### TURCK Modular Industrial I/O System

**BL20-E-8DI-24VDC-P**

**BL20-E-16DI-24VDC-P**

#### Discrete Input Economy Module

- Modular I/O
- Fieldbus Independent Configuration
- IP 20 Protection

#### Electrical

- Operating Current: <30 mA from \( V_{\text{MB}} \)
- <2 mA from \( V_{\text{IO}} \)

#### Power Distribution

- Inputs: \( V_{\text{IO}} \)
- Logic: \( V_{\text{MB}} \) and \( V_{\text{IO}} \)

#### Mechanical

- Operating Temperature: 0 to +55°C (+32 to +131°F)
- Protection: IP 20

#### Diagnostics

- LED to indicate module bus communication status as well as I/O diagnostics
- LEDs for each I/O point to indicate on/off status

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**Discrete Input Module Diagram**

[Diagram showing the layout of the BL20-E-8DI-24VDC-P and BL20-E-16DI-24VDC-P modules with diagnostic LEDs and I/O connections.]
### Industrial Automation

#### Inputs Data

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Channel</th>
<th>Pinout</th>
<th>Style</th>
<th>Group</th>
<th>Diagnostics</th>
<th>Individual</th>
<th>Inter-Channel</th>
<th>I/O Map</th>
</tr>
</thead>
<tbody>
<tr>
<td>BL20-E-012-24VDC-P</td>
<td>8</td>
<td>B20-E1</td>
<td>PNP</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BL20-E-016-24VDC-P</td>
<td>16</td>
<td>B20-E2</td>
<td>PNP</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: This module can only be used with other tension clamp modules.

### Input Connectors

#### B20-E1

#### B20-E2

### I/O Data Map 1

<table>
<thead>
<tr>
<th>Byte</th>
<th>Bit 7</th>
<th>Bit 6</th>
<th>Bit 5</th>
<th>Bit 4</th>
<th>Bit 3</th>
<th>Bit 2</th>
<th>Bit 1</th>
<th>Bit 0</th>
</tr>
</thead>
<tbody>
<tr>
<td>In</td>
<td>n-1</td>
<td>1-7</td>
<td>1-6</td>
<td>1-5</td>
<td>1-4</td>
<td>1-3</td>
<td>1-2</td>
<td>1-1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(Data from modules to the left)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>+1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### I/O Data Map 2

<table>
<thead>
<tr>
<th>Byte</th>
<th>Bit 7</th>
<th>Bit 6</th>
<th>Bit 5</th>
<th>Bit 4</th>
<th>Bit 3</th>
<th>Bit 2</th>
<th>Bit 1</th>
<th>Bit 0</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>1-7</td>
<td>1-6</td>
<td>1-5</td>
<td>1-4</td>
<td>1-3</td>
<td>1-2</td>
<td>1-1</td>
</tr>
<tr>
<td>+1</td>
<td></td>
<td>1-8</td>
<td>1-9</td>
<td>1-10</td>
<td>1-11</td>
<td>1-12</td>
<td>1-13</td>
<td>1-14</td>
</tr>
<tr>
<td>+2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(Data from modules to the right)
TURCK Modular Industrial I/O System

Discrete Output Economy Module

- Modular I/O
- Fieldbus Independent Configuration
- IP 20 Protection
- Base and Electronics in One Part

**Electrical**
- Operating Current: <30 mA from V_{MB}
- <10 mA from V_{IO}
- Output Current: <0.5 A per output (from V_{IO})

**Power Distribution**
- Outputs: V_{IO}
- Logic: V_{MB} and V_{IO}

**Mechanical**
- Operating Temperature: 0 to +55°C (+32 to +131°F)
- Protection: IP 20

**BL20-E-8DO-24VDC-0.5A-P**
- **Diagnostics (Logical)**
  - Diagnostic information available through the fieldbus gateway

**BL20-E-16DO-24VDC-0.5A-P**
- **Diagnostics (Physical)**
  - LED to indicate module bus communication status as well as I/O diagnostics
  - LEDs for each I/O point to indicate on/off status

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TURCK Inc. 3000 Campus Drive Minneapolis, MN 55441 Application Support: 1-800-544-7769 Fax: (763) 553-0708 www.turck.com
### Industrial Automation

