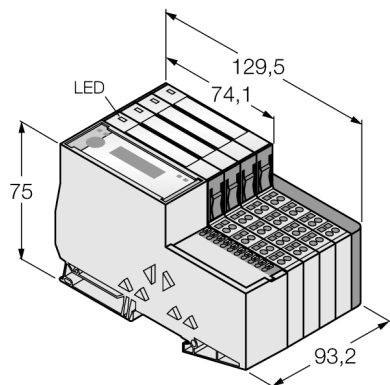


## Economy Set for Simple I/O Communication via PROFIBUS-DP in IP20

### TI-BL20-E-DPV1-S-8



- A special software (function module) for integration in PLC systems is not required.
- Cable max. 50 m between interface and read/write head
- 2 decimal rotary coding switches for the adjustment of the Profibus address
- Maximum transmission rate to the fieldbus 12 Mbps
- Sub-D female, 9-pin, for fieldbus connection
- Screw terminals for voltage supply
- LEDs for display of supply voltage, group and bus errors as well as status and diagnostics
- Connection of up to 8 read/write heads via BL ident extension cables
- Mixed operation of HF and UHF read/write heads

|                                               |                                                            |
|-----------------------------------------------|------------------------------------------------------------|
| <b>Type designation</b>                       | TI-BL20-E-DPV1-S-8                                         |
| Ident no.                                     | 1545129                                                    |
| Number of channels                            | 8                                                          |
| Dimensions (W x L x H)                        | 93.2 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                    | 1                                                          |
| <b>Fieldbus transmission rate</b>             | 9.6 kbps ... 12 Mbps                                       |
| Fieldbus address range                        | 1...126                                                    |
| Fieldbus addressing                           | via DIP switch                                             |
| Service interface                             | PS/2 socket                                                |
| Fieldbus connection technology                | Push-in clamps                                             |
| 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>            | 3                                                          |
| Number of diagnostics bytes                   | 4                                                          |
| Number of parameter bytes                     | 5                                                          |
| 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                                                       |
| <b>Included in delivery</b>                   | 2 x end brackets BL20-WEW-35/2-SW, 1 x end plate BL20-ABPL |

#### 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.

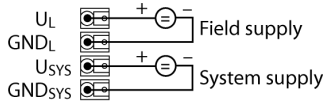
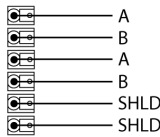
Programmable gateways with peripheral pre-processing function relieve the control system and fieldbus level.

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

# Economy Set for Simple I/O Communication via PROFIBUS-DP in IP20

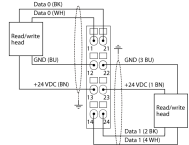
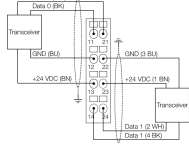
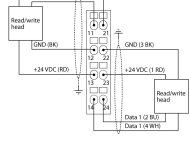
## TI-BL20-E-DPV1-S-8

### Anschlussübersicht

|                                                                                   |                                                                                                                                                                                                             |                                                                                                                  |
|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------|
|  | <p><b>Power Supply</b></p> <p>The <math>U_{SYS}</math> system supply feeds power to the gateway and the I/O modules.</p> <p>The <math>U_L</math> field supply feeds power to the sensors and actuators.</p> | <p><b>Pin Assignment</b></p>  |
|  | <p><b>PROFIBUS-DP</b></p> <p>Fieldbus cable (example):</p> <p>D9T451-2M (ident no. 6915759) or</p> <p>RSSW-451-2M (ident no. 6914229)</p>                                                                   | <p><b>Pin Assignment</b></p>  |

# Economy Set for Simple I/O Communication via PROFIBUS-DP in IP20 TI-BL20-E-DPV1-S-8

## 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 PROFIBUS-DP in IP20

### TI-BL20-E-DPV1-S-8

#### 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 PROFIBUS-DP in IP20

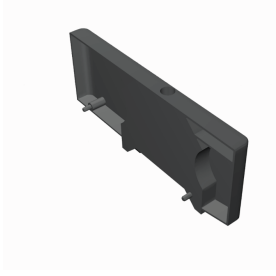
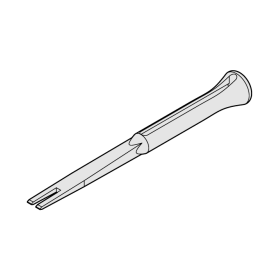
### TI-BL20-E-DPV1-S-8

#### 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 2 | Byte Count 1 | Byte Count 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 2 | Byte Count 1 | Byte Count 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 PROFIBUS-DP in IP20  
 TI-BL20-E-DPV1-S-8

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                                               |  |