



Surge Counter type ProCounter

APPLICATION

The operation counters type ProCounter are intended for recording a number of operations of the medium and high voltage surge arresters. The operation counter type ProCounter in special version enables the diagnostics of surge arresters.

ADVANTAGES

- reliability of operation,
- simplicity of fixing and maintenance,
- security of operation,
- possibility of diagnostics of surge arresters,
- high counting rate,
- insensitivity to the shape of the wave of discharge current,
- rustless connecting terminals,
- small overall dimensions.

CONDITIONS OF OPERATION

The operation counters type ProCounter are designed for operation at the ambient temperature from -40°C (233 K) to +60°C (333 K), at the altitudes not exceeding 1000 m. above sea level and at the rated frequency of the voltage of the power network included from 48 Hz to 62 Hz. These counters are designed for co-operation with the surge arresters, the leakage current of which does not exceed 100 mA.

STANDARDS

The operation counters type ProCounter meet the requirements of NW-001-2001 internal company standard.

DESIGN

The operation counter type ProCounter consists of a set of varistors made of zinc oxide, an electromagnetic counting mechanism and an electronic circuit. All the parts of this counter are closed in the hermetic housing made of aluminium alloy and painted by means of powder paint protecting against corrosion. There is a lead-in insulator together with a terminal, intended for connection with a surge arrester, in the upper wall of the housing. There is an earth terminal and a socket, intended for connection with a meter type MPU, in the lower wall of the housing. The terminals of this counter are made of stainless steel.

The operation counters type ProCounter are manufactured in three versions:

- version A - with the indicator of the leakage current and with the measuring socket,
- version B - without the indicator of the leakage current but with the measuring socket,
- version C - without the indicator of the leakage current and without the measuring socket.

The meter type MPU enables the diagnostics of the surge arresters during their operation.

The measurements by means of the meter type MPU are carried out during the normal operation of the surge arresters, without the disconnection of the voltage and without the dismounting of the surge arrester. The housing of the surge arrester should be clean and dry during the diagnostics carried out by means of the meter type MPU or by means of the indicator in the counter. It is necessary for the faultless evaluation of the state of surge arrester.

PRINCIPLE OF OPERATION

Each of operation of the surge arrester caused by the overvoltage causes the passage of the discharge current through the counter. The passage of the discharge current causes the charging of the capacitor. After the discharge current decay the capacitor is discharged through the winding of the counting mechanism causing the increase of the indication of the counter by „1“. The electronic circuit of the counters made in special version has the measuring shunt with the resistance 200 Ω , which is used for the accurate measurements of the leakage current. The voltage from the shunt is leaded to the measuring socket in the lower wall of the housing, which is used for the connection of the meter type MPU.

TECHNICAL DATA

✓ The range of the current surges, with the shape 8/20 µs, causing the operation of the counter	.....	200 ÷ 40000 A
✓ The range of the current surges, with the shape 30/60 µs, causing the operation of the counter	.....	200 ÷ 2000 A
✓ The long - duration current impulse withstand, with the rectangular shape and duration 2800 µs	.....	1200 A
✓ The high current impulse withstand, 4/10 µs	.....	100 kA
✓ The maximum voltage between the terminals of the counter at the current impulse 10 kA, 8/20 µs	.....	3,1 kV
✓ The maximum voltage between the terminals of the counter at the current impulse 20 kA, 8/20 µs	.....	3,4 kV
✓ Mass - approximately	.....	2 kg.
✓ Overall dimensions:		
width -	.....	124 mm,
height -	.....	237 mm,
depth -	.....	238 mm.
✓ Service position -	.....	horizontal.
✓ Connecting terminals -	.....	bolt M 12 made of stainless steel.

ADDITIONAL EQUIPMENT

The meter of the leakage current type MPU.

The supporting bracket, zinc coated according to the drawing number ProCounter SCL 4 021 01 or painted by means of powder paint according to the drawing number ProCounter SCL 4 021 02.

SPARE PARTS

The operation counter type ProCounter is an unreparable apparatus. Spare parts are not foreseen.

