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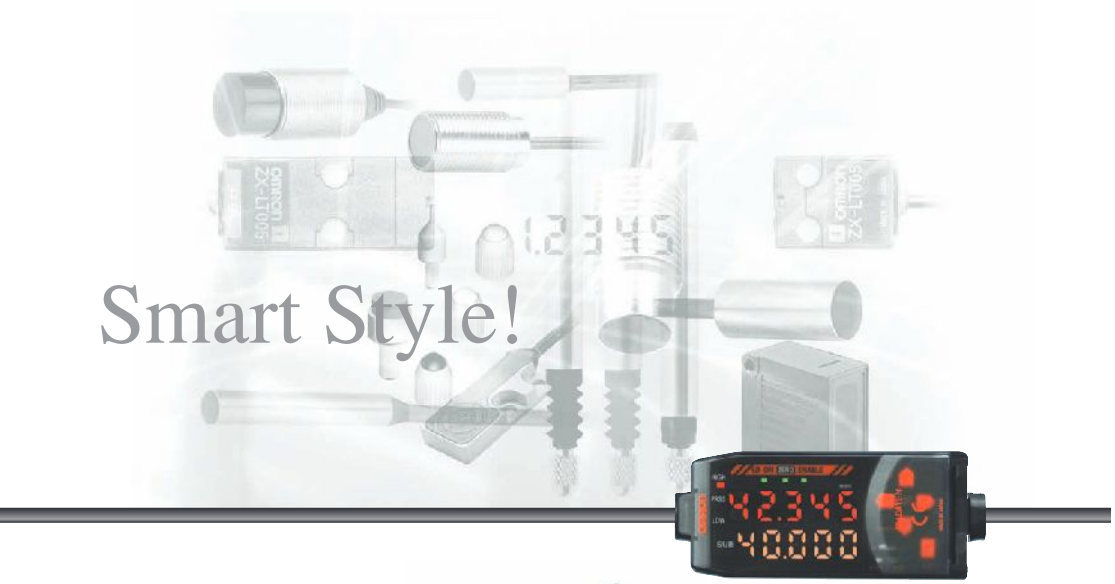
Find the *OMRON ZX-LD100L* at our website: ***Click HERE***

Smart Sensors

ZX Series

The Continuing Evolution of Smart Sensors

Presenting a New Laser-type ZX-LDA@-N Amplifier Unit









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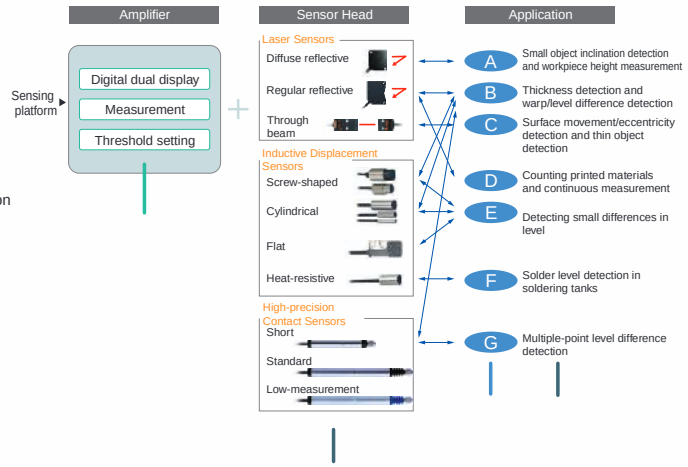
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Smart Style... from OMRON

I am a S

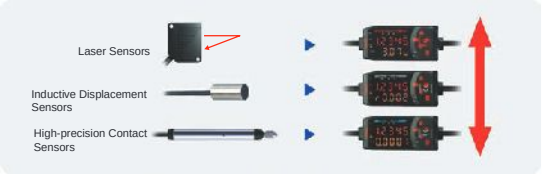
What's Smart?

A host of remarkable functions inside a compact body. OMRON combined these with an Amplifier display and easy operation to take Sensor detection to a whole new level. OMRON's sensing platform meets a wide range of diverse applications by offering a broad selection of heads employing different detection methods.



What's the Platform?

The ZX-LD-N integrates internal data for the entire ZX Series. This was achieved through technological advancements that vastly improve data communications between Amplifiers and enable calculations between different Sensor Heads.
Welcome to the ever-expanding Smart World of sensing.

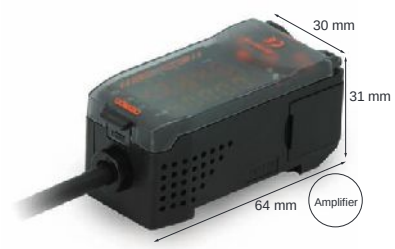


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Smart Sensor !!

OMRON Offers Sensor Users New Choices

What's Style?



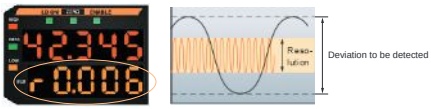
Top Priority Placed on Easy Operation

Advanced functions and performance plus easy operation.
This is a major feature of the ZX Series.
Experience operation that doesn't get any easier.



Easy-to-see Resolution Patent Pending

The resolution of the desired workpiece can also be easily determined by detection. The resolution display clearly shows the margin available for the threshold setting, to allow accurate judgement of detectability.



