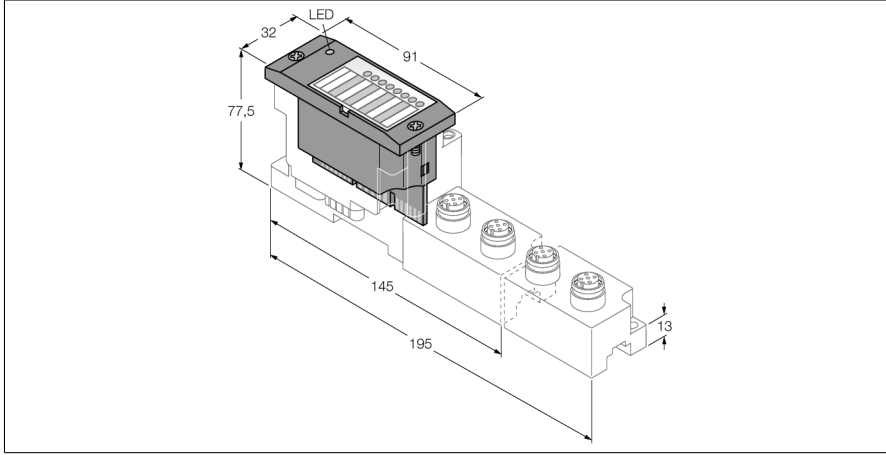


# BL67 electronic module

## 4 Analog Inputs for Current/Voltage and 4 Analog Outputs for Voltage

### BL67-4AI4AO-V/I



- Kullanılan fieldbus ve bağlantı teknolojisinden bağımsız
- Koruma sınıfı IP67
- LEDs indicate status and diagnostic
- Electronics galvanically separated from the field level via optocouplers
- 4 analog giriş, tek uçlu
- 0/4...20 mA veya
- -10/0...+10 VDC
- Kanal başına seçilebilir
- 4 analog çıkış
- -10/0...+10 VDC

Tip	BL67-4AI4AO-V/I
Tanit. no.	6827312
Besleme gerilimi	24 VDC
Kabul edilebilir aralık	18...30 VDC
Güç dağılımı, tipik	≤ 1 W
Nominal voltage $V_s$	24 VDC
Max. sensor supply $I_{sens}$	4 A
<b>Analog girişler</b>	
İşletme modları	0/4 ... 20 mA veya -10/0 ... 10 VDC
Giriş tanılama türü	Channel diagnostics
Sensör besleme	24 VDC
Input resistance	Akım: < 125 $\Omega$ (tür 65 $\Omega$ ); Gerilim: > 98.5 k $\Omega$ (tür 225 k $\Omega$ )
Maximum limiting frequency analog	< 20 Hz
23°C'de temel arıza sınırı	< 0.3 %
Tekrarlanabilirlik	< 0.05 %
Sıcaklık katsayısı	< 300 ppm/°C of full scale
Çözünürlük	16 Bit
Ölçüm prensibi	Sigma Delta
Ölçüm ekranı	16 bit signed integer
	12 bit full range left-justified

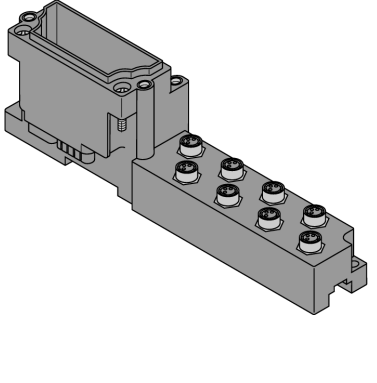
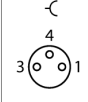
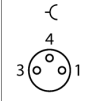

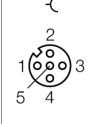
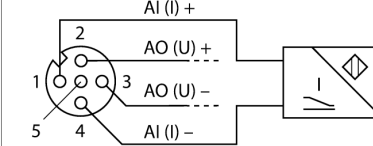
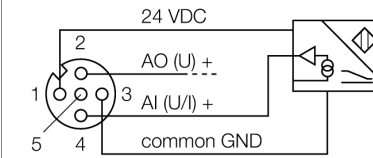
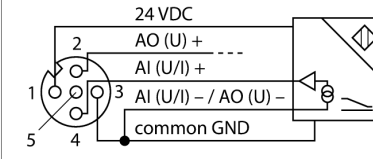
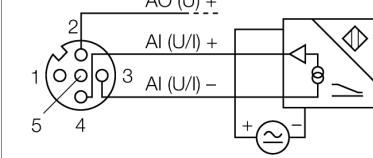
#### İşlevsel prensip

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.

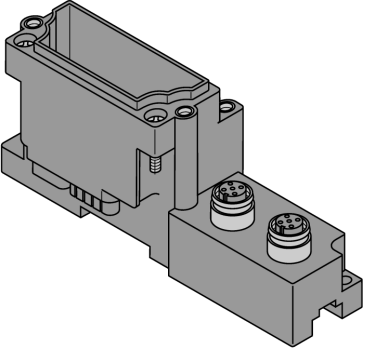
The electronic modules are completely independent of the higher level fieldbus through the use of gateways.

