

# Monitoring Relays

## 3UG Monitoring Relays for Electrical and Additional Measurements

### Level monitoring

#### Technical specifications

Type	3UG30/3UG35			
<b>Load capacity of the output relay</b>	Rated operational current $I_e$	A	Max. 8	
	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	
<b>Minimum contact load</b>		mA	5 /17 V for a fault of 1 ppm	
<b>Output relay with DIAZED fuse<sup>1)</sup></b>	gL/gG operational class	A	4	
<b>Electrical endurance</b>	Operating cycles		$1 \times 10^5$	
<b>Mechanical endurance</b>	Operating cycles		$2 \times 10^6$	
<b>Ambient temperature</b>	During operation	°C	-20 ... + 50	
	During storage	°C	-30 ... + 70	
<b>Conductor connection</b>	Solid	mm <sup>2</sup>	2 x (0.5 ...2.5)	
	Finely stranded, with end sleeves	mm <sup>2</sup>	2 x (0.5 ...1.5)	
<b>Degree of protection</b>	Terminals		IP20	
	Enclosures		IP40	
<b>Vibration resistance</b>	According to IEC 60068-2-6	Hz/mm	10 ...150/0.035	

<sup>1)</sup> Short-circuits without any relay contact welding according to DIN VDE 0660 Part 200.

<b>Rated control supply voltage <math>U_s</math></b>	V	See Catalog LV 1, Selection data (electrical isolation by means of a transformer)		
<b>Voltage tolerance</b>		0.85 ...1.1 x $U_s$		
<b>Maximum power consumption</b>	W/VA	3 / 6		
<b>Function</b>	Inlet or outlet monitoring	UNDER/OVER selector switch at the front		
<b>Sensitivity</b>	Adjustable	k $\Omega$	5 ... 100	
<b>Setting accuracy</b>	At maximum sensitivity	%	±30	
<b>Repeat accuracy</b>	At constant parameters	%	± 0.1	
<b>Sensor length</b>	Max.	m	100	
<b>Electrode voltage</b>	Max.	V	24 (50/60 Hz)	
<b>Electrode current</b>	Max.	mA	1 (50/60 Hz)	
<b>Conductor capacity</b>	Of the sensor cable <sup>1)</sup>	nF	10	
<b>Delay time</b>	• T1 at Max/M terminal	ms	Typically 500 (ON-delay with OVER, OFF-delay with UNDER)	
	• T2 at MIN/M terminal	ms	Typically 300 (OFF-delay with OVER, ON-delay with UNDER)	
<b>Mains buffering time</b>		ms	300	

<sup>1)</sup> The sensor cable does not necessarily have to be shielded, but it is not recommended to lay this cable parallel to the power supply lines. It is also possible to use a shielded cable, whereby the shield has to be connected to the M terminal.

#### Level monitoring sensors

Type		3UG32 07-3A three-pole	3UG32 07-2A two-pole	3UG32 07-2B two-pole	3UG32 07-1B single-pole	3UG32 07-1C single-pole	
<b>Length</b>	mm	500	500	--	--	--	
<b>Insulation</b>	Teflon insulation (PTFE)	Yes	Yes	Yes	--	Yes	
<b>Installation</b>		Vertical	Vertical	Lateral	Lateral	Lateral	
<b>Screw-in gland width A/F</b>		22					
<b>Thread</b>	Inch	R 3/8					
<b>Connection cable</b>	mm <sup>2</sup>	3 x 0.5, 2 m long					
<b>Operating temperature</b>	°C	90					
<b>Operating pressure</b>	bar	10					
<b>Assignment</b>	• Cable/Electrode	Cable brown	Center electrode	Not assignable	Gland	Gland	Gland
		Cable white	Not assignable	Not assignable	Not assignable	Electrode	Electrode
		Cable green	Not assignable	--	Not assignable	--	--