A Full Complement of Practical Functions

Operating Setting with No Need for a Digital Panel Meter Patent Pending

By simply fitting a Calculating Unit between two Amplifiers, the processing results of two Sensors can be displayed on a single Amplifier. Setting parameters need to be input only on one Amplifier.



Comprehensive Teaching Functions

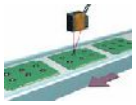
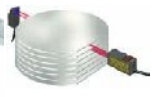
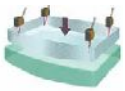
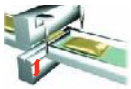
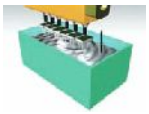
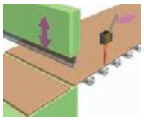
Position/2-point/Automatic

Three teaching functions rival the performance of photoelectric sensors.

- Position teaching
  For high-precision positioning applications
- 2-point teaching
  For detecting ultra-small level differences between two points
- Automatic teaching
  For teaching without stopping the workpiece

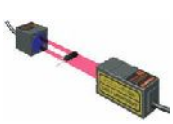
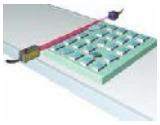
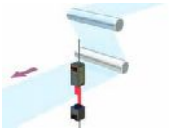
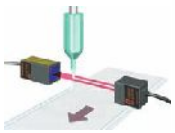
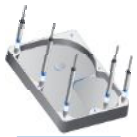
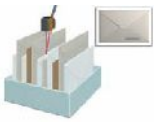
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Smart Sensors Application World

	Height and Level Differences		Positioning		Small Level Differences	Thickness
Semiconductors and Electronic Components	 Inspecting PCB mold height	 Measuring electronic component dimensions	 Performing shipping inspections on robot arms	 Wafer mapping (through-beam laser)	 Checking CRTs for shadow mask insertion	 Checking for doubled-up lead frames
Packing, Foods, Chemicals, and Sanitary Items	 Identifying the number of inner caps for sake bottle caps	 Detecting pinholes in pudding	 Checking the edge of transparent packing film	 Detecting the indentation on glass bottles	 Inspecting packing machine clamps	 Inspecting cakes in trays for thickness and presence
Household Appliances and Office Automation	 Measuring clock assembly height	 Inspecting the height of the core in cardboard	 Inspecting the solder level in soldering tanks		 Performing final inspections during watch assembly	 Checking the thickness of flexible items
Automobiles, Machine Tools, and Robots	 Measuring rivet height	 Measuring small component dimensions	 Inspecting the offset positioning of pressed workpieces	 Checking welding point positions on ring gears	 Inspecting bottom dead points on presses	 Measuring engine part dimensions
Automated Machinery, Inspection Equipment, and Others	 Inspecting ball bearings for foreign matter	 Identifying ceramic types	 Checking cut positions on external walling material	 Checking rubber positioning	 Inspecting pressure indicator dials and pointer gaps	 Detecting glue applied to bags

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ZX-LDA ZX-EDA ZX-TDA

Width and Level Differences	Warp and Raised Items	Eccentricity, Surface Movement, Coating Thickness	Flatness	Counting	
 Identifying capacitor types	 Inspecting chips for proper arrangement	 Checking disc motor tables for surface movement	 Inspecting robot arms for flatness		Semiconductors and Electronic Components
 Checking the edge of transparent packing film	 Detecting raised caps	 Detecting bonding agent and quantity during packing box assembly	 Checking the flatness of battery caps	 Counting tea bags	Packing, Foods, Chemicals, and Sanitary Items
 Measuring roller gap	 Measuring warpage of HDD chassis	 Inspecting the spray from aerosol cans	 Checking the flatness of HDD chassis	 Counting copy machine staples and pins	Household Appliances and Office Automation
 Inspecting drive belt thickness	 Checking dies for fit	 Measuring machine tool eccentricity and vibration	 Checking the flatness of brake pads	 Counting containers	Automobiles, Machine Tools, and Robots
 Inspecting paper tube length	 Inspecting seat belts for loose threads	 Inspecting the eccentricity of motor shafts	 Inspecting steel plate surface areas	 Counting envelops	Automated Machinery, Inspection Equipment, and Others

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New Sensor Proposals for IT Applications

Smart Monitor V3 NEW

PC Connection Takes Full Advantage of Sensor Performance

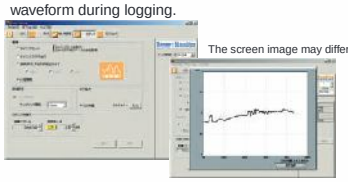
Use of the PC screen greatly enhances the panel display. Unlike conventional systems, the detection results from applications such as waveform monitoring and data logging can also be easily processed.



Flexible Quality Control

Data logging

The ability to log detection data and manage the system history enables efficient and effective quality control, and aides in determining necessary countermeasures. Also displays data in waveform during logging.



The screen image may differ from that of the actual product.

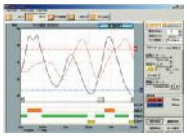
List Display Simplifies Setup

Complicated settings can be easily made with only the Amplifier panel while referring to function menus. Settings can also be imported and exported as text data.



