OMRON Model **ZW-5000**

Controller for Fiber Coaxial Displacement Sensor

INSTRUCTION SHEET

Thank you for selecting OMRON product. This sheet primarily describes precautions required in installing and operating the product. Before operating the product, read the sheet thoroughly to acquire sufficient knowledge of the product. For your convenience, keep the sheet at your disposal.

TRACEABILITY INFORMATION: Importer in EU: OMRON Europe B.V.

Wegalaan 67-69

The Netherlands

Manufacturer: OMRON Corporation, Shiokoji Horikawa, Shimogyo-ku, Kyoto. 600-8530 JAPAN NI -2132 JD Hoofddorp

The following notice applies only to products that carry the CE mark: Notice:

This is a class A product. In residential areas it may cause radio interference, in which case the user may be required to take adequate measures to reduce interference.

> E 9308560-9E

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PRECAUTIONS ON SAFETY

Meanings of Signal Words

Indicates a potentially hazardous situation which, if not avoided, will result in minor or moderate injury, or may result in serious injury or death. Additionally, there may be significant property damage.
Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury or in property damage.

Alert Statements in This Sheet

This product is not designed or rated for ensuring safety of persons either directly or indirectly. Do not use it for such purposes.

Do not disassemble the product. Doing so may cause electric shock due to the high voltage portion. Burn also may result due to high

temperature. Do not attempt to disassemble, deform by pressure, incinerate, repair, or modify this product.

Do not use it exceeding the rated voltage. There is a possibility of failure and □fire.

Do not connect amplifier units to AC power supply. Risk of explosion.

PRECAUTIONS FOR SAFE USE

Please observe the following precautions for safe use of the products.

- Initial alon Environment
 Do not use the product in environments where it can be exposed to inflammable/explosive gas.
 To secure the safety of operation and maintenance, do not install the product close to high-voltage devices and power devices.
 Ensure clearances 30 mm or more wide and 10 mm or more wide on the top and both sides of the sensor controller main which features there are the safety of the sensor controller main
- unit for intaking and exhausting air, respectively.
 Hang the upper side of the groove on the back of the sensor controller on the DIN rail. After installing the sensor controller, he sure to confirm that the Sensor Controller is fixed surely.
 When fixing the sensor controller with mounting screws, tighten the screws to the specified torque (1.2 Nm) described in the back of the sensor controller.

- this instruction Sheet.
 Avoid installing in the place with the vibrations as much as possible.
 Do not install the product near any devices that generate noise. If there is no choice but to install the product in a noisy environment, make sure to take noise prevention measures.
 2.Power Supply and Wring Power Supply and Wirng • Be careful when using a power supply with the overcurrent detection function. This sensor uses a DC-DC converter for the power supply circuit. The protection circuit may be activated due to surge current when using a power supply with the overcurrent detection function.

- overcurrent detection function.
 Recommended power supply: S8VS-06024 (OMRON: 24 VDC 2.5 A 60 W)
 Do not apply voltages or AC power supplies that exceed the rated voltage (24 VDC±10%).
 Do not reverse the polarity of the power connection.
 Unstable voltage may cause unexpected operation of the sensor controller. If such condition is anticipated, use an UPS (Uninterruptible Power Supply).
 Recommended UPS: S8BA Series (OMRON)
 Opence/lector outputs should not be short-circuited.

- Open-collector outputs should not be short-circuited.
 Open-collector outputs should not be short-circuited.
 The load current must be equal to or less than the specified value.
 High-Voltage lines and power lines must be wired separately from this product. Wiring them together or placing them in the same duct may cause induction, resulting in malfunction or damage.
 Take sufficient safety measures such as fail-safe circuit to use the product.
 Use a wire of the specified size for wiring. Do not connect the wire other than the specified size to the terminal block.
 Fix the terminal block tightly to protect from accidental injury by pushing the release button on the attached terminal block.
- block with a screwdriver. Supply power from a DC power supply for which measures have been applied to prevent high voltages (e.g., a safety
- block with a screwdriver.
 Supply power from a DC power supply for which measures have been applied to prevent high voltages (e.g., a safety extra low voltage circuit).
 The length of the power supply cable should be as short as possible.
 For the frame ground terminals, the terminal screw and crimp terminal of the specified size must be used. Do not directly connect the merely twisted wires to the frame ground terminals. Crimp terminal of the spower form a DC.
 Por the frame grounding (the ground resistance of 100 ohm or less). Set the grounding point as close as possible and the length of the growing wire as short as possible.
 Do not share the grounding wire as both edvice or do not connect the grounding wire to the beam of a building. Otherwise an adverse effect may occur.
 Do not connect this product with the same power supply as applied to an apparatus which might cause noises.
 Always turn off the power of the main unit before taking the following actions. Not doing so may result in malfunction.
 Connecting or wiring the cable
 Mounting or removing the Calibration ROM
 Before turning on the power after the wiring is completed, verify that the power is correct, that there are no incorrect connections such as a shorted load circuit, and that the load current is suitable. Incorrect wiring may cause damage and failures.
 When inserting or removing the Calibration ROM
 Before turning on the fiber cable, be careful not to stress the calibration ROM
 Handling of the fiber cable or more more more more more is suitable. Incorrect wiring may cause damage and failures.
 When inserting on the fiber cable or put anything heavy on it.
 Avoid the root of the fiber connector from being stressed by the bend.
 Do not step on the fiber cable or put anything heavy on it.
 Avoid applying torsional stress on the fiber cable.
 When connecting the fiber cable or put anything he

- When connecting the fiber connector, do not forciny push it or apply torsional succes to it.
 3.0thers
 Do not look into the light injection port directly.
 Do not use in safety circuits for atomic energy or that are critical for human life.
 Do not tatempt to disassemble, deform by pressure, incinerate, repair, or modify this product.
 When disposing of the product, treat as industrial waste.
 Connect a dedicated device (Sensor Head, Calibration ROM, fiber cable or RS-232C cable). Use of other devices may result in fire, explosion, malfunction or failure.
 Do not cut off the fiber cable. Otherwise, you might be injured by the glass of the cut portion. In addition, the Sensor Controller does not operate normally if the cable is cut off.
 If you notice an abnormal condition such as a strange odor, extreme heating of the unit, or smoke, immediately stop using the product, turn off the power, and consult your dealer.
 Do not or or por impose shock on the product.
 Hensure that all components which have locking mechanisms are locked before using the product.
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 Elsectromagnetic environment : Industrial electromagnetic environment (EN/IEC 61326-1 Table 2).
 The value of the interview is the two inversive test of the product.

