



# PULSE-ANALOG CONVERTER

MODEL : SU1512

GENERAL SPECIFICATION  
GS.No.GEF221E-3

## ■GENERAL

This instrument is an F/I converter that receives the pulse signal from a sensor, shapes it and, after isolation, changes the signal to an analog signal with current and voltage.

It is used for converting a pulse signal to an analog signal, instructing, recording, or controlling applications.

## ■FEATURES

1. Accepts signals, produces outputs, and provides power isolation
2. Accommodates large capacity power supply for sensor
3. Either 4 to 20mA (1 to 5V) or 0 to 20mA (0 to 5V) is selectable
4. Discretionary power supply for users in the range 85 to 264VAC (20 to 30V for DC).
5. Open collector, voltage pulse, and relay contact pulse input available.
6. Plug-in configuration and DIN rail mount are available



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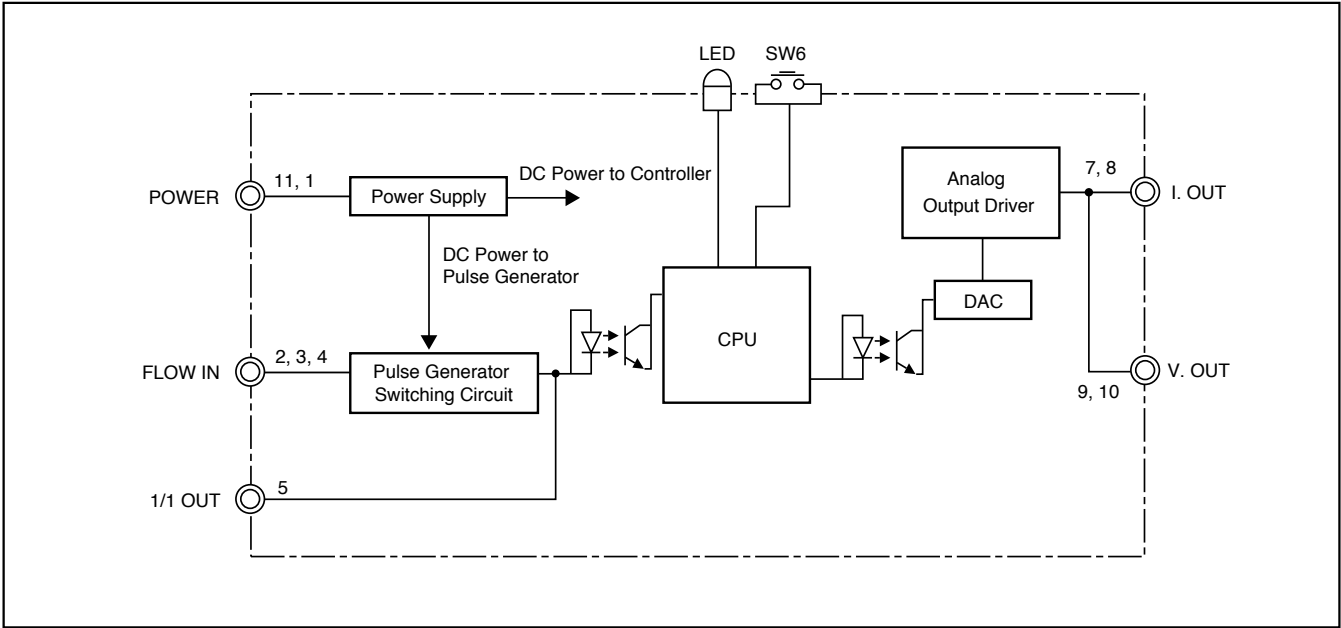
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PRODUCT CODE EXPLANATION

