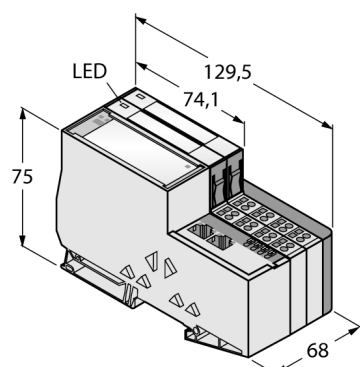


Set for Simple I/O Communication via Ethernet Modbus/TCP/ EtherNet/IP/ Profinet in IP20

TI-BL20-E-EN-S-4



- A special software (function module) for integration in PLC systems is not required.
- Cable length between interface and read/write head: up to 50 m
- Connection of up to 4 read/write heads via BLident ® M12 extension cables
- Mixed operation of HF and UHF read/write heads

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.

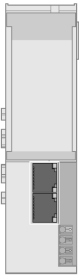
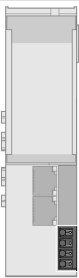
Preassembled sets (2, 4, 6 or 8-port), easily mounted, available for all fieldbus networks.

Type designation	TI-BL20-E-EN-S-4
Ident no.	7030631
Number of channels	4
Dimensions (W x L x H)	68 x 129.5 x 74.4 mm
Rated voltage from the supply terminal	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	0.4
Service interface	Ethernet
Voltage supply connection	Push-in terminals
Transmission rate	115.2 kbps
Electrical isolation	Electronics and field level isolated via opto-couplers
Output connectivity	Screw, tension spring
Sensor supply	0.25 A per channel, short-circuit proof
Number of diagnostics bytes	4
Number of parameter bytes	8
Number of input bytes	24
Number of output bytes	24
Relative humidity	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
Included in delivery	2 x end brackets BL20-WEW-35/2-SW, 1 x end plate BL20-ABPL

Set for Simple I/O Communication via Ethernet Modbus/TCP/ EtherNet/IP/ Profinet in IP20

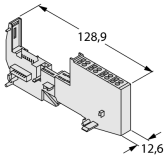
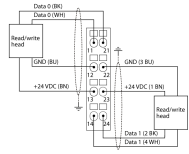
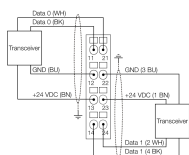
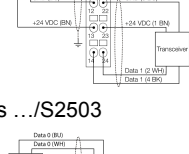
TI-BL20-E-EN-S-4

Anschlussübersicht

	Ethernet Fieldbus cable (example): RJ45S-RJ45S-441-2M (ident no. 6932517) or RJ45-FKSDD-441-0,5M/S2174 (ident no. 6914221)	Pin Assignment ETH2 8 1 ETH1 8 1 1 = TX + 2 = TX - 3 = RX + 4 = n.c. 5 = n.c. 6 = RX - 7 = n.c. 8 = n.c.
	Power Supply The U_{SYS} system supply feeds power to the gateway and the I/O modules. The U_L field supply feeds power to the sensors and actuators.	Pin Assignment U_L GND_L U_{SYS} GND_{SYS} + - + - Field supply System supply

Set for Simple I/O Communication via Ethernet Modbus/TCP/ EtherNet/IP/ Profinet in IP20 TI-BL20-E-EN-S-4

Compatible base modules

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

Set for Simple I/O Communication via Ethernet Modbus/TCP/ EtherNet/IP/ Profinet in IP20

TI-BL20-E-EN-S-4

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

Set for Simple I/O Communication via Ethernet Modbus/TCP/ EtherNet/IP/ Profinet in IP20

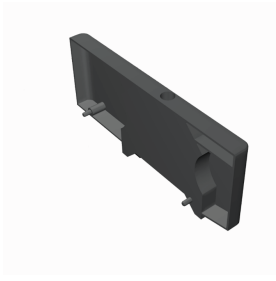
TI-BL20-E-EN-S-4

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								

Set for Simple I/O Communication via Ethernet Modbus/TCP/ EtherNet/IP/
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TI-BL20-E-EN-S-4

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	