#### Outputs and Data

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Signal Count</th>
<th>Pinout</th>
<th>Current</th>
<th>Individual Diagnostics</th>
<th>Wire-Break Detection</th>
<th>I/O Map</th>
</tr>
</thead>
<tbody>
<tr>
<td>BL20-E-8DO-24VDC-0.5A-P</td>
<td>8 BO-E1</td>
<td>0.5 A</td>
<td>X</td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>BL20-E-16DO-24VDC-0.5A-P</td>
<td>16 BO-E2</td>
<td>0.5 A</td>
<td>X</td>
<td></td>
<td></td>
<td>2</td>
</tr>
</tbody>
</table>

#### Output Connectors

**BO-E1**

8 DO

24Vdc 0.5A

**BO-E2**

16 DO

24Vdc 0.5A

#### I/O Data Map 1

<table>
<thead>
<tr>
<th>Byte</th>
<th>Bit 7</th>
<th>Bit 6</th>
<th>Bit 5</th>
<th>Bit 4</th>
<th>Bit 3</th>
<th>Bit 2</th>
<th>Bit 1</th>
<th>Bit 0</th>
</tr>
</thead>
<tbody>
<tr>
<td>n</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>n+1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>n+2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(Data for modules to the left)

#### I/O Data Map 2

<table>
<thead>
<tr>
<th>Byte</th>
<th>Bit 7</th>
<th>Bit 6</th>
<th>Bit 5</th>
<th>Bit 4</th>
<th>Bit 3</th>
<th>Bit 2</th>
<th>Bit 1</th>
<th>Bit 0</th>
</tr>
</thead>
<tbody>
<tr>
<td>n</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>n+1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>n+2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(Data for modules to the right)
BL20 Economy Module
8 analog inputs U/I resp. 4 PT/NI inputs
BL20-E-8AI-U/I-4PT/NI

- Independent of the type of fieldbus used
- Electronics and connection technology in one housing.
- Tension spring connection
- Degree of protection IP20
- LEDs for display of status and diagnostics
- Electronics galvanically isolated from the field level via opto couplers
- 8 2-wire analog inputs U/I
- 0...20mA, 4...20mA, -10...+10VDC or 0...+10VDC, selectable per channel resp.
- 4PT/NI inputs
  (2 analog inputs are complied to a PT/NI 2/3-wire input)

Terminal connection

Functional principle
With the BL20 Economy modules the electronics and connection technology is integrated in a single housing. Thus, the selection of a base module is unnecessary. Within a station the Economy modules can be combined with the modules featuring separate electronics/connection technology, provided that the base modules feature tension spring connections.
The electronic modules are completely independent of the type of higher level field bus through the use of gateways.

Type
Ident-No.
BL20-E-8AI-U/I-4PT/NI
6827325

Number of channels
8-channel

Rated voltage from the supply terminal
24 VDC

Admissible range
18...30 VDC

Rated current from field supply
≤ 35 mA

Rated current from module bus
≤ 35 mA

Power loss, typical
≤ 1.5 W

Input type
0/4 ... 20 mA, -10/0 ... +10 VDC, PT100, PT200, PT500, PT1000, NI100, NI1000, 0...250 Ohm, 0...400 Ohm, 0...800 Ohm, 0...2000 Ohm, 0...4000 Ohm,

Input resistance
< 62 Ω (current) resp. > 98.5 kΩ (voltage)

Max. input current
Strommodus: 50 mA

Max. input voltage
Spannungsmodus: -20 VDC < U < 20 VDC

Electrical isolation
electronics for the field level

Maximum limiting frequency, analogue
< 2 Hz

Basic fault limit at 23 °C
< 0.2 %

Temperature coefficient
< 200 ppm/°C of full scale

Resolution
16 Bit

Measured-value display
16 bit signed integer
12 bit full range left justified
12 bit left-justified

Number of diagnostic bytes
8

Number of parameter bytes
8

Dimensions (W x L x H)
12.6 x 160 x 74.6 mm

Operating temperature
0 to +55 °C

Storage temperature
-25 to +85 °C

Relative humidity
5 to 93% (internal), Level RH-2, no condensation (at 45 °C storage)

Vibration test
acc. to EN 61131

Shock test
acc. to IEC 68-2-27

Drop and topple
acc. to IEC 68-2-31 and free fall to IEC 68-2-32

Electro-magnetic compatibility
acc. to EN 50,082-2

Degree of protection
IP20
BL20 Economy Module
4 analog outputs
BL20-E-4AO-U/I

- Unabhängig vom verwendeten Feldbus
- Elektronik und Anschlusstechnik in einem Gehäuse
- Zugfederanschlussstechnik
- Schutzart IP20
- LED zur Anzeige von Diagnose
- Elektronik über Koppler galvanisch von der Feldebene getrennt
- 4 analog outputs
- 0…20mA, 4…20mA, -10…+10VDC or 0…+10VDC, selectable per channel