- ENO1320-1
 Electromagnetic environment : Industrial electromagnetic environment (EN/IEC 61326-1 Table 2)
 The following condition is applied to the immunity test of this product: While receiving electromagnetic interference, the voltage/current output might vary within ±3% of full scale.
- EMC Directive No.2014/30/EU

PRECAUTIONS FOR CORRECT USE

Observe the following to prevent failure, malfunctioning, and adverse effects on performance and the device Observe the following to prevent failure, malfunctioning, and adverse effects on performance and the Linstallation site Do not install in the following locations: • Locations subject to sudden temperature exceeds the rated temperature range. • Locations subject to sudden temperature exceeds the rated temperature range. • Locations where the relative humidity is below or above 35% to 85%. • Locations where the relative humidity is below or above 35% to 85%. • Locations where there are corrosive or flammable gases. • Locations where there is dust, salt, or iron powder. • Locations where there is strong scattered light (laser light, are welding light, ultraviolet light, etc.) • Locations where there is strong scattered light (laser light, are welding light, ultraviolet light, etc.) • Locations where there is a strong electrical or magnetic field. 2.Power and cable connections

Locations where there is a strong electrical or magnetic field.
2.Power and cable connections
When using a commercially available switching regulator, make sure that the Frame ground terminal is grounded.
Wire without placing load on the cables/connectors.
If there are surges on your power line, connect a surge absorber as appropriate for your conditions of use.
Use the product with the specified voltage. Applying a voltage or AC voltage that exceed the rating may result in burning or explosion of circuit components.
To extend the fiber cable between the Sensor Head and Sensor Controller, an optional extension fiber cable (ZW-XF50]
R) must be used. Only one extension fiber cable can be connected.
Use the Sensor Head and Calibration ROM of the same serial number. Operation will fail if those with different serial numbers are used.

numbers are used. Use the decirated Setup Software. Using the other software may result in malfunction of the product. Do not turn off the power supply while saving data into the Sensor Controller built-in memory. Doing so may damage the data. When the fiber cable is not connected, attach the provided protective caps to the fiber adapter and fiber connector. Leaving the product without the protective caps may result in malfunction caused by adhesion of a foreign material. When conclude the sensor head at unitial startup affer factory shipment, or connecting another type of the sensor head to the sensor controller at previous startup, be sure to initialize the setup with the sensor head connected to the sensor controller.

3.Warming Up After turning ming Up er turning on the power supply, allow the Sensor Controller to stand for at least 30 minutes before use. The internal perature of the Sensor Controller are unstable immediately after the power supply is turned on and attempting surrement may result in inconsistent measurement values.

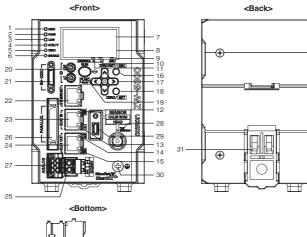
measurement may result in inconsistent measurement values. Maintenance • Do not use thinner, benzene, acetone or kerosene to clean the Sensor Head, fiber cable or Sensor Controller, If considerable foreign matter or dust collects on the Sensor Head or receiver/emitter of the Sensor Controller, use a blower brush (for camera lenses) to blow off the foreign matter. Avoid blowing it off with your breath. For a small amount of foreign matter or dust, gently wipe with a soft cloth. Do not wipe hard. If the receiver/emitter is damaged, malfunction or measurement error may result. • Do not touch the end face of the fiber cable of the sensor head. Otherwise, performance deterioration might occur. If the end face touches anything or becomes unclean, wipe off the dirt with option product ZW-XCL, the commercially available dedicated fiber cleaner, or a dry soft cloth. Do not use cloth soaked in alcohol. Otherwise, dirt might adhere again. • To clean the fiber connector of the controller, use option product ZW-XCL. • If inserting/extracting the sensor head (requently, use of the repeatedly usable commercially available dedicated fiber cleaner is recommended. For the recommended fiber cleaner, refer to the operation manual of the sensor head (ZW-5000 series sensor head).

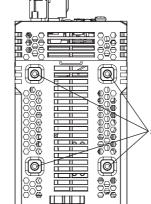
- head). Clean the vent hole periodically so as not to be clogged with dust or particulate. If the vent hole is clogged, heat is not dissipated from inside, leading a failure. 5.Sensing Object For Sensor Head Depending on the material/shape of the object, the object cannot be measured or can be measured but accuracy is poor. Transparent tobjects, objects with a low reflective sensor ratio, objects smaller than the spot diameter, objects with a large curvature, excessively inclined objects, objects with thin film on the surface, etc.

City value: Excessively insured operations of the second s lighting. 7. Influence of air current Massurad values may w

- Influence of air current Measured values may vary due to slow air current around the Sensor Head. In such case, put a cover around the Sensor Head.
 Operation beyond the measurement range As this sensor is sensitive, malfunction may occur beyond the measurement range. In such case, shorten the exposure to light or raise the level of the background removal.
 Service life of writing to sensor controller built-in EEPROM
 When the zero resetting memory is preset ON, data are written in the EEPROM (non-volatile memory) in the sensor controller every time the memory is reset to zero. The life of this EEPROM as writable memory is approximately one million times. So, if using the memory with setting it ON, be careful with the life of the writable memory.
 Coverage of fixing support
 Fixing support of component replacement by fiber breaking, lens damage and so on is not accepted.