Waveform Monitoring

Easy waveform monitoring replaces the conventional oscilloscope. Drag & drop threshold setting and other easy-to-use functions further enhance operation.



Waveform monitoring

Waveforms on up to 5 channels can be drawn with the new ZX-LDA-N.



One-shot waveform

High-speed waveforms can be obtained and displayed in one-shot operation.

PC Software Specifications

Monitoring Digital Values

- Setting differential direct threshold values
- Teaching settings

Waveform Monitoring

- Waveform collection • Waveform observation
- Waveform saving and loading

Data Logging

- Compilation settings • Microsoft Excel compatible (See note 2.)

Configurator Functions

- Setting Amplifier functions (actual measurement scaling, input scaling, etc.)
- Saving and loading Amplifier setting conditions

Note 1: Smart Monitor V3 is compatible with the ZX-L-N, ZX-L, ZX-E, and ZX-T.

Note 2: Microsoft Excel is a registered trademark of the Microsoft Corporation.

Note 3: System Requirements

OS: Windows 98 or 2000
CPU Unit: Celeron 400 MHz or better
RAM: 64 MB min.
Available hard disk space: 50 MB min.
Display screen: 800 x 600 dots and 256 colors min.
Baud rate: 38,400 bps min.

Note 4: Use an RS-232C crossover cable to connect to the computer.
If the computer does not have an RS-232C port, use a USB-Serial Conversion Cable (CS1W-CF31 made by OMRON).

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Contents

ZX-LDA-N Laser Sensors 8

Datasheet 12

ZX-EDA Inductive Displacement Sensors 18

Datasheet 20

ZX-TDA High-precision Contact Sensors 28

Datasheet 30

Common Precautions 35

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ZX

to Smart Style!

ZX-LDA-N NEW Laser Sensors

Easy *as* Smart Style!

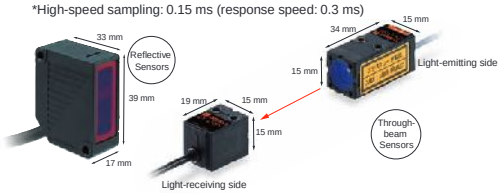
Advanced Functions Made Simple. That is the Essence of Smart Style.

The World's Smallest and Lightest

*As of October 1, 2001

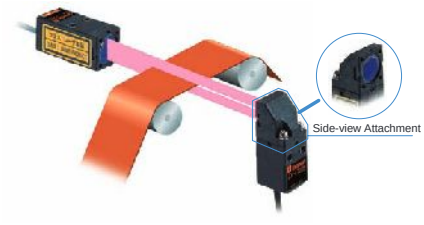
In addition to the obvious size difference, the ZX Series offers the world's lightest Sensors. Approximately the same size as a photoelectric sensor, the compact ZX Sensors contribute considerably to space-saving efforts on production sites. Naturally, response speed is also equivalent to that of a photoelectric sensor.

*High-speed sampling: 0.15 ms (response speed: 0.3 ms)



Flexible Mounting Direction

Install a Side-view Attachment (sold separately) for additional installation possibilities.

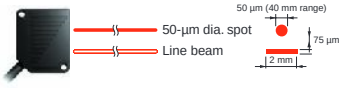


8 Reflective Types and 3 Through-beam Types Available

Reflective Sensors Class 2 visible light laser *For 4,096 sampling cycles

Select the model according to the application. Use a spot beam to detect small items, or a line beam for ordinary workpieces. Measurement distance also ranges from 28 to 500 mm, enabling seamless coverage for various detection applications.

Spot form
Two-spot Sensors



Distance range (resolution)

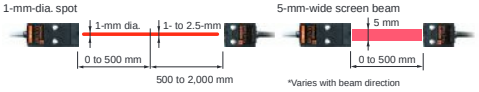
Three ranges



Through-beam Sensors Class 1 visible light laser *For 64 sampling cycles

Use a 1-mm-dia. spot for precise positioning, or a 5- to 10-mm-wide screen beam for area detection.

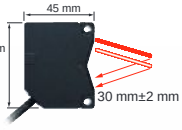
Measuring width and distance range (4-µm resolution)



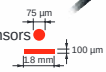
Regular reflection (displacement) Class 2 visible light laser

Ideal for detecting mirror surfaces.

Distance range (0.25 µm resolution)
One range



Spot form
Two-spot Sensors

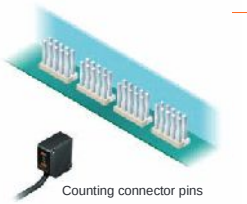


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Light-intensity Mode: High-performance Laser Photoelectric Sensor

Reflective Sensors

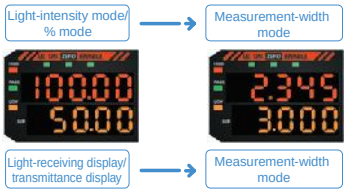



Counting connector pins

Light-intensity Mode: High-performance Laser Photoelectric Sensor

Light intensity can be detected by the ultra-small spot of the laser beam. By operating as a high-precision laser photoelectric sensor, rather than a displacement meter, this enables detection of small items with backgrounds, as well as color detection. Ideal function settings are possible by using both the displacement mode and the light-intensity mode to meet multiple application needs.

