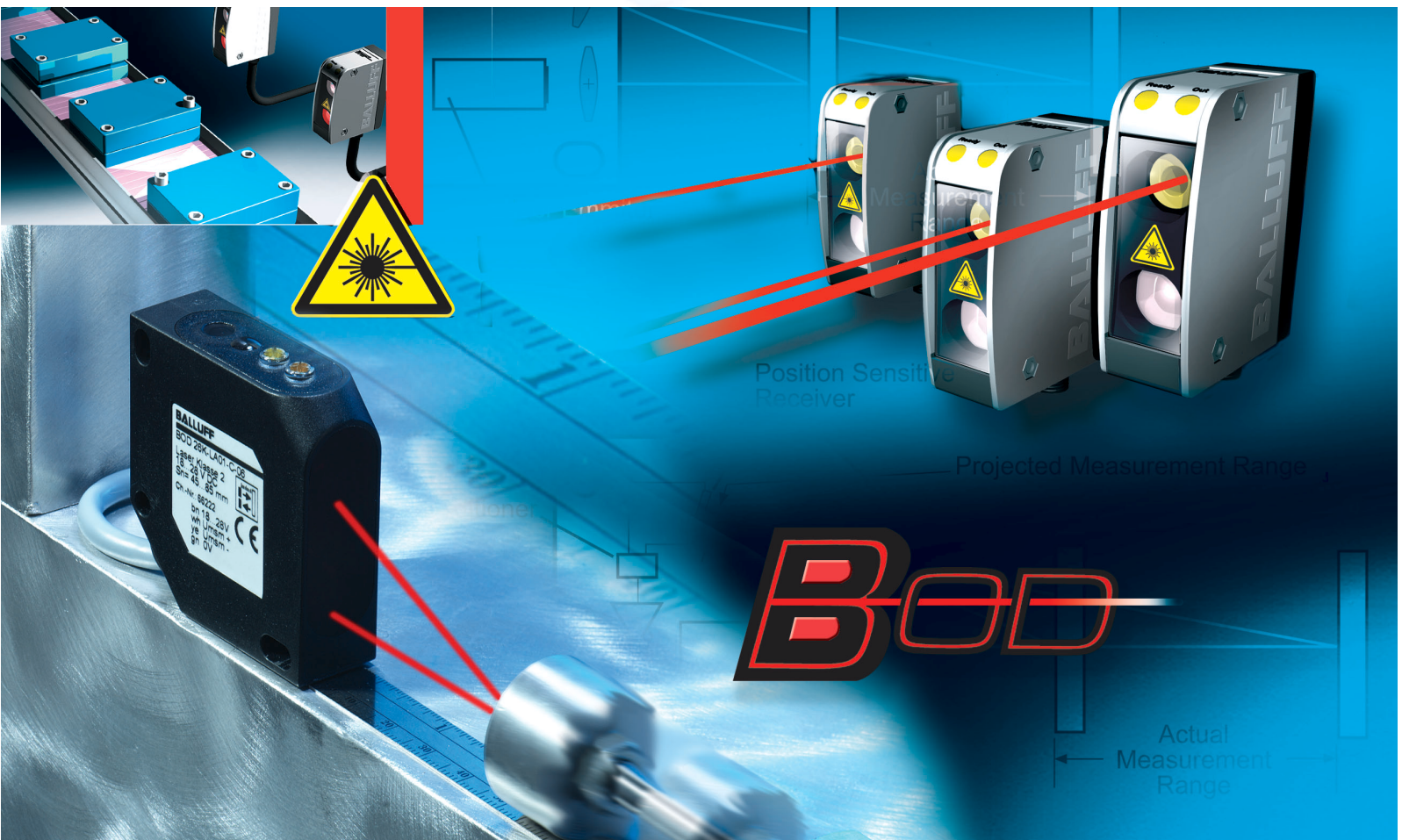


BALLUFF

New **Solutions** for Critical Measurement Applications...only from Balluff

BOD-66M & BOD-26K
Laser Measurement Sensors



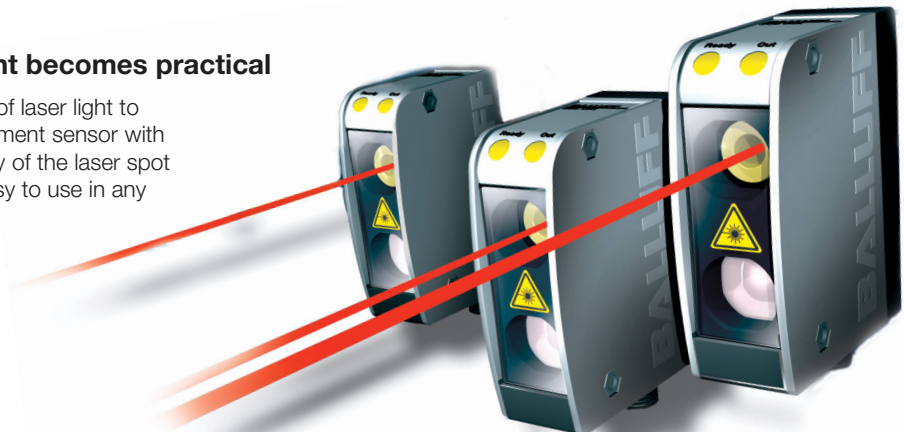
Laser Measurement Sensors



The BOD Family...

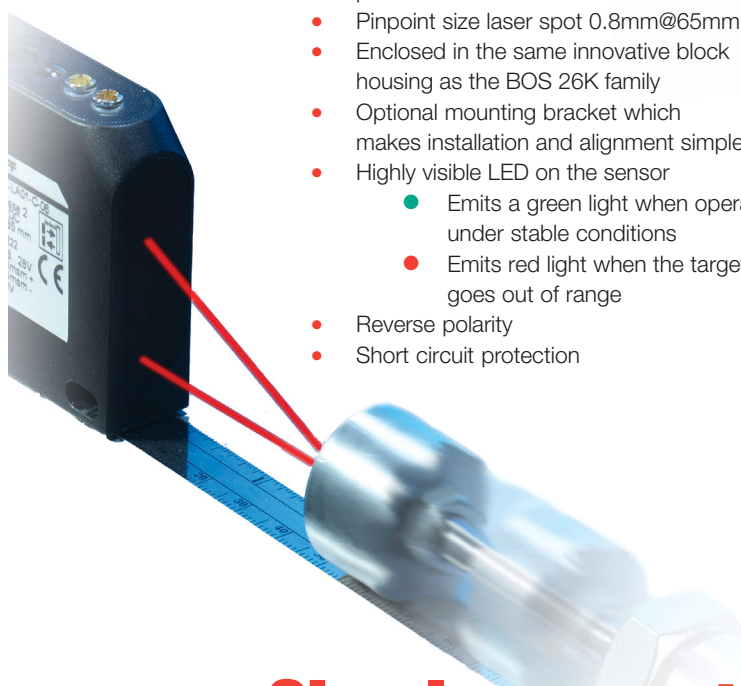
Precision laser measurement becomes practical

The BOD series utilizes the accuracy of laser light to produce an analog distance measurement sensor with resolution down to $20\mu\text{m}$. The visibility of the laser spot makes the BOD series simple and easy to use in any application.



BOD 26K Precision Distance Measurement

- Resolution down to $20\mu\text{m}$
- 0 to 10 Vdc analog output offers precision distance measurement
- Pinpoint size laser spot $0.8\text{mm}@65\text{mm}$
- Enclosed in the same innovative block housing as the BOS 26K family
- Optional mounting bracket which makes installation and alignment simple
- Highly visible LED on the sensor
 - Emits a green light when operating under stable conditions
 - Emits red light when the target goes out of range
- Reverse polarity
- Short circuit protection



BOD 66M Long-Range Background Suppression with Set-Point and Analog Output

The BOD 66M offers the best of both worlds, with long-range background suppression up to 2 meters (6.6') !

