

Data sheet

## Safety transformer

- DIN rail mountable
- Inherently safe, short-circuit and overload protected
- Can be installed in front of the RCD
- Potted for minimum noise
- Double insulated with terminal cover
- Low power consumption and heat generation
- 230/24 VAC – 5 VA /10 VA/63 VA
- Fulfills EN 61558-2-6



## Application

The safety isolating transformer is used for supplying energy meters and remote reading equipment in both housing and industrial environments.

The safety isolating transformer can be installed in both breaker/distribution panels with a DIN rail and separately on a plane surface by using the enclosed bracket. Terminal covers prepared for sealing are enclosed as well. Additional sealing is unnecessary regardless of whether the installation is performed inside or outside a breaker panel.

The safety isolating transformer is designed to provide a 24 VAC SELV circuit on the secondary side. This yields optimum serviceability and increases the personnel safety while working on the mains-supplied energy meters and the related equipment.

## Technical data

### Electrical data

Input voltage	230 VAC
Frequency	48-62 Hz
Insulating voltage	4 kV AC RMS
Fuse	Inherently safe, short-circuit and overload protected by PTC (120 °C)
Safety standard	EN 61558-2-6

Type number	6699-403	6699-404	6699-405
Output voltage	24 VAC No-load ≤ 28 VAC	24 VAC No-load ≤ 28 VAC	12/24 VAC <sup>1</sup> No-load ≤ 28 VAC
Max load	0.2 A	0.4 A	5.2/2.6 A
Max power	5 VA <sup>2</sup>	10 VA	63 VA
Max number of connected MULTICAL® meters [High-power SMPS]	1 [1]	2 [2]	30 [16]

### Mechanical data

Ambient temperature	40 °C
Protection class	IP 40
Constructional class	Class II, double insulated
Housing color	Light grey
Housing material	Class B (130 °C) / Class E (120 °C) <sup>3</sup>
Max wire size	2.5 mm <sup>2</sup>
Torque	Ca. 0.5 Nm

Type number	6699-403	6699-404	6699-405
Width [A]	35.5 mm	35.5 mm	106 mm
Height [B]	124 mm	124 mm	124 mm
Depth [C]	66 mm	66 mm	66 mm
Weight	0.4 kg	0.4 kg	1.3 kg

1. Double 12 VAC secondary windings with wire connection between windings for 24 VAC, see figure 2
2. Yearly consumption Max 15 kWh with one supplied MULTICAL® meter.
3. 6699-403 and 6699-404 – constructional class B, 6699-405 – constructional class C.

## Installation requirements

The safety isolating transformer must be installed by a certified electrician and only in accordance with applicable requirements defined by the national authorities. If connected before the residual-current circuit breaker, the primary side cabling must be installed short-circuit-proof.

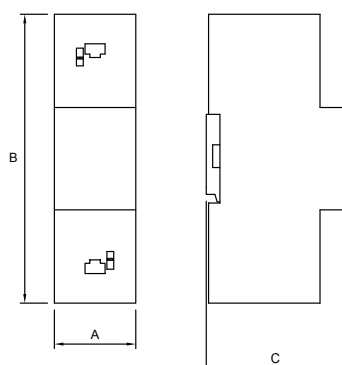
Wire size 24 VAC connection (secondary side)  $\geq 0.5 \text{ mm}^2$ .

### Maximum cable length between safety isolation transformer and MULTICAL®

Cable type	6699-403	6699-404	6699-405
0.75 mm <sup>2</sup>	50 m	50 m	25 m
1.5 mm <sup>2</sup>	100 m	100 m	50 m

## Dimensional drawing and electric connection

### Dimensioned sketch



### Terminal overview and mounting diagram

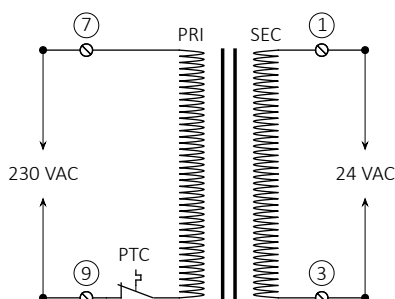


Figure 1 - 6699-403/6699-404, diagram with terminal numbers

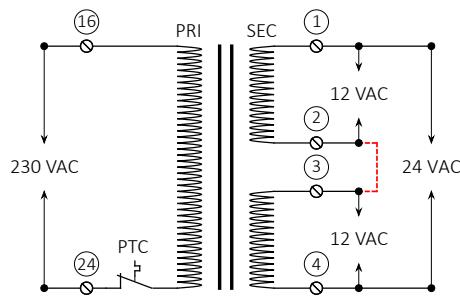


Figure 2 - 6699-405, diagram with terminal numbers, enclosed wire connection for 24 VAC is marked with red

Safety transformer

## Ordering

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<b>Order number</b>	<b>Description</b>
6699-403	230/24 VAC safety isolating transformer 5 VA
6699-404	230/24 VAC safety isolating transformer 10 VA
6699-405	230/12/24 VAC safety isolating transformer 63 VA

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