Through-beam Sensors



Equipped with a Laser Lifetime Monitor

Self-detection and Display of Laser Diode Lifetime

When laser diode deterioration is detected, a warning appears on the sub-digital display. Early detection enables timely, trouble-free replacement.



ZX-LDA-N

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ZX-LDA-N

NEW

New Laser Type

Advanced to Smart Style!

Advanced Functions Respond to Evolving Needs

More User Friendly

New Function

Zero Reset Time Display

A reference value other than zero can be set as the zero reset value.



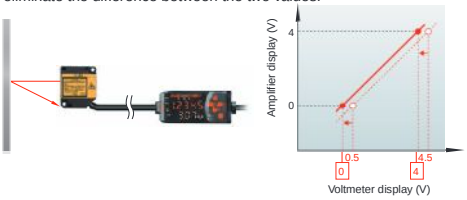
Present Value Display

The sub-digital display shows present values when the hold function is enabled. This makes it easy to check whether a measurement is within range.



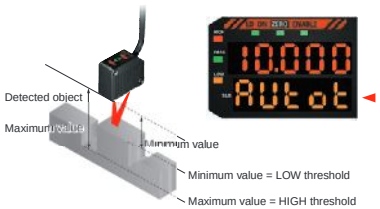
Linear Output Correction

Various factors, such as conversion errors occurring with connected devices, may cause the output value displayed on the Amplifier to differ from the actual output from a voltmeter. Adjusting the Amplifier display while monitoring the actual output on a voltmeter can eliminate the difference between the two values.



Automatic Teaching

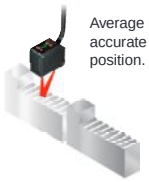
Maximum and minimum measurement values can be set as thresholds when automatic teaching is executed. It is useful for setting threshold values from actual measurements while the workpiece is moving.





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Enhanced Hold Function New Function



Average hold and delay hold functions were added to enable accurate assessment of changes and the desired measurement position.

Delay Hold/Average Hold

The delay hold function measures only signals within the desired sampling time after a specified time delay from the trigger. The newly added average hold function is especially useful for measuring large workpieces with uneven surfaces.



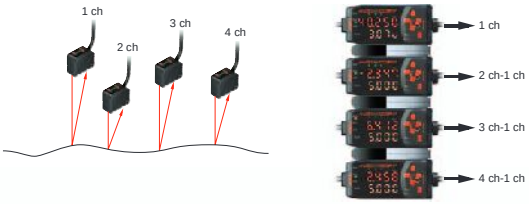
Previous Value Comparison Function

Gradual changes in measurements due to machine temperature changes or other factors can be ignored in certain situations, such as when detecting foreign matter around bearings. The previous value comparison function effectively detects any changes between previous and present values.



Multiple-point Measurements Computed Using 1 Point

The result computed for one point can be used as a basis for the output for every other point. This is especially useful for multiple-point measurements.



ZX-LDA-N



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Ordering Information

■ Sensors

Sensor Heads (Reflective)

Optical system	Beam shape	Sensing distance	Resolution*	Model
Diffuse reflective	Spot beam	40±10 mm	2 µm	ZX-LD40
		100±40 mm	16 µm	ZX-LD100
		300±200 mm	300 µm	ZX-LD300
	Line beam	40±10 mm	2 µm	ZX-LD40L
		100±40 mm	16 µm	ZX-LD100L
		300±200 mm	300 µm	ZX-LD300L
Regular reflective	Spot beam	30±2 mm	0.25 µm	ZX-LD30V
	Line beam			ZX-LD30VL

* For an average count of 4,096.

Sensor Heads (Through-beam)

Optical system	Measuring width	Sensing distance	Resolution*	Model
Through-beam	1-mm dia.	0 to 2000 mm	4 µm	ZX-LT001
	5 mm	0 to 500 mm		ZX-LT005
	10 mm			ZX-LT010

* For an average count of 64.

Amplifier Units

Appearance	Power supply	Output type	Model
	DC	NPN	ZX-LDA11-N
		PNP	ZX-LDA41-N

Note: Compatible connection with the Sensor Head.

Accessories (Order Separately)

Calculating Unit

Appearance	Model
	ZX-CAL2

Side-view Attachments

Appearance	Applicable Sensor Head	Model
	ZX-LT1001/ LT005	ZX-XF12
	ZX-LT010	ZX-XF22

Cables with Connectors on Both Ends (for Extension)*1

Cable length	Model	Quantity
1 m	ZX-XC1A	1
4 m	ZX-XC4A	
8 m	ZX-XC8A	
9 m *2	ZX-XC9A	

*1. ZX-XC@ R robot cable type also available.

*2. For use only with Reflective Sensors.

Smart Monitor 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-SFW11V3 *1, *2
CD-ROM	ZX-series Sensor Setup Software	ZX-SW11EV3 *1

*1. The ZX-SFW11V3 or ZX-SW11V3 is required to use Smart Monitor with the ZX-LDA11-N/41-N. Earlier versions cannot be used.

