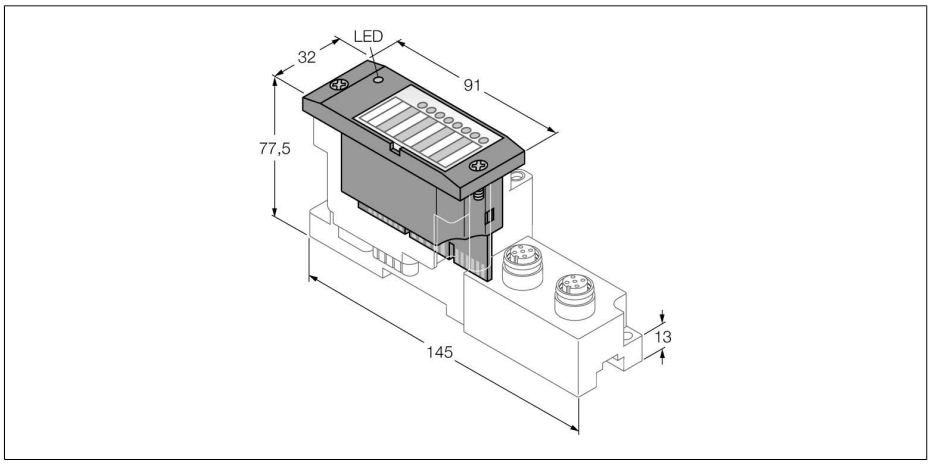
BL ident® extension module for use with function module or programmable gateway
Interface for connection of BL ident® read/write heads (HF/UHF)
BL67-2RFID-A



- **This module is used with the BL67-GW-DPV1**
- **Protection class IP67**
- **LEDs indicate status and diagnostic**
- **Electronics galvanically separated from the field level via optocouplers**
- **Connection of 2 BL ident read/write heads**
- **Mixed operation of HF and UHF read/ write heads**
- **Transmission rate: 115.2 kbps**
- **Cable length: 50 m max.**

Type	BL67-2RFID-A
Ident-No.	6827225
Number of channels	2
Supply voltage	24 VDC
Nominal voltage V_i	24 VDC
Rated current from field supply	≤ 100 mA
Rated current from module bus	≤ 30 mA
Power loss, typical	≤ 1 W
Transmission rate	115.2 kbps
Cable length	50 m
Electrical isolation	isolation of electronics and field level via optocouplers
Connection technology	M12
Simultaneity factor	1
Sensor supply	0.5 A per channel, short-circuit proof
Dimensions (W x L x H)	32x91x59mm
Approvals	CE, cULus
Operating temperature	-40…+70 °C
Storage temperature	-40 … +85 °C
Relative humidity	5 to 95% (internal), Level RH-2, no condensation (at 45 °C storage)
Vibration test	acc. to EN 61131
Extended vibartion resistance	
- up to 5 g (at 10 to 150 Hz)	For mounting on DIN rail no drilling according to EN 60715, with end bracket
- up to 20 g (at 10 to 150 Hz)	For mounting on base plate or machinery Therefore every second module has to be mounted with two screws each.
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
Electro-magnetic compatibility	acc. to EN 61131-2
Protection class	IP67
Tightening torque fixing screw	0.9…1.2 Nm

Functional principle

BL67 electronic modules are plugged on the purely passive base modules which in turn are connected to the field devices. The separation of connection level and electronics simplifies maintenance considerably. Flexibility is enhanced because the user can choose between base modules with different connection technologies.

The electronic modules are completely independent of the higher level fieldbus through the use of gateways.

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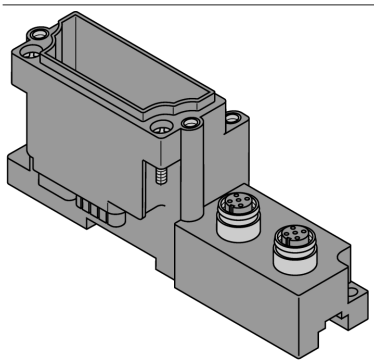
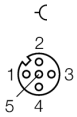
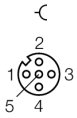
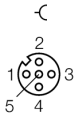
Compatible base modules

