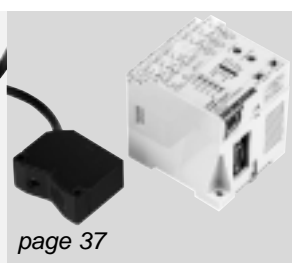
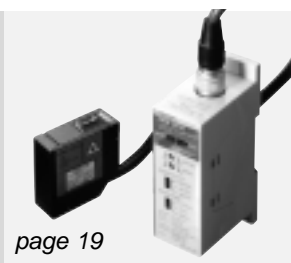


# SELECTION GUIDE

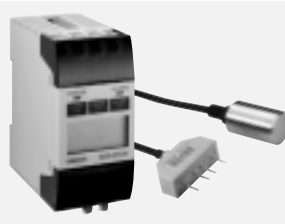


	Z4M-WR	Z4M	Z4M-N30V	Z4W-V25R
--	--------	-----	----------	----------

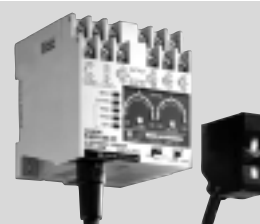
Sensor type	Laser displacement sensor	Laser displacement sensor	Laser displacement sensor	LED displacement sensor
Features	FDA class II. Visible beam eliminates the need for Z49 safety kit. Two measurement distances available: 40 mm and 100 mm. Automatic sensitivity setting minimizes sensing errors caused by color change.	Highest resolution 1.5 micron. Two measurement distances available: 40 mm and 100 mm. Automatic sensitivity setting minimizes sensing errors caused by color change.	Assures stable detection of glossy and dark surfaces. Visible light source. 100 micron spot diameter. Hold and edge detection modes.	LED displacement sensor with 10 micron resolution. Visible LED light source allows for easy setup and does not require safety precautions of laser products. Easy to use built-in amplifier.
Resolution	3, 20, or 80 microns at 40 mm; 16, 60, or 300 microns at 100 mm (depends on response time selected)	1.5, 10, or 40 microns at 40 mm; 8, 30, or 150 microns at 100 mm (depends on response time selected)	0.4 micron at 100 ms; 4 micron at 1 ms	10 microns at 25 mm
Sensing distance	40 mm sensing distance with $\pm 10$ mm measurement range; 100 mm sensing distance with $\pm 40$ mm measurement range	40 mm sensing distance with $\pm 10$ mm measurement range; 100 mm sensing distance with $\pm 40$ mm measurement range	30 mm sensing distance with $\pm 2$ mm measurement range	25 mm sensing distance with $\pm 4$ mm measurement range
Detectable object	Solid or liquid	Solid or liquid	Solid or liquid	Solid or liquid
Response time	60, 2, or 0.15 ms; 500, 20, or 0.7 ms	60, 2, or 0.15 ms; 500, 20, or 0.7 ms	100 ms; 1 ms	5 ms
Output	Linear analog 4 to 20 mA; NPN, 50 mA at 40 VDC	Linear analog -4 to +4 VDC; NPN, 50 mA at 40 VDC	Linear analog 4 to 20 mA; 12-bit binary output; 2 discrimination outputs; NPN, 100 mA at 30 VDC	Linear analog 4 to 20 mA displacement output; NPN, 50 mA at 30 VDC output when object is out of range
Supply voltage	12 to 24 VDC	12 to 24 VDC	12 to 24 VDC	12 to 24 VDC
Enclosure type	IP40	IP40	IP40	IP66
Light source	IEC class 2; FDA class II. Visible red 670 nm. Semiconductor laser.	IEC class 3b; FDA class IIIb. Infrared 780 nm. Semiconductor laser.	IEC class 2; FDA class II. Visible red 670 nm. Semiconductor laser.	Visible red light emitting diode.



page 69



page 81



page 101

## E2CA

## E2CD

## E4DA

	<b>E2CA</b>	<b>E2CD</b>	<b>E4DA</b>
<b>Sensor type</b>	Inductive displacement sensor	Inductive inspection sensor	Ultrasonic displacement sensor
<b>Features</b>	Linear 4 to 20 mA output for distance from object to sensor. Accurate to 0.6 micron. AC and DC amplifiers available. Adjustable detecting distance sensitivity.	High repeat accuracy $\pm 1$ to 5 mm ( $\pm 0.00004$ to 0.0002). Low temperature drift. Digital setting amplifier with built-in TEACH function for easy setup. Two independent outputs for High/Pass/Low discrimination.	Narrow beam ultrasonic sensor provides linear analog output. Ultrasonic beam can detect objects regardless of color. Amplifier provides three inspection outputs (High/Pass/Low) and analog 4 to 20 mA output.
<b>Resolution</b>	0.6 to 2 microns	0.5 to 5 microns	200 microns
<b>Sensing distance</b>	0.3 to 10 mm	0 to 5 mm	30 to 70 mm
<b>Detectable object</b>	Metal objects	Metal objects	Solid or liquid
<b>Response time</b>	100 ms	8 ms	2 ms
<b>Output</b>	Linear analog 4 to 20 mA; Control output, transistor; 100 mA at 40 VDC	2 NPN open collector; 100 mA at 30 VDC	Linear analog 4 to 20 mA; Three discrimination outputs; Transistor; 80 mA at 30 VDC; Alarm output; 80 mA at 30 VDC
<b>Supply voltage</b>	90 to 264 VAC (E2CA-AN4□) 10 to 30 VDC (E2CA-AL4□)	12 to 24 VDC	12 to 24 VDC
<b>Enclosure type</b>	IP67 sensor IP40 amplifier	IP67 sensor IP30 amplifier	IP66 sensor IP30 controller