Parts Names and Functions





No.	Name (color)	Function
1	HIGH indicator (Orange)	Lights when the judgment result is HIGH (HIGH threshold < measured value).
2	PASS indicator (Green)	Lights when the judgment result is PASS
		(LOW threshold ≤ measured value ≤ HIGH threshold).
3	LOW indicator (Orange)	Lights when the judgment result is LOW (measured value < LOW threshold
4	STABILITY indicator (Green)	Lights when the first surface is within the measuring range.
		Turns OFF when the measured value is outside the measuring range
5	ZERO indicator (Green)	Lights when zero reset setting is made.
6	ENABLE indicator (Green)	Lights when measurement is enabled. Turns off when measurement is disabled (e.g. when the
		received light amount is excessive or insufficient, when the Calibration ROM is not connected, or when FUNC mode is not active for measurement).
7	Main digital indicator (White)	Shows a measurement value or function name.
8	Sub digital indicator (Green)	Shows a measurement value of the measurement value or set value of the function
9	RUN indicator (Green)	Lights at RUN mode and turns off at FUNC mode.
10	THRESHOLD-L indicator (Orange)	
11		Lights when a HIGH threshold is shown on the sub digital.
12		Lights when EtherCAT communications is available.
13		Lights when connected to the EtherCAT device, and blinks during communications (data inputs).
14	L/A OUT indicator (Green)	Lights when connected to the EtherCAT device, and blinks during communications (data outputs
15	ECAT ERROR indicator (Red)	
QD	erating section	
No.	Name	Function
16	ZERORST/ESC key	Functions differ depending on operating mode.
17	←(LEFT) key	
	→ (RIGHT) key	
	1 (UP) key	
	↓ (DOWN) key	
18	ZERO/SET key	
19	Mode switch key	
20	Node address setting switch	
	(in hexadecimal)	The setting range is 0x01(1) to 0xFF(255).
No.	nnector/terminal	Function
21	RS-232C connector	Function Used when connecting a PLC or PC via RS-232C port.
21	H3-2320 COLINECTO	Be sure to use a dedicated RS-232C cable.
		De sule lo use a dedicated h3-2320 cable.
		Otherwise malfunction or failure may result
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22	Ethernet connector	•
22	Ethernet connector	For PLC/programmable terminal: ZW-XPT2 For PC: ZW-XRS2 Used to connect a PLC or PC via Ethernet.
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		For PLC/programmable terminal: ZW-XPT2 For PC: ZW-XRS2 Used to connect a PLC or PC via Ethernet. Be sure to use a commercial Ethernet cable that satisfies the following conditions Category 5e or higher, length 30 m or shorter RJ45 connector (8-pin modular jack) 1.1 connection: Select a cross cable. Connection via network HUB: Select a straight cable.
	Ethernet connector EtherCAT connector (IN)	For PLC/programmable terminal: ZW-XPT2 For PC: ZW-XR52 Used to connect a PLC or PC via Ethernet. Be sure to use a commercial Ethernet cable that satisfies the following conditions Category 5e or higher, length 30 m or shorter RJ45 connector (8-pin modular jack) 1:1 connection: Select a cross cable. Connection via network HUB: Select a straight cable. Used when connecting to the EtherCAT compatible device.
23	EtherCAT connector (IN)	For PLC/programmable terminal: ZW-XPT2 For PC: ZW-XRS2 Used to connect a PLC or PC via Ethernet. Be sure to use a commercial Ethernet cable that satisfies the following conditions Category 5e or higher, length 30 m or shorter RJ45 connector (8-pin modular jack) 1:1 connection: Select a cross cable. Connection via network HUB: Select a straight cable. Used when connecting to the EtherCAT compatible device. Use a recommended EtherCAT cable.
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23	EtherCAT connector (IN) EtherCAT connector (OUT)	For PLC/programmable terminal: ŻW-XPT2 For PC: ZW-XRS2 Used to connect a PLC or PC via Ethernet. Be sure to use a commercial Ethernet cable that satisfies the following conditions Category 5e or higher, length 30 m or shorter RJ45 connector (8-pin modular jack) 1:1 connection: Select a cross cable. Connection via network HUB: Select a straight cable. Used when connecting to the EtherCAT compatible device. Use a recommended EtherCAT cable. Use a recommended EtherCAT cable.
23 24 25	EtherCAT connector (IN) EtherCAT connector (OUT) 24V input terminal block	For PLC/programmable terminal: ZW-XPT2 For PC: ZW-XRS2 Used to connect a PLC or PC via Ethernet. Be sure to use a commercial Ethernet cable that satisfies the following conditions Category 5e or higher, length 30 m or shorter RJ45 connector (8-pin modular jack) 1:1 connection: Select a cross cable. Connection via network HUB: Select a straight cable. Used when connecting to the EtherCAT compatible device. Use a recommended EtherCAT cable. Use a recommended EtherCAT cable. Connects the 24VDC power supply of the Sensor Controller.
23 24 25	EtherCAT connector (IN) EtherCAT connector (OUT)	For PLC/programmable terminal: ŻW-XPT2 For PC: ZW-XR52 Used to connect a PLC or PC via Ethernet. Be sure to use a commercial Ethernet cable that satisfies the following conditions Category 5e or higher, length 30 m or shorter RJ45 connector (8-pin modular jack) 1:1 connection: Select a cross cable. Connection via network HUB: Select a straight cable. Used when connecting to the EtherCAT compatible device. Use a recommended EtherCAT cable. Used when connecting to the EtherCAT compatible device. Use a recommended EtherCAT cable. Connects the 24/DC power supply of the Sensor Controller. Connects parallel I/0 (judgment output, ALARM output, BUSY output,
22 23 24 25 26	EtherCAT connector (IN) EtherCAT connector (OUT) 24V input terminal block 32-pole expansion	For PLC/programmable terminal: ŻW-XPT2 For PC: ZW-XRS2 Used to connect a PLC or PC via Ethernet. Be sure to use a commercial Ethernet cable that satisfies the following conditions Category 5e or higher, length 30 m or shorter RJ45 connector (8-pin modular jack) 1:1 connection: Select a cross cable. Connection via network HUB: Select a straight cable. Used when connecting to the EtherCAT compatible device. Use a recommended EtherCAT cable. Connects the 24VDC power supply of the Sensor Controller. Connects parallel I/0 (judgment output, ALARM output, BUSY output, ENABLE output, bark No. output, SYNCFLG/TRIGBUSY output,
23 24 25	EtherCAT connector (IN) EtherCAT connector (OUT) 24V input terminal block 32-pole expansion	For PLC/programmable terminal: ŻW-XPT2 For PC: ZW-XR52 Used to connect a PLC or PC via Ethernet. Be sure to use a commercial Ethernet cable that satisfies the following conditions Category 5e or higher, length 30 m or shorter RJ45 connector (8-pin modular jack) 1:1 connection: Select a cross cable. Connection via network HUB: Select a straight cable. Used when connecting to the EtherCAT compatible device. Use a recommended EtherCAT cable. Used when connecting to the EtherCAT compatible device. Use a recommended EtherCAT cable. Connects the 24/DC power supply of the Sensor Controller. Connects parallel I/0 (judgment output, ALARM output, BUSY output,

27 Analog output terminal block Connects an analog voltage output and analog current output. Connects a fiber connector. or Connects the Calibration ROM.

30 Frame ground terminal A terminal for frame grounding. Connects a grounding wire.

28 Fiber adapter 29 ROM connector



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No	Name	Function
-		Used when securing the Sensor Controller to the DIN track.
31	Din track mounting hook	Used when securing the Sensor Controller to the DIN track.
<bo< th=""><th>ottom></th><th></th></bo<>	ottom>	
No	Name	Function