| Item          | Model |   |   |   |   |   | — | Supplementary Code |   |   |   |   |   |                                            | Description            |      |
|---------------|-------|---|---|---|---|---|---|--------------------|---|---|---|---|---|--------------------------------------------|------------------------|------|
|               | ①     | ② | ③ | ④ | ⑤ | ⑥ |   | ⑦                  | ⑧ | ⑨ | ⑩ | ⑪ | ⑫ | ⑬                                          |                        |      |
| Type          | S     | U | 1 | 5 | 1 | 2 | — |                    |   |   |   |   |   |                                            | PULSE-ANALOG CONVERTER |      |
| Power Supply  |       |   |   |   |   |   |   | 6                  |   |   |   |   |   |                                            | 20 to 30VDC            |      |
|               |       |   |   |   |   |   |   | 7                  |   |   |   |   |   |                                            | 85 to 264VAC 50/60Hz   | (※1) |
|               |       |   |   |   |   |   |   | 9                  |   |   |   |   |   |                                            | Other than above       |      |
| Input Signal  |       |   |   |   |   |   |   | 1                  |   |   |   |   |   | 8VDC 2-wire current pulse                  |                        |      |
|               |       |   |   |   |   |   |   | 2                  |   |   |   |   |   | 2-wire, 12VDC 3-wire contact-closure pulse |                        |      |
|               |       |   |   |   |   |   |   | 3                  |   |   |   |   |   | 2-wire, 12VDC 3-wire voltage pulse         |                        |      |
|               |       |   |   |   |   |   |   | 4                  |   |   |   |   |   | 24VDC 2-wire current pulse (4/20mADC)      |                        |      |
|               |       |   |   |   |   |   |   | 5                  |   |   |   |   |   | 12VDC 2-wire current pulse                 |                        |      |
|               |       |   |   |   |   |   |   | 6                  |   |   |   |   |   | 2-wire, 12VDC 3-wire open collector pulse  |                        |      |
|               |       |   |   |   |   |   |   | 8                  |   |   |   |   |   | 32VDC 3-wire open collector pulse          |                        |      |
|               |       |   |   |   |   |   |   | B                  |   |   |   |   |   | 24VDC 3-wire open collector pulse          |                        |      |
| Output Signal |       |   |   |   |   |   |   | 9                  |   |   |   |   |   | Other than above                           |                        |      |
|               |       |   |   |   |   |   |   | 1                  |   |   |   |   |   | 4 to 20mADC and 1 to 5VDC                  |                        |      |
|               |       |   |   |   |   |   |   | 2                  |   |   |   |   |   | 0 to 20mADC and 0 to 5VDC                  |                        |      |
|               |       |   |   |   |   |   |   | 9                  |   |   |   |   |   | Other than above                           |                        |      |
|               |       |   |   |   |   |   |   | 0                  | 0 | 0 |   |   |   | Always "000"                               |                        |      |
| Version Code  |       |   |   |   |   |   |   |                    |   |   |   |   | B |                                            |                        |      |

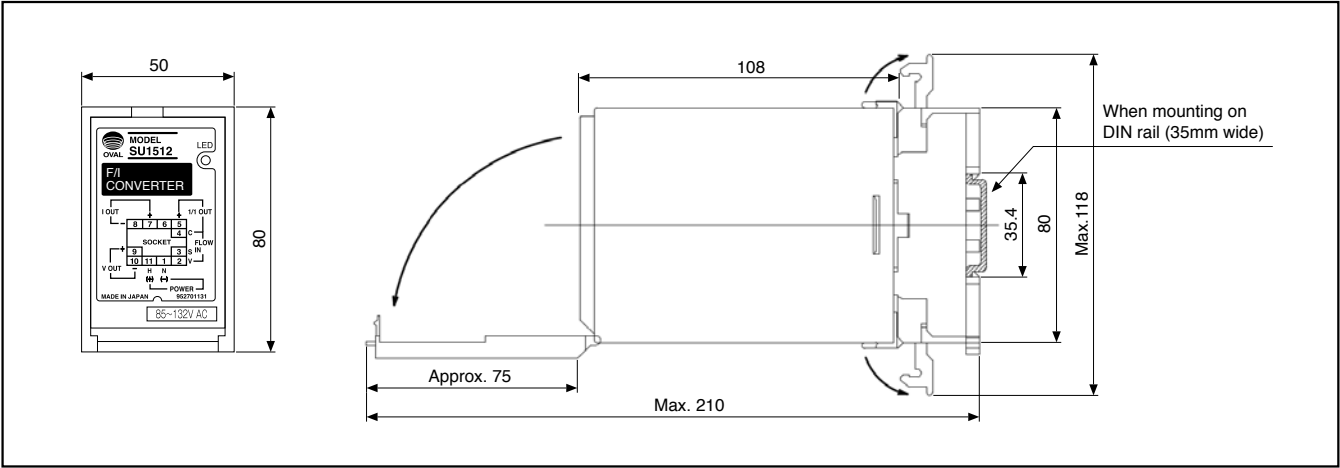
\*1: The current capacity of pulse generator's power supply is 100mA when power supply is 85 to 132VAC and power to pulse generator is 24V.  
In other cases, the current capacity is 40mA.