THE WAY OF PUTTING THE ORDERS

In the order should be given:

The name of the product, type, version (with or without the measuring socket, with or without the indicator), additional equipment (with or without the supporting bracket), quantity.

Examples of the orders:

1. The operation counter for surge arresters, type ProCounter, with the indicator and with the measuring socket, 3 pieces.
2. The operation counter for surge arresters, type ProCounter, without the indicator, with the measuring socket, 9 pieces.
3. The operation counter for surge arresters, type ProCounter, without the indicator and without the measuring socket, 3 pieces.

In order to receive, in the ordered lot of counters, also some additional equipment one should specify additionally this equipment in the order, in the succeeding items, and give the quantity of the ordered pieces.

Examples of the orders for the additional equipment:

1. The meter of the leakage current type MPU, 1 piece.
2. The supporting bracket according to ProCounter SCL 4 021 01, 3 pieces.
3. The supporting bracket according to ProCounter SCL 4 021 02, 9 pieces.

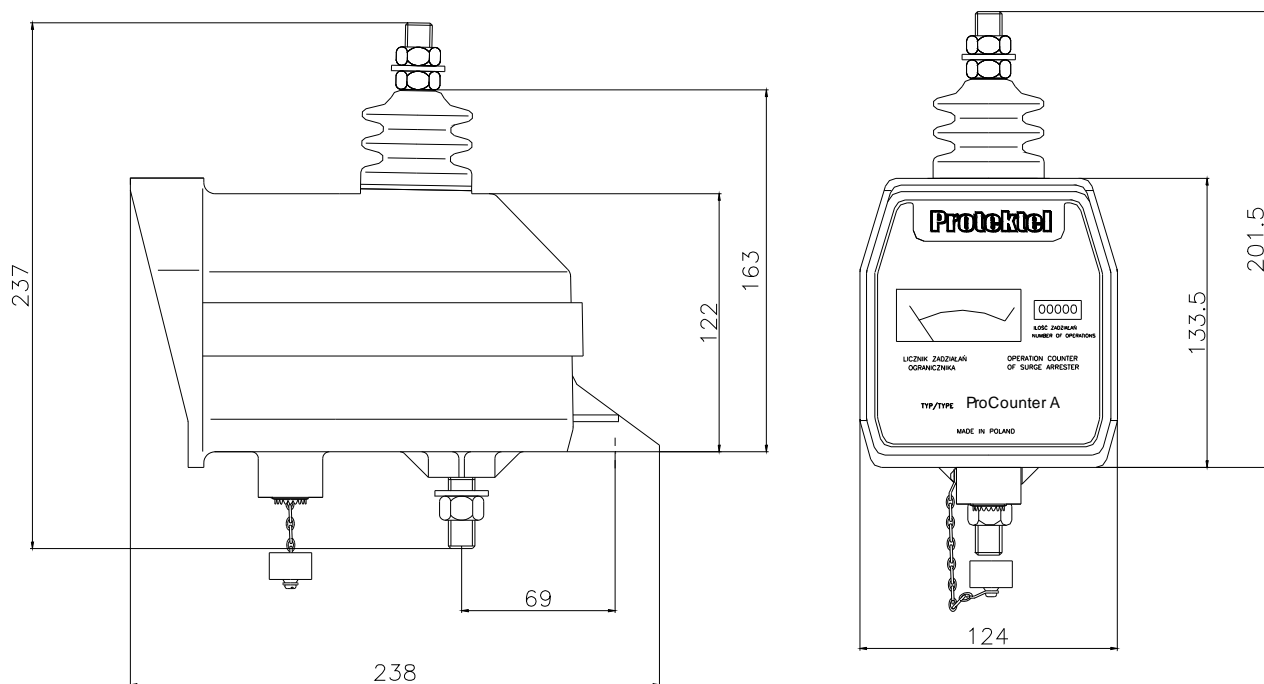
WARRANTY

The manufacturer warrants the faultless operation of the operation counters type ProCounter during the period of 12 months since the date of purchase.

NOTE

The manufacturer reserves the rights to change design and parameters without information, due to the technical progress.

DIMENSIONAL DRAWING



Producer

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