

INSTRUCTION MANUAL

WGP-DBZ WGP-DBT

SIGNAL DISTRIBUTOR

Thank you for selecting another fine *watanabe* product. Please check the description given on the rating label of this unit to make sure that it meets your specifications and be sure to read this instruction manual before using the product.

This manual outlines the operation, connection and adjustment procedures of this product.

The unit has been manufactured and inspected according to our strict quality control standard. If you should find a defect including damage incurred during transportation, contact us or the dealer where you purchased it immediately.

○PACKAGE INCLUDES:

- Distributor..... 1
- Base socket..... 1

* For details of models and specifications, please download the specification sheet from our website, and then check it.

1. PRECAUTIONS

1) Conformity with CE directive

- This equipment is compliant with Installation Category II and Pollution Degree 2 environment. The insulation capability between signal input and output is basic insulation. Before installing, please check that the insulation class of this equipment satisfies your system requirements.
- Please be sure to install this equipment to the inside of a panel.
- Please use this equipment at an altitude of up to 2000 m.
- Compliance with EN standards:
EN61326-1 EMS: Industrial environments; EMI: Class A
The wiring length should be not more than 30 m.

EN61010-1
EN IEC 63000

* Custom-made items other than a catalog standard specification are outside CE conformity.

2) Power supply

- Check the rated voltage on the rating label, and use the product within the range of each of the following ratings (△ is indicated on the rating label).
- 100 to 120V AC: 100 to 120V AC $\pm 10\%$ (50/60 Hz)
-DBZ: approx. 3.4 VA
-DBT: approx. 4.6 VA
 - 200 to 240V AC: 200 to 240V AC $\pm 10\%$ (50/60 Hz)
-DBZ: approx. 5.2 VA
-DBT: approx. 7.3 VA
 - 24V DC: 24V DC $\pm 10\%$
-DBZ: approx. 78 mA
-DBT: approx. 110 mA
* You can use it as 10.8 to 30 V, if you do not use this product as a CE compliant article.
 - 110V DC: 110V DC $\pm 10\%$
-DBZ: approx. 16 mA
-DBT: approx. 26 mA

3) Handling

- When removing or mounting the main body from/to the socket, be sure to turn OFF the power supply and the input signal in advance to prevent any problems.

4) Installation

- This equipment is designed for indoor use.
- Please install the main body in a location where the ambient temperature is within -5 to 55°C.
- Please install the main body in a location where relative humidity is less than 90%RH (no freezing or condensation).
- When the equipment is to be installed in a location where there is excessive dust or metal particles, house it in a dust-proof cabinet, which has a heat radiation function.
- Avoid exposing the equipment to vibration and impact, which may cause malfunction.

- Please do not block ventilation openings of the main body.

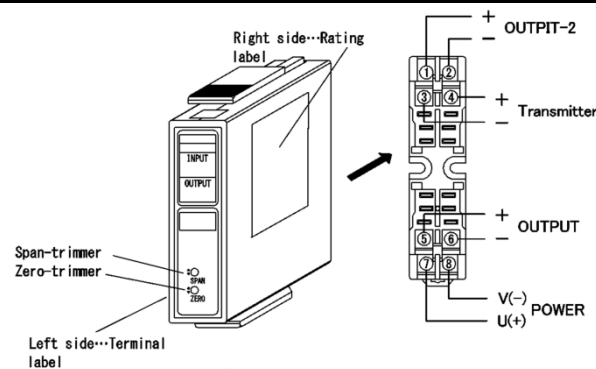
5) Wiring

- Be sure to keep the wiring of the power line, input signal line and output signal line away from any noise source, relay driving line and high-frequency line.
- Avoid clamping these lines together with a noise-superimposed line or putting them together in the same duct.

6) Others

- This equipment can be operated as soon as the power supply is turned ON. However, for optimum performance, allow 30 minutes of energizing time.
- This product is precision equipment. It is therefore recommended that you periodically calibrate it by performing ZERO and SPAN adjustments once a year.

2. NAME OF EACH PART AND TERMINAL LAYOUT



Terminal No.	Symbol	Contents
1	(OUTPUT-2) +	(Please use according to the application. *1)
2	(OUTPUT-2) -	
3	TRANS +	Connect 4-20 mA signal from the transmitter.
4	MITTER -	
5	OUTPUT +	The signal based on the input/output specification is output.
6	OUTPUT -	
7	POWER U(+)	Connect the power supply of the rated voltage.
8	POWER V(-)	

Connection points : M3.5 SEMS screw
Screw tightening torque : Recommended: 0.8 N-m

*1. About OUTPUT-2

Please note the following when using OUTPUT-2.

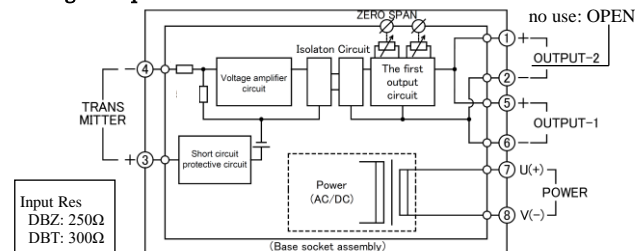
Voltage output: OUTPUT-2 is internally connected in parallel with OUTPUT-1. (See "3.CIRCUIT DIAGRAM")

Current output: OUTPUT-2 is internally connected in series with OUTPUT-1. (See "3.CIRCUIT DIAGRAM")

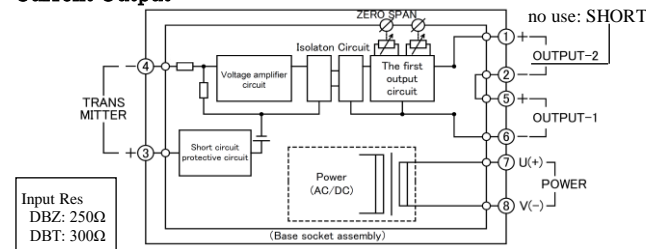
In both cases, please note that the allowable load resistance is the combined value of OUTPUT-1 and OUTPUT-2.

3. CIRCUIT DIAGRAM

• Voltage Output



• Current Output

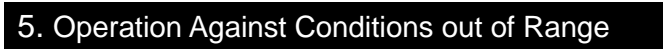


In case of current : OUTPUT-2 is shorted by metal fittings at the time of factory shipment.

4. ADJUSTMENT

This calibration shall be made 30 minutes after the power supply is turned ON, using a signal source (such as standard voltage, current generator), and measuring instruments (voltmeter, ammeter), whose accuracies are 10 times or higher than that of this equipment. The ZERO and SPAN adjustment ranges are both about 10% fs. Multi-turn trimmers are installed for performing these adjustments.

- | | | |
|--|---------------------------------------|-----------------------------|
| | In case of 4 to 20(1 to 5)V mA output | In case of 0 to 10 V output |
|--|---------------------------------------|-----------------------------|



1) Excessively large input

When a signal exceeding the upper limit of the input range is input

2) Excessively small input

If a signal lower than the lower limit of the input range is input, the output is reduced nearly proportional to the input down to -20% fs.

3) Load out of range

① In the case of current output, if the “allowable load resistance range” is exceeded the output obtained will be roughly

- ## 6. OUTLINE DIMENSIONS



7. INSTALATION DIMENSIONS

The diagram below shows the minimum mounting clearance between adjacent units.



1) How to fix the socket	2) How to fix the main body to the
Hold the product with the slider at	1.4

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9. WARRANTY

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