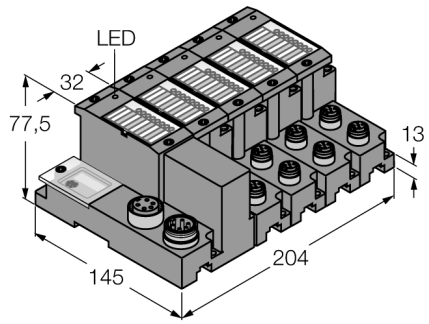
Set for simple I/O communication via DeviceNet™ in IP67
TI-BL67-DN-S-8

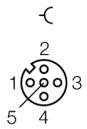
Industrial Automation

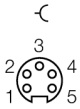


Type code	TI-BL67-DN-S-8
Ident no.	1545117
Number of channels	8
Dimensions (W x L x H)	204 x 145 x 77.5 mm
Supply voltage	24 VDC
max. system supply current $I_{mb\ (5V)}$	1.5, A
Max. sensor supply I_{sens}	4 A electronically limited current supply electronically limited current supply
max. load current $I_{\circ}$	8 A
Admissible range	11…26 VDC
Fieldbus transmission rate	125…500 kbps
Fieldbus address range	0…63
Fieldbus addressing	2 decimally coded rotary switches
Service interface	RS232 interface (PS/2 socket)
Fieldbus connection technology	2 x 7/8, 5-pin
Voltage supply connection	from DeviceNet™ cable
Fieldbus termination	external
Transmission rate	115.2 kbps
Cable length	50 m
Electrical isolation	isolation of electronics and field level via opto-couplers
Connection technology	M12
Sensor supply	0.5 A per channel, short-circuit proof
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 vibration resistance	
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 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
IP Rating	IP67

- **A special software (function module) for integration in PLC systems is not required.**
- **Cable max. 50 m between interface and read/write head**
- **3 decimal rotary coding switches to adjust the bus address**
- **Maximum transmission rate to the fieldbus 120/250/500 kbps**
- **Two males 7/8", 5-pin, for fieldbus connection**
- **LEDs for display of supply voltage, group and bus errors as well as status and diagnostics**
- **Connection of up to 8 read/write heads via BL ident M12 extension cables**
- **Mixed operation of HF and UHF read/write heads**

Wiring diagram





1 = Shield
2 = RD (V +)
3 = BK (V –)
4 = WH (CAN H)
5 = BU (CAN L)

DeviceNet™ IN

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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 preprocessing function relieve the control system and fieldbus level.

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

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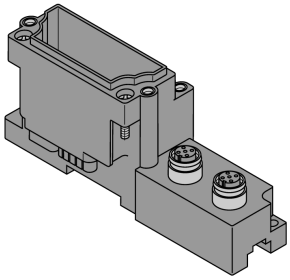
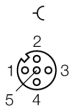
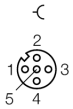
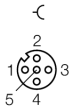
Compatible base modules

Design	Type	Pin configuration
	BL67-B-2M12 6827186 2 x M12, 5-pole, female, a-coded	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	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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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	DONE	BUSY	ERROR	XCVR CON	XCVR ON	TP	TFR	Reserved
	n+1	Error Code							
	n+2	Error Code 1							
	n+3	Reserved							
	n+4	READ DATA (8 Byte)							
	n+5								
	…								
	n+10								
	n+11								
Channel 1	n+12	DONE	BUSY	ERROR	XCVR CON	XCVR ON	TP	TFR	Reserved
	n+13	Error Code							
	n+14	Error Code 1							
	n+15	Reserved							
	n+16	READ DATA (8 Byte)							
	n+17								
	…								
	n+22								
	n+23								
OUTPUT	**BYTE**	**Bit 7**	**Bit 6**	**Bit 5**	**Bit 4**	**Bit 3**	**Bit 2**	**Bit 1**	**Bit 0**
Channel 0	m	XCVR	NEXT	TAG ID	READ	WRITE	TAG INFO	XCVR INFO	RESET
	m+1	Reserved					Byte Count 2	Byte Count 1	Byte Count 0
	m+2	Address high byte							
	m+3	Address low byte							
	m+4	WRITE DATA (8 Byte)							
	m+5								
	…								
	m+10								
	m+11								
Channel 1	m+12	XCVR	NEXT	TAG ID	READ	WRITE	TAG INFO	XCVR INFO	RESET
	m+13	Reserved					Byte Count 2	Byte Count 1	Byte Count 0
	m+14	Address high byte							
	m+15	Address low byte							
	m+16	WRITE DATA (8 Byte)							
	m+17								
	…								
	m+22								
	m+23								

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