

VOLTAGE CONVERTER AND LOOP ISOLATOR

Type: UIDA

FEATURES

- Loop powered isolator
- Input 4,8 - 24V and 6 - 30V
- Prevents interference from electrostatic fields and ground loops
- Working voltage up to 1000 V_{RMS}
- Transient overvoltage up to 8000 V_{peak}
- Excellent linearity
- Small outlines, 17,5 mm. wide

Description:

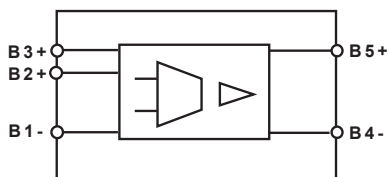
The loop isolator is designed to convert a voltage signal on the input into a 4 - 20mA current output. The use of a galvanic separation between the input and the output prevents signal distortion and instrumentation damages due to electrical noise, voltage spikes and ground loop currents. The UIDA does not need an external supply, as the input is powered from the voltage source and the output is powered from the loop. The insulation is based on a high performance linear optocoupler with an excellent linearity and a low coupling capacitance.

Application:

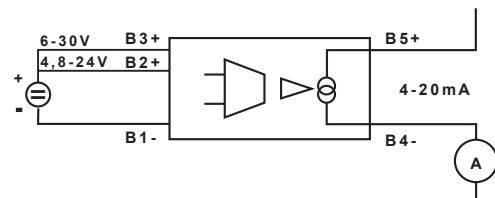
For use in instrumentation with current loop I/O as used by PLCs, sensors, recorders, indicators, alarm units etc.

CONNECTION DIAGRAM

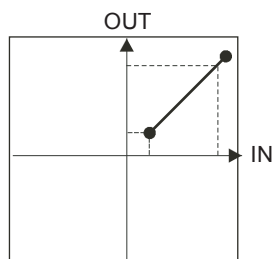
Rail mounting



FUNCTION DIAGRAM



INPUT/OUTPUT CHARACTERISTICS



Input: 4,8 - 24V or 6 - 30V
Output: 4 - 20mA

SPECIFICATIONS

INPUT

4,8 - 24V
6 - 30V

Min. func. input 4,8 / 6,0V
Max. cont. input 36V

PERFORMANCE PARAMETERS

TIMING
Response time < 10 msec.

ELECTRICAL
Precision Class 0.5 according to DIN / EN60688
Linearity < 0.02 %
Temp. dependence < 0.02 % / °C

OUTPUT

Loop supplied Loop voltage, 8 - 32 V
4 - 20 mA Max. voltage, 36 V
Max. load 600 Ω. @ 20 V Loop voltage

ISOLATION CHARACTERISTICS

Capacitance < 1 pF, input/output

Safety approval According to:
UL1577 (5 kVRMS/1 min. rating)
VDE 0884/06.92 ($V_{IORM} = 1$ kVRMS)
BSI: BS415; 1990
BS7002; 1992
BS EN60950; 1992
EN41003; 1991

GENERAL

Temperature range - 25 °C to + 55 °C
Humidity Up to 90 % RH non-condensing
Weight 0.044 kg



EMC directive 89/336:

International Standards
EN50081 - Emission
EN50082 - Immunity

Low voltage directive 73/23:

EN60255 - Electrical Relays

ORDERING INFORMATION

TYPE
Voltage converter and loop isolator

INPUT
Max. range A
24V

Max. range B
30V

OUTPUT
4 - 20mA

HOUSING
Rail mounting

SIZE
17,5 mm.

CODE END