32 Mounting screw hole Used to secure the Sensor Controller with screws

Specifications

External Ethernal Eth	Item				Specifications
Total number of Sensor Heads connected 1. CPPETID: SPESD:::::::::::::::::::::::::::::::::::					ZW-5000
Operating Sensor Head ZW-SS0[]_SP50[]_SP50[] Segment Main digital indicator 11-segment and isolay, 6 digits Sighay Studial indicator 11-segment and isolay, 6 digits Indicators Status indicator 11-segment and isolay, 6 digits EtherCAT display ECAT RUN (Green), LAIN (LinkActivity NIV) (Green), ECAT FRIN (Green), LEAT ERR (Reperted) EtherCAT display ECAT RUN (Green), LAIN (LinkActivity NIV) (Green), LEAT ERR (Reperted) EtherCAT EtherCAT segment green toroodo 1000ASE-TX RS-232C Anator output 115.200 bis max. Anator output 115.200 bis max. Anator output expansion (IntGHPASS)(OW) 100 Vol to 10.000 cuptud relation output On the output output expansion (IntGHPASS)(OW) On the maximum fload resistance. 300.0 Transitor output method Context (IntGHPASS)(OW) On the output output (Val to 100 Cuptut voltage: 21 fb to 26 4 VDC) On the output (Val to 100 Cuptut voltage: 21 max. Enablic output (TMIKG) Compart frame output (TMIKG) OFF leakage current: 0 1 m Amax. Syme input (TREC) OFF leakage current: 1 max and output method Input voltage: 24 VDC-10% (21 fb to 26 4 VDC) Timing input (TMIKG) Compa					
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display Sub digital indicator 11-segment green display, 6 digits Indicators Status indicator 11-segment green display, 6 digits Ether CAT display ECAT PUN (Green), THRESHOL-H (Cange), THRESHOL-H (Cange), THRESHOL-H (Cange), ECAT EPRI (Backen), ECAT EPRI (Backen), ECAT EPRI (Backen), ECAT EPRI (Backen), EC	Safety of LE	D			Risk Group 1 (IEC 62471)
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ZER0 (Green), EMBEL G(Green), THRESHOLPH (Compe), THRESHOLPL (Chargel, RUN (Green), TAN (Link/Activity ND) (Green) LA OUT (Link/Activity OUT) (Green), ECAT ERR (Re Interface Enternet 1098A5E-TX10BASE-T non-procedural (TCPUUP), EnterNe TherCAT Bitmat bics Analog output (Analog voltage output) (IN A DUT (Link/Activity OUT) (Green), ECAT ERR (Re Re):232C Immat bics Analog output (Analog voltage output) (DUT) 10 Y to +10 Y, output impedance: 100 Ω Immat bics Analog output (Analog Voltage output) (DUT) (DUT) (Tansistor output method onput) (MERRES)(DW) ON residual voltage: 2 V max. Comector Busy output (BUSY) connector ON residual voltage: 2 V max. Sync flag output (SABET) (Loging entro output) (SABET) (Sync input (SABET)) (Loging entro output) (SABET) (Sync input (SABET)) (Sync input (SABET)) (Sync input (SABET)) (Sync input (SABET)) (Sync input (SABET)) (Sync input (SYNCE)) (SaBET) (SABET) (Sync input (SYNCE	Indicators	Status indicator			HIGH (Orange), PASS (Green), LOW (Orange), STABILITY (Green),
Ether CAT display ECAT RUN (Green). L/A IN (Link/Activity QU) (Green). ECAT ERR (Re) Interface Ethernat 1008A5E-TX10BA5E-T (Consen). ECAT ERR (Re) EtherCAT EtherCAT EtherCAT Relig opta/ Image opta/ Barbaidov Anaig outpat (Curron). 10: Vio +10: V. outpat impedances: 10: 0. 0. Image optation (Curron). 10: Vio +10: V. outpat impedances: 10: 0.0. Image optation (Curron). 10: Vio +10: V. outpat impedances: 10: 0.0. Image optation (Curron). 10: Vio +10: V. outpat impedances: 10: 0.0. Image optation (Curron). 10: Vio +10: V. outpat impedances: 10: 0.0. Image optation (Curron). 10: Vio Indian (Curron). 10: Vio Indian. 10: 0: Vio In					
External interface LA QUT (Link/Activity, QUT) (Green), ECAT ERR (Re- Interface EthercAT EthercAT-specific protocol 100BASE-TX RS-232C 115,200 bps max. Andig output Analog output (QUT) 10 Vio 1 VIO volupt impedance: 100 Q symption Transistor output method Output voltage: 21 bits 30 VDC connector Busy output (BUSY) Ladg output (ALARM) Connector Busy output (BUSY) Lagging atter output (SNRLG) Tinger busy output (SNRLG) Tinger busy output (SNRLG) Light TOFF input Light TOFF input Light TOFF input Car output (SNRLG) Tinger busy output (SNRLG) Tinger input (FESET) Sync input (SORIN) Resector Input voltage: 21 bits 30 VDC Logging input (VION) Tinger input (FIRG) Logging input (SORIN) Timing input (TIMING) OV output set 21 bits 30 VDC Light Mark Car output woltage: 21 bits 30 VDC Logging input (SORIN) Tinger input (FIRG) <t< td=""><td></td><td colspan="3"></td><td>THRESHOLD-L (Orange), RUN (Green)</td></t<>					THRESHOLD-L (Orange), RUN (Green)
External Ethernal Ethernal Ethernal Ethernal EtherCAT External EtherCAT External EtherCAT External EtherCAT External Ext		EtherCAT	display		ECAT RUN (Green), L/A IN (Link/Activity IN) (Green)
Interface EtherCAT EtherCAT-specific protocol 100BASE-TX Araleg output Araleg output (DUT) 115 200 Dps max. Araleg output (DUT) 32-pole Judgment output (OUT) Transistor output method Output voltage: 21 bit 300 VDC construct Busy output (BUSY) Transistor output method Output voltage: 21 bit 30 VDC construct Busy output (BUSY) Fileakage current: 0.1 mA max. Syme flag output(SYNFLG) Tinger busy output (BUSY) Der sidual voltage: 24 VDC:10% (21.6 to 26.4 VDC) Input voltage: 32 VOC:10% (21.6 to 26.4 VDC) Light TO FF: Input voltage: 24 VDC:10% (21.6 to 26.4 VDC) Input voltage: 24 VDC:10% (21.6 to 26.4 VDC) Timing input (TIMING) OFF voltage/OFF current: 5 V/1 mA max. Otyput voltage: 21.6 to 30 VDC Zeror reser input (ZFR) Oveltage: 21.6 to 30 VDC Otyput voltage: 21.6 to 30 VDC Timing input (TIMING) OVeltage: 21.6 to 30 VDC Input voltage: 21.6 to 30 VDC Bark Bark output units Oveltage current: 5 V/1 mA max. Bark Bark output units Oveltage current: 5 V/1 mA max. OFF voltage/OFC current: 5 V/1 mA max. OFF voltage/OFC (21.6 to 26.4 VDC) Input voltage: 21 to 3					L/A OUT (Link/Activity OUT) (Green), ECAT ERR (Red)
R5-232C 115.200 bps max. Analog voltage output CMU1) 10 V to 10 V output impedance: 10 Q Isemial block Analog voltage output (QU11) 32pole Judgment outputs connector Busy output (BUSY) Connector Busy output (BUSY) Connector Busy output (BUSY) Loagin state output (ALARM) ON residual voltage: 21 8 to 30 VDC Loagin state output (ALARM) ON residual voltage: 21 W max. Sync flag output (BUSK) Loagin state output (BOSR) Loagin state output (ICOSER) State output (ICOSER) Stability output (TRINK) DC input method Input current: 7 mA Typ. (24 VDC) Timing input (TRINK) Reset input (RESET) ON voltage/ON current: 19 VX mA min. OFF voltage/OFF current: 5 V/1 mA max. OFF voltage/OFF current: 5 V/1 mA max. Sync input (FWNC) Tingits routput method Upd voltage: 24 VDC-10% (21.6 to 26.4 VDC) Imput voltage: 24 VDC-10% (21.6 to 26.4 VDC) Input voltage: 24 VDC-10% (21.6 to 26.4 VDC) Imput voltage: 24 VDC-10% (21.6 to 26.4 VDC) Input voltage: 24 VDC-10% (21.6 to 26.4 VDC) Imput voltage: 24 VDC-10% (21.6 to 26.4 VDC) Input voltage: 24 VDC-10% (External	Ethernet			100BASE-TX\10BASE-T non-procedural (TCP/UDP), EtherNet/IF
Analog output (Analog voltage output (UUT) 1-10 V. output (Impedance:: 100 Q. 32-pole Judgment outputs 4 mA to 20 mA. maximum load resistance:: 300Q. connector Busky output (BUSY) Load output voltage:: 21 fb to 30 VDC connector Busky output (BUSY) Load output voltage:: 21 fb to 30 VDC connector Busky output (BUSY) Load output:: 50 mA max. Atarm output (ALARM) OFF leakage current:: 0.1 mA max. Sync flag output(SNFLG) DF leakage current:: 0.1 mA max. Logging atte atto (LOSSTAT) Logging atte atto (LOSSTAT) Logging atte atto (LOSSTAT) DC input method Light OFF input DC input ontert:: 7 mA Typ.: (24 VDC) Timing input (TIMING) OFF voltage/OFC current:: 5 V/1 mA max. Sync input (SYNC) Transistor output method Transistor output output; ON residual voltage:: 21 fb to 30 VDC Logging input (LOGGING) Bank Bank Bank output voltage:: 21 fb to 30 VDC Logging input (LOGGING) Bank Bank Bank output voltage:: 21 fb to 30 VDC Logging input (LOGGING) Bank Bank Bank output voltage:: 21 fb to	interface	EtherCAT			EtherCAT-specific protocol 100BASE-TX
