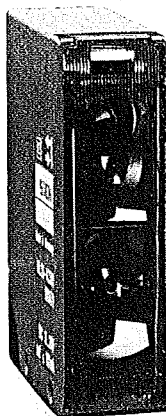


# WTA24

distance sensor

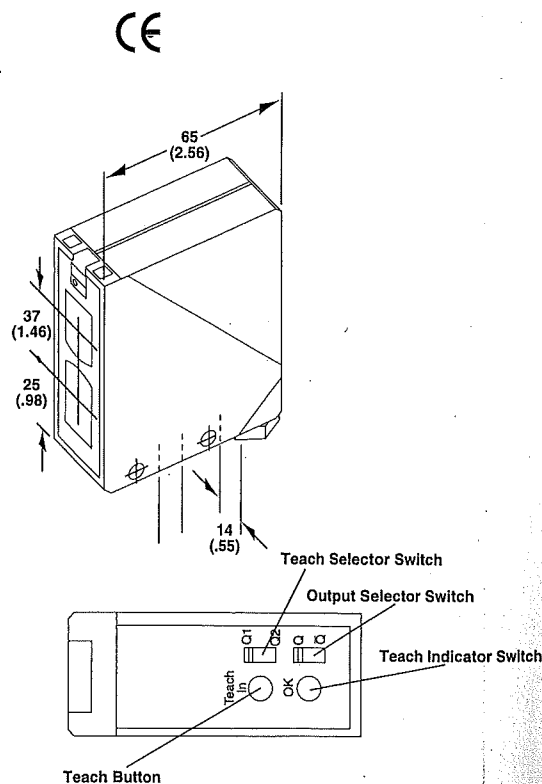
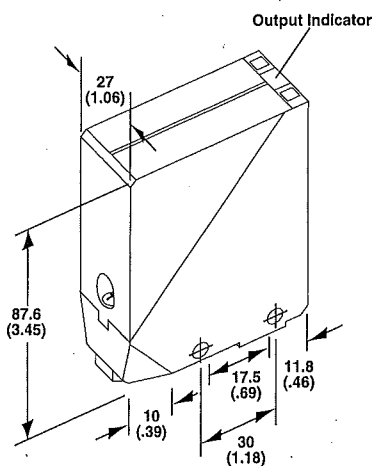
## H I G H L I G H T S



- ▶ Rugged diecast metal housing
- ▶ Analog output
- ▶ Signal strength indicator
- ▶ Two switching outputs set with Teach-in

- ▶ Outputs short circuit protected
- ▶ Power supply reverse polarity protected
- ▶ Cable connections swivel 90° for easy installation
- ▶ Optional dust shield, snow shield, cooling plates

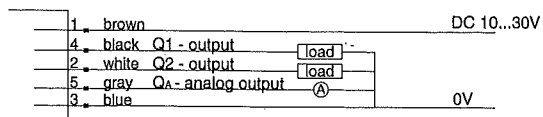
3 m (9.8 ft)



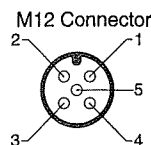
M12x1

Dimensions in mm (in)

## connection diagram



wire colors refer to standard cable, not included



KD5-RIM 122

# WTA24

distance sensor

	WTA 24 -P5201	-P5401	-P5501
Part Number	1 011 504	1 011 505 <i>412</i>	1 011 515
Sensing Range	250...350 mm (10...14 in)	600...1200 mm (24...48 in)	1000...3000 mm (40...120 in)
Light Spot Size	4...8 mm (0.16...0.32 in)	15...30 mm (0.6...1.2 in)	20...50 mm (0.8...2 in)
Angle of Divergence	7°	2°	0.5°
Resolution (based on sensing range, target 100 x 100 mm (4 x 4 in))	white (90%) 0.5% grey (18%) 0.5% black (6%) 1.0%	white (90%) 1.0% grey (18%) 1.5% black (6%) 2.0%	white (90%) 2.0% grey (18%) 5.0% black (6%) 4.0%
Reproducibility (based on sensing distance, target 100 x 100 mm (4 x 4 in))	white (90%) 1.0% grey (18%) 1.0% black (6%) 1.5%	white (90%) 1.5% grey (18%) 2.5% black (6%) 4.0%	white (90%) 4.0% grey (18%) 10.0% black (6%) 8.0%
Linearity (based on sensing range, target 100 x 100 mm (4 x 4 in))	white (90%) 0.5% grey (18%) 1.0% black (6%) 2.5%	white (90%) 1.0% grey (18%) 2.0% black (6%) 5.0%	white (90%) 2.0% grey (18%) 4.0% black (6%) 10.0%
Accuracy (based on sensing distance, target 100 x 100 mm (4 x 4 in))	white (90%) 1.5% grey (18%) 2.0% black (6%) 4.0%	white (90%) 3.0% grey (18%) 5.0% black (6%) 8.0%	white (90%) 5.5% grey (18%) 13.0% black (6%) 10.0%
Temperature Drift (based on sensing distance)	0.2 % / k	0.2 % / k	0.2 % / k
Light Source	LED, infrared, modulated, average service life 100,000 hours @ 25°C (77°F)		
Supply Voltage $V_s$ (limit values)	12...30 V DC		
Current Consumption	≤ 100 mA		
Ripple (within $V_s$ tolerances)	≤ 5 V peak-to-peak		
Switching Output Current	Q1 and Q2		
Switching Mode	PNP, switchable, Q, $\bar{Q}$		
Output Voltage	HIGH = $V_s - (\leq 2 \text{ V})$ ; LOW = $\leq 2 \text{ V}$		
Output Current Max.	100 mA		
Response Time / Switching Frequency	≤ 5 ms/100 Hz	10 Hz	
Analog Output	4...20 mA (3 and 21 mA in capture range/R = 0 to 500 $\Omega$ )	≤ 50 ms/10 Hz	
Enclosure Rating	IP 67 / NEMA 6		
Ambient Operating Temperature	-14...55°C (7...131°F)		
Storage Temperature	-25...70°C (-13...167°F)		
EMC	IEC 801		
Shock / Vibration	IEC 68-2-27/IEC 68-2-6		
VDE Protection Class	II Double Insulated		

WTA 24