Dimension drawing	Type	Pin configuration
	**BL67-B-2M12** 6827186 2 x M12, 5-pole, female, a-coded **Comments** Matching connection cable (for example): RK4.5T5-RS4.5T/S2500 Ident-No. 6699201	Connectors …/S2500  1 = BN (+) 2 = BK (Data) 3 = BU (GND) 4 = WH (Data) 5 = shield Connectors …/S2501  1 = BN (+) 2 = WH (Data) 3 = BU (GND) 4 = BK (Data) 5 = shield Connectors …/S2503  1 = RD (+) 2 = BU (Data) 3 = BK (–) 4 = WH (Data) 5 = shield

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LED display

LED	color	status	description
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, diagnostics disabled
	GREEN	ON	Tag available
	GREEN	FLASHING (2 Hz)	Data exchange with tag enabled
	RED	ON	Read/write head fault
	RED	FLASHING (2 Hz)	Short-circuit in the supply line of read/write head

Compatible gateways:

Ident	Type	Communication	Version and higher	Application
6827232	BL67-GW-DPV1	PROFIBUS-DP	FW 1.10	PLC systems with Profibus DPV1 master and PIB (Proxi Ident Block) function block. The PIB is required for the control of the RFID system and uses internally acyclic services.
6827228	BL67-GW-EN-PN	PROFINET IO	FW 1.0.0.5	PLC systems with PROFINET IO master and PIB (Proxi Ident Block) function block. The PIB is required for the control of the RFID system and uses internally acyclic services.
Compatible CoDeSys programmable gateways				
Ident	**Type**	**Communication**	**Version and higher**	**Application**
6827241	BL67-PG-EN	Modbus TCP	FW 1.3.0.0	PLC systems with Modbus TCP Master or PC based solution (e.g.visualization) using a Modbus TCP driver software.
6827246	BL67-PG-EN-IP	EtherNet/IP™	FW 1.6.0.1	PLC systems with EtherNet/IP™ scanner (master). No function block is required for the higher level PLC.
6827240	BL67-PG-DP	PROFIBUS-DP	FW 1.3.0.0	PLC systems with Profibus DP Master. No function block is required for the higher level PLC.
The CoDeSys programmable gateways can be used for quick and decentral pre-processing or as a stand-alone solution. The application of the CoDeSys PIB (Proxy Ident Block) function block is obligatory in any case. The library with the PIB is included in the CoDeSys target file.				
In addition to the specific fieldbus interface, all CoDeSys programmable gateways offer further Ethernet based communication possibilities:				
Ident	**Type**	**Communication**	**Version and higher**	**Application**
-	all PGs	Ethernet TCP/IP	FW 1.3.0.0	PC based applications with transparent Ethernet TCP/IP communication.
-	all PGs	Ethernet UDP/IP	FW 1.3.0.0	PC based applications with transparent Ethernet UDP/IP communication.
-	all PGs	OPC	FW 1.3.0.0	PC based application with OPC client. A license free CoDeSys OPC server is required.
-	all PGs	SymARTI	FW 1.3.0.0	Interchange of global network variables between CoDeSys programmable devices rep. control systems via Ethernet.
-	all PGs	DDE	FW 1.3.0.0	CoDeSys features a DDE (dynamic data exchange) interface. This way contents of control variables and IEC addresses can be exported via the DDE interface and further processed by other applications such as Excel.

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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	n								
	n+1								
Channel 1	n+2								
	n+3								
OUTPUT	**BYTE**	**Bit 7**	**Bit 6**	**Bit 5**	**Bit 4**	**Bit 3**	**Bit 2**	**Bit 1**	**Bit 0**
Channel 0	m								
	m+1								
Channel 1	m+2								
	m+3								

n = process data offset of the input data depending on station configuration and the corresponding fieldbus.
m = process data offset of the output data depending on station configuration and the corresponding fieldbus.

With PROFIBUS, PROFINET and CANopen, the I/O data of this module is localized
within the process data of the whole station via the hardware configuration tool of the fieldbus master.
With DeviceNet™, EtherNet/IP™ and Modbus TCP a detailed mapping table can be created
with the TURCK configuration tool I/O-ASSISTANT.

RFID-A-Handling in PROFIBUS-DP, PROFINET and CoDeSys:
The BLident RFID-A interface modules cannot all be controlled via the process data. A software function module in the PLC is required in every case. The function block is standardised for RFID systems and is called Proxy Ident Block or abbreviated as PIB. Such a function block is available for the CoDeSys programmable BL67-gateway and for the S7 PLC systems.

The process data are not described in detail here for this reason. The function block provides all the necessary control and status variables. Further information concerning the handling of the process data with the PIB can be found in the respective BLident manuals D101579 “Commissioning in PROFIBUS-DP” and D101640 “Commissioning of the programmable gateway with CoDeSys”.

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