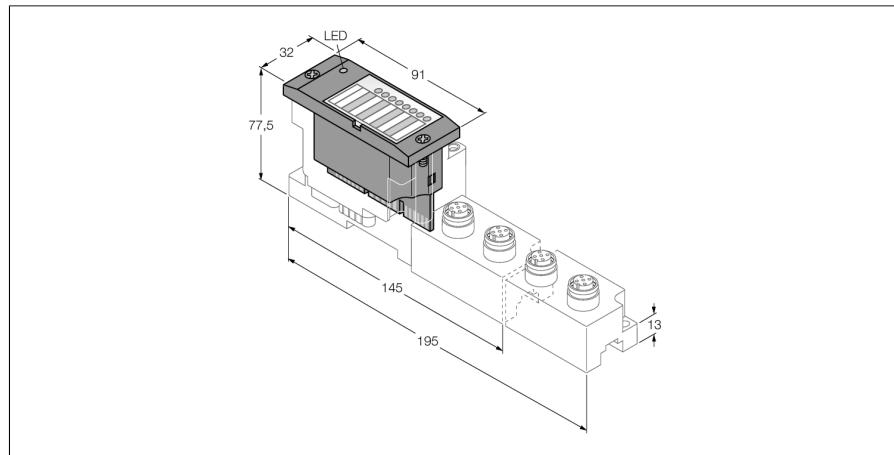


# BL67 electronic module

## Detection of Standard Counting Signals

### BL67-1CNT/ENC



- Kullanılan fieldbus ve bağlantı teknolojisinden bağımsız
- Koruma sınıfı IP67
- LEDs indicate status and diagnostic
- Electronics galvanically separated from the field level via optocouplers
- Detection of standard counting signals
- 5 VDC differential
- 5 ... 24 VDC single-ended
- 2 digital inputs, 24 VDC
- 2 digital outputs, 24 VDC, 0.5 A
- 2 more digital DIO channels (each channel is independently serviceable as input or output, 24 VDC, 0.5 A)

Tip	BL67-1CNT/ENC
Tanıt. no.	6827224
Kanal sayısı	1
Besleme gerilimi	24 VDC
Nominal voltage $V_i$	24 VDC
Alan beslemesinden gelen nominal akım	$\leq 100$ mA
Modül veri yolundan gelen nominal akım	$\leq 50$ mA
Güç dağılımı, tipik	$\leq 1.2$ W
Elektrik yalımı	isolation of electronics and field level via opto-couplers
Giriş tipi	PNP
Düşük seviye sinyal gerilimi	< 5 V
Yüksek seviye sinyal gerilimi	7...30 V
Yüksek seviye sinyal akımı	max. 5 mA
Çıkış bağlantısı	M12, M23
Çıkış tipi	PNP
Çıkış voltajı	24 VDC
Kanal başına çıkış akımı	0.5 A
Çıkış gecikmesi	0.2 ms
Yük tipi	resistive, inductive, lamp load
Lamba yükü	< 10 W
Anahtarlama frekansı, dirençli	< 100 Hz
Anahtarlama frekansı, endüktif	< 2 Hz
Anahtarlama frekansı, lamba yükü	< 10 Hz
Kısa devre koruması	evet
Simultaneity factor	1
Ölçüm aralıkları	
Frekans ölçümü	up to 250 kHz
Hız ölçümü	factor parameterisable
Periyot süresi ölçümü	çözünürlük 200 ns, maks. periyot süresi ( $2^{32-1}$ ) * 200 ns
Üst sayım sınırı	0x80000000 up to 0xFFFFFFFF
Alt sayım sınırı	0x80000000 up to 0xFFFFFFFF

