermocouples (type J, K, N, S and T) and frequency (TTL and switch contact). Additional it provides switching outputs whose switching functions can be configured variably.

The device has a EASYBus interface by default that makes the GIA 20 EB 2002 to a full-fledged EASYBus module. A additional interface converter allows communicating with a PC.

Technical data

Measuring inputs
Standard signals : 0..20 mA, 4..20 mA, 0..50 mV, 0..1 V, 0..2 V and 0..10 V
Resistance thermometer : Pt100 (3-wire), Pt1000 (2-wire)
Thermocouples : type J, K, N, S, T
Frequency, rotation speed
Flow
Up/down counter
Serial interface

Control mode : Low-Side, High-Side, Push-Pull
Switching outputs : 2 (integrated)
Switching functions : display, 2-point, 3-point, 2-point with min-/max-alarm, min-/max-alarm

Display
Display : 4-digit LED display
-1999..+9999 digit, freely scalable
(for standard signals)
Operation : via 3 buttons
(after disassembly of front panel)
Power supply : 9..28 V DC
Interface : EASYBus interface, elec. isolated
Working temperature : -20..+50 °C

Electric connection : via screw / clamp terminals
cable cross section: 0.14..1.5 mm²
Protection class : front IP54,
Bus load : 1

Dimensions
Size : 24 x 48 x 65 mm (H x W x D)
(incl. screw / clamp terminals)
Panel mounting : with VA-spring clamp
Panel cutout : 21.7 x 45.0 [±0.5 mm] (H x W)

Ordering code

1. Supply voltage
000 9..28 V DC (Standard)
IS1 Elec. isolated supply: 11..14 V
IS2 Elec. isolated supply: 22..27 V
2. Options
00 without option
FS3T front panel with buttons
Switching Module
EBB .. OUT / ..

- 2 bi-stable switching contacts (type BP)
- No additional power supply needed (type BP)
- Functional snap-on housing

Characteristics

The EBB .. OUT / .. is used for decentralized control and regulating systems.

The switching module serves the control of relays by means of EASYBus. The 2 / 4 relays are controlled via alarm monitor module or via the PC software EASYControl net.

The module is available in design type BP (bus powered) which doesn't need a separate power supply or in type 12V (12 V DC power supply).

Technical data

| Switching capacity | 250 V AC / 16 A |
| Connection          | screw clamps   |
| Control             | via EBUW 232 A or software EASYControl net |

Design types

<table>
<thead>
<tr>
<th></th>
<th>EBB 2 OUT / BP</th>
<th>EBB 4 OUT / BP</th>
<th>EBB 2 OUT / 12V</th>
<th>EBB 4 OUT / 12V</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power supply</td>
<td>device is supplied from EASYBus</td>
<td>12 V DC ±10 % / 150 mA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Switching output</td>
<td>2 change-over contacts</td>
<td>4 change-over contacts</td>
<td>2 change-over contacts</td>
<td>4 change-over contacts</td>
</tr>
<tr>
<td>Response time</td>
<td>&lt; 1 sec.</td>
<td>&lt; 2 sec.</td>
<td>&lt; 0.1 sec.</td>
<td>0.1 sec.</td>
</tr>
<tr>
<td>Bus load</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

Dimensions

Housing: 96 x 48 x 60 mm (H x W x D)

Ordering code

1. Switching outputs
   - 2 switching outputs
   - 4 switching outputs

2. Power supply
   - BP: bus powered (without external supply)
   - 12V: 12 V DC supply

Necessary accessories

The following accessories are needed:

- alarm monitor module EBUW 232 A (p.r.t. accessories)
- software EASYControl net
EASYBus Device for Regulating, Displaying and Monitoring

EB 3000

- Alarm monitoring and regulating of 20 channels
- Several calculation functions
- Diverse control modes

Characteristics

The EB 3000 is used for regulating or alarm monitoring of up to 20 modules.

