

Load Monitoring

Low voltage and cos-phi monitoring

AD-LW 100 GS

Description

The AD-LW 100 GS monitors the load condition of inductive consumers. The main application areas are asynchronous motors with a 1 or 3 phase mains, whose load changes considerably. An evaluation of the cos-phi max value is carried out and simultaneously an independent under voltage monitoring. Exceeding the set limit values releases a contact. The switching conditions are displayed at the front via LEDs

Application

Function the measuring principle for the cos-phi is based on the evaluation of the phase shift between voltage and current in a

phase. The actual measuring size is therefore the phase angle between voltage and current. The setting value of the cos-phi or the phase angle is therefore only correct for sinusoidal sizes. The phase shift runs almost in reverse to the load. A cos-phi of 0 (= 90°) is therefore equivalent to a low load whereas a cos-phi of 1 (= 0°) is equivalent to a high load.)

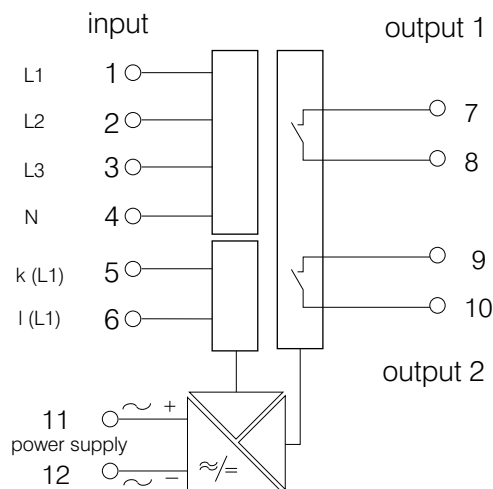
Specification

type	1 channel housing: AD-LW 100 GS	
power supply	ALLPOWER 20...253V AC/DC internal electrically insulated	
power consumption	approx. 2,5 VA resp. 4 W	
input voltage	3 x 180...240 VAC L1 / L2 / L3 against neutral wire	
input current	1 x 1...5 A current in L1	
adjustment range	with trimmer on the front side (270°) cos-phi: 0,2...0,9 voltage: 180...250 VAC	
output	each one normally open contact with switch function on front side	
hysteresis	approx. 3% from range	
accuracy	approx. 2%	
insulation test voltage	input/output	5 kV RMS
	signal/power supply	4 kV RMS
CE-conformity	EN 50081-2, EN 50082-2	
ambient temperature variations	0 to 50°C cos-phi min + low pressure cos-phi min + cos-phi min	



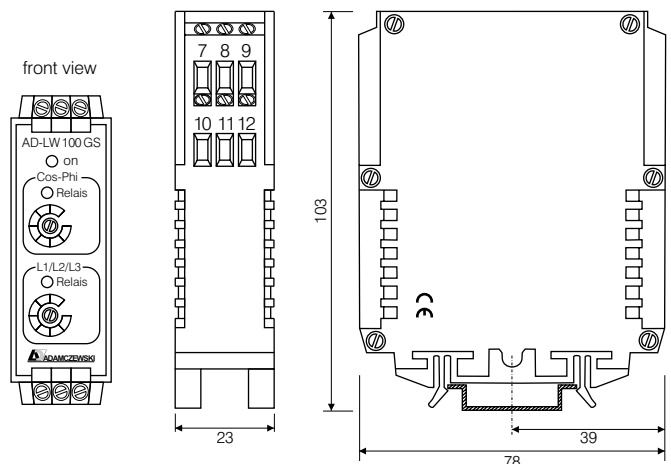
connection and dimension: AD-LW 100 GS

Input: 3 x 180-250 V AC, 1x 0-5 A AC



connection data:
fine-wire 2,5 mm²
single-wire 4,0 mm²
max. voltage 250 VAC

manner of fastening
attachment rail NS 35 / 7,5
protection IP 20
weight approx. 200 g



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