

LOW-POWER VOLTAGE TRANSFORMER

UR90



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Tele and Radio Research Institute

INFORMATION SHEET
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RoHS-compliant



The national and industry safety regulations must be observed during installation and operation. If the transformer is improperly used or used not for its intended purpose, the user shall be fully responsible for any possible risks to safety and resulting damage.



Operating a damaged device may result in the improper functioning of the protected unit, which may result in risks to life or health. Correct and trouble-free operation of the device requires proper transport, storage, assembly, installation and commissioning as well as proper operation, maintenance and service.



The installation and operation of the equipment should only be carried out by qualified personnel.

The UR 90 voltage transformer is designed for supervision and monitoring in industrial facilities
We reserve the right to introduce changes in the device.

INTENDED USE

The **UR 90** low-power voltage transformer is intended for use in an industrial environment for measuring voltage in MV networks equipped with bushings compliant with PN-EN 50180 and PN-EN 50181 standards, interface C.

The **UR 90** is made in the form of a highly stable resistance divider with linear characteristics, in accordance with the standards: PE EN 61869-6: 2017-03, PN-EN IEC 61869-11: 2018-07. Therefore, a very high accuracy of the division coefficient, thermal stability in a very wide range of working temperatures and a wide measuring band have been achieved.

The **UR 90** is supplied with a special connection cable with a length of 5/8/10 m. The transformer has capacity compensation.

For cable assembly to the transformer, the M8 type loading is supported.



ASSEMBLY

The assembly of the transformer involves screwing it into a bushing or surge arrester by means of a hexagonal M24 holder. The connection cable with an M8 3-pin female connector is terminated with free wires.



To maintain the measurement parameters, the connection cable delivered together with the transformer must be used and its length should not be altered.

The transformer should be earthed using an M8 screw located in the hexagonal holder or using the attached earthing cable terminated with an M8 eye terminal.



Before connecting to a bushing or surge arrester, the voltage transformer must be covered with a suitable silicone grease, e.g. silicone grease PE1352 WT 0 offered by Nexans.

TECHNICAL PARAMETERS

Input / output circuit

Rated primary voltage U_n	24/V3 kV 20/V3 kV 15/V3 kV 10/V3 kV 6/V3 kV
Rated secondary voltage U_n	3,25/V3 V
Insulation level	24/50/125 kV
Maximum operating voltage	24/V3 kV
Rated voltage factor	1,2 U_n /cont. 1,9 U_n /8h
Rated frequency	50/60Hz
Nominal load	200 k Ω , 300 pF 2 M Ω , 50 pF
Accuracy class	0,5/3P

Environmental conditions

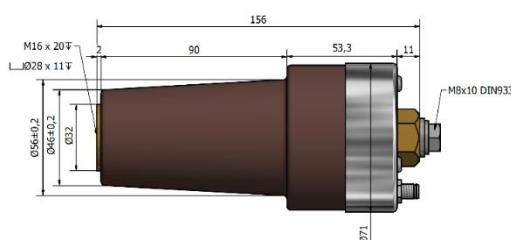
Operating temperature	-25°C ... +75°C
Storage temperature	-40°C ... +85°C
Air humidity	no condensation of water vapour and no frost formation

Connectors

Connector type	M8 3-pin male
Conductor type	with M8 connector, shielded, terminals 2 x 0.34..0.8 mm ²
Leads	a – brown n – black

Weight and dimensions

Weight	900 g
Dimensions	



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ORDER SPECIFICATION

	A	B	C
Rated primary voltage U_n			
$U_n = 24/V3$ kV	24		
$U_n = 20/V3$ kV	20		
$U_n = 15/V3$ kV	15		
$U_n = 10/V3$ kV	10		
$U_n = 6/V3$ kV	6		
Cable length			
5 m		5	
8 m		8	
10 m		10	
Nominal load			
200 k Ω , 300 pF			200
2 M Ω , 50 pF			2

Order example: UR90-20-8-2

UR 90	low power voltage transformer UR 90
A-20	rated primary voltage U_n 20/V3 kV
B-8	8 m connection cable
C-2	nominal load 2 M Ω , 50 pF

WARRANTY

The product is covered by a 36-month warranty. If the sale was preceded by an agreement signed by the Buyer, the provisions of this agreement shall apply. The guarantee covers free removal of defects revealed during use, provided the conditions specified in the warranty sheet have been maintained. Detailed warranty conditions can be found on the website: energetyka.itr.org.pl