The EB 3000 is an universal regulating, displaying and monitoring device for EASYBus sensor modules. Any EASYBus measuring channel can be allocated to the 20 channels which the EB 3000 provides. Additionally there are 2 virtual channels. This allows performing several calculation functions and displaying the result. Possible functions are for example sensor difference, averaging of x sensors or set-point control. The EB 3000 has 4 switching outputs and 1 alarm output. The 22 channels can be freely allocated to the 4 switching outputs. Therefore several control modes (2-point control, 3-point control, stepping switch, etc.) can be realized.

The EB 3000 has a self-diagnostic function checking error-free operation, sensor break, etc. and outputs a corresponding error message as the case may be. For advanced configuration and start-up of the EB 3000 the gratis software EASYBus-Configurator is needed.

Technical data

<table>
<thead>
<tr>
<th>Input</th>
<th>max. 30 bus loads max. 20 modules addressable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Connection</td>
<td>all EASYBus/EASYLog sensor modules can be connected via 2-pole connection wire in ring, tree or star form; sensors are supplied by EB 3000</td>
</tr>
<tr>
<td>Permitted EASYBus length</td>
<td>500 m (depending on wiring )</td>
</tr>
<tr>
<td>Display range</td>
<td>-1999.9999 Digit 4-digit LED (measuring value), 2-digit LED (channel)</td>
</tr>
</tbody>
</table>

Switching outputs 4 normally-open contact
Switching functions 2-point controller, shift points, switching delay individually adjustable for each output
Alarm output 1 change-over contact
Alarm functions Sammelalarm für alle Sensoren, Alarmsignale veränderbar
Sensor interface EASYBus
PC interface EASYBus
Power supply 230 V AC, 50/60 Hz
Working temperature -25..+50 °C
Functions alarm, min-/max-value memory, calculation functions, self-diagnostic
Housing ABS
Protection class front IP54, with optional sealing:IP65
Bus load (EB input) 1

Dimensions

Size : 48 x 96 x 100 mm (H x W x D)
Panel mounting : by fixing clamps
Panel cutout : 43.0 x 90.5 [±0.5 mm] (H x W)

Ordering code

1. EB3000
1. Option
00 without option
IP sealing to increase protection class to IP65

Necessary accessories

The following accessories are needed for configuration of EB 3000 and recording / read-out of connected EASYBus modules:

- Interface converter RS232 – EASYBus (e.g. EBW1, EBW2, EBW64) or USB – EASYBus (EBW3)
- EASYBus-Configurator (as of version 2.0) for start-up and configuration of advanced settings
### Interface Converter

**EBW 1 / EBW 3**

**EBW 64 / EBW 240**

- Bidirectional interface converter
- Transfer rate: 4800 baud
- RS232 to EASYBus or USB to EASYBus

### Characteristics

The interface converters are used for decentralized data collection, configuration of logger functions and for read-out the value memories of EASYBus modules.

The EBW are bidirectional interface converters, from RS232 to EASYBus or USB to EASYBus.

By means of the interface converters a EASYBus module can be connected to a PC, SPS, etc.

### Technical data

<table>
<thead>
<tr>
<th></th>
<th>EBW 1</th>
<th>EBW 3</th>
<th>EBW 64</th>
<th>EBW 240</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max. bus load</td>
<td>14</td>
<td>2</td>
<td>64</td>
<td>240</td>
</tr>
<tr>
<td>Power supply</td>
<td>230 V AC, 50/60 Hz</td>
<td>none, USB powered</td>
<td>230 V AC, 50/60 Hz</td>
<td></td>
</tr>
<tr>
<td>Interfaces</td>
<td>PC: RS232 sensor: EASYBus</td>
<td>PC: USB sensor: EASYBus</td>
<td>PC: RS232 sensor: EASYBus</td>
<td></td>
</tr>
</tbody>
</table>