Analog outputs	
İşletme modları	-10/0 ... 10 V
Type of output diagnostics	Channel diagnostics
Sensor supply	24 VDC, 250 mA per channel
Yük direnci, dirençli	> 1 k $\Omega$
Yük direnci, kapasitif	< 1 $\mu$ F
Transmission frequency	< 100 Hz
Basic fault limit at 23 °C	< 0.3 %
Repeat accuracy	< 0.05 %
Temperature coefficient	< 300 ppm/°C of full scale
Resolution	16 bit
Measured-value display	16 bit signed integer
	12 bit full range left-justified
Ortam sıcaklığı	
Saklama sıcaklığı	-40...+70 °C
Bağıl nem	%5...95 (dahili), seviye RH-2, yoğuşmasız (45°C'de depolandığında)
Titreşim testi	
- up to 5 g (at 10 to 150 Hz)	EN 61131 uyarınca 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	
Düşme ve devrilme	IEC 60068-2-27 uyarınca acc. to IEC 68-2-31 and free fall to IEC 68-2-32
Elektromanyetik uyumluluk	EN 61131-2 uyarınca
IP Derecesi	IP67

## Compatible base modules

Ölçekli çizim	Type	Pin configuration
	<p><b>BL67-B-8M8</b> 6827188 8 x M8, 3-pole, female</p>	<p>Terminal ataması port 0 ila 3</p>  <p>1 = V<sub>SENS</sub> 3 = GND 4 = AI +</p> <p>Pin Assignment Ports 4 to 7</p>  <p>1 = V<sub>SENS</sub> 3 = GND 4 = AO +</p>
	<p><b>BL67-B-4M12</b> 6827187 4 x M12, 5-pole, female, a-coded</p> <p><b>Comments</b> Bağlantı kablosunun eşleştirilmesi (örnek): RKC5.501T-2-RSC5.501T/TXL Tanım. No. 6628831</p>	<p>Tel ataması</p>  <p>1 = V<sub>SENS</sub> 2 = AO + 3 = GND 4 = AI + 5 = PE</p> <p>2-wire Connection</p>  <p>3-wire connection</p>  <p>4-wire connection technology</p>  <p>With external supply</p> 

## Compatible base modules

Ölçekli çizim	Type	Pin configuration																																								
	<p><b>BL67-B-2M12-8-P</b> 6827337 2 x M12, 8-pole, female, paired</p> <p><b>Comments</b> Field-wireable connector (for example): BS8181-0 Ident. no. 6901004</p>	<p><b>Terminal ataması port 0</b></p> <p>↺</p> <table border="0"> <tr> <td>8</td><td>2</td><td>3</td><td>1 = AI 0 +</td><td>5 = V<sup>SENS</sup></td> </tr> <tr> <td>1</td><td>6</td><td>4</td><td>2 = AI 1 +</td><td>6 = V<sup>SENS</sup></td> </tr> <tr> <td>7</td><td>6</td><td>5</td><td>3 = AO 0 +</td><td>7 = GND</td> </tr> <tr> <td></td><td></td><td></td><td>4 = AO 1 +</td><td>8 = PE</td> </tr> </table> <p><b>Pin Assignment Port 1</b></p> <p>↺</p> <table border="0"> <tr> <td>8</td><td>2</td><td>3</td><td>1 = AI 2 +</td><td>5 = V<sup>SENS</sup></td> </tr> <tr> <td>1</td><td>6</td><td>4</td><td>2 = AI 3 +</td><td>6 = V<sup>SENS</sup></td> </tr> <tr> <td>7</td><td>6</td><td>5</td><td>3 = AO 2 +</td><td>7 = GND</td> </tr> <tr> <td></td><td></td><td></td><td>4 = AO 3 +</td><td>8 = PE</td> </tr> </table>	8	2	3	1 = AI 0 +	5 = V <sup>SENS</sup>	1	6	4	2 = AI 1 +	6 = V <sup>SENS</sup>	7	6	5	3 = AO 0 +	7 = GND				4 = AO 1 +	8 = PE	8	2	3	1 = AI 2 +	5 = V <sup>SENS</sup>	1	6	4	2 = AI 3 +	6 = V <sup>SENS</sup>	7	6	5	3 = AO 2 +	7 = GND				4 = AO 3 +	8 = PE
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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
AI channels 0...3		OFF	Channel x inactive
	GREEN	ON	Channel x active
	GREEN	FLASHING (0.5 Hz)	Measuring range undershoot
	GREEN	FLASHING (4 Hz)	Measuring range overshoot
AO channels 4...7			Without function (no LEDs for analog outputs)

## Data mapping

DATA	BYTE	Bit 7	Bit 6	Bit 5	Bit 4	Bit 3	Bit 2	Bit 1	Bit 0
<b>Input</b>	n	AI 0 LSB							
	n+1	AI 0 MSB							
	n+2	AI 1 LSB							
	n+3	AI 1 MSB							
	n+4	AI 2 LSB							
	n+5	AI 2 MSB							
	n+6	AI 3 LSB							
	n+7	AI 3 MSB							
<b>Output</b>	m	AO 0 LSB							
	m+1	AO 0 MSB							
	m+2	AO 1 LSB							
	m+3	AO 1 MSB							
	m+4	AO 2 LSB							
	m+5	AO 2 MSB							
	m+6	AO 3 LSB							
	m+7	AO 3 MSB							

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.