Analog output (Analog voltage output (UUT) 1-10 V. output (Impedance:: 100 Q. 32-pole Judgment outputs 4 mA to 20 mA. maximum load resistance:: 300Q. connector Busy output (BUSY) Load output voltage:: 21.6 to 30 VDC connector Busy output (BUSY) Load output voltage:: 21 wax. Atarm output (ALARM) OFF leakage current:: 0.1 mA max. Sync flag output(SNPELG) DF leakage current:: 0.1 mA max. Sync flag output(SNPELG) DF leakage current:: 0.1 mA max. Sync flag output(SNSER) DC input method Logging atte atto (LOSSTAT) Logging atte atto (LOSSTAT) Logging input (IMING) DC input method Sync fing (PKNC) Transistor output method Tringing (TIMING) OFF voltage/OFC current: 5 V/1 mA max. Sync input (SVNC) Transistor output method Transistor output woltage: 21.6 to 30 VDC Logging input (LOGGING) Bank Bank selection Oth residual voltage: 21.6 to 30 VDC Logging input (LOGGING) Bank selection DC input method Input voltage: 21.1 to 30 DC input method Dutput voltage: 21.6 to 30 VDC Logging input (LOGGING) Bank s		RS-232C			115,200 bps max.
Isemial biok: Anaba current output Transistor output method S2-poil Judgment outputs Transistor output method output voltage: 21.6 to 30 VDC Double voltage: 21.6 to 30 VDC connector Busy output (BUSY) Alarm output (ALARM) ON residual voltage: 21.6 to 30 VDC Logang arms other output (AUSAB) ON residual voltage: 21.6 to 30 VDC Logang arms other (LINABLE) OFF leakage current: 0.1 mA max. Sality output (SIRBUTY) Logang arms other (LOGER) Sality output (SIRBUTY) Logang arms other (LIOSER) Sality output (SIRBUTY) DC input method Input voltage: 24 VDC-10% (21.6 to 26.4 VDC) Timing input (TIMING) ON voltage/OK ourrent: 19 V3 mA min. GFF voltage/OK current: 50 V1 mA max. OFF voltage/OFF current: 5 V1 mA max. Sync input (SYNC) Transistor output method Output voltage: 21 to 30 VDC Logging input (LOGGING) Logging input (LOGGING) DC input method Input voltage: 24 VDC-10% (21.6 to 26.4 VDC) Input voltage: 24 VDC-10% (21.6 to 26.4 VDC) OFF voltage/OFF current: 5 V1 mA max. OFF voltage/OFF current: 5 V1 mA max. Main Exposure time Autoffixed <t< td=""><td></td><td>Analog output</td><td>Analog v</td><td>oltage output (OUTV)</td><td></td></t<>		Analog output	Analog v	oltage output (OUTV)	
32-pole Judgment outputs connector Transistor output method 0utput voltage: 21 6 to 30 VDC Dead current: 50 mA max. 1 Alarm output (ALARM) OFF leakage current: 0.1 mA max. 2 Sync flag output(SYNELG) OFF leakage current: 0.1 mA max. 3 Sync flag output(SYNELG) OFF leakage current: 0.1 mA max. 1 Loging atta output (LOSER) Input voltage: 24 VDC-10% (21.6 to 26.4 VDC) 1 Transition count (LOSER) Input voltage: 24 VDC-10% (21.6 to 26.4 VDC) 2 Transition cutput method Input voltage: 24 VDC-10% (21.6 to 26.4 VDC) 1 Transition cutput method Ovoltage/ON current: 19 V/3 mA min. 2 Transition cutput method Ovoltage/ON current: 19 V/3 mA min. 3 Transition cutput method Input voltage: 21 fb to 30 VDC 1 Cognition (TRIG) Cognition (CSING) 3 Bank Bank output umm 8 Bank output umm Transistor cutput method 1 Input voltage: 24 VDC-10% (21.6 to 26.4 VDC) 1 Input voltage: 24 VDC-10% (21.6 to 26.4 VDC) 1 Input voltage: 24 VDC-10% (21.6 to 26.4 VDC)					
expansion (HIGH/PASSLOW) Disgroutput (BUSY) Alarm output (ALARM) Sync. Tag. output (SWNLG) Triager busy output (BUSY) Logic remet: 50 m Amax. ON residual voltage: 2 V max. OFF leakage current: 0.1 mA max. Sync. Tag. output(SWNLG) Triager busy output (DGERR) Stability output (SISTR) LOGING are control (LIGATA) LIGHT OFF input LIGHT OFF input LIGHT OFF input LIGHT OFF input (CERO) Triming input (TIMIG) Expose input (RESET) Sync. Input (SWNC) Trigger input (TRIG) Logging input (LOGGING) Bank Bark output doing selection DC input method Input current: 5 V/I mA max. Sync. Input (SWNC) Tringger input (TRIG) Logging input (LOGGING) Bank Bark output during selection Transistor output method Output voltage: 21 m ax. OV residual voltage: 21 m ax. OFF leakage current: 5 V/I mA max. Main functions Bark selection (BANK_OUTI to 3) DL cinput method Output voltage: 24 WDC2-10% (21.6 to 26.4 VDC) Input current: 5 V/I mA max. Main functions Exposure time Autofixed DC input method Input voltage: 21.6 to 30 VDC Load current: 0 mA max. Main functions Exposure time Autofixed DC input method Input voltage: 24 WDC2-10% (21.6 to 26.4 VDC) Input current: 7 mA Typ. (24 VDC) ON voltage/OFF current: 5 V/I mA max. Main functions Measurement cycle *1 80 Just to 1600 Jus Specified materials Standard/miror surface/rough surface Measurement value/filterentiation/filterentiation/filterentiation/filterentiation/filterentiation/filterentiation/filterentiation/filterentiation/filterentiation/filterentiation/filterentiation/filterentiation/filterentiation/filterentiation/filterentiation/filterentiation/filterentition/filterentiation/filterentiation/filterentiation/fil		32-pole	Judgm	ent outputs	
Connector Burgy output (BUSY) Laarn output (ALARM) Sync flag output(INK-RG Infrage busy output(IRGNS) Logins state output(COSTAT Logins state output(COSTAT Logins state output(COSTAT) Logins state output(COSTAT) Logins state output(COSTAT) Logins state output(COSTAT) Logins state output(COSTAT) LUCHT OFF input DC input method Input voltage: 24 VDC±10% (21.6 to 26.4 VDC) Input current: 7 m Typ. (24 VDC) Tringer input (CERO) ILIGHT OFF input (LIGHT OFF) DC input method Input voltage: 24 VDC±10% (21.6 to 26.4 VDC) OFF voltage/OFF current: 7 m Typ. (24 VDC) Tringer input (CERO) Transistor output (and cost output (STNC) OFF voltage/OFF current: 5 V/1 mA max. Sync input (SYNC) Transistor output method (IDANK_OUT1 to 3) OFF voltage/OFF current: 5 V/1 mA max. Bank Bank output during selection Transistor output method Output voltage: 24 VDC±10% (21.6 to 26.4 VDC) Input voltage: 24 VDC±10% (21.6 to 26.4 VDC) Input voltage/OFF current: 5 V/1 mA max. OFF leakage current: 0.1 mA max. ØFF voltage/OFF current: 5 V/1 mA max. OFF voltage/OFF current: 5 V/1 mA max. ØFF voltage/OFF current: 5 V/1 mA max. OFF voltage/OFF current: 5 V/1 mA max. ØFF voltage/OFF current: 5 V/1 mA max. OFF voltage/OFF current: 5 V/1 mA max. ØFF voltage/OFF current: 5 V/1 mA max. OFF voltage/OFF current: 5 V/1 mA max. ØFF voltage/OFF current: 5 V/1 mA max. OFF voltage/OFF current: 5 V/1 mA max.			(HIĞH/	PASS/LOW)	
Alarm output (ALARM) Sync flag output (ENABLE) Sync flag output (ENABLE) Sync flag output (INSK) Loging error output (LOGERR) Stability output (INGUSTA) Loging error output (LOGERR) Stability output (INGUSTA) Loging error output (LOGERR) Stability output (INGUSTA) LIGHT OFF input (LIGHT OFF) DC input method Input voltage: 24 VDC±10% (21.6 to 26.4 VDC) Input voltage: 24 VDC±10% (21.6 to 26.4 VDC) Timing input (TIMING) LIGHT OFF) DC input method Input voltage: 24 VDC±10% (21.6 to 26.4 VDC) ON voltage/ON current: 19 V/3 MA min. Reset input (RESET) Sync input (SYNC) ON voltage/ON current: 19 V/3 MA min. OFF voltage/OFF current: 5 V/1 mA max. Bank output during selection (BANK_OUTI to 3) DC input method Input voltage: 21 fo 30 VDC Load current: 50 mA max. DC input method Input voltage: 24 VDC±10% (21.6 to 26.4 VDC) (BANK_SEL1 to 3) DC input method DC input method Input voltage: 21 fo 30 VDC Load current: 7m TApp. (24 VDC) ON voltage/ON current: 7m TApp. (24 VDC) ON voltage/ON current: 7m TApp. (24 VDC) ON voltage/ON current: 7m TApp. (24 VDC) Dispective meant current in a Max. Main functions Exposure time Autofixed Autofixed Measurement volce '1 80 Ju s to 1600 Ju S Scaling/finds/zzero reset/measurement value logging/ VI proteosesing Measurement value/finde/firentiation/high-pass/low-pass/band-pas Voltputs Scaling/finds/zzero reset/measurement value logging/ VI proteosesing Measurement value/finde/firentiation/high-pass/low-pass/band-pas Voltputs Scaling/finds/zzero reset/measurement value logging/ VI proteosesing Voltputs Scaling/finds/zzero reset/m					