### Scope of delivery

**EBW 1:**
- Interface converter, 9-pole DSub extension cable

**EBW 3:**
- Interface converter

**EBW 64:**
- Interface converter, 9-pole DSub extension cable

**EBW 240:**
- Interface converter, plug power supply, 9-pole DSub extension cable incl. software EASYControl

### Dimensions

<table>
<thead>
<tr>
<th></th>
<th>EBW 1</th>
<th>EBW 3</th>
<th>EBW 64</th>
<th>EBW 240</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>112 x 80 x 45 mm (H x W x D)</td>
<td>56 x 31 x 24 mm (H x W x D)</td>
<td>100 x 75 x 100 mm (H x W x D)</td>
<td>200 x 240 x 85 mm (H x W x D)</td>
</tr>
</tbody>
</table>

### Ordering code

<table>
<thead>
<tr>
<th>1. Design type</th>
<th>1</th>
<th>3</th>
<th>64</th>
<th>240</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>as per description</td>
<td>as per description</td>
<td>as per description</td>
<td>as per description</td>
</tr>
</tbody>
</table>

---

**Technical data**

- Permissible bus length
- Power consumption
- Bit-recovery
- Short-circuit proof
- Electrically isolated
- Overload display
- Transfer rate
- EASYControl

**Bus load**

- EBW 1: max. 20 modules addressable
- EBW 3: max. 20 modules addressable
- EBW 64: max. 20 modules addressable
- EBW 240: max. 20 modules addressable

**Power supply**

- EBW 1: 230 V AC, 50/60 Hz
- EBW 3: none, USB powered
- EBW 64: 230 V AC, 50/60 Hz
- EBW 240: 230 V AC, 50/60 Hz

**Protection class**

- Front: IP54
- Housing: ABS

**Working temperature**

- -25..+50 °C

**Transfer rate**

- 4800 baud
Interface Converter
GW 110 PB

- Bidirectional interface converter
- Profibus to RS232 for EASYBus

Characteristics
The GW 110 PB is an interface converter from Profibus to EASYBus. In combination with an additional EBW 1 / 64 / 250 EASYBus modules can be connected to the Profibus. The interface converter GW 110 PB is adequate for hat-rail mounting.

Technical data
- Max. number of sensor modules: depending on EBW
- Power supply: 230 V / 50/60Hz
- Interfaces: RS 232, Profibus
- Permissible bus length: depending on EBW
- Power supply: depending on EBW
- Transfer rate: depending on EBW

Dimensions
Housing: 100 x 115 x 20 (H x W x D)

Scope of delivery
- 1x gateway-interface-converter
- 1x connection cable
- 1x power supply

Ordering code
GW110PB

Necessary accessories
An additional interface converter EBW 1, EBW 64 or EBW 250 is needed to get from the RS232 interface to the EASYBus.

- EBW 64: We recommended the interface converter EBW 64 as it allows bus length up to 1000m and is adequate for hat rail mounting.

Radio Modem Set
DFM 232 Set

- Wireless inquiry of EASYBus modules
- Bidirectional RS 232 interface
- High range

Characteristics
The DFM 232 Set is used for remote inquiry of e.g. greenhouses or heating/ventilation/climate.

The DFM 232 Set provides remote access to EASBus modules via 433MHz wireless network. The set contains a transmitter and a receiver.

Technical data
- Frequency: 433.050..434.775 MHz
- Bit rate: 4800 bit/s
- Transfer rate: 300..115200 Baud
- Power supply: 12..24 V DC

Dimensions
Housing: 70 x 95 x 30 mm (H x B x T)

Necessary accessories
An interface converter EBW 1, EBW 64 or EBW 250 is needed to get from RS232 interface to EASYBus

Ordering code
DFM232Set
WLAN oder Gigabit-Ethernet zu USB Wandler
LAN 3200 / WLAN 3200

- Zur Abfrage von EASYBus-Modulen oder GMH Handmessgeräte mit Schnittstelle
- 2 x USB-Eingang

Merkmale
Anwendung findet der LAN 3200/WLAN 3200 bei der Abfrage von Messwerten über LAN/WLAN.

