



HIGH SELECTOR

TYPE 112-21A

LOW SELECTOR

TYPE 112-20A

- **Selects the highest or lowest of up to six inputs**
- **Signal conversion e.g 4-20mA to 0-10V**
- **Wide range of inputs & outputs**
- **Isolated voltage, current sink or current source outputs**
- **AC or DC powered versions**
- **Wall or DIN rail mounting**
- **Current loop integrity feature**



These instruments will provide an output which is equal, or proportional, to the highest input signal (112-21A) or the lowest input signal (112-20A). The output can be converted into a signal of a different type.

Inputs

All inputs should be of the same current or voltage spans e.g. all 4-20mA or all 0-10V, etc.

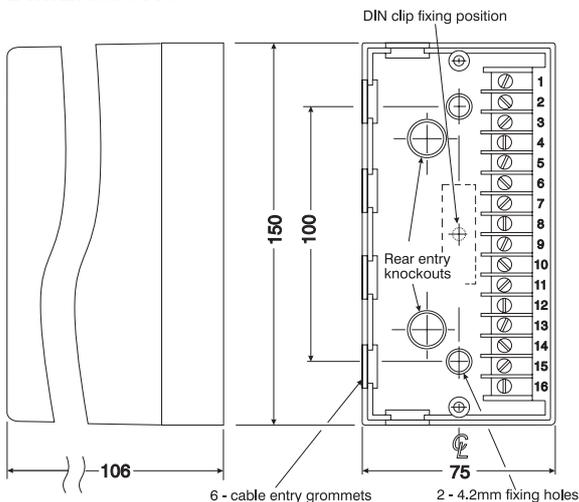
Input current loop integrity

For current inputs, when the plug-in module is removed, signal loops are maintained via shunt resistors mounted between input terminals in the base section. These resistors are matched to the unit for optimum accuracy.

Output

The output signal may be of a different type to the input signal and can be factory configured for most of the common process signal types. A current sink output version is also available which functions as a two-wire transmitter and sinks 4-20mA from an external power source.

DIMENSIONS



Information required when ordering

- Function i.e. High Selector or Low Selector
- Input signals *NB* should be of the same spans and be able to share a common connection. (select from options overleaf)
- Number of inputs (2 to 6 can be accommodated)
- Output signal (select from options overleaf)
- Supply voltage and frequency
- Whether a DIN Rail Mounting clip is required

SPECIFICATION

INPUTS

NB. The required type must be specified when ordering.
All inputs must be able to share a common connection. If they cannot be connected together, a Signal Isolator e.g. type B12-SI must be used to isolate the inputs.

0-10 mA into 100 ohms
0-20 mA into 50 ohms
4-20 mA into 62.5 ohms
0-5v into greater than 1 M ohms
1-5v into greater than 1 M ohms
(Other inputs available to order)

FUNCTION

112-20: Output =/proportional to lowest input
112-21: Output =/proportional to highest input

OUTPUTS

NB. The required type must be specified when ordering.
0-10 mA into 2000 ohms max.
0-20 mA into 1000 ohms max.
4-20 mA into 1000 ohms max.
0-5v into 500 ohms min.
1-5v into 500 ohms min.
Current Sink 4- 20 mA @ 50 Volts max.
(Other outputs available to order)

CALIBRATED ACCURACY

Set at 100% to be within $\pm 0.1\%$ FSD

LINEARITY ERROR

$\leq \pm 0.1\%$ FSD.

SUPPRESSION/ELEVATION ERROR

$\leq \pm 0.1\%$ FSD.

CURRENT INPUT SHUNT ERROR

For current inputs, the instrument and shunt resistors (mounted in the base section of the module) are calibrated as matched pairs. An error of $\leq \pm 0.1\%$ can be expected if the instrument is used with unmatched input resistors.

OUTPUT RIPPLE

$\leq 0.1\%$ RMS of FSD.

LOAD RESISTANCE EFFECT

$\leq 0.001\%$ of span/100 ohms change.

ISOLATION

The inputs are commoned together but are isolated from the output and the power supply.
Maximum voltage 250V RMS or 400V DC
Resistance between input, output or power supply $\geq 50 \times 10^6$ ohms measured at 1000 V DC.

STABILITY

Over 24 hours $\pm 0.1\%$ FSD.
Over 1 year $\pm 0.25\%$ FSD.

INPUT OVER-RANGE CAPABILITY

Voltage inputs 250 volts RMS or DC max.
Current inputs: 0.5W max.

TEMPERATURE COEFFICIENTS

Zero: $\pm 0.02\%$ span/ $^{\circ}$ C
Span: $\pm 0.02\%$ span/ $^{\circ}$ C

ENVIRONMENTAL

Temperature range:
operating -10 to +50 deg C;
storage -20 to +70 deg
Humidity: 0-95% RH non-condensing

SUPPLY VOLTAGE REJECTION

Output change < 0.01% span/% supply change.

POWER SUPPLY

A LED indicates when the power supply is connected.
Standard AC: 110, 220 or 240V $\pm 10\%$ 50/60Hz; 5VA
Fuse (internal) 100mA quick-blow (20 x 5mm)
Optional DC: 12, 24 or 48V -10% to + 20%; 3.5W
Fuse (internal) 250mA anti-surge (20 x 5mm)

ENCLOSURE DETAILS

Base: Phenol (black)
Cover: Polystyrol (light grey)
Protection: IP40

SAFETY & EMC

Safety: EN61010-1 Immunity: EN50082-1
Emissions: EN50081-1 CE certified

WEIGHT

Approximately 0.5 kg



WARNING! THIS UNIT CAN BE MAINS POWERED, AND ALL INPUTS TO IT MUST BE ISOLATED FROM DANGEROUS VOLTAGES BEFORE THE FRONT COVER IS REMOVED. LIVE TERMINALS WILL BE EXPOSED.

Continuous development may necessitate changes in these details without notice

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