# Isolation and Measuring transducers **SUM - Voltage transducer for AC conversion**

22.5mm housing

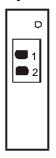


## **Options**

Other supply voltages available upon request.

# **DIP** switch adjustments

Output signal for example 4-20mA





# **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  $_{\rm out}$  or U  $_{\rm out}$ ). The SUM has three-way isolation.

#### Part number

013011	SUM	0500mV AC	24V AC/DC
013012	SUM	01V AC	24V AC/DC
013013	SUM	05V AC	24V AC/DC
013014	SUM	010V AC	24V AC/DC
013015	SUM	050V AC	24V AC/DC
013016	SUM	0100V AC	24V AC/DC
013017	SUM	0250V AC	24V AC/DC
013040	SUM	0500mV AC	230V AC
013041	SUM	01V AC	230V AC
013042	SUM	05V AC	230V AC
013043	SUM	010V AC	230V AC
013044	SUM	050V AC	230V AC
013045	SUM	0100V AC	230V AC
013046	SUM	0250V AC	230V AC

# **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 24V AC/DC -15 / +10% or: 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 013041 0...1V AC 013012 013013 013042 0...5V AC 0...10V AC 013014 013043 0...50V AC 013015 013044 0...100V AC 013016 013045 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  $750\Omega$  voltage output  $2k\Omega$ 

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 Crosshead screws;

Connection terminals: Crosshead screws;
M3.5 self opening
Connection cross section: Multi-strand wire with

Multi-strand wire with wire sleeves 2 x 2.5mm<sup>2</sup> single wire 2 x 2.5mm<sup>2</sup>

Finger touch proof: VDE 0106T.100 and

VBG4

Mounting: Symmetrical DIN rail

EN 50022

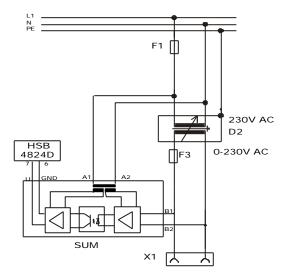
Dimensions I x w x h: 78mm x 22.5mm x

110mm

Weight:

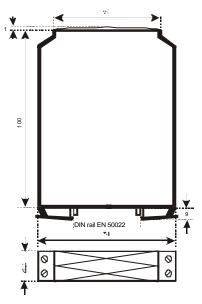
24V AC/DC version 76g 230V AC version 150g

# **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

Left:  $B1 - A1 - I_{out} - U_{out}$ Lower side Right: nc - nc - nc - ncLeft: B2 - A2 - nc - GND

