

Monitoring Relays

3UG Monitoring Relays for Electrical and Additional Measurements

Voltage monitoring

Technical specifications

		3UG46 31- .AA	3UG46 31- .AW	3UG46 32- .AA	3UG46 32- .AW	3UG46 33
General data						
Rated control supply voltage U_s	V	24 AC/DC	24 ... 240 AC/DC	24 AC/DC	24 ... 240 AC/DC	17 ... 275 AC/DC ¹⁾
Rated frequency for AC	Hz	50/60				40 ... 500
Operating range	V	20.4 ... 27.6	20.4 ... 264	20.4 ... 27.6	20.4 ... 264	17...275
Rated power in W/VA	VA	2/4				
Width	mm	22.5				
RESET		Automatic /manual				
Availability time after application of U_s	ms	1000				
Response time once a switching threshold is reached	ms	Max. 450				
Adjustable tripping delay time	s	0.1 ... 20				
Adjustable ON-delay time	s	--				
Mains buffering time , minimum	ms	10				
Rated insulation voltage U_i Degree of pollution 3 Overvoltage category III acc. to VDE 0110	V	690				
Rated impulse withstand voltage U_{imp}	kV	6				
Safe isolation acc. to EN 60947-1	V	300				
Permissible ambient temperature • During operation • During storage	°C	-25 ... +60 -40 ... +85				
EMC tests²⁾		IEC 60947-1/ IEC 61000-6-2 / IEC 61000-6-4				
Degree of protection • Enclosures • Terminals		IP40 IP20				
Vibration resistance acc. to IEC 60068-2-6		1 ... 6 Hz: 15 mm; 6 ... 500 Hz: 2 g				
Shock resistance acc. to IEC 60068-2-27		12 shocks (half-sine 15 g/11 ms)				
Connection type		Screw terminals				
• Terminal screw • Solid • Finely stranded with end sleeve • AWG cables, solid or stranded • Tightening torque	mm ² mm ² AWG Nm	M 3 (standard screwdriver, size 2 and Pozidriv 2) 1 x (0.5 ... 4) / 2 x (0.5 ... 2.5) 1 x (0.5 ... 2.5) / 2 x (0.5 ... 1.5) 2 x (20 ... 14) 0.8 ... 1.2				
Connection type		Spring-loaded terminals				
• Solid • Finely stranded, with end sleeves acc. to DIN 46228 • Finely stranded • AWG cables, solid or stranded	mm ² mm ² mm ² AWG	2 x (0.25 ... 1.5) 2 x (0.25 ... 1.5) 2 x (0.25 ... 1.5) 2 x (24 ... 16)				
Measuring circuit						
Permissible measuring range single-phase AC/DC voltage	V	0.1 ... 68		10 ... 650		17 ... 275
Setting range single-phase voltage	V	0.1 ... 60		10 ... 600		17 ... 275
Measuring frequency	Hz	40 ... 500				40 ... 500
Measuring accuracy	%	5				
Repeat accuracy at constant parameters	%	1				
Accuracy of digital display		±1 digit				
Deviations for temperature fluctuations	%/°C	±0.1				
Hysteresis for single-phase voltage	V	0.1 ... 30		0.1 ... 300		0.1 ... 150
Control circuit						
Load capacity of the output relay • Thermal current I_{th}	A	5				
Rated operational current I_e at • AC-15/24 ... 400 V • DC-13/24 V • DC-13/125 V • DC-13/250 V	A	3 1 0.2 0.1				
Minimum contact load at 17 V DC	mA	5				
Output relay with DIAZED fuse gL/gG operational class	A	4				
Electrical endurance AC15	Million operating cycles	0.1				
Endurance with contactor relay	Million operating cycles	10				

¹⁾ Absolute limit values.

²⁾ Caution: This is a Class A product. In the household environment this device may cause radio interference. In this case the user must introduce suitable measures.