Enabling output (ENABLE) Sync flag output(SYNFLG) Loging state output(COSTAT) Loging state output(COSTAT) Loging state output(COSTAT) Loging state output(COSTAT) Loging state output(COSTAT) Task state output(CASSTAT) LLIGHT OFF input (LIGHT OFF input (LIGHT OFF) DC input method Input voltage: 24 VDC±10% (21.6 to 26.4 VDC) Input current: 7 mATyp. (24 VDC) Tringi input (CERO) Tringi input (CERO) Tringi input (CIGGING) DC input method Input output: 27 MATyp. (24 VDC) OFF voltage/OFF current: 5 W1 mA max. Sync input (SYNC) Tringi input (CIGGING) Transistor output method Output voltage: 21 to 30 VDC Load current: 50 mA max. Bank Bank output during selection (BANK_OUT1 to 3) Corp under: 21 to 30 VDC Load current: 50 mA max. OFF leakage current: 0.1 mA max. OFF leakage current: 0.1 mA max. OFF leakage current: 0.1 mA max. OFF leakage current: 0.1 mA max. Input woltage: 24 VDC±10% (21.6 to 26.4 VDC) Input current: 7 mA Typ. (24 VDC) ON voltage/OF current: 5 V11 mA max. Main functions Exposure time Auto/fixed Masurement cycle *1 80 us to 1600 us Specified materials Standard/mirror surface/rough surface Measurement terms Height/thickness/operation filter processing Measurement value/judgment result/resolution/sight internal (outputs Scaling/holds/zero reset/measurement value logging/ Keep clamp Display Measurement value/judgment result/resolution/sight internal (outputs in r		0011100101			
Sunc. flag.oubul(SYNLG) Trigger basy oubul(TRIGBUSY) Logging state oubul.(LOGERR) Stability oubul(TSKSTAT) L(GHT OFF input (LIGHT OFF) Timing input (TIMIG) Zero reset input (ZERO) Timing input (TIRIG) Bank UESET) Sync. input (SYNC) Trigger input (TERSET) Sync. input (SYNC) Bank Output during selection input input (CoGING) Bank Bank ouput during selection (BANK_OUTI to 3) Bank Selection DC F voltage/OFF current: 5 V/1 mA max. OFF voltage/OFF current: 5 V/1 mA max. OFF voltage/OFF current: 5 V/1 mA max. OFF leakage current: 0 mA max. OFF leakage current: 5 V/1 mA max. OFF leakage current: 7 mA Typ. (24 VDC) Input current: 7 mA Typ. (24 VDC) ON voltage/OF current: 5 V/1 mA max. OFF leakage current: 7 mA Typ. (24 VDC) ON voltage/OFF current: 5 V/1 mA max. DFF voltage/OFF current: 5 V/1 mA max. OFF leakage current: 7 mA Typ. (24 VDC) ON voltage/OFF current: 5 V/1 mA max. DFF voltage/OFF current: 5 V/1 mA max. Seclified materials Standar/Mirror suface/rough surface Measurement times Height/thickness/operation Filter processing Display Disp					
Image fusion output (IDGBUSY) Logging attra output (LOSGRA) Stability output (LOSGRA) Stability output (LOSGRA) Stability output (LOSGRA) UIGHT OFF) DC input method UGHT OFF) Input voltage: 24 VDC±10% (21.6 to 26.4 VDC) Timing input (TIMING) Poster input (TIMING) Reset input (RESST) OFF voltage: 24 VDC±10% (21.6 to 26.4 VDC) Tring input (TIMING) Poster input (TIMING) Reset input (RESST) OFF voltage/OFF current: 5 V/1 mA max. Sync input (SYNC) Transistor output method Uppt voltage: 24 VDC±10% (21.6 to 26.4 VDC) Input voltage: 24 VDC±10% (21.6 to 26.4 VDC) <td></td> <td></td> <td></td> <td></td> <td></td>					
Loging state output (LOGSTAT) Loging error output (LOGSTAT) Stability output (STABLITY) Task state output(TASKSTAT) LIGHT OFF input LIGHT OFF input Timing input (TIMING) Visite (LIGHT OFF) Timing input (TIMING) Sync input (STKO) Sync input (STKO) Trigger input (TRIG) Logging input (TIMING) Normal (State output output input (STKO) Bank Bank extention input (ITIG) Logging input (COGGING) Bank selection input (IGNING) Correct (BANK_OUT1 to 3) Bank selection input (IGNING) Corpsure time AutoRixed Measurement cycle '1 80 µs to 1600 µs Specified materials Standard/mirror surface/rough surface Measurement term Height/Hickness/operation Filter processing Median/average/differentiation/high-pass/ow					
Logging emc cubud L/OGEBRI Stability output (STABILITY) Task stab cubut/TASKITAD DC input method LIGHT OFF input (LIGHT OFF) DC input method DC input current: 7 m Typ. (24 VDC) Timing input (TIMING) Reset input (REST) ON voltage: 24 VDC=10% (21.6 to 26.4 VDC) Timing input (TIMING) Reset input (REST) ON voltage: 24 VDC=10% (21.6 to 26.4 VDC) Tingger input (COGGING) Transistor output method OV residual voltage: 24 VDC=10% (21.6 to 26.4 VDC) Bank Bank output during selection Selection Over residual voltage: 21.6 to 30 VDC (BANK_OUT) to 3) Load current: 50 V1 mA max. OFF leakage current: 0.1 mA max. Bank selection input DC input method input voltage: 24 VDC=10% (21.6 to 26.4 VDC) ON voltage/OFF current: 5 V1 mA max. Main functions Exposure time Auto/fixed Auto/fixed DC input method input voltage: 24 VDC=10% (21.6 to 26.4 VDC) Measurement cycle *1 80 us to 1600 us Selection Specified materials Standard/mirror surface/rough surface Measurement titems Height/thickness/operation Filter processing Median/average/differentialon/high-pass/low-pass/band-pz Outputs Scaling/holds/zero reset/measurement value logging// VLtputs Scaling/holds/zero reset/measurement v					
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Image: State output/TASKSTAT) LIGHT OFF input LIGHT OFF input Input voltage: 24 VDC2:10% (21.6 to 26.4 VDC) Timing input (TMING) ON voltage/ON current: 19 V/3 mA min. Reset input (2ERO) OFF voltage/OFF current: 5 V/1 mA max. Sync input (SYNC) Transistor output method Logging input (TMIG) ON voltage/OFF current: 5 V/1 mA max. Sync input (COGGING) Transistor output method Bank Bank output during Transistor output method Selection Output voltage: 21 6 to 30 VDC Logging input (LOGGING) Ovaltage/OFF current: 0.1 mA max. Bank selection Diput method Input outgae: 24 VDC2:10% (21 6 to 26.4 VDC) Input outgae: 24 VDC2:10% (21 6 to 26.4 VDC) Input outgae: 24 VDC2:10% (21 6 to 26.4 VDC) Input outgae: 24 VDC2:10% (21 6 to 26.4 VDC) Input outgae: 24 VDC2:10% (21 6 to 26.4 VDC) Input current: 7 mA Typ. (24 VDC) ON voltage/OFF current: 5 V/1 mA max. Bank selection Input current: 7 mA Typ. (24 VDC) ON voltage/OFF current: 5 V/1 mA max. Specified materials Standard/mirror surface/rough surface Measurement cycle '1 <t< td=""><td></td><td></td><td></td><td></td><td></td></t<>					
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Reset input (RESET) Sync input (SYNC) Trigger input (IRIG) Logging input (LOGGING) OFF voltage/OFF current: 5 V/1 mA max. Bank Bank output during selection olupt voltage: 21.6 to 30 VDC (BANK_OUT1 to 3) Transistor output method Output voltage: 21.6 to 30 VDC (BANK_OUT1 to 3) Bank Bank selection input OTF relakage current: 0.1 mA max. ON residual voltage: 2 V max. OFF voltage/OR current: 50 vA max. ON residual voltage: 2 V VDC2 ON voltage/ON current: 19 V/3 mA min. Main functions Exposure time Auto/fixed Measurement cycle '1 80 us to 1600 µs Specified materials Measurement terms Height/thickness/operation Filter processing Outputs Scaling/holds/zero reset/measurement value longing Keep clamp Ota task procesuit/nesolution/light intensity Internal logging state/incident light peak level Task processing Median/average/differentiation/high-pass/low-pass/band-pe Keep clamp Auto/fixed Total number of registrations Standard Mode: Max 8 bant, Judgmet Value Mode: Max 32 bar Task processing Standard Mode: Max 8 bant, Judgmet Value Mode: Max 32 bar Task processing Total number of registrations Standard Mode: Max 8 bant, Judgmet Value Mode: Max 32 bar Task processing Standard Mode: Max 8 bant, Judgmet Value Mode: Max 32 bar Task processing					
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Fiber adapter cap (1 piece), Strap (1 piece), Instruction Sheet(This Instruction Sheet),	Accessories				
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I wembership Hegistration Sheet, Precautions					Membership Registration Sheet, Precautions