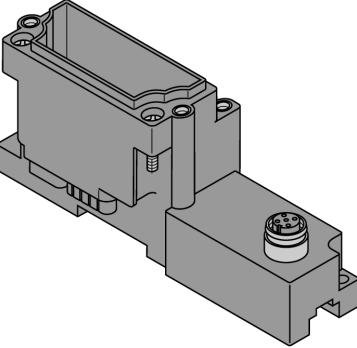
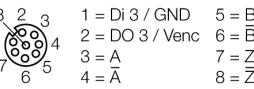
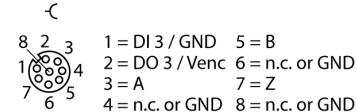
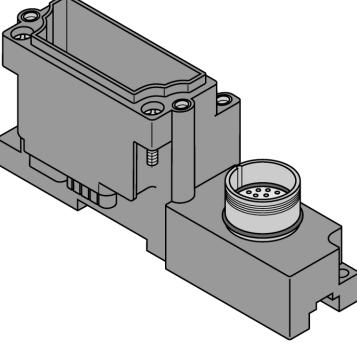
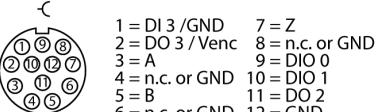
#### İşlevsel prensip

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.

Giriş bayt sayısı	12
Çıkış bayt sayısı	8
Boyuşlar (W x L x H)	32 x 91 x 59 mm
Onaylar	CE, cULus
Ortam sıcaklığı	-40...+70 °C
Saklama sıcaklığı	-40...+85 °C
Bağıl nem	%5...95 (dahili), seviye RH-2, yoğuşmasız (45°C'de depolandığında)
Titreşim testi	EN 61131 uyarınca
- 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.
Darbe testi	IEC 60068-2-27 uyarınca
Düşme ve devrilme	acc. to IEC 68-2-31 and free fall to IEC 68-2-32
Elektromanyetik uyumluluk	EN 61131-2 uyarınca
IP Derecesi	IP67
Tightening torque fixing screw	0,9...1,2 Nm

## Compatible base modules

Ölçekli çizim	Type	Pin configuration																																								
	<p><b>BL67-B-1M12-8</b> 6827193 1 x M12, 8-pole, female</p> <p><b>Comments</b> Matching connection cable (for example): BS8181-0 Ident no. 6901004</p>	<p>Pim atanması: RS422</p>  <table> <tr><td>8</td><td>2</td><td>3</td><td>1 = Di 3 / GND</td><td>5 = B</td></tr> <tr><td>1</td><td>(GND)</td><td>4</td><td>2 = DO 3 / Venc</td><td>6 = B̄</td></tr> <tr><td>7</td><td>(GND)</td><td>5</td><td>3 = A</td><td>7 = Z</td></tr> <tr><td>6</td><td>(GND)</td><td>4</td><td>4 = Ā</td><td>8 = Z̄</td></tr> </table> <p>Pim atanması: İt-çek</p>  <table> <tr><td>8</td><td>2</td><td>3</td><td>1 = DI 3 / GND</td><td>5 = B</td></tr> <tr><td>1</td><td>(GND)</td><td>4</td><td>2 = DO 3 / Venc</td><td>6 = n.c. or GND</td></tr> <tr><td>7</td><td>(GND)</td><td>5</td><td>3 = A</td><td>7 = Z</td></tr> <tr><td>6</td><td>(GND)</td><td>4</td><td>4 = n.c. or GND</td><td>8 = n.c. or GND</td></tr> </table>	8	2	3	1 = Di 3 / GND	5 = B	1	(GND)	4	2 = DO 3 / Venc	6 = B̄	7	(GND)	5	3 = A	7 = Z	6	(GND)	4	4 = Ā	8 = Z̄	8	2	3	1 = DI 3 / GND	5 = B	1	(GND)	4	2 = DO 3 / Venc	6 = n.c. or GND	7	(GND)	5	3 = A	7 = Z	6	(GND)	4	4 = n.c. or GND	8 = n.c. or GND
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	<p><b>BL67-B-1M23</b> 6827213 1 x M23, 12-pole, female</p> <p><b>Comments</b> Matching connection cable (for example): FW-M23ST12Q-G-LT-ME-XX-10 Ident no. 6604070</p>	<p>Pim atanması: RS422</p>  <table> <tr><td>1</td><td>DI 3 / GND</td><td>7 = Z</td></tr> <tr><td>2</td><td>DO 3 / Venc</td><td>8 = Z̄</td></tr> <tr><td>3</td><td>A</td><td>9 = DIO 0</td></tr> <tr><td>4</td><td>Ā</td><td>10 = DIO 1</td></tr> <tr><td>5</td><td>B</td><td>11 = DO 2</td></tr> <tr><td>6</td><td>B̄</td><td>12 = GND</td></tr> </table> <p>Pim atanması: İt-çek</p>  <table> <tr><td>1</td><td>DI 3 / GND</td><td>7 = Z</td></tr> <tr><td>2</td><td>DO 3 / Venc</td><td>8 = n.c. or GND</td></tr> <tr><td>3</td><td>A</td><td>9 = DIO 0</td></tr> <tr><td>4</td><td>n.c. or GND</td><td>10 = DIO 1</td></tr> <tr><td>5</td><td>B</td><td>11 = DO 2</td></tr> <tr><td>6</td><td>n.c. or GND</td><td>12 = GND</td></tr> </table>	1	DI 3 / GND	7 = Z	2	DO 3 / Venc	8 = Z̄	3	A	9 = DIO 0	4	Ā	10 = DIO 1	5	B	11 = DO 2	6	B̄	12 = GND	1	DI 3 / GND	7 = Z	2	DO 3 / Venc	8 = n.c. or GND	3	A	9 = DIO 0	4	n.c. or GND	10 = DIO 1	5	B	11 = DO 2	6	n.c. or GND	12 = GND				
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**LED display**

