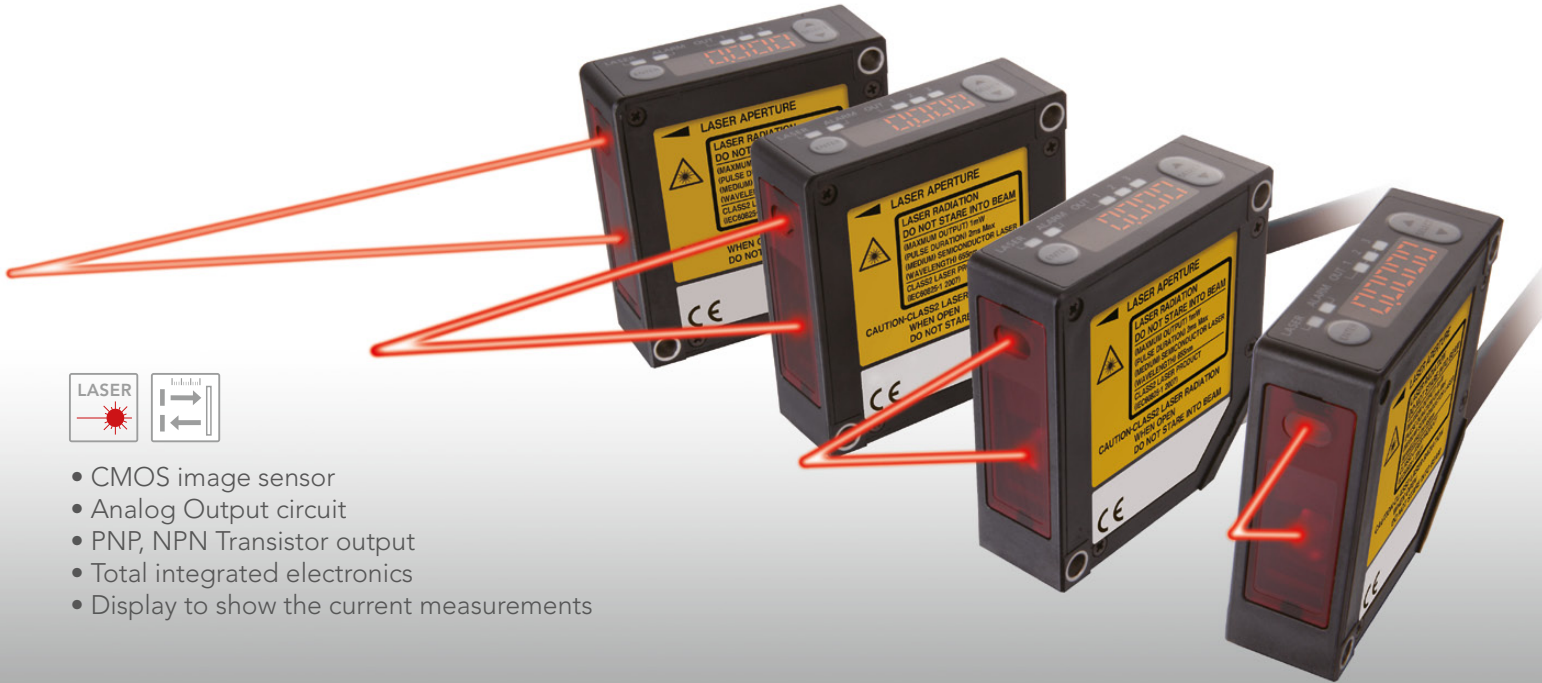


## AWLG Laser Distance Sensors

Triangulation (up to 400 mm)



- CMOS image sensor
- Analog Output circuit
- PNP, NPN Transistor output
- Total integrated electronics
- Display to show the current measurements

The sensors in the AWLG series can hardly be beaten in regard to accuracy. Resolutions from 0.5 µm and measuring frequencies of up to 5,000 Hz clearly demonstrate how powerful this series is. Thanks to latest laser technologies and the CMOS sensor, high levels of colour independence are guaranteed even where difficult surfaces are concerned. But the sensors' features are also con-

vincing: an integrated distance display, serial RS-422 and RS-485 ports and – depending on the version – voltage or current output. Which means that these – with 110 grams particularly light-weight sensors – possess three transistor outputs. The serial ports allow sensors in the AWLG series to be connected to a separate specially adapted display.

