

## Rotation Monitor

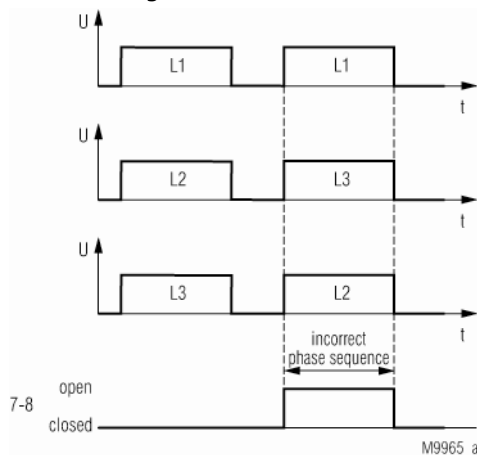
### ROMi / ROMe

Mat.: 262000010 / 262000011



- According to DIN EN 60255
- Detection of incorrect phase sequence
- No separately auxiliary voltage necessary
- Nominal voltage range 3 AC 380 ... 690 V
- Suitable for frequency converter ( $f = 40 \dots 80 \text{ Hz}$ )
- Output: NC contact (open at incorrect phase sequence)
- Extended temperature range
- ROMi: potted module with stranded wire connection suitable for mounting in terminal box
- Width ROMe: 35 mm (1.4 in)

### 1. Function diagram



### 4. Applications

To avoid wrong sense of rotation on 3-phase motors

### 5. Technical Data

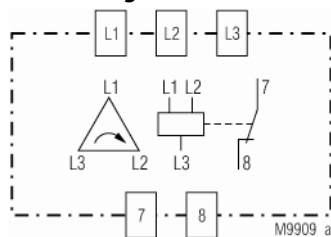
#### Input (L1-L2-L3) (ROMi: stranded wire red-blue-grey)

<b>Nominal voltage <math>U_N</math>:</b>	3 AC 380 ... 690 V
<b>Voltage range:</b>	0.85 ... 1.1 $U_N$ (3 AC 320 ... 760 V)
<b>Nominal consumption:</b>	approx. 3 VA
<b>Frequency range:</b>	40 ... 80 Hz (main frequency); suitable for frequency converter

#### Output (7-8) (ROMi: stranded wire yellow-green)

<b>Contact:</b>	1 NC contact
<b>Reaction time:</b>	After connection of all 3 phases with wrong phase sequence until NC contact opens: approx. 100 ms

### 2. Circuit diagram



### 3. Approvals and marking



#### Thermal current $I_{th}$

ROMi:	2 A
ROME:	5 A

#### Switching capacity ROMi

acc. AC 15:	1 A / AC 230 V	IEC/EN 60 947-5-1
acc. DC 13:	1 A / DC 24 V	IEC/EN 60 947-5-1

#### Switching capacity ROMe

acc. AC 15:	2 A / AC 230 V	IEC/EN 60 947-5-1
acc. DC 13:	2 A / DC 24 V	IEC/EN 60 947-5-1

#### Electrical life time:

1.5 x 10<sup>5</sup> switching cycles

#### Short circuit strength

#### max. fuse rating

ROMi:	2 A gL	IEC/EN 60 947-5-1
ROME:	4 A gL	IEC/EN 60 947-5-1

#### Mechanical life time:

≥ 30 x 10<sup>6</sup> switching cycles

## General Data

<b>Operating mode:</b>	Continuous operation	
<b>Temperature range:</b>		
ROMi:	-30 °C ... +75 °C (-22 °F ... +167 °F)	
ROME:	-30 °C ... +70 °C (-22 °F ... +158 °F)	
<b>Clearance and creepage distances</b>		
rated impulse voltage / pollution degree;		
output to input:	6 kV / 3	IEC 60 664-1
<b>EMC</b>		
Fast transients:	2 kV	IEC/EN 61 000-4-4
Surge voltages:	2 kV	IEC/EN 61 000-4-5
Interference suppression:	Limit value class B	EN 55 011
<b>Degree of protection:</b>		
ROMi:	Potted module	
ROME:	Enclosure: IP 40	EN 60 529
	Terminals: IP 20	EN 60 529
<b>Housing:</b>		
ROMi:	Pottant with UL approval	
ROME:	Thermoplastic with V0 behaviour according to UL subject 94	
<b>Vibration resistance:</b>	Amplitude 0.35 mm, IEC/EN 60 068-2-6	
	Freq. 10 ... 55 Hz	
<b>Climate resistance:</b>		
ROMi:	30 / 075 / 04	IEC/EN 60 068-1
ROME:	30 / 070 / 04	IEC/EN 60 068-1
<b>Wire connection:</b>		
ROMi:		
L1; stranded wire red:	0.5 mm <sup>2</sup> , double insulation	
L2; stranded wire blue:	0.5 mm <sup>2</sup> , double insulation	
L3; stranded wire grey:	0.5 mm <sup>2</sup> , double insulation	
7; stranded wire yellow:	0.25 mm <sup>2</sup> , double insulation	
8; stranded wire green:	0.25 mm <sup>2</sup> , double insulation	
ROME:	2 x 2.5 mm <sup>2</sup> solid	DIN 46 228
	2 x 1.5 mm <sup>2</sup>	DIN 46 228-1/-2/-3
	stranded wire with sleeve	
<b>Wire fixing ROME:</b>	Flat terminals with self-lifting clamping piece	EN 60 999
<b>Mounting ROME:</b>	DIN-rail	IEC/EN 60 715
<b>Weight:</b>		
ROMi:	180 g	
ROME:	220 g	