CONFIGURATION



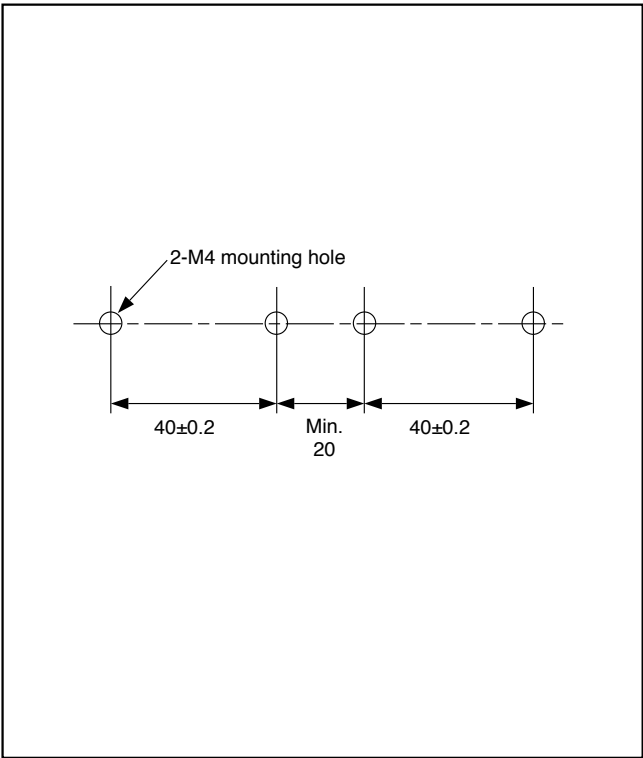
DIMENSIONS

Unit: mm

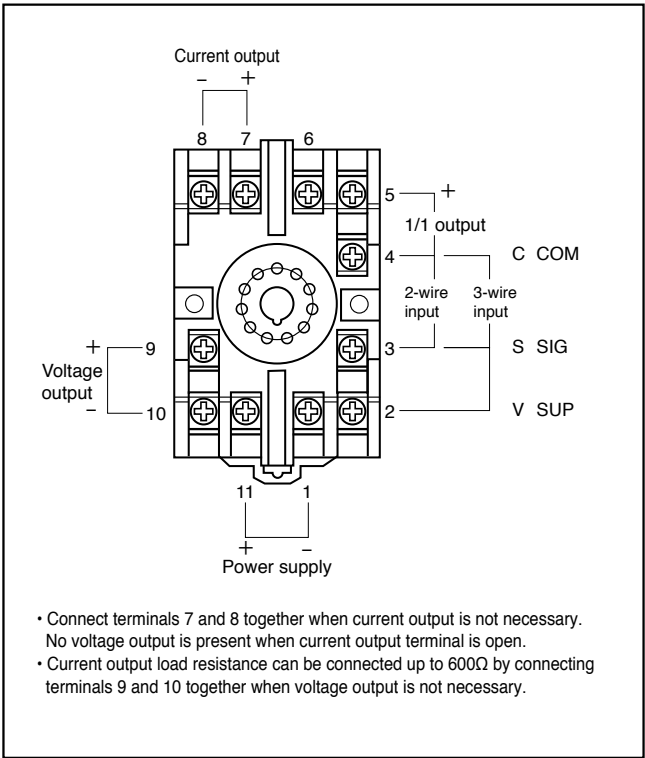


MOUNTING PITCH

Unit: mm



TERMINAL CONNECTIONS



When you make an inquiry, please specify the model number and supplementary code of the product and the model number, specifications, input frequency, and output range of the companion instrument. In addition, please specify the following specifications.

|                      |                                               |
|----------------------|-----------------------------------------------|
| 1. Time constant     | None or _____ seconds (2 to 15s) Standard: 2s |
| 2. Low cut frequency | None or _____ Hz (0 to 100Hz) Standard: None  |