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

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Specifications

■ Sensor Heads (Reflective)

Item / Model	ZX-LD40	ZX-LD100	ZX-LD300	ZX-LD30V	ZX-LD40L	ZX-LD100L	ZX-LD300L	Z3X-LD30VL
Optical system	Diffuse reflective			Regular reflective	Diffuse reflective			Regular reflective
Light source (wave length)	Visible-light semiconductor laser with a wavelength of 650 nm and an output of 1 mW max.; class 2							
Measurement point	40 mm	100 mm	300 mm	30 mm	40 mm	100 mm	300 mm	30 mm
Measurement range	±10 mm	±40 mm	±200 mm	±2 mm	±10 mm	±40 mm	±200 mm	±2 mm
Beam shape	Spot				Line			
Beam size*1	50-µm dia.	100-µm dia.	300-µm dia.	75-µm dia.	75 µm x 2 mm	150 µm x 2 mm	450 µm x 2 mm	100 µm x 1.8 mm
Resolution*2	2 µm	16 µm	300 µm	0.25 µm	2 µm	16 µm	300 µm	0.25 µm
Linearity*3	±0.2% FS (entire range)	±0.2% FS (80 to 120 mm)	±2% FS (200 to 400 mm)	±0.2% FS (entire range)	±0.2% FS (32 to 48 mm)	±0.2% FS (80 to 120 mm)	±2% FS (200 to 400 mm)	±0.2% FS (entire range)
Temperature characteristic*4	±0.03% FS/°C (Except for ZX-LD300 and ZX-LD300L, which are ±0.1% FS/°C.)							
Ambient illumination	Incandescent lamp: 3,000 lx max. (on light receiving side)							
Ambient temperature	Operating: 0 to 50°C, Storage: −15 to 60°C (with no icing or condensation)							
Ambient humidity	Operating and storage: 35% to 85% (with no condensation)							
Insulation resistance	20 MΩ min. at 500 VDC							
Dielectric strength	1,000 VAC, 50/60 Hz for 1 min							
Vibration resistance (destruction)	10 to 150 Hz, 0.7-mm double amplitude 80 min each in X, Y, and Z directions							
Shock resistance (destruction)	300 m/s^2 3 times each in six directions (up/down, left/right, forward/backward)							
Degree of protection	IEC60529, IP50			IEC60529, IP40	IEC60529, IP50			IEC60529, IP40
Connection method	Connector relay (standard cable length: 500 mm)							
Weight (packed state)	Approx. 150 g			Approx. 250 g	Approx. 150 g			Approx. 250 g
Materials	Case: PBT (polybutylene terephthalate), Cover: Aluminum, Lens: Glass			Case and cover: Aluminum, Lens: Glass	Case: PBT (polybutylene terephthalate), Cover: Aluminum, Lens: Glass			Case and cover: Aluminum, Lens: Glass
Accessories	Instruction sheet, Laser warning label (English)							

*1. Beam size: The beam size is defined by $1/e^2$ (13.5%) of the strength of the beam at the beam center (measured value). Incorrect detection may occur if there is light leakage outside the defined spot and the material around the sensing object is more reflective than the sensing object.

*2. Resolution: The resolution is the deviation (±3σ) in the linear output when connected to the ZX-LDA Amplifier Unit. (The resolution is measured with the standard reference object (white ceramic), at the measurement point with the ZX-LDA set for an average count of 4,096 per period.) The resolution is given at the repeat accuracy for a stationary workpiece, and is not an indication of the distance accuracy. The resolution may be adversely affected under strong electromagnetic fields.

*3. Linearity: The linearity is given as the error in an ideal straight line displacement output when measuring the standard reference object. The linearity and measurement values vary with the object being measured.

*4. Temperature characteristic: The temperature characteristic is measured at the measurement point with the Sensor and reference object (OMRON's standard reference object) secured with an aluminum jig.

Note: Highly reflective objects can result in incorrect detection by causing out-of-range measurements.

■ Sensor Heads (Through-beam)

Item / Model	ZX-LT001		ZX-LT005	ZX-LT010
Optical system	Through-beam			
Light source (wave length)	Visible-light semiconductor laser with a wavelength of 650 nm; JIS class1			
Maximum output	0.2 mW max.		0.35 mW max.	
Measurement width	1-mm dia.	1- to 2.5-mm dia.	5 mm	10 mm
Measurement distance	0 to 500 mm	500 to 2,000 mm	0 to 500 mm	
Minimum sensing object	8-µm dia. (opaque)	8- to 50-µm dia. (opaque)	0.05-mm dia. (opaque)	0.1-mm dia. (opaque)
Resolution*1	4 µm *2	---	4 µm *3	
Temperature characteristic	0.2% FS/°C			
Ambient illumination	Incandescent lamp: 10,000 lx max. (on light-receiving side)			
Ambient temperature	Operating: 0 to 50°C, Storage: −25 to 70°C (with no icing or condensation)			
Degree of protection	IEC60529, IP40			
Connection method	Connector relay (standard cable length: 500 mm)			
Weight (packed state)	Approx. 220 g			
Cable length	Extendable up to 10 m with special extension cable.			
Materials	Case: Polyetherimide, Case cover: Polycarbonate, Unit cover: Glass			
Tightening torque	0.3 N·m max.			
Accessories	Optical axis adjustment seal, sensor head-amplifier connection cable (1.5 m), instruction sheet			

*1. This value is obtained by converting the deviation (±3σ) in the linear output that results when the sensor head is connected to the amplifier unit, into the measurement width.