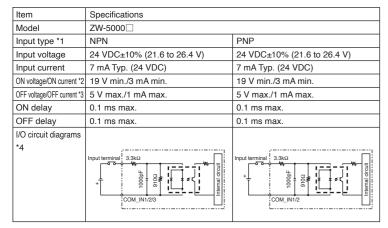
The Export Trade Control Order compatible Sensor Controller (ZW-5000T) is available.

When using this Sensor Controller, the minimum resolution is 0.25 µm regardless of the connected Sensor Head and setting conditions.
*1 If an extension fiber cable 5 m long or more is connected, the setup range of measurement cycle (exposure time) must be changed. For details, refer to "Setting Measurement Cycle" in the user's manual.

EtherCAT communications specifications

Item	Specifications
Communications standards	IEC 61158 Type12
Physical layer	100BASE-TX (IEEE802.3)
Connector	RJ45x2 EtherCAT IN: EtherCAT input EtherCAT OUT: EtherCAT output
Communication medium	Category 5 or higher twisted pair cable
	(Aluminum tape and woven double shielded straight cable is recommended.)
Communication distance	Distance between nodes: within 100m
Process data	Variable PDO mapping
Mail box (CoE)	Emergency message, SDO request, SDO response, SDO information
Distributed clock	Synchronization in DC mode
LED display	L/A IN (Link/Activity IN)×1 L/A OUT(Link/Activity OUT)×1
	ECAT RUN×1 ECAT ERR×1

Input circuit



*1 For both NPN/PNP. Wire the product properly according to the specifications of the external devices

*2 ON voltage/ON current

A voltage value or current value that turn the input from OFF to ON An ON voltage value is a potential difference between COM_IN1/2/3 and input terminals. *3 OFF voltage/OFF current

A voltage value or current value that turn the input from ON to OFF. An OFF voltage value is a potential difference between COM_IN1/2/3 and input terminals. *4 The table below shows the correspondence between COM_IN (input common) and input signals.

Name	COM_IN1	COM_IN2	COM_IN3
Input signal name	TIMING	SYNC/TRIG	BANK_SEL1
	RESET		BANK_SEL2
	ZERO		BANK_SEL3
	LIGHT_OFF		LOGGING

Important Chattering measures

The sensor is equipped with a chattering countermeasure function. However, if chattering of 100 µs or higher occurs, it is unable to prevent incorrect input due to chattering. (Variation of input signals less than 100 µs is ignored. Input signals are determined when the same level is kept for 100 us or more.)

Be sure to use contactless input signals such as SSR or PLC transistor output. If contact signals (with relays) are used, TIMING input might occur again due to bounce of the contact while measurement is performed

Output circuit

Item	Specifications	
Model	ZW-5000	
Output type *1	NPN	PNP
Output voltage	21.6 to 30 VDC	21.6 to 30 VDC
Load current	50 mA max.	50 mA max.
ON residual voltage	2 V max.	2 V max.
ON leakage current	0.1 mA max.	0.1 mA max.
I/O circuit diagrams *2	Output terminal Cod Cod Cod Cod Cod Cod Cod Cod	COM_OUT123

*2 For both NPN/PNP. Wire the product properly according to the specifications of external devices

 $\ast 1$ The table below shows the correspondence between COM_OUT (output common) and each output signal.

Terminal name	COM_OUT1	COM_OUT2	COM_OUT3
Output signal	HIGH	BANK_OUT1	STABILITY
name	PASS	BANK_OUT2	LOGERR
	LOW	BANK_OUT3	LOGSTAT
	ALARM		SYNCFLG/TRIGBUSY
	BUSY		TASKSTAT
	ENABLE		

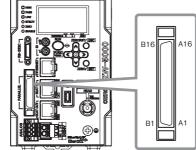
Connect a load corresponding to the output specifications. Short-circuiting the terminals may damage the Sensor

· Do not allow the load current to exceed the rated value. Exceeding the rated value many damage the output circuit

32-pole expansion connector

Used for ajudgment output or control input.

Applicable connector: FX2B series (HIROSE ELECTRIC Co., Ltd.) The parallel cable for 32-pole expansion connector (ZW-XCP2E) is bundled.

