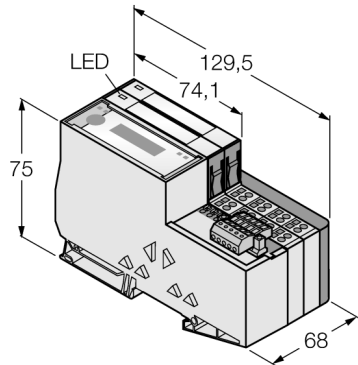


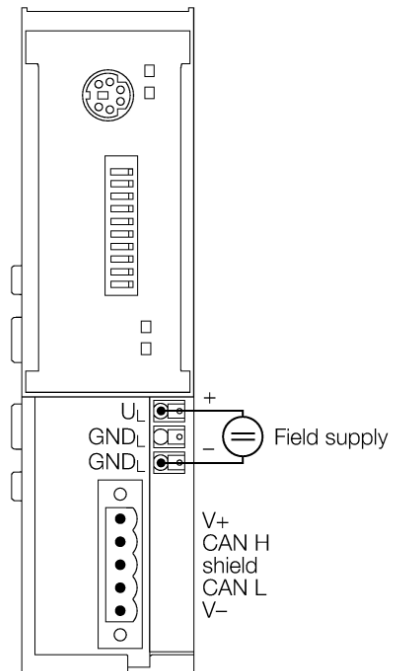
# Economy Set for Simple I/O Communication via DeviceNet™ in IP20

## TI-BL20-E-DN-S-4



- 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 4 read/write heads via BL ident extension cables
- Mixed operation of HF and UHF read/write heads

### Field/System Supply



### Functional principle

The BL ident® system can be installed 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 in 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.


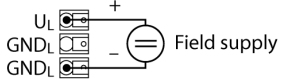

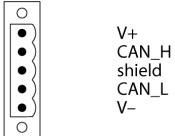
<b>Type designation</b>	TI-BL20-E-DN-S-4
Ident no.	1545131
Number of channels	4
Dimensions (W x L x H)	68 x 129.5 x 75 mm
<b>Rated voltage from the supply terminal</b>	24 VDC
Supply voltage	24 VDC
System power supply	24 VDC / 5 VDC
Field supply	24 VDC
Admissible range	18...30 VDC
Max. field supply current	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
Cable length	50 m
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>Operating temperature</b>	0...+55 °C
Storage temperature	-25...+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
Electromagnetic compatibility	acc. to EN 50,082-2
Protection class	IP20

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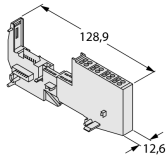
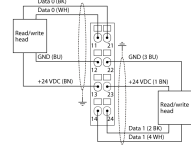
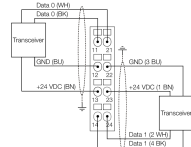
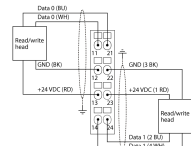
**Included in delivery**

2 x end brackets BL20-WEW-35/2-SW, 1 x  
end plate BL20-ABPL, 1 x open style connec-  
tor

**Anschlussübersicht**

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

Compatible base modules

	<p><b>Type</b></p> <p>BL20-S4T-SBBS 6827046 Tension spring connection</p> <p>BL20-S4S-SBBS 6827047 Screw connection</p>	<p><b>Pin configuration</b></p> <p>.../S2500 Connectors</p>  <p>.../S2501 Connectors</p>  <p>Connectors .../S2503</p> 
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## 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-4**

**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										