*2. For an average count of 64. The value is 5 µm for an average count of 32.
This is the value that results when a minimum sensing object blocks the light near the center of the 1-mm measurement width.

*3. For an average count of 64. The value is 5 µm for an average count of 32.

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■ Amplifier Units

Item / Model	ZX-LDA11-N	ZX-LDA41-N
Measurement period	150 µs	
Possible average count settings*1	1, 2, 4, 8, 16, 32, 64, 128, 256, 512, 1,024, 2,048, or 4,096	
Temperature characteristic	When connected to a Reflective Sensor Head: 0.01% FS/°C, When connected to a Through-beam Sensor Head: 0.1% FS/°C	
Linear output*2	4 to 20 mA/FS, Max. load resistance: 300 Ω, ±4 V (± 5 V, 1 to 5 V *3), Output impedance: 100 Ω	
Judgement outputs (3 outputs: HIGH/PASS/LOW)*1	NPN open-collector outputs, 30 VDC, 50 mA max. Residual voltage: 1.2 V max.	PNP open-collector outputs, 30 VDC, 50 mA max. Residual voltage: 2 V max.
Laser OFF input, zero reset input, timing input, reset 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 within 1.5 V OFF: Open (leakage current: 0.1 mA max.)
Functions	Measurement value display, set value/light level/resolution display, scaling, display reverse, display OFF mode, ECO mode, number of display digit changes, sample hold, peak hold, bottom hold, peak-to-peak hold, self-peak hold, self-bottom hold, intensity mode, zero reset, initial reset, ON-delay timer, OFF-delay timer, one-shot timer, deviation, previous value comparison, sensitivity adjustment, keep/clamp switch, direct threshold value setting, position teaching, 2-point teaching, automatic teaching, hysteresis width setting, timing inputs, reset input, monitor focus, (A-B) calculations*4, (A+B) calculations*4, mutual interference*4, laser deterioration detection, zero reset memory, key lock	
Indications	Operation indicators: High (orange), pass (green), low (yellow), 7-segment main display (red), 7-segment subdisplay (yellow), laser 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 power supply voltage of 24 VDC (with Sensor connected)	
Ambient temperature	Operating: 0 to 50°C, Storage: −15 to 60°C (with no icing or condensation)	
Ambient humidity	Operating and storage: 35% to 85% (with no condensation)	
Insulation resistance	20 MΩ min. at 500 VDC	
Dielectric strength	1,000 VAC, 50/60 Hz for 1 min	
Vibration resistance (destruction)	10 to 150 Hz, 0.7-mm double amplitude 80 min each in X, Y, and Z directions	
Shock resistance (destruction)	300 m/s² 3 times each in six directions (up/down, left/right, forward/backward)	
Connection method	Prewired (standard cable length: 2 m)	
Weight (packed state)	Approx. 350 g	
Materials	Case: PBT (polybutylene terephthalate), Cover: Polycabonate	
Accessories	Instruction sheet	

*1. The response speed of the linear output is calculated as the measurement period × (average count setting + 1) (with fixed sensitivity).
The response speed of the judgement outputs is calculated as the measurement period × (average count setting + 1) (with fixed sensitivity).
*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.

Note: For operating details, refer to the operation manual (Cat. No. Z157).

■ Calculating Unit

Item	ZX-CAL2
Applicable Amplifier Units	ZX-LD11-N/41-N, ZX-EDA11/41, ZX-TDA11/41
Current consumption	12 mA max. (supplied from the Smart Sensor Amplifier Unit)
Ambient temperature	Operating: 0 to 50°C, Storage: −15 to 60°C (with no icing or condensation)
Ambient humidity	Operating and storage: 35% to 85% (with no condensation)
Connection method	Connector
Dielectric strength	1,000 VAC, 50/60 Hz for 1 min
Insulation resistance	100 MΩ (at 500 VDC)
Vibration resistance (destructive)	10 to 150 Hz, 0.7-mm double amplitude 80 min each in X, Y, and Z directions
Shock resistance (destructive)	300 m/s² 3 times each in six directions (up/down, left/right, forward/backward)
Materials	Display: Acrylic, Case: ABS resin
Weight (packed state)	Approx. 50 g
Accessories	Instruction sheet

■ ZX-series Communications Interface Unit

Item		ZX-SF11
Current consumption		60 mA max. (supplied by the Amplifier Unit)
Applicable Amplifier Units		ZX Series
Applicable Amplifier Unit versions		ZX-LDA@1-N Ver. 1.000 or higher ZX-EDA@1 Ver. 1.100 or higher ZX-TDA@1 Ver. 1.000 or higher
Max. No. of Amplifier Units		5
Communications functions	Communications port	RS-232C port (9-pin D-Sub Connector)
	Communications protocol	CompoWay/F*
	Baud rate	38,400 bps
	Data configuration	Data bits: 8, Parity: none, Start bits: 1, Stop bits: 1, Flow control: none
Indicators		Power supply: green, Sensor communications: green, Sensor communications error: red, External terminal communications: green, External terminal communications error: red
Protective circuits		Reverse polarity protection
Ambient temperature		Operating: 0 to 50°C, storage: −15 to 60°C (with no icing or condensation)
Ambient humidity		Operating and storage: 35% to 85% (with no condensation)
Insulation resistance		20 MΩ min. (at 500 VDC)
Dielectric strength		1,000 VAC, 50/60 Hz for 1 min, Leakage current: 10 mA max.
Materials		Case: PBT (polybutylene terephthalate), Cover: Polycarbonate
Accessories		Instruction sheet, 2 clamps

* Contact your OMRON representative for CompoWay/F communications specifications.

