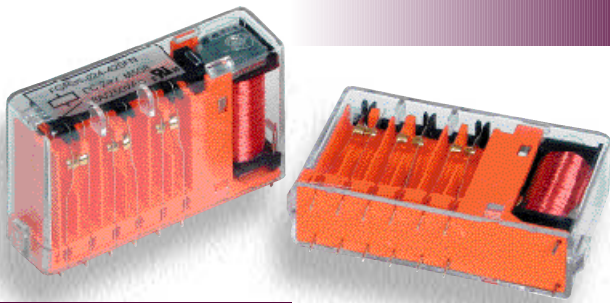


# FGR SAFETY RELAYS

with force guided contact sets



## FGR35 (6-Pole)

### General Technical Data

Relay Version	FGR35 (6-pole)
Contact Configurations	240 (2NO/4NC) , 330 (3NO/3NC) 420 (4NO/2NC) , 510 (5NO/1NC)
Contact Material	AgCd0 + 0.2 µm Au or 2µm Au gold pl.
Nominal Coil Consumption (average)	800 mW
Pull-in Consumption (average)	450 mW
Admissible Ambient Temperature Range / °C (°F)	-25 ... +80 °C (-13 ... + 176 °F)
Admissible Coil Temperature	120 °C (248 °F)
Max. Switched Voltage Rating in accordance to DIN VDE 0435	230/240 VAC / 300 VDC
Max. Switched Current Rating (de-rated to 6 A if more than 2 contacts are simultaneously loaded)	8 A
Max. Contact Load (resistive)	1,800 VA / 60 W
Mechanical Service Life	1 x 10 <sup>7</sup> switching operations
Electrical Service Life	1 x 10 <sup>5</sup> switching operations
Contact gap in case of malfunction (110% V <sub>nom.</sub> ; T <sub>vmin.</sub> ; R <sub>min.</sub> )	> 0.5 mm
Response times Pull-in / Drop-out	13 / 8 m sec.
Insulation for reference voltage 250V	Operational surge voltage category III; and Pollution degree 2 Reinforced Insulation Basic Insulation
Coil-Contact set Contact set - Contact set	
Vibration resistance within frequency range of 10-55Hz in accordance to DIN EN 60068-2-6	5 g
Shock resistance	10 g / 11 ms
Weight	30 g
Approvals (in progress)	UL, CUL, CSA (TÜV)

### Standard Coil Data at 20°C (68°F)

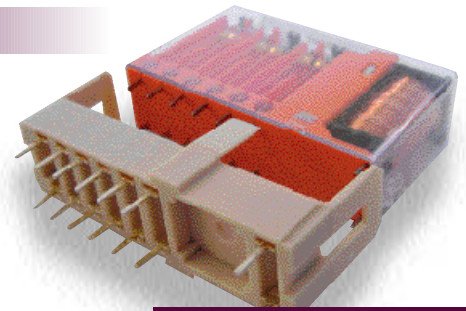
Nominal Voltage	Coil Resistance	Tolerance	Pull-in Voltage	Drop-out Voltage	Max. Operat. Voltage	Coil Consumption
VDC	Ohm	%	VDC	VDC	VDC	mA
6	30	±10	4.1	0.3	11	200
12	120	±10	8.2	0.6	21	100
24	480	±10	16.8	1.2	42	50
48	1,920	±10	33.6	2.4	85	25
60	3,000	±10	42	3	96	20
110	10,800	±15	77	5.5	198	10

### Ordering Example

- **FGR35-024-420PN** designates a FGR relay series 35 with 24 VDC coil and 4NO/2NC force guided contact set with AgCd0-0.2 µm Au gold flashed contacts.
- For detailed ordering information please refer to FGR designation key on page 15