<b>LED</b>	<b>Color</b>	<b>Status</b>	<b>Meaning</b>
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
A/Z		OFF	Inputs A and Z inactive
	GREEN	ON	Input A active
	RED	ON	Input Z active
	RED/GREEN	ON	Inputs A and Z active
B		OFF	Input B inactive
	GREEN	ON	Input B active resp. direction input indicates "count down"
DIO 0 / DIO 1		OFF	Channel status x = 0 (OFF)
	GREEN	ON	Channel status x = 1 (ON)
	RED	ON	Overload at output x
DO 2 / DO 3		OFF	Output status x = 0 (OFF)
	GREEN	ON	Output status x = 1 (ON)
	RED	ON	Overload at output x
DI 2 / DI 3		OFF	Input status x = 0 (OFF)
	GREEN	ON	Input status x = 1 (ON)

**Data mapping**

DATA	BYTE	Bit 7	Bit 6	Bit 5	Bit 4	Bit 3	Bit 2	Bit 1	Bit 0
<b>Input</b>	n	X	A	B	Z	DI 3	DI 2	DI 1	DI 0
	n+1	ERR_PARA	SYNC_AKN	X	X	X	X	X	count direction
	n+2	REG_WR_ACCEPT	REG_WR_AKN	X	X	X	STS_ZC	STS_OFLW	STS_UFLW
	n+3	REG_RD_ABORT	REG_RD_ADDR						
	n+4	REG_RD_DATA, Byte 0							
	n+4	REG_RD_DATA, Byte 1							
	n+6	REG_RD_DATA, Byte 2							
	n+7	REG_RD_DATA, Byte 3							
	n+8	AUX_RD_DATA, Byte 0							
	n+9	AUX_RD_DATA, Byte 1							
	n+10	AUX_RD_DATA, Byte 2							
	n+11	AUX_RD_DATA, Byte 3							
<b>Output</b>	m	DO 3	DO 2	DO 1	DO 0	X	X	X	GATE
	m+1	X	SYNC_REQ	X	X	X	X	X	RES_STS
	m+2	REG_WR	REG_WR_ADDR						
	m+3	REG_RD_ADDR							
	m+4	REG_WR_DATA, Byte 0							
	m+4	REG_WR_DATA, Byte 1							
	m+6	REG_WR_DATA, Byte 2							
	m+7	REG_WR_DATA, Byte 3							

n = Offset of input data; depending on extension of station and the corresponding fieldbus.

m = Offset of output data; depending on extension of station 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.