

Isolation and Measuring transducers
SUM - Voltage transducer for AC conversion
 22.5mm housing



Application

For the voltage monitoring of alternating voltage systems.

Description

The **SUM voltage transducer** uses the terminals A1 / A2 for connection to 24V AC/DC or 230V AC (please specify). The green LED indicates the connection of the power supply, which must be continuously connected to the transducer.

Function

The SUM transducer converts an alternating voltage, connected to the terminals B1 and B2, into an independent current or voltage signal. The desired output signal can be adjusted with the DIP switches located on the front panel of the relay. The current or voltage signals are connected to different terminals (I_{out} or U_{out}). The SUM has three-way isolation.

Part number

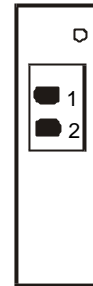
013011	SUM	0...500mV AC	24V AC/DC
013012	SUM	0...1V AC	24V AC/DC
013013	SUM	0...5V AC	24V AC/DC
013014	SUM	0...10V AC	24V AC/DC
013015	SUM	0...50V AC	24V AC/DC
013016	SUM	0...100V AC	24V AC/DC
013017	SUM	0...250V AC	24V AC/DC
013040	SUM	0...500mV AC	230V AC
013041	SUM	0...1V AC	230V AC
013042	SUM	0...5V AC	230V AC
013043	SUM	0...10V AC	230V AC
013044	SUM	0...50V AC	230V AC
013045	SUM	0...100V AC	230V AC
013046	SUM	0...250V AC	230V AC

Options

Other supply voltages available upon request.

DIP switch adjustments

Output signal
 for example
 4-20mA



Approvals



Mounting

Snap-on mounting using a standard DIN rail EN 50022. The unit is designed to allow side-by-side mounting, with an ambient temperature of < 60°C.

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Technical data

Supply

Supply voltage
 or: 24V AC/DC -15 / +10%
 230V AC -15 / +10%

Frequency range: 0 / 50 ... 60Hz
 Power consumption: approx. 2VA
 Operating mode: continuous
 Insulation voltage: 24V -> 1kV
 230V -> 3,75kV

Measuring range

Measuring range: 0.5% over the entire temperature and voltage range

Overload capability: 10% continuous, 100% 1s
 Insulation voltage: 3,75kV

Part number

24V AC/DC	230V AC	
013011	013040	0...500mV AC
013012	013041	0...1V AC
013013	013042	0...5V AC
013014	013043	0...10V AC
013015	013044	0...50V AC
013016	013045	0...100V AC
013017	013046	0...250V AC

Output values

Voltage loss in measuring range: max. 150mV
 Output: 0 (4)...20mA DC
 0 (2)...10V DC

Ohmic resistance: current output 750Ω
 voltage output 2kΩ

Insulation voltage: 3,75kV

Operating indicators

Supply voltage: LED, green

General data

Ambient temperature: - 25 ... + 60°C
 Climate resistance: VDE 0435T.2021
 Mounting position: any
 Vibration resistance: VDE 0435T.2021
 Test voltage: 2.5kV
 Isolation group: VDE 0110 Group C 250
 Protection class: Terminals IP 20
 Housing IP 40

Connection terminals: Crosshead screws;
 M3.5 self opening

Connection cross section: Multi-strand wire with wire sleeves 2 x 2.5mm²
 single wire 2 x 2.5mm²
 VDE 0106T.100 and VBG4

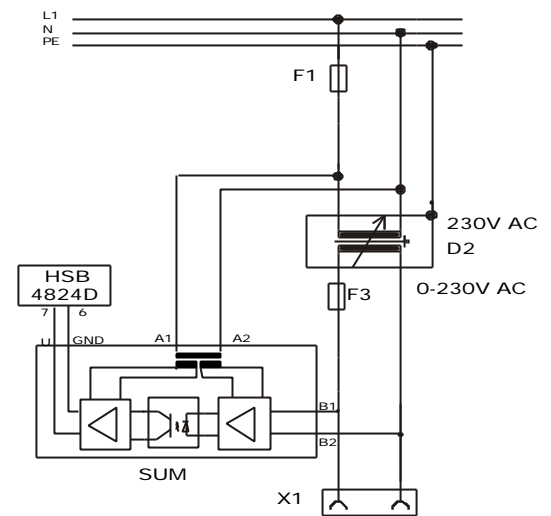
Finger touch proof:

Mounting: Symmetrical DIN rail EN 50022

Dimensions l x w x h: 78mm x 22.5mm x 110mm

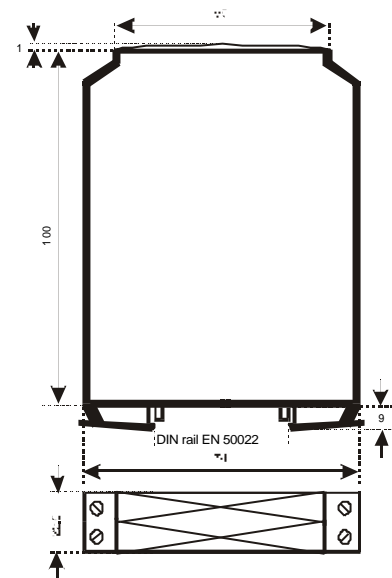
Weight: 76g
 24V AC/DC version
 230V AC version 150g

Example



The SUM converts the load current into a voltage signal. The load current is digitally displayed using the HSB4824D.

Dimensions



Connections

The terminal assignment for the connections is located on the front panel of the relay. **Reading the front panel from top to bottom**, the connections are in the following order:

Upper side	Right: nc - nc - nc - nc
	Left: B1 - A1 - I _{out} - U _{out}
Lower side	Right: nc - nc - nc - nc
	Left: B2 - A2 - nc - GND