



## PFR690

### Phase rotation relay

- Phase control unit PFR 690 for analysis of correct phase rotation
- Destructions or damages caused by false direction of rotation are prevented effectively.
- The PFR690 unit evaluates correct phase rotation and phase loss. The unit consists of a changer whose contact closes at clockwise 3 phase-rotation
- The PFR690 unit is powered directly out of three phases

### Product description

If there is a need for correct 3 phase-rotation in installations and circuitry the PFR690 eliminates malfunctions.

This is extremely important when activating motor equipment.

False phase rotation could cause serious damages or even destruction of the equipment.

### Connecting instructions

The PFR690 unit is connected parallel to the electric consumer and evaluates 3 phase rotation.

When using clockwise 3 phase rotation (L1-L2-L3) the relay operates and closes contacts 11 and 14.

If there is a wrong phase rotation the relay will not switch.

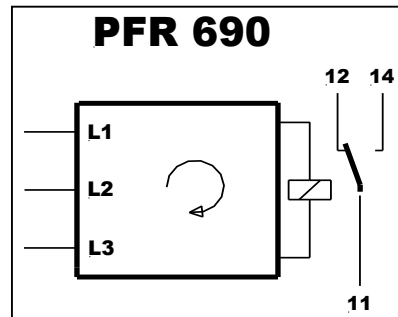
To assure precise functionality engage all phases simultaneously.

The **BONTRONIC** control unit is used also as phase loss monitor.

The energetic recovery reaction has to be proved in a field test.

It is advisable to install the PFR690 unit before the electrical contacts of the motor protection. During clockwise phase rotation the unit operates and switches the working contact of the electric contactor coil.

### Wiring diagram



### Ordering information

Case colour grey	Model	Ord. No.
	<b>PFR690</b>	<b>909214</b>

### Technical specifications

Model	Ord. No.
<b>PFR690</b>	<b>909214</b>

#### Input data

Input voltage (3 phases)	690 V $\pm$ 10%, 50-60 Hz
Current demand	4mA max. per Phase
Power consumption	4VA max.
3 Phase rotation	L1 - L2 - L3

#### Output data

Contact loadings	1 Changer
Switching voltage	250V AC
Constant current	5A
Starting current	8A
Switching power AC max.	1200 VA (Resistive load)
Switching power DC max.	120 W (Resistive Load)
Isolation voltage coil / contact	4 kV effective

#### General data

Operating temperature	0°C to +40°C
Storage temperature	-20°C to +80°C
Degree of protection	IP 20
Wire alignment	AWG 12
Dimensions	90 x 65 x 35 mm