<table>
<thead>
<tr>
<th>Type</th>
<th>BL20-E-4AO-U/I</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ident-No.</td>
<td>6827328</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Number of channels</th>
<th>4-channel</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rated voltage from the supply terminal</td>
<td>24 VDC</td>
</tr>
<tr>
<td>Admissible range</td>
<td>18…30 VDC</td>
</tr>
<tr>
<td>Rated current from field supply</td>
<td>≤ 130 mA</td>
</tr>
<tr>
<td>Rated current from module bus</td>
<td>≤ 50 mA</td>
</tr>
<tr>
<td>Power loss, typical</td>
<td>≤ 2.6 W</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Output type</th>
<th>0…20mA, 4…20mA, -10…+10VDC or 0…+10VDC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Load resistance, resistive</td>
<td>&lt; 0,45 (Strom) bzw. &gt; 1 (Spannung) kΩ</td>
</tr>
<tr>
<td>Load resistance, inductive</td>
<td>&lt; 0,01 (Strommodus) mH</td>
</tr>
<tr>
<td>Load resistance, capacitive</td>
<td>&lt; 1 (Spannungsmodus) µF</td>
</tr>
<tr>
<td>Electrical isolation</td>
<td>electronics for the field level</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Transmission frequency</th>
<th>&lt; 20 Hz</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basic fault limit at 23 °C</td>
<td>&lt; 0.2 %</td>
</tr>
<tr>
<td>Temperature coefficient</td>
<td>&lt; 200 ppm/°C of full scale</td>
</tr>
<tr>
<td>Resolution</td>
<td>16 Bit</td>
</tr>
<tr>
<td>Measured-value display</td>
<td>16 bit signed integer</td>
</tr>
<tr>
<td></td>
<td>12 bit left-justified</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Number of diagnostic bytes</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of parameter bytes</td>
<td>12</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Dimensions (W x L x H)</th>
<th>12.6 x 160 x 74.6 mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating temperature</td>
<td>0 to +55 °C</td>
</tr>
<tr>
<td>Storage temperature</td>
<td>-25 to +85 °C</td>
</tr>
<tr>
<td>Relative humidity</td>
<td>5 to 95% (internal), Level RH-2, no condensation (at 45 °C storage)</td>
</tr>
<tr>
<td>Vibration test</td>
<td>acc. to EN 61131</td>
</tr>
<tr>
<td>Shock test</td>
<td>acc. to IEC 68-2-27</td>
</tr>
<tr>
<td>Drop and topple</td>
<td>acc. to IEC 68-2-31 and free fall to IEC 68-2-32</td>
</tr>
<tr>
<td>Electro-magnetic compatibility</td>
<td>acc. to EN 50,082-2</td>
</tr>
<tr>
<td>Degree of protection</td>
<td>IP20</td>
</tr>
</tbody>
</table>

Functional principle
With the BL20 Economy modules the electronics and connection technology is integrated in a single housing. Thus, the selection of a base module is unnecessary. Within a station the Economy modules can be combined with the modules featuring separate electronics/connection technology, provided that the base modules feature tension spring connections. The electronic modules are completely independent of the type of higher level field bus through the use of gateways.
TURCK Modular Industrial I/O System

SWIRE Economy Communication Module

- Modular Motor Starter Control
- Fieldbus Independent Configuration
- IP 20 Protection
- Base and Electronics in One Part

Electrical
- Operating Current: ≤60 mA from $V_{bus}$
  <3 A from $V_{IO}$

Mechanical
- Operating Temperature: 0 to +55°C (+32 to +131°F)
- Protection: IP 20

Diagnostics (Logical)
- Diagnostic information available through the fieldbus gateway

Diagnostics (Physical)
- LEDs for status and I/O diagnostics

Supported Gateways
- BL20-GW-OPV1
- BL20-GWBR-CANopen
- BL20-GWBR-DNET

BL20-E-1SWIRE

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Diagnostics LED

5.075 [128.8]

I/O LED

I/O connection

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SWIRE Economy Communication Module

BL20-E-1SWIRE
### Industrial Automation

#### Part Number Input Count Pinout Current Group Diagnostics Individual Diagnostics Hardware Diagnostics I/O Map

| BL20-E-SWIRE | 1 | 3A | X | X | 1 |

Note: This module can only be used with other tension clamp modules unless it is separated using a BL20-PF-24VDC-D and BL20-PA4-SBBC base.