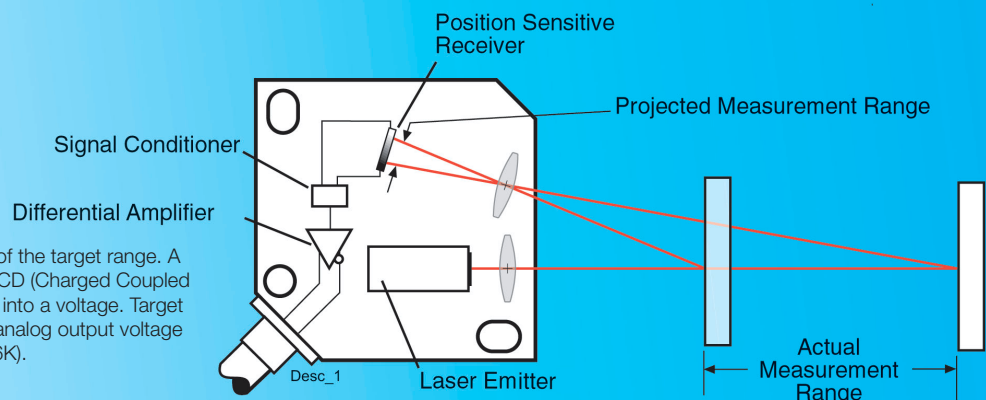
- Push-button set-point adjustment with a PNP output
- 1 to 10Vdc analog output offers precision distance measurement
- State of the art laser emission and CCD Line Receiver offers a resolution of 5mm ($0.197''$)
- Innovative aluminum housing for superior mechanical protection and sealed to IP65
- Protected push-button provides easy set-point adjustment
- Remotely teachable
- Two highly visible LED's provide indication of operation
 - Green LED indicates teach-in in progress or power-on and ready
 - Yellow LED indicates teach-in of object or object is in range

Simple & easy to use in any application!

Figure 1 ►

The BOD series uses the laser light beam in a triangulation arrangement to determine the distance to the target. Triangulation uses a fixed beam of laser light to reflect off a target (at right). The reflected light is received through a lens that acts as a pivot point for the received light.

This produces a scaled down version of the target range. A PSD (Position Sensitive Device) or a CCD (Charged Coupled Device) receiver interprets the position into a voltage. Target distance corresponds to the sensor's analog output voltage (1-10Vdc BOD 66M, 0-10Vdc BOD 26K).

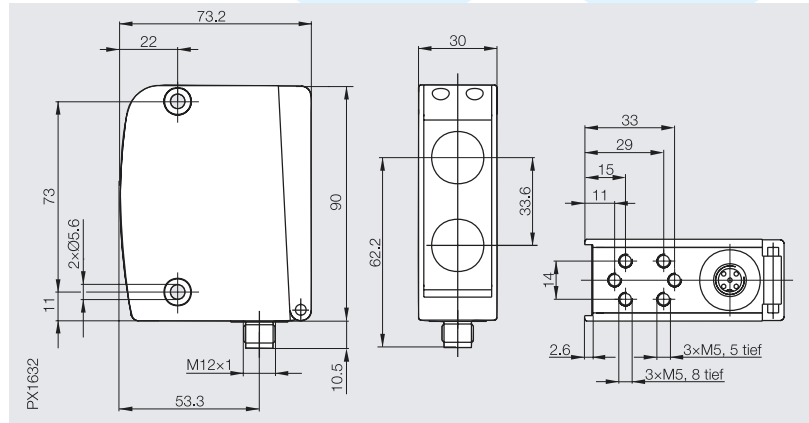


Laser Measurement Sensors



BALLUFF

Series	BOD 66M
Working range	200...2000 mm
Analog output	1...10Vdc
Switching output	200...2000 mm
Resolution	≤ 5 mm (0.196")



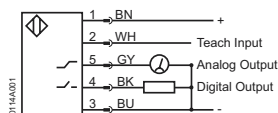
**Long-range
background
suppression**

Ordering Code : Cable

Ordering Code : Connector

Supply voltage U_a	18...30 Vdc
Voltage drop U_a at I_a	≤ 2 V
Rated isolation voltage U_i	250 Vac
Rated operational current I_a	≤ 250 mA
No-load supply current I_o	≤ 150 mA
Protected against polarity reversal	yes
Short circuit protected	yes
On/off delay	≤ 100 ms
Frequency of operating cycles	10... 100 Hz*
Analog output	1...10 Vdc
Switching output	PNP
Output function	Light operate
Permissible ambient light	≤ 5000 Lux
Range setting	Teach-in
Teach-in of object in range	LED yellow
Teach-in in progress	LED green
Ambient temperature range T_a	-20...+50 °C
Degree of protection per IEC 60529	IP 65
Insulation class	II
Laser protection class	II
Housing material	GD-Zn
Material of sensing face	glass
Connection	connector, 5-wire
Recommended 5-pin connector	C04-ANQ-00-PB-050MS or C04-BNQ-00-PB-050MS
Weight	380 g
Emitter type	laser light red 660 nm
Light spot diameter	3 x 12 mm at 2 m
Gray value shift (90% / 18%)	≤ 1%
Linearity	≤ 0.5%
Temperature drift	compensated
Wiring connection:	*Depending on object reflectivity