	AWLG 008 x	AWLG 020 x	AWLG 040 x	AWLG 120 x	AWLG 300 x
<b>MEASUREMENT DATA</b>					
Measuring range	26 - 34 mm	40 - 60 mm	65 - 105 mm	60 - 180 mm	100 - 400 mm
Resolution	0.5 µm	1.5 µm	2.5 µm	8 µm	20 µm
Linearity error	0.008 mm	0.02 mm	0.04 mm	0.12 mm	0.9 mm
Beam diameter	0.1 - 0.1 mm	0.5 - 1 mm	0.75 - 1.25 mm	1 - 1.5 mm	1.75 - 3.5 mm

## AWLG Laser Distance Sensors

## Technical Details

	AWLG xxx S	AWLG xxx M
<b>GENERAL DATA</b>		
Series	AWLG	
Type	Standard type	High funktion type
Measurement method	Triangulation	
Light source	Laser	
Wavelength	655 nm	
Laser class	2	
Receiving element	CMOS image sensor	
Connection type	0.1 mm <sup>2</sup> 10-core cabtyre cable, 5 m	
Beam type	Point	
Power on indication	LED green	
Display alarm / pollution	LED orange	
Switching status indicator	3 x LED yellow	
Display	5-digit LED display, red	
Electronic	Integrated	
<b>MEASUREMENT DATA</b>		
Measuring frequency (max.)	5000 Hz	
<b>OUTPUTS</b>		
Interfaces	-	RS-422/485
Output circuit	Analog	
Baud rate	-	9600 - 921600 bps
Voltage output	0 - 10.5 V	
Current output	3.2 - 20.8 mA	
Output current	< 50 mA	
Transistor output	PNP, NPN	
<b>POWER SUPPLY</b>		
Power supply	22 - 26 V DC	
Power consumption (max.)	100 mA	
Short circuit protection	Yes	
<b>PHYSICAL CHARACTERISTICS</b>		
Housing material	Plastic (PBT)	
Front (optics)	Acryl	
Ingress protection	IP67	
Dimensions (W x H x D)	20.4 x 60 x 57 mm	
Weight	70 g	
Construction type	Rectangular	
<b>ENVIRONMENTAL</b>		
Operating temperature range	-10 - +45 °C	
Storage temperature range	-20 - +60 °C	
Humidity	35 - 85 %, non condensing	
Ambient light immunity	< 3 klx	

## AWLG Laser Distance Sensors

*Analog output lines*

PIN NO.	SIGNAL NAME	FUNCTION	LEAD WIRE COLOR	
7	A (V)	Analog voltage output	Shielded single conductor	Black
8	AGND	Analog ground		
9	A (I)	Analog current output	Shielded single conductor	Gray
10	AGND	Analog ground		

*I/O terminal block*

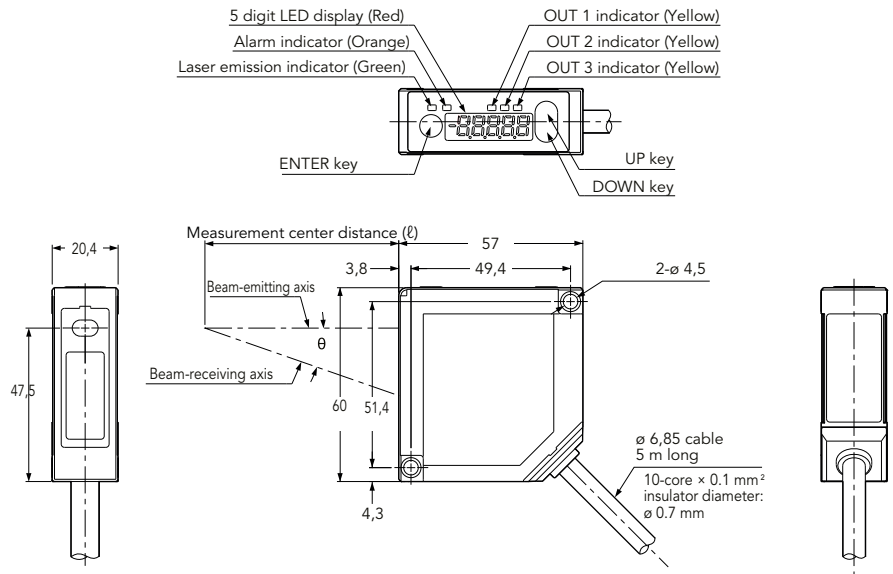
PIN NO.	SIGNAL NAME	FUNCTION	LEAD WIRE COLOR	
1	OUT1	Judgment output 1	Black	
2	OUT2	Judgment output 2	White	
3	OUT3	Judgment output 3 or alarm output	Gray	
4	TM	Timing input	Pink	
5	MI	Multifunction input: Zero set, zero set OFF, reset, change memory, teach, save, and laser control	Violet	
6	NP	NPN/PNP type switching input (default = NPN)	Pink/Violet	
11	+SD	Transmission data	Twisted-pair wire	Green (before Dec 2010: Black)
12	-SD	Transmission data		Sky blue (before Dec 2010: White)
13	+RD	Reception data	Twisted-pair wire	Orange (wire color has not changed)
14	-RD	Reception data		Yellow (before Dec 2010: White)
15	GGND	RS422/485 shield		
16	+V	24V DC input for power supply	Brown	
17	0V	Power supply ground	Blue	

