

- Fieldbus and connection technology independent
- A special software (function module) for integration in PLC systems is not required.
- 8 byte user data per read/write cycle
- LEDs indicate status and diagnostic
- Electronics galvanically separated from the field level via optocouplers
- Connection of 2 BLident® read/write heads (HF or UHF)
- Mixed operation of HF and UHF read/write heads
- Transmission rate: 115.2 kbps
- Cable length max. 50 m

Type designation	BL20-2RFID-S
Ident no.	6827306
Number of channels	2
Rated voltage from the supply terminal	24 VDC
Nominal current from field supply	≤ 100 mA
Nominal current from module bus	≤ 30 mA
Power dissipation, typical	≤ 1 W
Transmission rate	115.2 kbps
Cable length	50 m
Electrical isolation	Electronics and field level isolated via optocouplers
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
Dimensions (W x L x H)	12.6 x 74.1 x 55.4mm
Approvals	CE, cULus, zone 2, Class I, Div. 2
Operating temperature	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
MTTF	242 years acc. to SN 29500 (Ed. 99) 40 °C

Functional principle

BL ident® solutions can be adapted to different system structures.

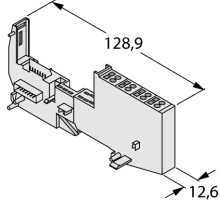
Numerous fieldbus standards, such as PROFIBUS-DP, EtherNet/IP, Ethernet Modbus TCP, DeviceNet, CANopen and PROFINET IO enable a flexible integration.

Simple BL ident® electronic modules (BL20-2RFID-S, BL67-2RFID-S) can be mounted in existing control or host systems, as standard input and output process data are used for communication.

Programmable gateways with peripheral pre-processing to relieve the higher-level control and bus system.

Premounted sets (2, 4, 6 or 8-port) for all fieldbus networks reduce the mounting effort.

Compatible base modules

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

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

Compatible gateways

Ident. no.	Type	Communication	Version and higher	Application
6827234	BL20-GW-DPV1	PROFIBUS-DP	FW 1.11	PLC systems with PROFIBUS-DP master. Acyclic services or function modules are not required.
6827168	BL20-GWBR-DNET	DeviceNet™	FW 6.02	PLC systems with DeviceNet™ scanner (master).
6827167	BL20-GWBR-CANOPEN	CANopen	FW 3.02	PLC systems with CANopen master. Special services or function modules are not required.

Compatible economy gateways

Ident. no.	Type	Communication	Version and higher	Application
6827250	BL20-E-GW-DP	PROFIBUS-DP	FW 1.12	PLC systems with PROFIBUS-DP master. DPV1 services are not required.
6827301	BL20-E-GW-DN	DeviceNet™	FW 1.16	PLC systems with DeviceNet™ scanner (master).
6827252	BL20-E-GW-CO	CANopen	FW 2.00	PLC systems with CANopen master. Special services or function modules are not required.
6827329	BL20-E-GW-EN	Modbus TCP PROFINET EtherNet/IP™	FW 1.0.0.1	PLC systems with Modbus TCP master or PC-based solution using Modbus driver software. PLC systems with EtherNet/IP™ scanner (master). PLC systems with PROFINET Master.
6827377	BL20-E-GW-PN	PROFINET IRT	FW 1.0.0.2	PLC systems with PROFINET Master.
6827380	BL20-E-GW-EC	EtherCAT®	FW 1.1.1.0	PLC systems with EtherCAT® master.
6827381	BL20-E-GW-RS-MB/ET	Modbus RTU / ASCII	FW 1.1.1.0	PLC systems with Modbus RTU/ASCII master.

Compatible CODESYS V3 programmable gateways

Ident. no.	Type	Communication	Version and higher	Application
6827393	BL20-PG-EN-V3	Modbus TCP PROFINET EtherNet/IP™	FW V1.0.7.0	PLC systems with Modbus TCP master or PC-based solution using Modbus driver software. PLC systems with EtherNet/IP™ scanner (master). PLC systems with PROFINET Master.
6827398	BL20-PG-EN-V3-WV	Modbus TCP PROFINET EtherNet/IP™	FW 1.0.7.0	PLC systems with Modbus TCP master or PC-based solution using Modbus driver software. PLC systems with EtherNet/IP™ scanner (master). PLC systems with PROFINET Master.

Compatible CODESYS V2 programmable gateways

Ident. no.	Type	Communication	Version and higher	Application
6827249	BL20-PG-EN	Modbus TCP	FW 1.5.0.2	PLC systems with Modbus TCP master or PC-based solution using Modbus driver software.

6827248	BL20-PG-EN-IP	EtherNet/IP™	FW 1.9.0.11	PLC systems with EtherNet/IP™ scanner (master).
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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
14		Address high byte								
15		Address low byte								
16		WRITE DATA (8 Byte)								
17										
...										
22										
23										