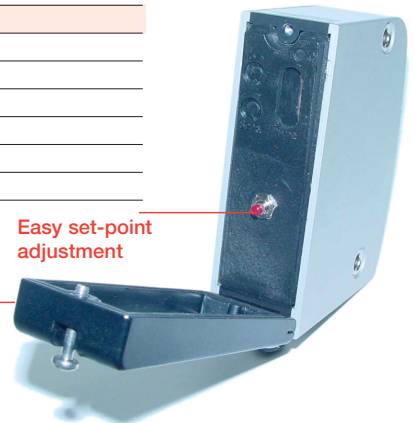
See reverse for
sensing range diagrams
and connector info



**Closed-face
teach-in panel
provides...**

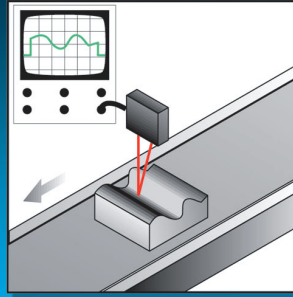
**Protective,
easy-open
back cover**

**Easy set-point
adjustment**

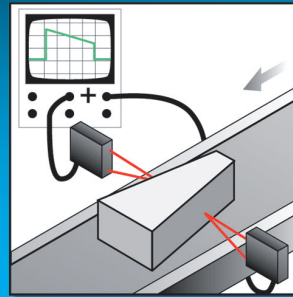


Common Applications

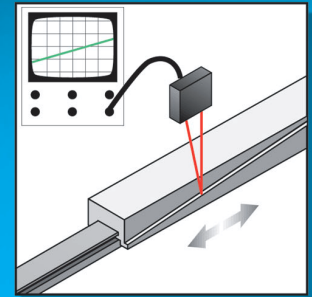
Ideal for non-contact measurement of small parts, tool checks, surface profiling and more!



