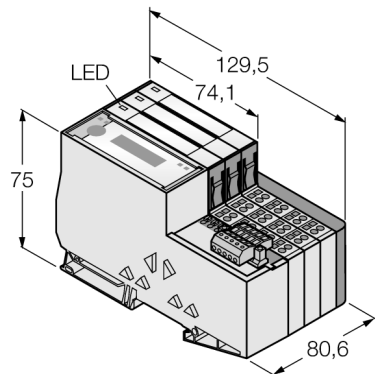


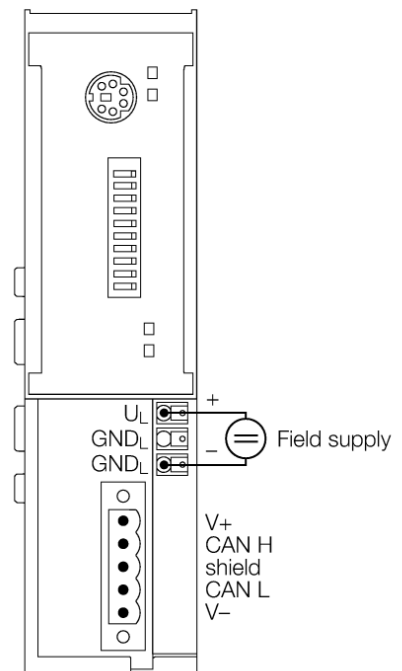
## Economy Set for Simple I/O Communication via DeviceNet™ in IP20

### TI-BL20-E-DN-S-6



- A special software (function module) for integration in PLC systems is not required.
- Cable max. 50 m between interface and read/write head
- Rotary coding switch to adjust the bus address
- Maximum transmission rate to the fieldbus 120/250/500 kbps
- LEDs for display of supply voltage, group and bus errors as well as status and diagnostics
- Connection of up to 6 read/write heads via BL ident extension cables
- Mixed operation of HF and UHF read/write heads

#### Field/System Supply



#### Functional principle

BL ident can be integrated into your plant structure in many different ways.

Various fieldbus standards, such as PROFIBUS-DP, EtherNet/IP, Ethernet Modbus TCP, EtherCAT, DeviceNet, CANopen and PROFINET IO allow flexible integration.

BL ident simple electronic modules (BL20-2RFID-S, BL67-2RFID-S) can be integrated into existing control or host systems without function block, since standard input/output process data is used for communication.

Programmable gateways with peripheral pre-processing function relieve the control system and fieldbus level.

Preassembled sets (2, 4, 6 or 8-port), easily mounted, available for all fieldbus networks.

|                                               |                                                        |
|-----------------------------------------------|--------------------------------------------------------|
| <b>Type designation</b>                       | TI-BL20-E-DN-S-6                                       |
| Ident no.                                     | 1545132                                                |
| Number of channels                            | 6                                                      |
| Dimensions (W x L x H)                        | 80.6 x 129.5 x 75 mm                                   |
| <b>Rated voltage from the supply terminal</b> | 24 VDC                                                 |
| Supply voltage                                | 24 VDC                                                 |
| System power supply                           | 24 VDC / 5 VDC                                         |
| Field supply                                  | 24 VDC                                                 |
| Admissible range                              | 18...30 VDC                                            |
| Max. field supply current                     | 8                                                      |
| Max. system supply current                    | 0.7                                                    |
| <b>Fieldbus transmission rate</b>             | 125/250/500 kbps                                       |
| Fieldbus address range                        | 0...63                                                 |
| Fieldbus addressing                           | via DIP switch                                         |
| Service interface                             | PS/2 socket                                            |
| Fieldbus connection technology                | Open style connector                                   |
| Voltage supply connection                     | Push-in terminals                                      |
| Fieldbus termination                          | via DIP switch                                         |
| <b>Transmission rate</b>                      | 115.2 kbps                                             |
| Electrical isolation                          | Electronics and field level isolated via opto-couplers |
| <b>Output connectivity</b>                    | Screw, tension spring                                  |
| <b>Sensor supply</b>                          | 0.25 A per channel, short-circuit proof                |
| <b>Number of diagnostics bytes</b>            | 4                                                      |
| Number of parameter bytes                     | 8                                                      |
| Number of input bytes                         | 24                                                     |
| Number of output bytes                        | 24                                                     |
| <b>Relative humidity</b>                      | 15...95 %, no condensation allowed                     |
| Vibration test                                | Acc. to EN 61131                                       |
| Shock test                                    | Acc. to IEC 60068-2-27                                 |
| Drop and topple                               | Acc. to IEC 60068-2-31                                 |
| Electromagnetic compatibility                 | Acc. to EN 61131-2                                     |
| Protection class                              | IP20                                                   |

