# Isolator

## WSPF-DS



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 ±10% full scale
- ★ Safe design by dielectric strength of 3000Vac
- ★ Compatible with 30Vdc power supply voltage
- ★ 5 years warranty, long life
- ★ CE approved

Ord	erina	code	
	9		

ws _↓	PF- <mark>DS</mark> -	
Code	Input	Input Resistance
12	0 to 1Vdc	1ΜΩ
13	0 to 5Vdc	1ΜΩ
14	1 to 5Vdc	1MΩ
15	0 to 10Vdc	1ΜΩ
24	±5Vdc	1ΜΩ
25	±10Vdc	1ΜΩ
32	0 to 1mAdc	100Ω
33	0 to 10mAdc	50Ω
35	0 to 20mAdc	50Ω
36	4 to 20mAdc	50Ω
40	±1mAdc	100Ω

50Ω Contact us for other than the above

Current input : ±20mA, Span : 1mA to 40mA

Voltage input : ±300V, Span : 60mV to 600V

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Code	Output	Allowable Load Resistance	
Α	4 to 20mAdc	750Ω or less	
В	1 to 5mAdc	3kΩ or less	
D	0 to 1mAdc	15kΩ or less	
Е	0 to 10mAdc	1.5kΩ or less	
G	0 to 20mAdc	750Ω or less	
Н	1 to 5Vdc	1kΩ or more	
J	0 to 10mVdc	10kΩ or more	
ĸ	0 to 100mVdc 100kΩ or more		
L	0 to 1Vdc	1kΩ or more	
Ν	0 to 5Vdc	1kΩ or more	
Р	0 to 10Vdc	2kΩ or more	
R	±10Vdc 2kΩ or more		
<b>S</b> * 1	Contact us for other than the above Current output 20mA or less Voltage output 10V or less		

#### Test Report None Х т With Test report

Cod	e Power Supply
Α	100 to 240Vac ±10% 50/60Hz
D	24Vdc ±10%
* 2	10.8 to 30Vdc
8	110Vdc ±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**

41

99

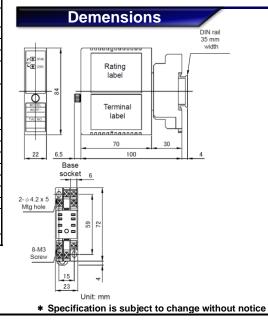
\*1

±20mAdc

Input signal	DC current / voltage	
Output signal	DC current / voltage	
Accuracy	±0.1% FS (at 23°C)	
Response time	Approx. 25ms ( 0 to 90%)	
Allowable load	Current output	
	15V or less of voltage drop between output terminal	
	Voltage output	
	Load current 5mA or less	
	*1µA or less if the output is less than 1V FS	
	F	
Zero & span adjustment	±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	±0.015% of span per °C	
Isolation	Between input, output, and power supply	
Insulation resistance	100M $\Omega$ or more with 500Vdc megger	
	Between input, output, and power supply terminal	
Dielectric strength	3000Vac for 1 minute between power supply and input/output	
	terminal,	
	2000Vac for 1 minute between input and output terminal	
Power consumption	Approx. 4.5VA (AC), Approx. 60mA (DC)	
Power supply variation	±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, EN IEC 63000	
	Installation category : II, Pollution degree : 2	
Rated altitude	2000m or less	
EMC directive Rated altitude	Installation category : II, Pollution degree : 2	

## **Terminal connections**

	No	No Symbol		Description
	1 4	INPUT	+	Input
	5	NC		No connection
8 8	8	NC		No connection
202	9 12	OUTPUT	+	Output
12 0	13 14	POWER	U(+) V(-)	Power Supply



Watanabe Electric Industry Co. Ltd.