## ■GENERAL SPECIFICATIONS

| Item                         |                                            | Description                                                                                                                                                                                                                                                                                              |                                       |  |                          |  |
|------------------------------|--------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------|--|--------------------------|--|
| Input Signal                 | Incoming Pulse                             |                                                                                                                                                                                                                                                                                                          | Companion Pulse Generator             |  | Power to Pulse Generator |  |
|                              | 8VDC 2-wire current pulse                  |                                                                                                                                                                                                                                                                                                          | Opto OD01, 02                         |  | 8.5VDC                   |  |
|                              | 2-wire, 12VDC 3-wire contact-closure pulse |                                                                                                                                                                                                                                                                                                          | PG20                                  |  | 13.5VDC                  |  |
|                              | 2-wire, 12VDC 3-wire voltage pulse         |                                                                                                                                                                                                                                                                                                          | PG30, NPG60A(F)                       |  | 13.5VDC                  |  |
|                              | 24VDC 2-wire current pulse (4/20mADC)      |                                                                                                                                                                                                                                                                                                          | PA14, 15, 25, NPG60A(E)               |  | 24.0VDC                  |  |
|                              | 12VDC 2-wire current pulse                 |                                                                                                                                                                                                                                                                                                          | PG30S                                 |  | 13.5VDC                  |  |
|                              | 2-wire, 12VDC 3-wire open collector pulse  |                                                                                                                                                                                                                                                                                                          | FLOWPET-EG, NPG60A(E3), MOS-FET       |  | 13.5VDC                  |  |
|                              | 32VDC 3-wire open collector pulse          |                                                                                                                                                                                                                                                                                                          | PA11                                  |  | 32.0VDC                  |  |
|                              | 24VDC 3-wire open collector pulse          |                                                                                                                                                                                                                                                                                                          | Mass Flow Monitor                     |  | 24.0VDC                  |  |
|                              | Response pulse                             |                                                                                                                                                                                                                                                                                                          | 3kHz max. (50Hz max. in case of PG20) |  |                          |  |
| Input Frequency Pulse Output |                                            | Open collector Max. applied voltage 30VDC Allowable current 20mA<br>NPN transistor output                                                                                                                                                                                                                |                                       |  |                          |  |
| Analog Output                |                                            | Signal: 4 to 20mADC, 0 to 20mADC (Load resistance 350Ω max.) and 1 to 5VDC, 0 to 5VDC (Output impedance 250Ω)<br>Accuracy: ±0.25% of FS (Temperature coefficient 0.015%/°C)<br>Ripple rate: 1% of FS (at the 10% flow of FS)<br>Time constant: Variable<br>Output can be fixed to H/L by error or alarm. |                                       |  |                          |  |
| LED Indication               |                                            | Error and alarm indicator                                                                                                                                                                                                                                                                                |                                       |  |                          |  |
| Power Supply                 |                                            | 85 to 132VAC, 133 to 264VAC 50/60Hz or 20 to 30VDC                                                                                                                                                                                                                                                       |                                       |  |                          |  |
| Power Consumption            |                                            | 100VAC 16VA/200VAC 27VA (Max.12W)                                                                                                                                                                                                                                                                        |                                       |  |                          |  |
| Ambient Temperature          |                                            | -10 to +50°C                                                                                                                                                                                                                                                                                             |                                       |  |                          |  |
| Insulation Resistance        |                                            | Between Power Terminal in a lump and output terminal: 10MΩ min. (500VDC)                                                                                                                                                                                                                                 |                                       |  |                          |  |
| Withstand Voltage            |                                            | Between Power Terminal in a lump and output terminal: 1500VAC x 1min. (In case of AC terminal)<br>Between Power Terminal in a lump and output terminal: 1000VAC x 1min. (In case of DC terminal)                                                                                                         |                                       |  |                          |  |
| Mounting                     |                                            | Plug-in type (Mounted on wall or DIN rail)                                                                                                                                                                                                                                                               |                                       |  |                          |  |
| Enclosure                    |                                            | Resin molding, black                                                                                                                                                                                                                                                                                     |                                       |  |                          |  |
| Weight                       |                                            | 0.5kg approx., including socket                                                                                                                                                                                                                                                                          |                                       |  |                          |  |
| Accessory Furnished          |                                            | Front panel mount socket: 1 pc. Jumper plug: 2 pc. Ferrite core only in case of DC terminal                                                                                                                                                                                                              |                                       |  |                          |  |

※1: Current capacity up to 100mA is available only with specifications of 100VAC and pulse generator's power-supply voltage of 24VDC.

※: Please contact our sales office when modification of full scale value is required.

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