# FGR SAFETY RELAYS

with force guided contact sets



**FGR35 (6-Pole)**

## Dimensions and Foot Prints

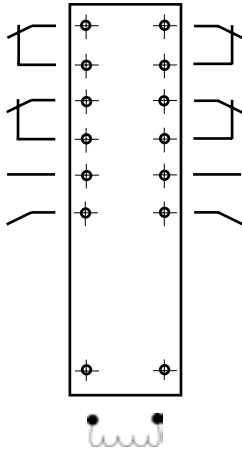
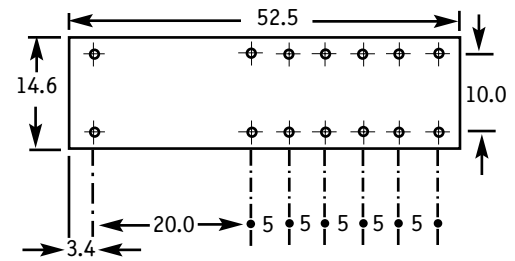
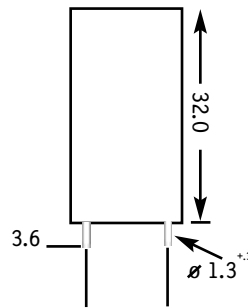
All Dimensions shown are metric (mm)

For conversion:

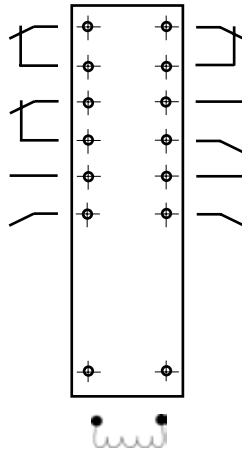
1mm = 0.03937 inch

1inch = 25.40 mm

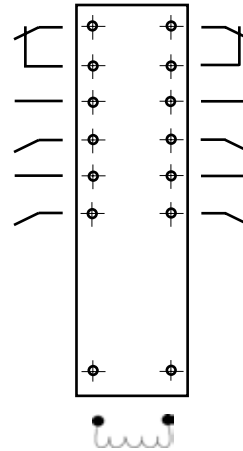
**Note:** FGR Relays are suitable for hand and wave soldering process. The inside diameter of soldering eyes for all relay pins must be  $1.3^{+0.3}$ mm (0.052<sup>+0.013</sup>inch)



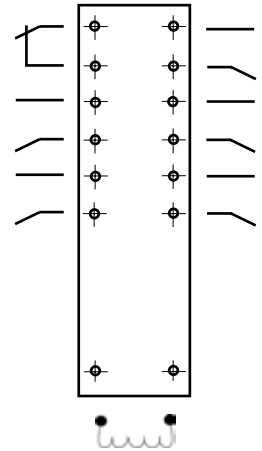
**2NO/4NC**



**3NO/3NC**



**4NO/2NC**

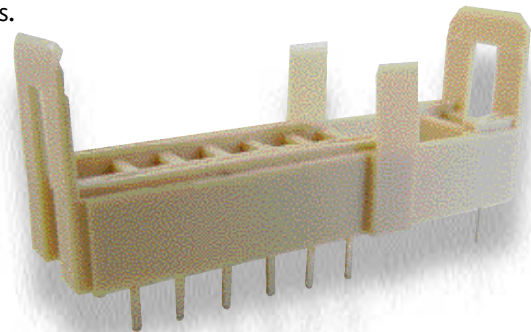


**5NO/1NC**

## Accessories

**FGR35-S6:** 6-Pole PCB mount socket for safety relay FGR35 6-Pole.

This socket can be used for all FGR35 6-Pole contact set arrangements.



- All FGR Sockets are rated 8 Amp / 250 Volt AC or DC.
- All FGR Sockets can be used for all available coil voltages. 6 VDC to 110 VDC.
- All FGR Sockets are provided with terminals that are suitable for hand and wave soldering process.
- Overall dimensions: L. W. H. 55.1 x 17.0 x 22.5mm (2.17 x 0.67 x 0.89inch).
- Soldering Pin length: 5.5mm (0.22inch). The inside diameter of soldering eyes for all socket pins must be  $1.3^{+0.3}$ mm (0.052<sup>+0.013</sup>inch).

