



This compact plug-in type converter (isolator) provides signal output which is mutually isolated between input, output and power-supply. It amplifies and converts various kinds of signal with isolation to use in the integrated instrumental control system. It is highly effective as noise countermeasures.

## Features

- ★ Fine zero & span adjustment by 15 turn trimmer
- ★ Zero & span adjustment  $\pm 10\%$  full scale
- ★ Safe design by dielectric strength of 3000Vac
- ★ Compatible with 30Vdc power supply voltage
- ★ 5 years warranty, long life
- ★ CE approved

## Ordering code

WSP- **DS** - **□□** - **□□**

| Code     | Input   | Input Resistance |
|----------|---|------------------|
| 10       | 0 to 10mVdc   | 1M $\Omega$      |
| 11       | 0 to 100mVdc  | 1M $\Omega$      |
| 12       | 0 to 1Vdc   | 1M $\Omega$      |
| 13       | 0 to 5Vdc   | 1M $\Omega$      |
| 14       | 1 to 5Vdc   | 1M $\Omega$      |
| 15       | 0 to 10Vdc  | 1M $\Omega$      |
| 17       | 0 to 60mVdc   | 1M $\Omega$      |
| 24       | $\pm 5$ Vdc   | 1M $\Omega$      |
| 25       | $\pm 10$ Vdc  | 1M $\Omega$      |
| 30       | 0 to 10 $\mu$ Adc   | 1k $\Omega$      |
| 31       | 0 to 100 $\mu$ Adc  | 100 $\Omega$     |
| 32       | 0 to 1mAdc  | 100 $\Omega$     |
| 33       | 0 to 10mAdc   | 50 $\Omega$      |
| 35       | 0 to 20mAdc   | 50 $\Omega$      |
| 36       | 4 to 20mAdc   | 50 $\Omega$      |
| 40       | $\pm 1$ mAdc  | 100 $\Omega$     |
| 41       | $\pm 20$ mAdc   | 50 $\Omega$      |
| 99<br>*1 | Contact us for other than the above<br>Current input : $\pm 20$ mA, Span : 10 $\mu$ A to 20mA<br>Voltage input : $\pm 300$ V, Span : 10mV to 300V |                  |

| Code    | Output   | Allowable Load Resistance |
|---------|--|---------------------------|
| A       | 4 to 20mAdc  | 750 $\Omega$ or less      |
| B       | 1 to 5mAdc   | 3k $\Omega$ or less       |
| D       | 0 to 1mAdc   | 15k $\Omega$ or less      |
| E       | 0 to 10mAdc  | 1.5k $\Omega$ or less     |
| G       | 0 to 20mAdc  | 750 $\Omega$ or less      |
| H       | 1 to 5Vdc  | 1k $\Omega$ or more       |
| J       | 0 to 10mVdc  | 10k $\Omega$ or more      |
| K       | 0 to 100mVdc   | 100k $\Omega$ or more     |
| L       | 0 to 1Vdc  | 1k $\Omega$ or more       |
| N       | 0 to 5Vdc  | 1k $\Omega$ or more       |
| P       | 0 to 10Vdc   | 2k $\Omega$ or more       |
| R       | $\pm 10$ Vdc   | 2k $\Omega$ or more       |
| S<br>*1 | Contact us for other than the above<br>Current output 20mA or less<br>Voltage output 10V or less |                           |

| Code | Test Report      |
|------|------------------|
| X    | None             |
| T    | With Test report |

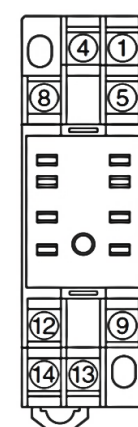
| Code | Power Supply                     |
|------|----------------------------------|
| A    | 100 to 240Vac $\pm 10\%$ 50/60Hz |
| D    | 24Vdc $\pm 10\%$                 |
| *2   | 10.8 to 30Vdc                    |
| 8    | 110Vdc $\pm 10\%$                |

- \* 1...CE approval do not adapt input range code 99 and output range code S.
- \* 2...CE approval do not adapt when power supply is 10.8Vdc to 30Vdc.

