

WATER SUPPLIES DEPARTMENT
STANDARD SPECIFICATION E-82-12
SIGNAL ISOLATORS/CONVERTERS

1. GENERAL

Signal isolators/converters are used to provide isolation between input and output analogue circuits and to convert the output analogue signals to the required range.

2. DESIGN

Unless stated otherwise in the Particular Specification, the signal isolators/converters shall meet the following design requirements :-

(a) General requirement

Function	: Signal isolation and conversion
Isolation	: Better than 1000V d.c. between input and output
Accuracy	: Better than $\pm 0.3\%$ of span
Power supply	: 220V 50 Hz
Operating temperature	: 0 – 55°C

(b) Input

Input signal	: 0-10 mA, 4-20 mA, mV, V or variable resistance as specified in the Particular Specification
Input resistance	: Not exceeding 100 ohms for current input Greater than 1 M-ohms for voltage input

(c) Output

Output signal	: 4-20 mA proportional to input except otherwise specified in the Particular Specification
Maximum output load	: 1000 ohms

3. CONSTRUCITON

The signal isolators/converters shall normally be DIN rail mounted inside panel. When outdoor application or external mounting is specified, it shall be housed in an IP54 enclosure and suitable for wall mounting.

4. EQUIPMENT PARTICULARS

The contractor should refer to the Particular Specification for the following particulars of the equipment :-

- (a) Input signal : 0-10 mA, 4-20 mA, range of mV, V or variable resistance
- (b) Output signal : 4-20 mA
- (c) Mounting requirements : Panel mounted or external mounted