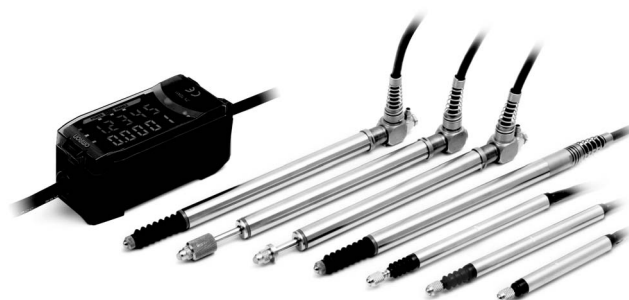


Smart Sensors (High-precision Contact Type) ZX Series (ZX-T)

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 |
|  | 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 | <ul style="list-style-type: none"> - 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 | <ul style="list-style-type: none"> - 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.