## Specifications

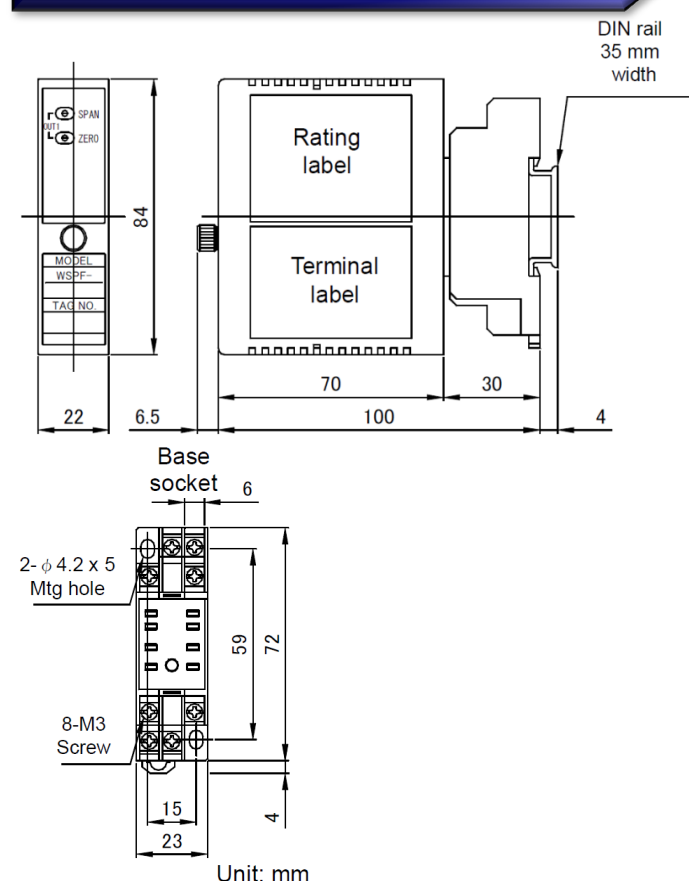
|                             |  |
|-----------------------------|--|
| Input signal                | DC current / voltage   |
| Output signal               | DC current / voltage   |
| Accuracy                    | $\pm 0.1\%$ FS (at 23°C)   |
| Response time               | Approx. 25ms ( 0 to 90%)   |
| Allowable load              | Current output<br>15V or less of voltage drop between output terminal<br>Voltage output<br>Load current 5mA or less<br>*1 $\mu$ A or less if the output is less than 1V FS |
| Zero & span adjustment      | $\pm 10\%$ FS (15 turn trimmer)  |
| Operating temperature range | -5 to +55°C  |
| Operating relative humidity | 90% or less (Non-condensing)   |
| Storage temperature range   | -10 to +60°C   |
| Temperature coefficient     | $\pm 0.015\%$ FS of span per °C  |
| Isolation                   | Between input, output, and power supply  |
| Insulation resistance       | 100M $\Omega$ or more with 500Vdc megger<br>Between input, output, and power supply terminal   |
| Dielectric strength         | 3000Vac for 1 minute between power supply and input/output terminal,<br>2000Vac for 1 minute between input and output terminal   |
| Power consumption           | Approx. 4.5VA (AC), Approx. 60mA (DC)  |
| Power supply variation      | $\pm 0.1\%$ FS (within the range of rated voltage)   |
| Dimensions                  | 84(H) X 23(W) X 106.5(D)mm   |
| Weight                      | Approx. 130g   |
| Structure                   | Plug-in (Body part and socket part)  |
| Connection                  | M3 SEMS screw part of the base socket (Tightening torque 0.6N·m)   |
| Mounting                    | DIN rail or wall surface   |
| Case color and material     | Ivory, ABS resin, flame retardant grade UL94V-0  |
| EMC directive               | EN61326-1, EN61010-1, EN50581<br>Installation category : II, Pollution degree : 2  |
| Rated altitude              | 2000m or less  |

## Terminal connections



| No | Symbol       | Description   |
|----|--------------|---------------|
| 1  | +            | Input         |
| 4  | -            |               |
| 5  | NC           | No connection |
| 8  | NC           | No connection |
| 9  | +            | Output        |
| 12 | -            |               |
| 13 | U(+)<br>V(-) | Power Supply  |
| 14 |              |               |

## Dimensions



\* Specification is subject to change without notice