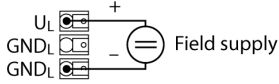
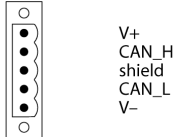
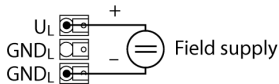
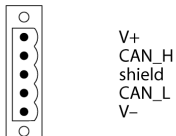
Economy Set for Simple I/O Communication via DeviceNet™ in IP20  
TI-BL20-E-DN-S-6

|                      |                                                                                      |
|----------------------|--------------------------------------------------------------------------------------|
| Included in delivery | 2 x end brackets BL20-WEW-35/2-SW, 1 x end plate BL20-ABPL, 1 x open style connector |
| Included in delivery | 2 × end brackets BL20-WEW-35/2-SW, 1 × end plate BL20-ABPL, 1 × open-style connector |

# Economy Set for Simple I/O Communication via DeviceNet™ in IP20

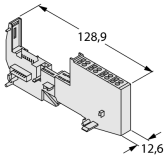
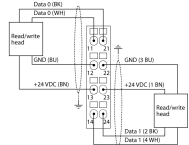
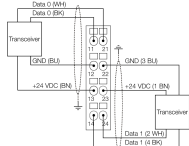
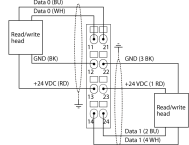
## TI-BL20-E-DN-S-6

### Anschlussübersicht

|                                                                                     |                                                                                                                                                                                               |                                                                                                                    |
|-------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|
|    | <p><b>Power Supply</b><br/>The U<sub>SYS</sub> system supply feeds power to the gateway and the I/O modules.<br/>The U<sub>f</sub> field supply feeds power to the sensors and actuators.</p> | <p><b>Pin Assignment</b></p>    |
|    | <p><b>DeviceNet</b><br/>Fieldbus cable (example):<br/>CBC5-572-2M (ident no. 6606065) or<br/>RKC5701-5M (ident no. 6931035)</p>                                                               | <p><b>Pin Assignment</b></p>    |
|   | <p><b>Power Supply</b><br/>The U<sub>SYS</sub> system supply feeds power to the gateway and the I/O modules.<br/>The U<sub>f</sub> field supply feeds power to the sensors and actuators.</p> | <p><b>Pin assignment</b></p>   |
|  | <p><b>DeviceNet</b><br/>Fieldbus cable (example):<br/>CBC5-572-2M (ID 6606065) or<br/>RKC5701-5M (ID 6931035)</p>                                                                             | <p><b>Pin assignment</b></p>  |

# Economy Set for Simple I/O Communication via DeviceNet™ in IP20 TI-BL20-E-DN-S-6

## Compatible base modules

| Dimension drawing                                                                 | Type                                                         | Pin configuration                                                                                                                       |
|-----------------------------------------------------------------------------------|--------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|
|  | <b>BL20-S4T-SBBS</b><br>6827046<br>Tension spring connection | <b>Pin configuration</b><br>.../S2500 Connectors<br> |
|                                                                                   | <b>BL20-S4S-SBBS</b><br>6827047<br>Screw connection          | .../S2501 Connectors<br>                             |
|                                                                                   |                                                              | Connectors .../S2503<br>                             |
|                                                                                   |                                                              |                                                                                                                                         |

## Economy Set for Simple I/O Communication via DeviceNet™ in IP20

### TI-BL20-E-DN-S-6

#### LED display

| LED     | Color | Status            | Meaning                                                                                                                                                    |
|---------|-------|-------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|
| D       |       | OFF               | Error report or diagnostics active.                                                                                                                        |
|         | RED   | ON                | Failure of MODBUS communication Check if more than 2 adjacent electronic modules are pulled. Relevant modules are located between gateway and this module. |
|         | RED   | FLASHING (0.5 Hz) | Upcoming module diagnostics                                                                                                                                |
| RW0/RW1 |       | OFF               | No tag, no active diagnostics                                                                                                                              |
|         | GREEN | ON                | Tag available                                                                                                                                              |
|         | GREEN | FLASHING (2 Hz)   | Data exchange with tag enabled                                                                                                                             |
|         | RED   | ON                | Read/write head error                                                                                                                                      |
|         | RED   | FLASHING (2 Hz)   | Short-circuit in the supply line of read/write head                                                                                                        |

## Economy Set for Simple I/O Communication via DeviceNet™ in IP20

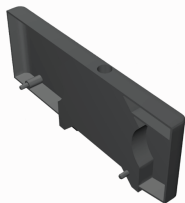
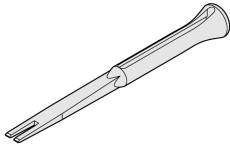
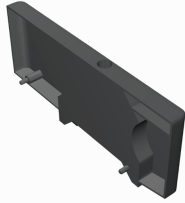
### TI-BL20-E-DN-S-6