## AWLG Laser Distance Sensors

Dimensions (mm)

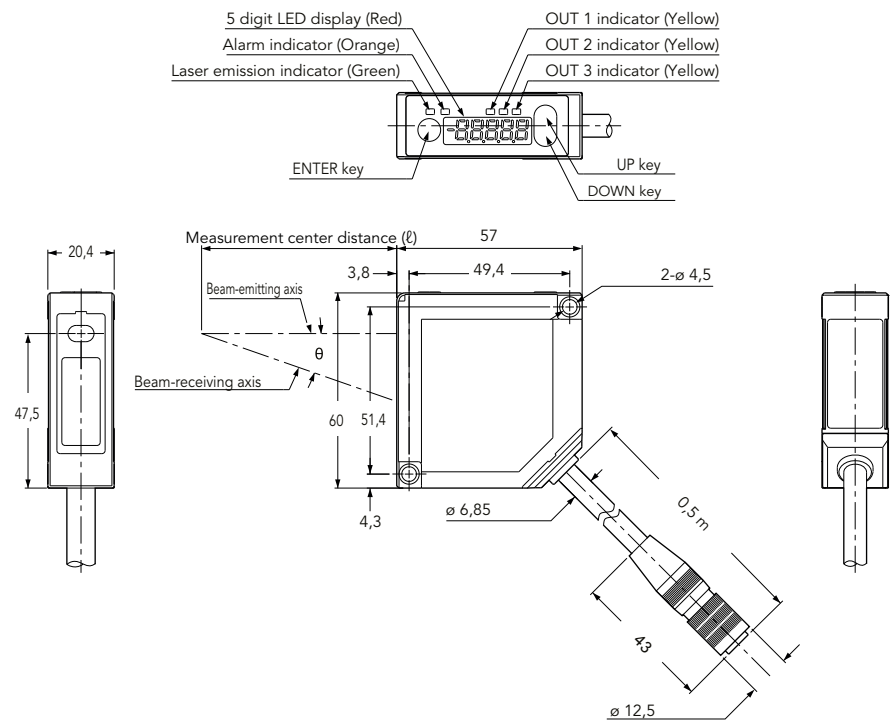
### Standard type

ORDER CODE	MEASUREMENT CENTER DISTANCE (ℓ)	θ
AWLG 008 S	30 mm	30°
AWLG 020 S	50 mm	21°
AWLG 040 S	85 mm	15°
AWLG 120 S	120 mm	11°
AWLG 300 S	250 mm	6°



### High function type

ORDER CODE	MEASUREMENT CENTER DISTANCE (ℓ)	θ
AWLG 008 M	30 mm	30°
AWLG 020 M	50 mm	21°
AWLG 040 M	85 mm	15°
AWLG 120 M	120 mm	11°
AWLG 300 M	250 mm	6°



### Extension cable (Option)

ORDER CODE	LENGTH
ZWK AWLG 2	2 m
ZWK AWLG 5	5 m
ZWK AWLG 10	10 m
ZWK AWLG 20	20 m