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### Mating Cordsets:

From SWIRE slice to first motor starter: BL20-SWIRE-CAB-XXX

End cap for last motor starter: BL20-SWIRE-CAB-000

From one motor starter to an adjacent motor starter: BL20-SWIRE-CAB-008

XXX = Cable length in cm, cable lengths available in 25, 50, 100 and 200 cm.

---

### I/O Data Map 1

<table>
<thead>
<tr>
<th>Byte</th>
<th>Bit 7</th>
<th>Bit 6</th>
<th>Bit 5</th>
<th>Bit 4</th>
<th>Bit 3</th>
<th>Bit 2</th>
<th>Bit 1</th>
<th>Bit 0</th>
</tr>
</thead>
<tbody>
<tr>
<td>In</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>n-1</td>
<td>SWIRE Slave 2</td>
<td>SWIRE Slave 1</td>
<td>S02</td>
<td>P02</td>
<td>S12</td>
<td>S01</td>
<td>P01</td>
<td>S11</td>
</tr>
<tr>
<td>n+1</td>
<td>SWIRE Slave 4</td>
<td>SWIRE Slave 3</td>
<td>S04</td>
<td>P04</td>
<td>S12</td>
<td>S03</td>
<td>P03</td>
<td>S13</td>
</tr>
<tr>
<td>n+2</td>
<td>SWIRE Slave 6</td>
<td>SWIRE Slave 5</td>
<td>S06</td>
<td>P06</td>
<td>S12</td>
<td>S05</td>
<td>P05</td>
<td>S15</td>
</tr>
<tr>
<td>n+3</td>
<td>SWIRE Slave 8</td>
<td>SWIRE Slave 7</td>
<td>S08</td>
<td>P08</td>
<td>S12</td>
<td>S07</td>
<td>P07</td>
<td>S17</td>
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<tr>
<td>n+4</td>
<td>SWIRE Slave 10</td>
<td>SWIRE Slave 9</td>
<td>S10</td>
<td>P10</td>
<td>S12</td>
<td>S09</td>
<td>P09</td>
<td>S19</td>
</tr>
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<td>n+5</td>
<td>SWIRE Slave 12</td>
<td>SWIRE Slave 11</td>
<td>S12</td>
<td>P12</td>
<td>S12</td>
<td>S11</td>
<td>P11</td>
<td>S11</td>
</tr>
<tr>
<td>n+6</td>
<td>SWIRE Slave 14</td>
<td>SWIRE Slave 13</td>
<td>S14</td>
<td>P14</td>
<td>S12</td>
<td>S13</td>
<td>P13</td>
<td>S13</td>
</tr>
<tr>
<td>n+7</td>
<td>SWIRE Slave 16</td>
<td>SWIRE Slave 15</td>
<td>S16</td>
<td>P16</td>
<td>S12</td>
<td>S15</td>
<td>P15</td>
<td>S15</td>
</tr>
<tr>
<td>n+8</td>
<td>SWIRE Slave 18</td>
<td>SWIRE Slave 17</td>
<td>S18</td>
<td>P18</td>
<td>S12</td>
<td>S17</td>
<td>P17</td>
<td>S17</td>
</tr>
</tbody>
</table>

- **n**: Data from modules to the left
- **n+8**: Data from modules to the right

**Six**: Motor Starter is On

**PKZ-STx**: Motor Starter is OK

**SDx**: Slave Diagnostics Available

**SIx**: Turn on Motor Starter

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TLRCK Inc. 3000 Campus Drive Minneapolis, MN 55441 Application Support: 1-800-544-7769 Fax: (763) 553-0708 www.turck.com
**gateway for BL20 I/O system**
**interface for PROFIBUS-DP**
**BL20-E-GW-DP**

<table>
<thead>
<tr>
<th><strong>Type</strong></th>
<th>BL20-E-GW-DP</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Ident-No.</strong></td>
<td>6827250</td>
</tr>
<tr>
<td></td>
<td>M6827250</td>
</tr>
</tbody>
</table>

**Supply voltage**
- 24 VDC
- System power supply: 24 VDC / 5 VDC
- Field supply: 24 VDC
- Admissible range: 18...30 VDC
- Rated current from module bus: ≤ 430 mA
- Max. field supply current: 10 A
- Max. system supply current: 1 A
- Voltage supply connection: Push-in clamps