# SELECTION GUIDE



page 113

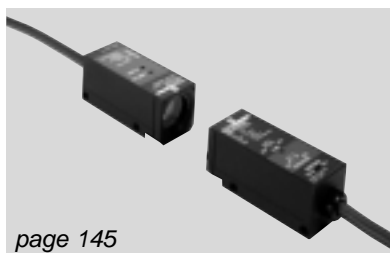


page 123



page 131

	<b>D5A</b>	<b>D5M</b>	<b>D5V</b>
<b>Sensor type</b>	Contact displacement sensor	LVDT contact inspection sensor	Contact displacement sensor
<b>Features</b>	1 micron repeatability for accurate measurement of tool wear. LED indicator available for ease of use. Dry contact or solid state output available. Quick disconnect type available for quick installation or maintenance.	High repeat accuracy. 5 mm or 10 mm sensing range; $\pm 0.5\%$ linearity. IP67 protection, resists oil and water spray. Pin plunger or roller plunger actuator.	Works under a low operating force of 30 gf. Inexpensive high resolution sensor. Ball, pin and flat actuator types available.
<b>Resolution</b>	1 to 3 microns	10 or 20 microns	10 micron (linear output) 1 micron (serial output)
<b>Sensing distance</b>	2 mm to 10.5 mm	5 mm or 10 mm	5 mm
<b>Detectable object</b>	Solid objects	Solid objects	Solid objects
<b>Response time</b>	–	6 ms max.	6 ms (linear output); 7 ms (serial output including transmission)
<b>Output</b>	Dry contact: 10 mA 24 VAC/12 VDC; PNP: 100 mA 5 to 24 VDC	Linear analog 4 to 20 mA	Linear analog 4 to 20 mA; B7A (16 bit) serial communications
<b>Supply voltage</b>	24 VAC 12 VDC for dry contact output; 5 to 24 VDC for PNP output	24 VDC	12 to 24 VDC
<b>Enclosure type</b>	IP67 sensor	IP67 sensor	IP40 sensor



	Z4LA	Z4LB	Z4LC
--	------	------	------

Sensor type	Laser measurement sensor	Laser measurement sensor	Laser measurement sensor
Features	Thru-beam wide beam laser sensor with 5 micron resolution. Linear analog and discrimination outputs included for inspection and control. Conforms to IEC class 3b and FDA class IIIB standards with optional safety kit Z49-SF1.	Thru-beam visible light source for easy optical alignment. Linear analog and discrimination outputs included for inspection and control. TEACH function provides one touch setup. Digital display of measured values and discrimination output indicators for easy operation.	Thru-beam visible light source for easy optical alignment. Linear analog, digital and discrimination outputs included for inspection and control. Measurement mode selection for different sensing applications. Digital display of measured values and discrimination output indicators for easy operation.
Resolution	5 microns	5 to 30 microns	10 microns
Measurement width	10 mm beam width	10 mm or 30 mm beam width	28 mm beam width
Sensing distance	0 to 300 mm	0 to 300 mm; 40 mm fixed	0 to 300 mm; 40 mm fixed
Detectable object	Solid objects	Solid objects	Solid objects
Response time	5 ms	0.3 ms or 5 ms selectable	3.3 ms
Output	Analog 1 to 5 VDC; Control output, NPN open collector; 100 mA at 30 VDC	Analog +1 to +5 VDC; Two discrimination outputs: low and pass; NPN or PNP 100 mA at 30 VDC	Analog 4 to 20 mA; Digital 12 bit binary NPN 30 VDC 20 mA max; Three discrimination outputs: high, pass and low
Supply voltage	12 to 24 VDC	12 to 24 VDC	12 to 24 VDC
Enclosure type	IP66 sensor IP40 safety kit	IP40 sensor IP20 amplifier	IP40 sensor IP20 amplifier
Light source	IEC class 3b; FDA class IIb; Infrared 780 nm; Semiconductor laser	IEC class 1; FDA class II; Visible red 650 nm; Semiconductor laser	IEC class 1; FDA class II; Visible red 670 nm; Semiconductor laser