

## Environment

Rated insulation voltage (U <sub>i</sub> )	Conforming to IEC/EN 60947-1 and 60947-5-1	V	400
	Conforming to VDE 0110	V	400
Rated impulse withstand voltage (U <sub>imp</sub> )		kV	4 in enclosure
Conforming to standards			IEC/EN 60669-1 and 60669-2, NF C 61-112
Approvals			NF-USE, CEBEC, ASE, KEMA, N, S, D, FI VDE pending
Degree of protection	Conforming to VDE 0106		Protection against direct finger contact IP 20 open, IP 40 in enclosure
Protective treatment	Standard version		"TC"
Ambient air temperature around the device	Storage	°C	- 40...+ 80
	Operation	°C	- 20...+ 50
Maximum operating altitude	Without derating	m	2000
Operating positions	Without derating		± 90° in relation to normal vertical mounting position
Shock resistance 1/2 sine wave = 10 ms	Impulse relay open		Please call 0870 608 8 608
	Impulse relay closed		Please call 0870 608 8 608
Vibration resistance 5...300 Hz	Impulse relay open		4 gn
	Impulse relay closed		4 gn

## Pole characteristics

Number of poles			1 or 2		
Rated operational current (I <sub>e</sub> ) (U <sub>e</sub> ≤ 250 V)	In AC-7a (heating)	A	16		
Rated operational voltage		V	250		
Conventional thermal current (I <sub>th</sub> )	θ ≤ 50 °C	A	16		
Short time rating provided there has been no current flow for the previous 15 minutes with θ ≤ 40 °C	For 1 s	A	320		
	For 10 s	A	96		
	For 30 s	A	48		
Short-circuit protection by fuse or circuit breaker	gl fuse	A	16		
	Circuit-breaker I <sup>2</sup> t (at 3 kA rms prospective)	A <sup>2</sup> s	5000		
Average impedance per pole	At I <sub>th</sub> and 50 Hz	mΩ	4		
Power dissipated per pole		W	1		
Maximum cabling c.s.a.			Min	Max	
	Flexible cable without cable end	1 conductor	mm <sup>2</sup>	0.5	6
		2 conductors	mm <sup>2</sup>	0.5	4
	Flexible cable with cable end	1 conductor	mm <sup>2</sup>	0.5	6
		2 conductors	mm <sup>2</sup>	0.5	4
	Solid cable without cable end	1 conductor	mm <sup>2</sup>	0.5	6
2 conductors		mm <sup>2</sup>	0.5	4	
Tightening torque	Power circuit connections	N.m	1.4		

## Control circuit characteristics

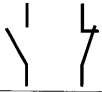
<b>Rated control circuit voltage (Uc)</b>		<b>V</b>	12...240 V, for other voltages, please call our Customer information centre on 0870 608 8 608.
<b>Control voltage limits (θ &lt; 50 °C)</b>	Operating threshold, dual frequency 50/60 Hz	<b>V</b>	0.85...1.1 Uc
<b>Average consumption at 20 °C and at Uc</b>	Inrush at 50 Hz	<b>VA</b>	19
<b>Operating time</b>	Closing "C"	<b>ms</b>	70
	Opening "O"	<b>ms</b>	70
<b>Minimum pulse time</b>		<b>ms</b>	70
<b>Mechanical durability</b>	In operating cycles		10 <sup>6</sup>
<b>Electrical durability</b>	In operating cycles AC-21 AC-22		200,000 100,000
<b>Maximum operating rate</b>	Operating cycles per hour		900
<b>Maximum cabling c.s.a.</b>			
Flexible cable without cable end	1 or 2 conductors	<b>mm<sup>2</sup></b>	2.5
Flexible cable with cable end	1 conductor	<b>mm<sup>2</sup></b>	2.5
	2 conductors	<b>mm<sup>2</sup></b>	1.5
Solid cable without cable end	1 or 2 conductors	<b>mm<sup>2</sup></b>	1.5
<b>Tightening torque</b>		<b>N.m</b>	1.4

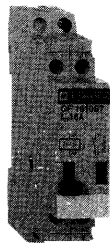
# Modular components

Impulse relays, type GF16

## Function

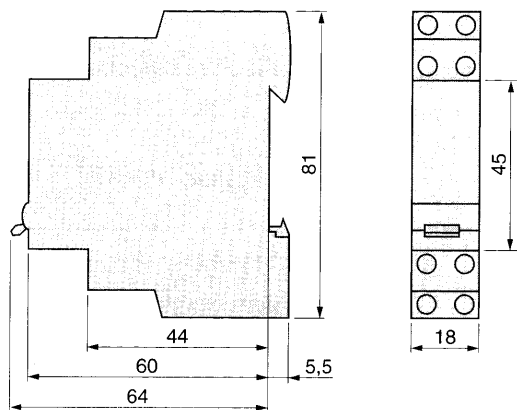
Opening and closing of circuits which are remotely switched by pulse and mechanically maintained. These impulse relays are used in lighting circuits when there are more than two switching points.

Maximum current rating category AC-1	No. of poles 	Coil voltages ~ 50/60 Hz		Sold in lots of	Unit reference	Weight	
A		V	V			kg	
16	1	-	12	6	12	<b>GF-1610J7</b>	0.110
			24	12	12	<b>GF-1610B7</b>	0.110
			48	24	12	<b>GF-1610E7</b>	0.110
			110	48 <sup>N</sup>	12	<b>GF-1610F7</b>	0.110
			220	-	12	<b>GF-1610M7</b>	0.110
			230/240	110	12	<b>GF-1610U7</b> *	0.110
	2	-	12	6	12	<b>GF-1620J7</b>	0.110
			24	12	12	<b>GF-1620B7</b>	0.110
			48	24	12	<b>GF-1620E7</b>	0.110
			110	48	12	<b>GF-1620F7</b>	0.110
			220	-	12	<b>GF-1620M7</b>	0.110
			230/240	110	12	<b>GF-1620U7</b>	0.110
1	1		12	6	12	<b>GF-1611J7</b>	0.110
			24	12	12	<b>GF-1611B7</b>	0.110
			48	24	12	<b>GF-1611E7</b>	0.110
			110	48	12	<b>GF-1611F7</b>	0.110
			220	-	12	<b>GF-1611M7</b>	0.110
			230/240	110	12	<b>GF-1611U7</b> *	0.110

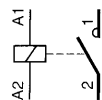


GF-1610

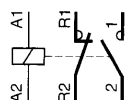
**Dimensions**  
GF-1610, GF-1611, GF-1620



**Schemes**  
GF-1610



**GF-1611**



**GF-1620**