**Fieldbus transmission rate**
- 9.6 kbps up to 12 Mbps
- Fieldbus addressing per DIP switch
- Fieldbus addressing range: 1...126
- Service interface: PS/2 socket for I/O-ASSISTANT
- Fieldbus connection technology: Push-in clamps
- Fieldbus termination per DIP switch

**Number of diagnostic bytes**
- 3

**Number of parameter bytes**
- 5

**Dimensions (W x L x H)**
- 33.5 x 129.5 x 74.4 mm

**Approvals**
- cULus, Zone2, ClassI,Div.2.

**Operating temperature**
- 0 to +55 °C

**Storage temperature**
- -25 to +85 °C

**Relative humidity**
- 5 to 95% (internal), Level RH-2, no condensation (at 45 °C storage)

**Vibration test**
- acc. to EN 61131

**Shock test**
- acc. to IEC 68-2-27

**Drop and topple**
- acc. to IEC 68-2-31 and free fall to IEC 68-2-32

**Electro-magnetic compatibility**
- acc. to EN 50082-2

**Protection class**
- IP20

**Included in scope of supply**
- 2 x end brackets BL20-WEW35/2-SW, 1 x end plate BL20-ABPL

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**Functional principle**
BL20 gateways are the head component of a BL20 station. They are designed to interface the modular fieldbus nodes to the higher level fieldbus (PROFIBUS-DP, DeviceNet, CANopen, Ethernet).

All BL20 electronic modules communicate over the internal module bus, the data of which is transferred to the fieldbus via the gateway, so that all I/O modules can be configured independently of the bus system.
gateway for BL20 I/O system
Interface for CANopen
BL20-E-GW-CO

- DIP switch for adjustment of the node address
- Protection class IP20
- 2 x end brackets BL20-WEW35/2-SW
- 1 x end plate BL20-ABPL
- with integrated supply
- LEDs for display of supply voltage, common alarm and bus errors
- Interface between the BL20 system and CANopen
- 1 Mbps
- Push-in clamps

Field supply/system supply

Functional principle
BL20 gateways are the head component of a BL20 station. They are designed to interface the modular fieldbus nodes to the higher level fieldbus (PROFIBUS-DP, DeviceNet, CANopen, Ethernet). All BL20 electronic modules communicate over the internal module bus, the data of which is transferred to the fieldbus via the gateway, so that all I/O modules can be configured independently of the bus system.
gateway for BL20 I/O system
interface for DeviceNet
BL20-E-GW-DN

- DIP switch for adjustment of the node address
- Protection class IP20
- 2 x end brackets BL20-WEW35/2-SW
- 1 x end plate BL20-ABPL
- with integrated supply
- LEDs for display of supply voltage, common alarm and bus errors
- Interface between BL20 system and DeviceNet
- 125 / 250 / 500 kbps
- The connection to DeviceNet™ is established via an open-style connector

Field supply/system supply

**Functional principle**

BL20 gateways are the head component of a BL20 station. They are designed to interface the modular fieldbus nodes to the higher level fieldbus (PROFIBUS-DP, DeviceNet, CANopen, Ethernet).

All BL20 electronic modules communicate over the internal module bus, the data of which is transferred to the fieldbus via the gateway, so that all I/O modules can be configured independently of the bus system.

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**Type**
BL20-E-GW-DN

**Ident-No.**
M6827301

**Supply voltage**
- System power supply: 24 VDC / 5 VDC
- Field supply: 24 VDC
- Admissible range: 18...30 VDC

**Rated current from module bus**
- ≤ 250 mA

**Max. field supply current**
- 10 A

**Max. system supply current**
- 0.7 A

**Voltage supply connection**
- Push-in clamps

**Fieldbus transmission rate**
- 125/250/500 kbps, DIP switch

**Fieldbus addressing per DIP switch**
- 0...63

**Fieldbus connection technology**
- PS/2 socket for I/O-ASSISTANT

**Fieldbus termination per DIP switch**
- open connector

**Dimensions (W x L x H)**
- 33.5 x 129.5 x 74.4 mm

**Approvals**
- cULus, Zone2, Class1, Div.2.

**Operating temperature**
- 0 to +55 °C

**Storage temperature**
- -25 to +85 °C

**Relative humidity**
- 5 to 95% (internal), Level RH-2, no condensation (at 45 °C storage)

**Vibration test**
- acc. to EN 61131

**Shock test**
- acc. to IEC 68-2-27

**Drop and topple**
- acc. to IEC 68-2-31 and free fall to IEC 68-2-32

**Electro-magnetic compatibility**
- acc. to EN 50,082-2

**Protection class**
- IP20

**Included in scope of supply**
- 2 x end brackets BL20-WEW35/2-SW, 1 x end plate BL20-ABPL
gateway for BL20 I/O system
interface for MODBUS TCP incl. supply
BL20-E-GW-EN