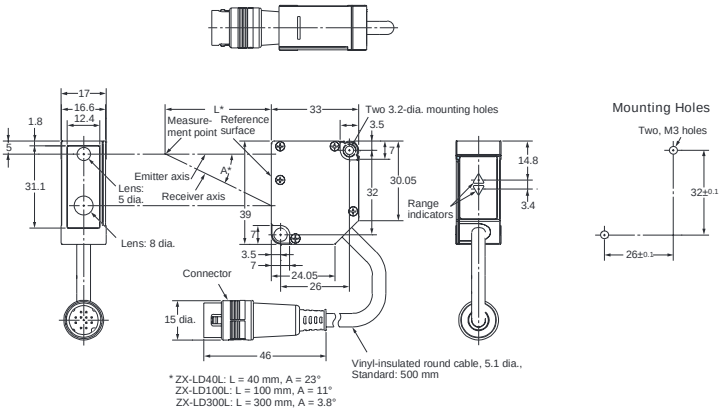
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Dimensions

(Unit: mm)

■ Sensor Heads (Diffuse Reflective)

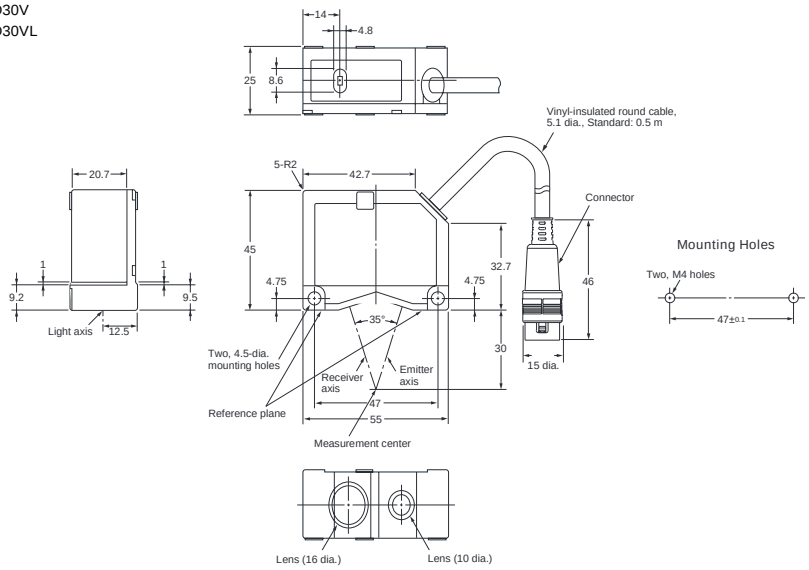
ZX-LD40
ZX-LD100
ZX-LD300
ZX-LD40L
ZX-LD100L
ZX-LD300L



* ZX-LD40L: L = 40 mm, A = 23°
ZX-LD100L: L = 100 mm, A = 11°
ZX-LD300L: L = 300 mm, A = 3.8°

■ Sensor Heads (Regular Reflective)

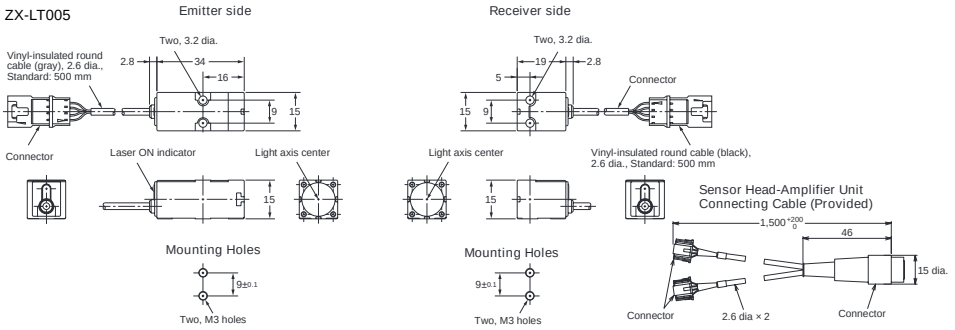
ZX-LD30V
ZX-LD30VL



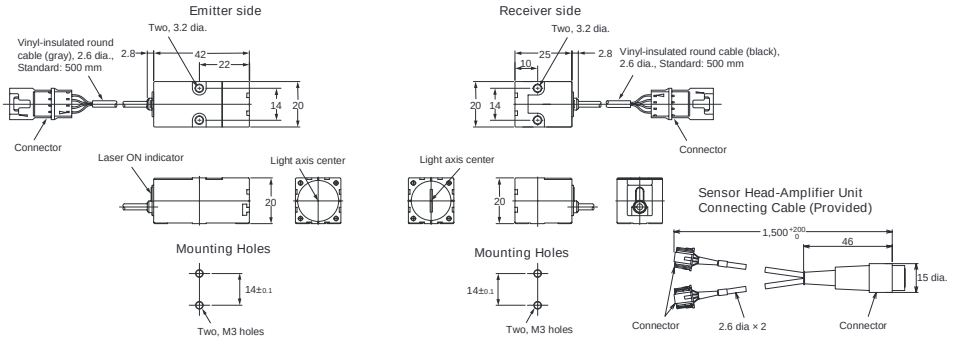
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■ Sensor Heads (Through-beam)

