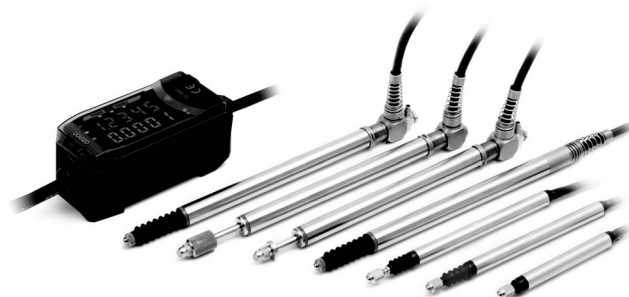


Smart Sensors (High-precision Contact Type) ZX Series (ZX-T)

CE



For the most recent information on models that have been certified for safety standards, refer to your OMRON website.

Ordering Information

■ Sensors

Sensor Heads

Size	Type	Sensing distance	Resolution (See note.)	Model
6 dia.	Short type	1 mm	0.1 μm	ZX-TDS01T
	Standard type	4 mm		ZX-TDS04T
	Low measurement type			ZX-TDS04T-L
8 dia.	Standard type	10 mm	0.4 μm	ZX-TDS10T
	Ultra-low-load Type			ZX-TDS10T-L
	Air Lift Type			ZX-TDS10T-V
	Air Lift/Air Push Type			ZX-TDS10T-VL

Note: The resolution refers to the minimum value that can be read when a ZX-TDA□1 Amplifier Unit is connected.

■ Amplifier Units

Appearance	Power supply	Output type	Model
	DC	NPN	ZX-TDA11 2M
		PNP	ZX-TDA41 2M

■ Accessories (Order Separately)

Calculating Unit

Appearance	Model
	ZX-CAL2

ZX-series Communications Interface Unit

Appearance	Model
	ZX-SF11

SmartMonitor Sensor Setup Tool for Personal Computer Connection

Appearance	Name	Model
	ZX-series Communications Interface Unit	ZX-SF11
 + CD-ROM	ZX-series Communications Interface Unit + ZX-series Sensor Setup Software Basic	ZX-SFW11EV3 *1, *2
CD-ROM	ZX-series Sensor Setup Software	ZX-SW11EV3 *1

*1. When using the ZX-TDA11/41 with the SmartMonitor, either the ZX-SFW11EV3 or the ZX-SW11EV3 SmartMonitor must be used. Earlier versions cannot be used.

*2. The ZX-SFW11EV3 SmartMonitor can be used only to set functions and monitor waveforms.

Cables with Connectors on Both Ends (for Extension)*

Cable length	Model	Quantity
1 m	ZX-XC1A	1
4 m	ZX-XC4A	
8 m	ZX-XC8A	

* Robot Cable models are also available. The model numbers are ZX-XC□R.

Preamplifier Mounting Brackets

Appearance	Model	Remarks
	ZX-XBT1	Attached to each Sensor Head
	ZX-XBT2	For DIN track mounting

Specifications

■ Amplifier Units

Item	ZX-TDA11	ZX-TDA41
Measurement period	1 ms	
Possible average count settings (See note 1.)	1, 16, 32, 64, 128, 256, 512, or 1,024	
Linear output (See note 2.)	Current output: 4 to 20 mA/F.S., Max. load resistance: 300 Ω Voltage output: ±4 V (±5 V, 1 to 5 V (See note 3.)), Output impedance: 100 Ω	
Judgement outputs (3 outputs: HIGH/PASS/LOW)	NPN open-collector outputs, 30 VDC, 30 mA max. Residual voltage: 1.2 V max.	PNP open-collector outputs, 30 VDC, 30 mA max. Residual voltage: 2 V max.
Zero reset input, timing input, reset input, judgement output hold input	ON: Short-circuited with 0-V terminal or 1.5 V or less OFF: Open (leakage current: 0.1 mA max.)	ON: Supply voltage short-circuited or supply voltage of 1.5 V or less OFF: Open (leakage current: 0.1 mA max.)
Function	- Measurement value display - Display reverse - Sample hold - Self-peak hold - Initial reset - Hysteresis width setting - Judgement output hold input - Sensor disconnection detection - Non-measurement setting - Zero reset indicator - Pressing force alarm - Present value/set value/output value display - ECO mode - Peak hold - Self-bottom hold - Direct threshold value setting - Timing inputs - (A-B) calculations (See note 4.) - Zero reset memory - Clamp value setting - Span adjustment - Number of display digit changes - Bottom hold, peak-to-peak hold - Zero reset - Position teaching - Reset input - (A+B) calculations (See note 4.) - Function lock - Scale inversion - Warming-up display	
Indicators	Judgement indicators: High (orange), pass (green), low (yellow), 7-segment main digital display (red), 7-segment sub-digital display (yellow), power ON (green), zero reset (green), enable (green)	
Power supply voltage	12 to 24 VDC ±10%, Ripple (p-p): 10% max.	
Current consumption	140 mA max. (with Sensor connected), For 24-VDC power supply voltage: 140 mA max. (with Sensor connected)	
Ambient temperature	Operating and storage: 0 to 50°C (with no icing or condensation)	
Temperature characteristic	0.03% F.S./°C	
Connection method	Prewired (standard cable length: 2 m)	
Weight (packed state)	Approx. 350 g	
Materials	Case: PBT (polybutylene terephthalate), Cover: Polycarbonate	

Note 1. The response speed of the linear output is calculated as the measurement period × (average count setting + 1).

The response speed of the judgement outputs is calculated as the measurement period × (average count setting + 1).

2. The output can be switched between a current output and voltage output using a switch on the bottom of the Amplifier Unit.

3. Setting is possible via the monitor focus function.

4. A Calculating Unit (ZX-CAL2) is required.