3UG Monitoring Relays for Electrical and Additional Measurements

Current monitoring

Technical specifications

		3UG46 21-.AA	3UG46 21-.AW	3UG46 22-.AA	3UG46 22-.AW
General data					
Rated control supply voltage U_s	V	24	24 … 240	24	24 … 240
Rated frequency	Hz	50/60			
Operating range	V	20.4 ... 26.4	20.4 ... 264	20.4 ... 26.4	20.4 ... 264
Rated power	W/VA	2/4			
Width	mm	22.5			
RESET		Automatic/ manual			
Availability time after application of U_s	ms	1000			
Response time on reaching a switching threshold	ms	450			
Adjustable tripping delay time	s	0.1 … 20			
Adjustable ON-delay time	s	0.1 … 20			
Mains buffering time, min.	ms	10			
Rated insulation voltage U_i Degree of pollution 3; overvoltage category III according to VDE 0110	V	690			
Rated impulse withstand voltage U_{imp}	kV	6			
Safe isolation according to EN 60947-1	V	300			
Permissible ambient temperature					
• During operation	°C	-25 … +60			
• During storage	°C	-40 … +85			
EMC tests[1]		IEC 60947-1/ IEC 61000-6-2 / IEC 61000-6-4			
Degree of protection					
• Enclosure		IP40			
• Terminals		IP20			
Vibration resistance according to IEC 60068-2-6	Hz/mm	1-6/15; 6-500.20 m/s^2			
Shock resistance according to IEC 60068 Part 2-27	*g*/ms	15/11			
Conductor cross-section					
• Screw terminals		M3 (standard screwdriver size 2 and Pozidriv 2)			
- Solid	mm^2	1 x (0.5 ... 4) / 2 x (0.5 ... 2.5)			
- Finely stranded with end sleeve	mm^2	1 x (0.5 ... 2.5) / 2 x (0.5 ... 1.5)			
- AWG conductors, solid or stranded	AWG	2 x (20 ... 14)			
- Tightening torque	Nm	0.8 … 1.2			
• Spring-loaded terminals					
- Solid	mm^2	2 x (0.25 ... 1.5)			
- Finely stranded, with end sleeves according to DIN 46228	mm^2	2 x (0.25 ... 1.5)			
- Finely stranded	mm^2	2 x (0.25 ... 1.5)			
- AWG conductors, solid or stranded	AWG	2 x (24 ... 16)			
Measuring circuit					
Measuring range for single-phase AC/DC current	A	0.003 … 0.6		0.05 … 15	
Setting range for single-phase current	A	0.003 ... 0.5		0.05 ... 10	
Load supply voltage	V	24	Max. 300[2] Max. 500[3]	24	Max. 300[2] Max. 500[3]
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 current		0.1 ... 250 mA		0.01 ... 5 A	
Permissible overcurrent, continuous	A	0.6		15	
Permissible overcurrent, < 1 s	A	5		50	
Protection against destruction, DIAZED gL/gG	A	2		16	
Measuring circuit internal resistance, shunt	mΩ	500		5	
Control circuit					
Load capacity of the output relay					
• Thermal current limit I_{th}	A	5			
Rated operational current I_e at					
• AC-15/24 ... 400 V	A	3			
• DC-13/24 V	A	1			
• DC-13/125 V	A	0.2			
• DC-13/250 V	A	0.1			
Minimum contact load at 17 V DC	mA	5			
Output relay with DIAZED fuse gL/gG	A	4			
Electrical endurance AC15	Million oper. cycles	0.1			
Endurance with contactor relay	Million oper. cycles	10			

1) Note: 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.

2) With safe isolation.

3) With easy isolation.