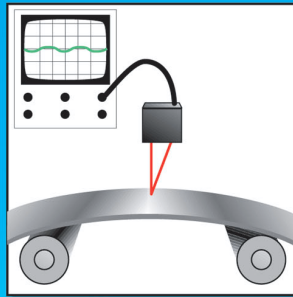
Part profiling



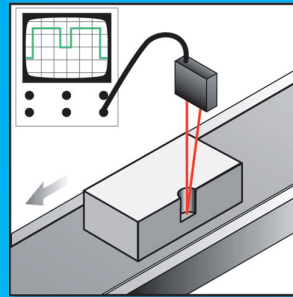
Thickness gauging



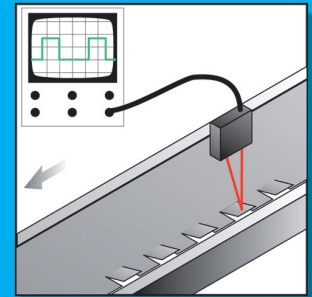
Linear movement



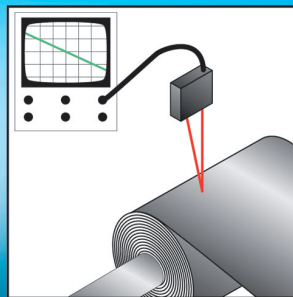
Wave measurement



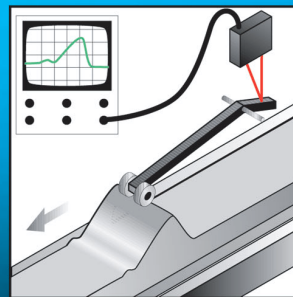
Hole depth



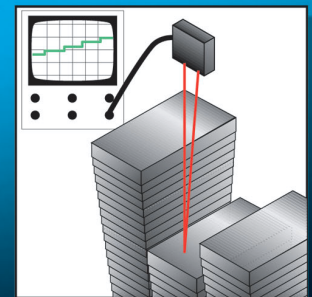
Bend measurement



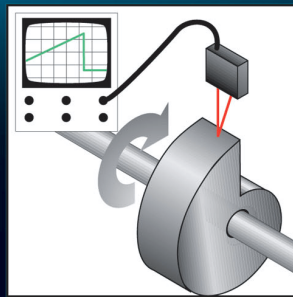
Roll diameter



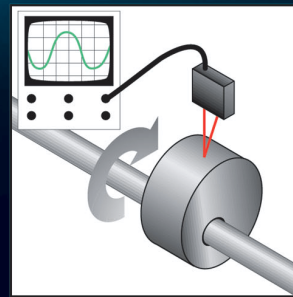
Contact follower



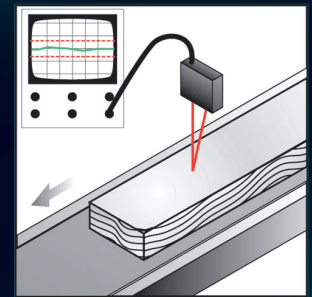
Stack level monitoring



360° rotational positioning



180° rotational positioning



Board thickness



Precision laser measurement made practical!

>> What is a micron?

1 micron = 0.001mm
1 micron = 1 μ m
1 micron = 0.00003937in
25.4 microns = 1 thousandth (0.001in)

>> How small is a micron?

Diameter of a human hair: 25.4 microns
Diameter of a grain of sand (average): 200 microns
Thickness of copy paper is about: 100 microns
Thickness of a dollar bill is about: 100 microns

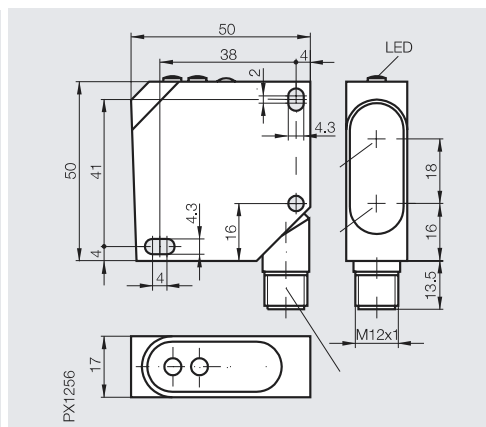
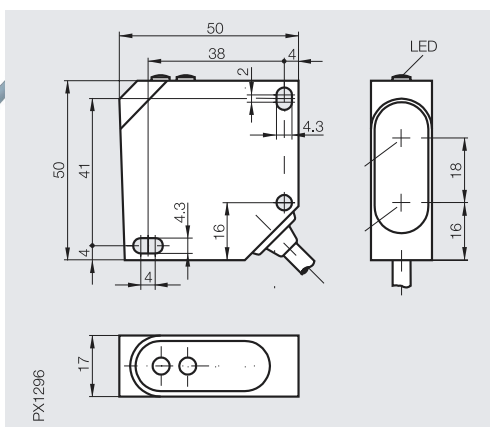
a metric unit of distance equal to one millionth of a meter.

Laser Measurement Sensors



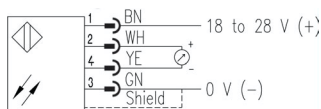
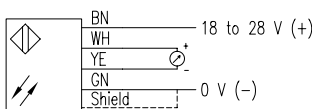
Series	BOD 26K		BOD 26K	
Working range	45...85 mm		45...85 mm	
Analog output	0...10 VDC		0...10 VDC	
Resolution	≤ 80 μm (0.00315")	≤ 20 μm (0.0008")	≤ 80 μm (0.00315")	≤ 20 μm (0.0008")

CE



Ordering Code : Cable	BOD-26K-LA01-C-06	BOD-26K-LA02-C-06	BOD-26K-LA01-S4-C	BOD-26K-LA02-S4-C
Ordering Code : Connector				
Supply voltage U_B	18...28 Vdc		18...28 Vdc	
Voltage drop U_d at I_o	-		-	
Rated isolation voltage U_i	250 Vac		250 Vac	
Rated operational current I_o	3 mA		3 mA	
No-load supply current I_o	≤ 35 mA		≤ 35 mA	
Protected against polarity reversal	yes		yes	
Short circuit protected	yes		yes	
On/off delay	1 ms		1 ms	
Frequency of operating cycles	400 Hz	40 Hz	400 Hz	40 Hz
Analog output	0...10 Vdc, Differential output		0...10 Vdc, Differential output	
Switching output	-		-	
Output function	-		-	
Permissible ambient light	≤ 5000 Lux		≤ 5000 Lux	
Range setting	-		-	
Out of range/function indicator	LED red		LED red	
Stability	LED green		LED green	
Ambient temperature range T_a	0...+45 °C		0...+45 °C	
Degree of protection per IEC 60529	IP 67		IP 67	
Insulation class	□		□	
Laser protection class	II		II	
Housing material	ABS impact resistance		ABS impact resistance	
Material of sensing face	PMMA		PMMA	
Connection	cable		connector, 4-wire	
Recommended 4-pin connector	-		C04-ANL-00-PB-050MS or C04-BNL-00-PB-050MS	
Weight	600 g		40 g	
Emitter type	laser light red 670 nm		laser light red 670 nm	
Light spot diameter	0.8 mm at 65 mm		0.8 mm at 65 mm	
Gray value shift (90% / 18%)	≤ 3%		≤ 3%	
Linearity	≤ 1%		≤ 1%	
Temperature drift	18 μm/°C		18 μm/°C	