Technische Daten
<table>
<thead>
<tr>
<th>Serielle Schnittstelle</th>
<th>2 x USB</th>
</tr>
</thead>
<tbody>
<tr>
<td>LAN Port</td>
<td>RJ-45 10/100/1000 Mbps</td>
</tr>
<tr>
<td>Netzwerkverbindung über:</td>
<td>Stat. IP oder DHCP</td>
</tr>
<tr>
<td>Versorgungsspannung über Netzteil</td>
<td>12 V DC / 1 A</td>
</tr>
</tbody>
</table>

Beschreibung
LAN 3200:
Zur Abfrage von EASYBus Modulen, GMH Handmessgeräten mit Schnittstelle oder GDUSB 1000 über Netzwerk oder Funk-Netzwerk. Mit 1 USB Port kann direkt ein oder mehrere EBW 3, USB 3100N oder GDUSB 1000 angeschlossen werden (bis zu 15 mit USB Hub). Für EBW 1, EBW 64 oder EBW 250 ist ein USB Adapter im Lieferumfang enthalten.

Abmessung
Gehäuse: 100 x 100 x 25,5 mm (H x B x T)
Gewicht: LAN: 96 g / WLAN: 118 g

Bestellschlüssel
LAN3200
WLAN3200
Lieferumfang/Zubehör: WLAN 3200, Netzteil, USB-Adapter, Anleitung, CD

Konfigurationssoftware
EASYBus-Configurator

- Übersichtliche Darstellung mittels Baumstruktur
- Zuordnung der Messstellen durch „Drag and Drop“
- Kostenlos Freeware

Merkmale
Eingesetzt wir der kostenlose EASYBus-Configurator bei der Konfiguration und Erstinstallation von EASYBus-Systemen.


Vorteile
- Auflistung aller angeschlossenen Module in einer Baum-Struktur
- Übersichtliche Einstellung von EASYBus-Sensormodulen
- Einfache Einrichtung des EB 3000 Regel-, Anzeige- und Überwachungsgerätes:
  - Hinzufügen von Modulen per Drag & Drop-Funktion
  - Programmierung von vorgefertigten virtuellen Kanal-Funktionen
- Übersichtliche Einstellung der Schalt- und Alarm-Ausgänge

Systemvoraussetzungen
Empfohlen Windows 8.1 32 / 64 Bit oder neuer.
(Lauffähig ab Windows XP, nicht lauffähig unter Windows RT, auf ARM oder Intel Itanium basierten Windows Systemen. Technischer Support ab Windows 8.1)

Bestellschlüssel
EASYBus-Configurator
Kostenloser Download über unsere Homepage
Measuring Data Acquisition Software
EBS 20M / EBS 60M

- Freely scalable diagrams
- Data storage in a data base
- Simultaneous support of multiple interfaces

Characteristics

This software is used for on-site data evaluation, real-time monitoring of EASYBus measuring, for process and climate control and for plant and building monitoring.

The EBS 20M / EBS 60M provides 20 / 60 channel measuring data acquisition for recording, monitoring, displaying and documenting the data.

Features

- Simultaneous support of multiple interfaces
- Use of different interface converters at the same time
- Easy and fast installation and operation
- Freely scalable diagrams
- Visualization of the data during recording
- Reliable data storage due to usage of a SQL database
- Data export to established formats (e.g. Excel)

Monitoring and Displaying Software
EASYControl net

- Network-compatible displaying software
- Permanent update of displayed values
- Visualization with tables, digital displays, tachometers or charts

Characteristics

The software EASYControl net is used for recording, monitoring, displaying and documenting EASYBus sensor modules in a network.