- DIP switch for adjustment of the node address
- Protection class IP20
- 2 x end brackets BL20-WEW35/2-SW
- 1 x end plate BL20-ABPL
- with integrated supply
- LEDs for display of supply voltage, common alarm and bus errors
- Interface between the BL20 system and MODBUS TCP
- 10/100 Mbps
- Integrated switch
- 2x RJ45 socket

Field supply/system supply

Functional principle
BL20 gateways are the head component of a BL20 station. They are designed to interface the modular fieldbus nodes to the higher level fieldbus (PROFIBUS-DP, DeviceNet, CANopen, Ethernet).
All BL20 electronic modules communicate over the internal module bus, the data of which is transferred to the fieldbus via the gateway, so that all I/O modules can be configured independently of the bus system.

Type
BL20-E-GW-EN
Ident-No. 6827329

Supply voltage
24VDC
System power supply 24 VDC / 5 VDC
Field supply 24 VDC
Admissible range 18…30 VDC
Rated current from module bus ≤ 200 mA
Max. field supply current 10 A
Max. system supply current 0.4 A
Voltage supply connection Push-in clamps

Fieldbus transmission rate
10/100 Mbps
Fieldbus addressing per DIP switch
Service interface Mini USB
Fieldbus connection technology RJ45 socket

Dimensions (W x L x H)
33.5 x 129.5 x 74.4 mm

Approvals cULus, Zone2, ClassI,Div.2.
Operating temperature 0 to +55 °C
Storage temperature -25 to +85 °C
Relative humidity 5 to 95% (internal), Level RH-2, no condensation (at 45 °C storage)
Vibration test acc. to EN 61131
Shock test acc. to IEC 68-2-27
Drop and topple acc. to IEC 68-2-31 and free fall to IEC 68-2-32
Electro-magnetic compatibility acc. to EN 50,082-2
Protection class IP20

Included in scope of supply
2 x end brackets BL20-WEW35/2-SW, 1 x end plate BL20-ABPL
gateway for BL20 I/O system
interface for EtherNet/IP supply inclusive
BL20-E-GW-EN-IP

- DIP switch for adjustment of the node address
- Protection class IP20
- 2 x end brackets BL20-WEW35/2-SW
- 1 x end plate BL20-ABPL
- with integrated supply
- LEDs for display of supply voltage, common alarm and bus errors
- Interface between the BL20 system and EtherNet/IP
- 10/100 Mbps
- Integrated switch
- 2x RJ45 socket

Field supply/system supply

Functional principle
BL20 gateways are the head component of a BL20 station. They are designed to interface the modular fieldbus nodes to the higher level fieldbus (PROFIBUS-DP, DeviceNet, CANopen, Ethernet).

All BL20 electronic modules communicate over the internal module bus, the data of which is transferred to the fieldbus via the gateway, so that all I/O modules can be configured independently of the bus system.

Type
BL20-E-GW-EN-IP
Ident-No. 6827330

Supply voltage

<table>
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<tr>
<th>Description</th>
<th>Value</th>
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<td>Field supply</td>
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</tr>
<tr>
<td>Voltage supply connection</td>
<td>Push-in clamps</td>
</tr>
</tbody>
</table>

Fieldbus transmission rate

- 10/100 Mbps
- per DIP switch
- Mini USB
- RJ45 socket

Fieldbus connection technology

Dimensions (W x L x H)
33.5 x 129.5 x 74.4 mm

Approvals
cULus, Zone2, ClassI, Div.2.

Operating temperature
0 to +55 °C

Storage temperature
-25 to +85 °C

Relative humidity
5 to 95% (internal), Level RH-2, no condensation (at 45 °C storage)

Vibration test
acc. to EN 61131

Shock test
acc. to IEC 68-2-27

Drop and topple
acc. to IEC 68-2-31 and free fall to IEC 68-2-32

Electro-magnetic compatibility
acc. to EN 50,082-2

Protection class
IP20

Included in scope of supply
2 x end brackets BL20-WEW35/2-SW, 1 x end plate BL20-ABPL