ZX-LT001
ZX-LT005

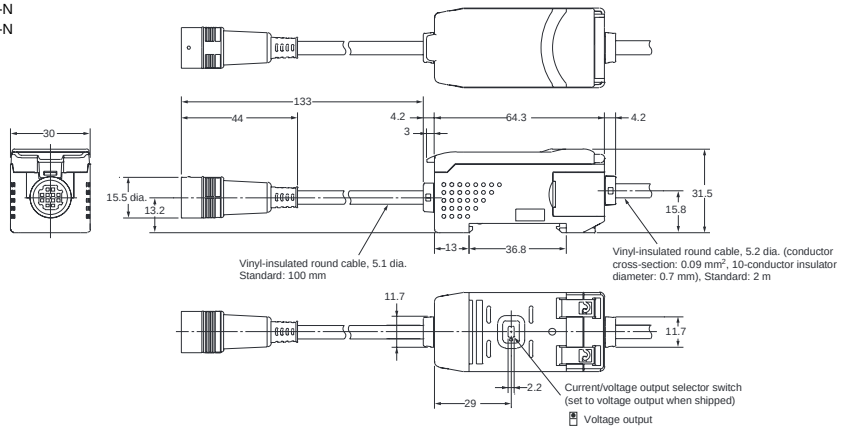


ZX-LT010



■ Amplifier Units

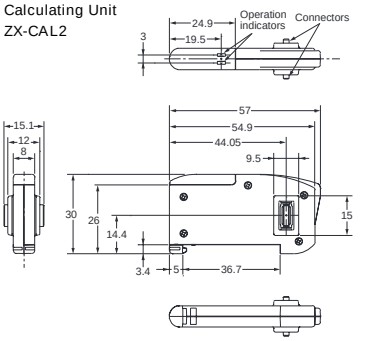
ZX-LDA11-N
ZX-LDA41-N



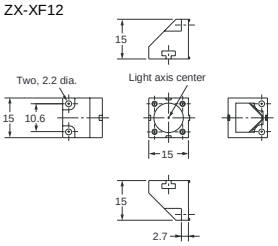
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■ Accessories (Order Separately)

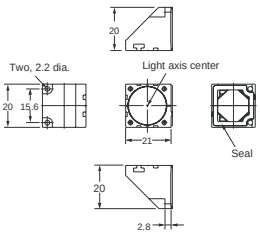
Calculating Unit
ZX-CAL2



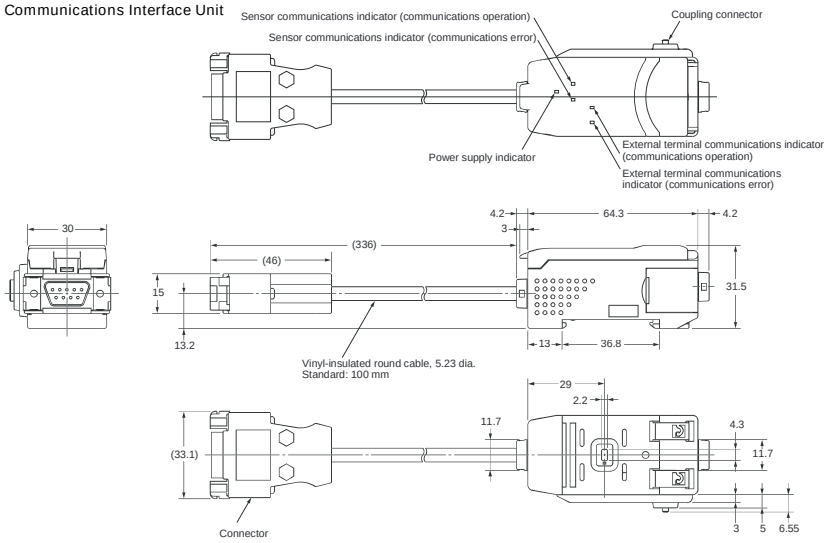
Side-view Attachments
ZX-XF12



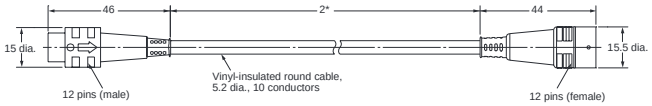
ZX-XF22



ZX-series Communications Interface Unit
ZX-SF11



Cables with Connectors on Both Ends (for Extension)
ZX-XC1A (1 m)
ZX-XC4A (4 m)
ZX-XC8A (8 m)
ZX-XC9A (9 m)*1



*1 For use only with the ZX-L.
*2 ZX-XC1A: 1,000
ZX-XC4A: 4,000
ZX-XC8A: 8,000
ZX-XC9A: 9,000

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