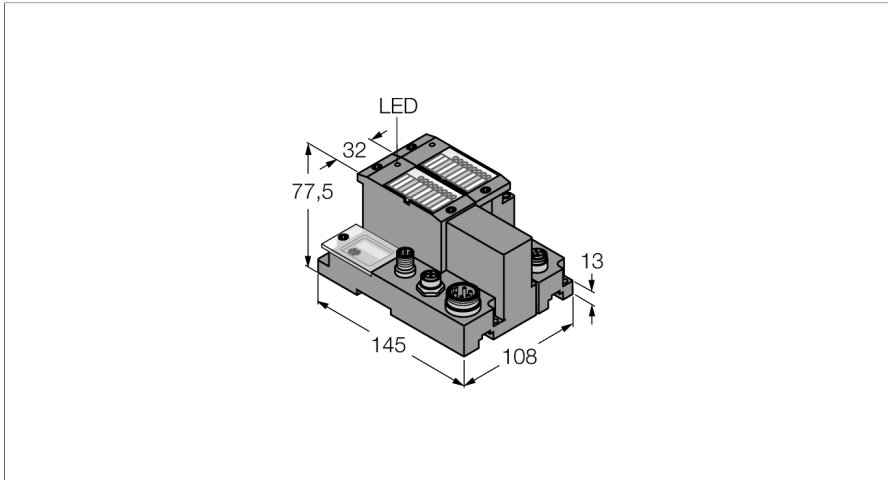


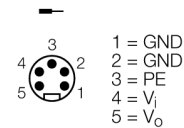
# Set for Simple I/O Communication via Ethernet Modbus/TCP/EtherNet/IP/Profinet in IP67

## TI-BL67-EN-S-2



- A special software (function module) for integration in PLC systems is not required.
- Cable max. 50 m between interface and read/write head
- 10/100 Mbps
- LEDs for display of supply voltage, group and bus errors as well as status and diagnostics
- Connection of up to 2 read/write heads via BL ident M12 extension cables
- Mixed operation of HF and UHF read/write heads

### Power Supply



<b>Type designation</b>	TI-BL67-EN-S-2
Ident no.	1545150
Number of channels	2
Dimensions (W x L x H)	108 x 145 x 77.5 mm
<b>Supply voltage</b>	24 VDC
max. system supply current $I_{mb(SV)}$	1.3, A
Max. sensor supply $I_{sens}$	4 A electronically limited current supply electronically limited current supply
max. load current $I_o$	10 A
Admissible range	18...30 VDC
<b>Service interface</b>	Mini USB, Ethernet
Voltage supply connection	5-pin male 7/8" connector
<b>Transmission rate</b>	115.2 kbps
Electrical isolation	isolation of electronics and field level via opto-couplers
<b>Output connectivity</b>	M12
<b>Sensor supply</b>	0.5 A per channel, short-circuit proof
<b>Temperature derating</b>	&#x0020;
> 55 °C Circulating air (Ventilation)	no limitation
> 55 °C Steady ambient air	$I_{sens} < 3A, I_{mb} < 1A$
Relative humidity	5...95 % (internal), level RH-2, no condensation (when stored at 45 °C)
Vibration test	Acc. to EN 61131
Extended vibration resistance	VN 02-00 and higher
- 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 up 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 60068-2-27
Drop and topple	acc. to IEC 68-2-31 and free fall to IEC 68-2-32
Electromagnetic compatibility	Acc. to EN 61131-2
Protection class	IP67
<b>Included in delivery</b>	1 x end plate BL67

### Functional principle

BL67 gateways are the head component of a BL67 station. They are designed to connect the modular fieldbus nodes to the higher-level fieldbus (PROFIBUS-DP, DeviceNet, CANopen, Ethernet Modbus TCP, PROFINET, EtherCAT or EtherNet/IP).

All BL67 electronic modules communicate via the internal module bus, the data of which is transferred to the fieldbus via the gateway. All I/O modules can thus be configured independently of the bus system.

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, DeviceNet, CANopen und PROFINET IO enable a 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 to relieve the higher-level control and bus system.

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

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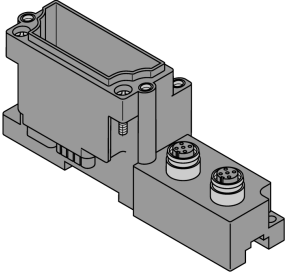
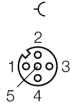
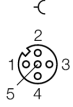
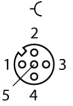
## TI-BL67-EN-S-2

### Pin assignment and supply concept

	<p><b>Ethernet Ports</b> Starting from version VN 03-00, the gateway features two D-coded M12 Ethernet ports with integrated switch. The ports are used as interfaces for configuration and fieldbus communication. The gateway supports the EtherNet/IP™ and Modbus TCP protocols</p>	<p><b>Pin Assignment</b></p> <p>1 = YE (TX +) 2 = WH (RX +) 3 = OG (TX -) 4 = BU (RX -)</p>
	<p><b>Power Supply</b> Double-tuned power supply of the BL67 system.</p> <p><b>System power supply <math>V_i</math></b> <math>V_i</math> is for the internal system supply at the backplane bus (<math>V_{MB(EV)}</math>) and for the 4A short-circuit limited sensor supply (<math>V_{sens}</math>).</p> <p><b>Load voltage <math>V_o</math></b> <math>V_o</math> for output supply, limited to max. 10A.</p>	<p><b>Pin Assignment</b></p> <p>1 = GND 2 = GND 3 = PE 4 = <math>V_i</math> 5 = <math>V_o</math></p>
	<p><b>Ethernet Ports</b> The ports are used as interfaces for configuration and fieldbus communication. The gateway supports EtherCAT.</p>	<p><b>Pin assignment</b></p> <p>1 = YE (TX +) 2 = WH (RX +) 3 = OG (TX -) 4 = BU (RX -)</p>
	<p><b>Power Supply</b> The BL67 system is supplied with power via two circuits.</p> <p><b>System supply <math>V_i</math></b> <math>V_i</math> is for the internal system supply at the backplane bus (<math>V_{MB(EV)}</math>), and for the sensor supply (<math>V_{sens}</math>) with a short-circuit current limit of 4 A.</p> <p><b>Load voltage <math>V_o</math></b> <math>V_o</math> is for supplying the outputs and is limited to max. 10 A.</p>	<p><b>Pin assignment</b></p> <p>1 = GND 2 = GND 3 = PE 4 = <math>V_i</math> 5 = <math>V_o</math></p>

**Set for Simple I/O Communication via Ethernet Modbus/TCP/EtherNet/IP/  
Profinet in IP67  
TI-BL67-EN-S-2**

**Compatible base modules**

Dimension drawing	Type	Pin configuration
	<p>BL67-B-2M12 6827186 2 x M12, 5-pole, female, a-coded</p>	<p><b>.../S2500 Connectors</b></p>  <p>1 = BN (+) 2 = BK (Data) 3 = BU (GND) 4 = WH (Data) 5 = shield</p> <p><b>.../S2501 Connectors</b></p>  <p>1 = BN (+) 2 = WH (Data) 3 = BU (GND) 4 = BK (Data) 5 = shield</p> <p><b>Connectors .../S2503</b></p>  <p>1 = RD (+) 2 = BU (Data) 3 = BK (GND) 4 = WH (Data) 5 = shield</p>

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## TI-BL67-EN-S-2

### LED display

LED	Color	Status	Meaning
D		OFF	No error message or diagnostics active.
	RED	ON	Failure of module bus 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

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## TI-BL67-EN-S-2

### 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								