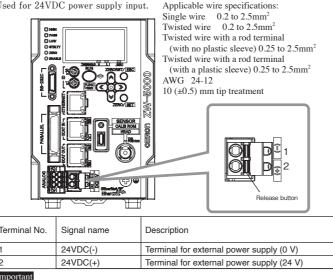


Terminal No.	Signal name	Description	Wire color of ZW-XCP2E
A1	LOGGING	LOGGING input	Brown
A2	BANK_SEL3	Bank selection input	Red
A3	BANK_SEL2		Orange
A4	BANK_SEL1		Yellow
A5	COM_IN3	COM3 for input	Green
A6	TASKSTAT	TASKSTAT output	Blue
A7	SYNCFLG/TRIGBUSY	SYNCFLG/TRIGBUSY input	Purple
A8	LOGSTAT	LOGSTAT output	Gray
A9	LOGERR	LOGERR output	White
A10	STABILITY	STABILITY output	Black
A11	COM_OUT3	COM3 for output	Brown
A12	NC	Not used.	Red
A13	NC		Orange
A14	NC		Yellow
A15	SYNC/TRIG	SYNC/TRIG output	Green
A16	COM_IN2	COM2 for input	Blue
B1	BANK_OUT3	Bank No. output	Brown
B2	BANK_OUT2		Red
B3	BANK_OUT1		Orange
B4	COM_OUT2	COM2 for output	Yellow
B5	ENABLE	ENABLE output	Green
B6	BUSY	BUSY output	Blue
B7	ALARM	ALARM output	Purple
B8	LOW	LOW judgment output	Gray
B9	PASS	PASS judgment output	White
B10	HIGH	HIGH judgment output	Black
B11	COM_OUT1	COM1 for output	Brown
B12	LIGHT_OFF	LIGHT OFF input of sensor head	Red
B13	ZERO	ZERO input of sensor head	Orange
B14	RESET	RESET input of sensor head	Yellow
B15	TIMING	TIMING input of sensor head	Green
B16	COM_IN1	COM1 for input	Blue
Important			

Important
• Cut off unnecessary signal cables so as not to contact some other signal cable.

24V input terminal block

Used for 24VDC power supply input.



Important •Wiring with the power being supplied may cause short circuit and failure of the product. Wire the power supply without feeding power. •Do not connect the product with the same power supply as applied to an apparatus which might

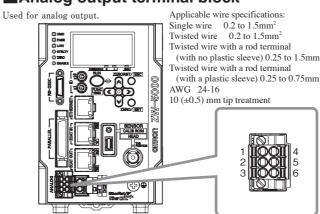
cause noises. If wiring the product with the same line of duct of other equipment, electromagnetic induction might influence the product, causing malfunction or damage of the sensor.

•Do not turn off the power during the initial processing directly after turning on the power of the sensor controller because the Sensor Controller internal memory is being accessed. •Hold the terminal block securely to prevent getting injured when pushing in the release button

using a screwdriver.

 \cdot Keep the length of the wire as short as possible.

Analog output terminal block



Terminal No.	Signal name	Description
1	OUT(V)	The measured value is outputted as a voltage value of -10 to +10 V
		When measurement is impossible: Approx. +10.8 V
		(This is an initial value and selectable by the user.)
		When an alarm occurs: Approx. +10.8 V
2	OUT(A)	The measured value is outputted as a current value of 4 to 20 mA.
		When measurement is impossible: Approx. +20.8 mA
		(This is an initial value and selectable by the user.)
		When an alarm occurs: Approx. +20.8 mA
3	OUT OV	This is the OV terminal for analog output.
4	NC	Not used.
5	NC	Not used.
6	NC	Not used.

Important

 Keep unnecessary signal cables not contacting with other signal cables. The length of the wire Analog signal is not output if the following condition is satisfied.
When the EtherCAT output is enabled:

The cleaning method by using ZW-XCL

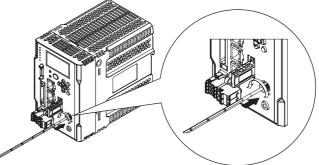
(1) Pulling out the cleaner

Pull out a cleaner from the bag so as not to make the tip portion of the cleaner dirty.

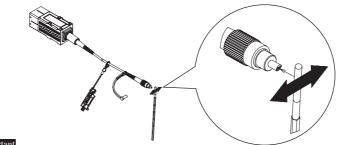


(2) Cleaning of the end face of the fiber connector of the Sensor Controller side

Insert the cleaner tip (white end face) into the fiber connector or connection adapter. Then, rotate the tip in the same direction around three times as pushing it onto the side face and the end face of the optical connector. When clearing is over, pull out the cleaner from the fiber connector slowly. If the fiber cable is used with an extension cable connected, clean the connection adapter, too in the same way.



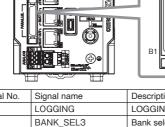
(3) Cleaning of the end face of the fiber connector of the sensor head side Remove the cap of the fiber connector, and wipe up and down the end face of the fiber connector around three times.

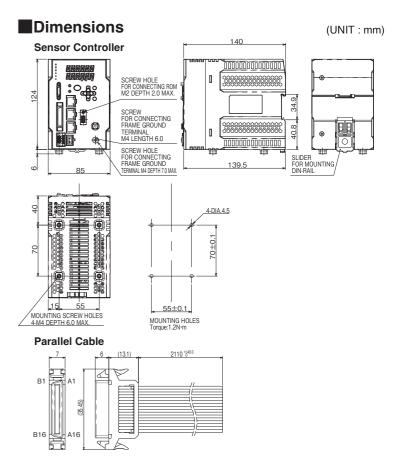


. The cleaner can only be used one time. Reusing the cleaner may result in dirt or scratches on the end surface, causing malfunctions or measurement errors. Discard after use. • Be sure to clean the fiber cleaner with the cloth for the cleaning part (white end face).

Notice for Korea Radio Law

Please see the following URL for Korean KC mark compliance information. http://www.rra.go.kr/selform/OMR-ZW-5000





Relevant Manuals

Man. No.	Model	Manual name
Z362	ZW-8000 /7000 /5000	Confocal Fiber Displacement Sensor ZW-8000/7000/5000 Series User's Manual
Z363	ZW-8000_/7000_/5000_	Confocal Fiber Displacement Sensor ZW-8000/7000/5000 Series User's Manual: Communication Settings
W504	SYSMAC-SE2	Sysmac Studio Version 1 Operation Manual

Suitability for Use

Omron Companies shall not be responsible for conformity with any standards, codes or regulations which apply to the combination of the Product in the Buyer's application or use of the Product. At Buyer's request, Omron will provide applicable third party certification documents identifying ratings and limitations of use which apply to the Product. This information by itself is not sufficient for a complete determination of the suitability of the Product in combination with the end product, machine, system, or other application or use. Buyer shall be solely responsible for determining appropriateness of the particular Product with respect to Buyer's application, product or system. Buyer shall take application responsibility in all cases.

NEVER USE THE PRODUCT FOR AN APPLICATION INVOLVING SERIOUS RISK TO LIFE OR PROPERTY WITHOUT ENSURING THAT THE SYSTEM AS A WHOLE HAS BEEN DESIGNED TO ADDRESS THE RISKS, AND THAT THE OMRON PRODUCT(S) IS PROPERLY RATED AND INSTALLED FOR THE INTENDED USE WITHIN THE OVERALL EQUIPMENT OR SYSTEM.

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