Wiring connections:

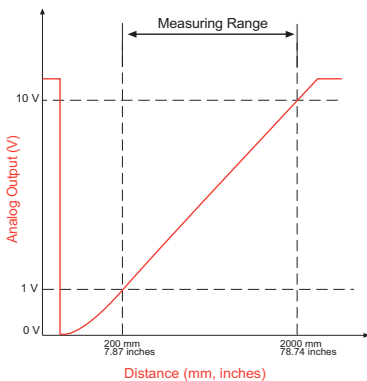


See reverse for
sensing range diagrams,
accessories and
connector info

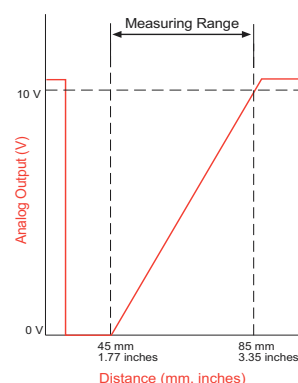
Resolution down to **20 μm!**

Sensing Range Diagrams

66M

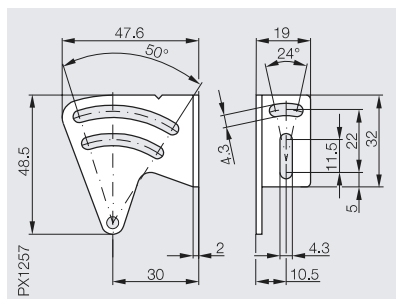


26K



BOD 26K Accessories

Mounting bracket makes installation & alignment simple!

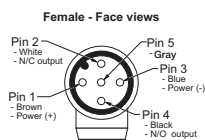


Series	Mid-Size Block
Size	50 x 50 mm
Ordering Code	BOS-26K-HW-1
Description	Dual Axis Adjustable Mounting Bracket
Material	Metal
Suitable Product	BOD 26K

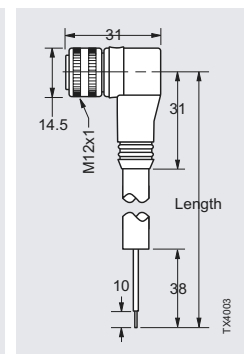
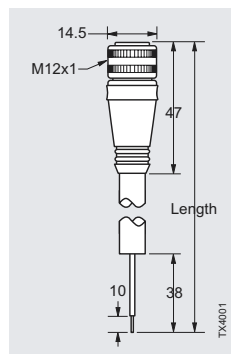
BOD Series Connectors

Decrease your setup and down time by connecting with Balluff!

Connector	Micro
Style	M12 DC Single Keyway
Configuration	Straight Female



Micro	Micro
M12 DC Single Keyway	M12 DC Single Keyway
Straight Female	Right Angle Female



5-Wire (BOD 66M)	C04-ANQ-00-PB-050MS	C04-BNQ-00-PB-050MS
4-Wire (BOD 26K)	C04-ANL-00-PB-050MS	C04-BNL-00-PB-050MS
Operating Voltage Rating (NO LED)	250 AC/DC	
Operating Voltage Rating (With LED)	10 - 30 Vdc	
Amperage	4 Amps	
Wire Gauge	22 AWG	
Jacket	Black PUR	
Coupling Nut	Nickel Plated Brass	
Protection	IP68, NEMA 6P	
Ambient Operating Temperature	-4 to 221° F (-21 to 105° C)	
UL Listed	Yes	
CSA Certified	Yes	
Shielded	Yes	



Gordy's Sensors

5772 Smaller Rd, Johnstown, OH 43031 Phone: (740) 967-2283 Fax: (740) 967-2855
Website: www.gordyssensors.com or Email: sales@gordyssensors.com