#### I/O Data Mapping

| INPUT     | BYTE | Bit 7               | Bit 6 | Bit 5  | Bit 4    | Bit 3   | Bit 2           | Bit 1           | Bit 0           |
|-----------|------|---------------------|-------|--------|----------|---------|-----------------|-----------------|-----------------|
| Channel 0 | 0    | DONE                | BUSY  | ERROR  | XCVR CON | XCVR ON | TP              | TFR             | Reserved        |
|           | 1    | Error Code          |       |        |          |         |                 |                 |                 |
|           | 2    | Error Code 1        |       |        |          |         |                 |                 |                 |
|           | 3    | Reserved            |       |        |          |         |                 |                 |                 |
|           | 4    | READ DATA (8 Byte)  |       |        |          |         |                 |                 |                 |
|           | 5    |                     |       |        |          |         |                 |                 |                 |
|           | ...  |                     |       |        |          |         |                 |                 |                 |
|           | 10   |                     |       |        |          |         |                 |                 |                 |
|           | 11   |                     |       |        |          |         |                 |                 |                 |
| Channel 1 | 12   | DONE                | BUSY  | ERROR  | XCVR CON | XCVR ON | TP              | TFR             | Reserved        |
|           | 13   | Error Code          |       |        |          |         |                 |                 |                 |
|           | 14   | Error Code 1        |       |        |          |         |                 |                 |                 |
|           | 15   | Reserved            |       |        |          |         |                 |                 |                 |
|           | 16   | READ DATA (8 Byte)  |       |        |          |         |                 |                 |                 |
|           | 17   |                     |       |        |          |         |                 |                 |                 |
|           | ...  |                     |       |        |          |         |                 |                 |                 |
|           | 22   |                     |       |        |          |         |                 |                 |                 |
|           | 23   |                     |       |        |          |         |                 |                 |                 |
| OUTPUT    | BYTE | Bit 7               | Bit 6 | Bit 5  | Bit 4    | Bit 3   | Bit 2           | Bit 1           | Bit 0           |
| Channel 0 | 0    | XCVR                | NEXT  | TAG ID | READ     | WRITE   | TAG INFO        | XCVR INFO       | RESET           |
|           | 1    | Reserved            |       |        |          |         | Byte Count<br>2 | Byte Count<br>1 | Byte Count<br>0 |
|           | 2    | Address high byte   |       |        |          |         |                 |                 |                 |
|           | 3    | Address low byte    |       |        |          |         |                 |                 |                 |
|           | 4    | WRITE DATA (8 Byte) |       |        |          |         |                 |                 |                 |
|           | 5    |                     |       |        |          |         |                 |                 |                 |
|           | ...  |                     |       |        |          |         |                 |                 |                 |
|           | 10   |                     |       |        |          |         |                 |                 |                 |
|           | 11   |                     |       |        |          |         |                 |                 |                 |
| Channel 1 | 12   | XCVR                | NEXT  | TAG ID | READ     | WRITE   | TAG INFO        | XCVR INFO       | RESET           |
|           | 13   | Reserved            |       |        |          |         | Byte Count<br>2 | Byte Count<br>1 | Byte Count<br>0 |
|           | 14   | Address high byte   |       |        |          |         |                 |                 |                 |
|           | 15   | Address low byte    |       |        |          |         |                 |                 |                 |
|           | 16   | WRITE DATA (8 Byte) |       |        |          |         |                 |                 |                 |
|           | 17   |                     |       |        |          |         |                 |                 |                 |
|           | ...  |                     |       |        |          |         |                 |                 |                 |
|           | 22   |                     |       |        |          |         |                 |                 |                 |
|           | 23   |                     |       |        |          |         |                 |                 |                 |

## Economy Set for Simple I/O Communication via DeviceNet™ in IP20 TI-BL20-E-DN-S-6

### Accessories

| Type code                  | Ident no. |                                                                   | Dimension drawing                                                                     |
|----------------------------|-----------|-------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| BL20-ABPL (2 PCS.)         | 6827123   | End plate for a BL20 station after the last I/O module (2 pieces) |    |
| BL20-WEW-35/2-SW (10 PCS.) | 6827124   | End bracket for fixation of a BL20 station (10 pieces)            |    |
| ZBW5-2BETÄTIGUNGSWERKZEUG  | 6827125   | Tension spring tool                                               |  |
| BL20-ABPL (2 PCS.)         | 6827123   | End plate for a BL20 station after the last I/O module (2 pieces) |  |
| BL20-WEW-35/2-SW (10 PCS.) | 6827124   | End bracket for fixation of a BL20 station (10 pieces)            |  |