Features

- User accounts (with secured password transmission)
- Recorded data cannot be modified or manipulated later
- Permanent update of displayed values
- Correct chronological allocation of measuring values
- Load former data and complete them with "live" data
- Uncoupling of data acquisition, data storage and visualization
- Component communicating via LAN
- Data visualization via local network
- Trigger EBB Out switching channels via EASYBus
- Embedding of almost every measuring system or measuring device via Plugin.
- Different kinds of visualization
- Display multiple graphs “live” in one chart
- Blinking symbols on error or status messages

System prerequisite

Recommended Windows 8.1 32/64 bit or higher.
(Running from Windows XP, not running under Windows RT, ARM or Intel Itanium based Windows systems.
Technical support from Windows 8.1)

Ordering code

EASYControl net

1. Type
   20M  20-channel measuring data acquisition software
   60M  60-channel measuring data acquisition software
Function Library
EASYBus.dll

- Function library for interface communication
- Easy integration of all EASYBus modules to your own
- WINDOWS®-software
- Multiple program examples for Excel VBA, Visual Studio 2005-2010, C++

Read-Out and Operating Software for Logger
GSOFT 40K

- Displaying, operating and export of logger data
- Chart and table display
- Automatic read-out / archiving

Characteristics
The software GSOFT 40K is suited for operating logger modules and for read-out of measuring data.

The GSOFT 40K provides the possibility to operate simultaneously several EASYLogs, register their status information and read-out, display, document and save the measuring values.

Features
- Comfortable user interface
- Display of logger status information
- Setting of special functions
- Additional entering of remarks
- Visualization of data in charts and tables
- Simultaneous operation and display of several loggers
- Remote operation via conventional and mobile telephone nets
- Automated read-out / archiving
- Export function (e.g. to Excel)

Ordering code
EASYBus.dll

system prerequisite
Recommended Windows 8.1 32/64 bit or higher.
(Running from Windows XP, not running under Windows RT, ARM or Intel Itanium based Windows systems.
Technical support from Windows 8.1)

Ordering code
GSOFT40K

system prerequisite
Recommended Windows 8.1 32/64 bit or higher.
(Running from Windows XP, not running under Windows RT, ARM or Intel Itanium based Windows systems.
Technical support from Windows 8.1)

Scope of delivery
1x software GSOFT 40K, 1x connection cable EBSK 01

Ordering code
GSOFT40K
and easily put in or out if needed
(supplied without EASYLog)

GWH 40K
Wall mounting with lock as protection
against theft
Suitable for: EASYLog (except:
EASYLog 40NS W) and EBN/K,
(supplied without EASYLog)

ESK-1
Network-independent external
starting key
Suitable for: logger of type
EASYLog 40... and EASYLog 24...

Cables and terminals

EBSK 01
1 m connection cable with
special plug
For connecting an EASLog
to the EASBus.
For read-out or continuous operation

EBSK 03
3 m connection cable with
special plug
For connecting an EASLog
to the EASBus.
For read-out or continuous operation

EBSK 10
10 m connection cable with
special plug
For connecting an EASLog
to the EASBus.
For read-out or continuous operation

VSL 2P
Twisted special cable for
EASYBus systems
Cross section 2 x 0.75 mm²

AKL 1P
Special branch terminal for
connection to VSL2P (2 pieces)

Interface accessories

USB adapter
RS232 (9-pole) <=> USB
For connecting an interface converter
EBW 1 / 64 / 240 to an USB interface (with extension cable)

GRS 01/9
EB 2000 MC – interface cable
for connection to
9-pole RS232-interface of a PC

Alarm monitoring

EBUW 232 A
Independent alarm monitoring
Power supply:
6..12 VDC
Switching output:
NPN open-collector,
max. 12V / 50mA

Workings:
The EBUW 232A monitors independently – that means without
additional PC – up to 240 EASYBus modules for their alarm
conditions. If an alarm is present, the alarm output of the EBUS
232A will be set.
Furthermore it is possible to control switching module EBB 4
OUT // via EASYBus. Distinction of min/max alarm and system
alarm is possible.