## Dimensions

<b>Width x height x depth:</b>		
ROMi:	62 x 62 x 28 mm (2.5 x 2.5 x 1.1 in)	
ROME:	35 x 90 x 59 mm (1.4 x 3.5 x 2.3 in)	

## 6. Standard types

Rotation monitor ROMi (internal)

Material number: 262000010

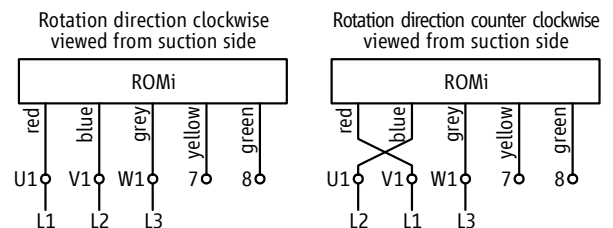
- Output: 1 NC contact
- Nominal voltage  $U_N$ : 3 AC 380 ... 690 V
- Frequency range: 40 ... 80 Hz
- Width: 62 mm (2.5 in)

Rotation monitor ROME (external)

Material number: 262000011

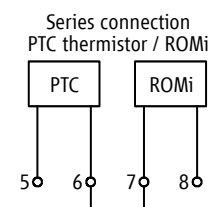
- Output: 1 NC contact
- Nominal voltage  $U_N$ : 3 AC 380 ... 690 V
- Frequency range: 40 ... 80 Hz
- Width: 35 mm (1.4 in)

## 7. Wiring diagram ROMi



## 8. Additional notes

- The rotation monitor ROMi / ROME may detect a wrong sense of rotation while using a soft starter. In this case it can be necessary to bypass the output circuit (7-8) during the start up procedure of the pump.
- In case the motor is additionally equipped with a PTC thermistor, the rotation monitor ROMi may be monitored separately (7-8) as well as in series with the PTC thermistor (5-8):



## EG-Konformitätserklärung EC-Declaration of Conformity

**Hersteller:** Hermetic-Pumpen GmbH  
Manufacturer:  
**Beschreibung der Ware nach Art:** Rotationsmonitor intern  
Product: Rotation monitor internal  
**Typ:** ROMi  
**Material-Nr.:** 262000010  
Material-No.:  
**Zutreffende EG Richtlinien:** 2004/108/EG 2006/95/EG  
Concerned EC – Directive: 2004/108/EC 2006/95/EC

**Hersteller:** Hermetic-Pumpen GmbH  
Manufacturer:  
**Beschreibung der Ware nach Art:** Rotationsmonitor extern  
Product: Rotation monitor external  
**Typ:** ROME  
**Material-Nr.:** 262000011  
Material-No.:  
**Zutreffende EG Richtlinien:** 2004/108/EG 2006/95/EG  
Concerned EC – Directive: 2004/108/EC 2006/95/EC

Wir erklären die Übereinstimmung der beschriebenen Produkte mit den Forderungen nachfolgender EG-Richtlinien.  
We declare the conformity of the described products with the demands from the listed EC-Directives.

**Richtlinie 2004/108/EG  
Directive 2004/108/EC**

**Richtlinie 2006/95/EG  
Directive 2006/95/EC**

Angewandte harmonisierte Normen:  
Applied harmonised standards:

**DIN EN 61000-6-4 09.2007  
DIN EN 61000-6-2 03.2006**



**Datum: 17.7.2009**

Geschäftsleitung / Management HERMETIC-PUMPEN GmbH  
Dr. R. Krämer

Diese Erklärung ist keine Zusicherung von Eigenschaften im Sinne der Produkthaftung.  
Die Sicherheitshinweise der Produktdokumentation sind zu beachten.  
This declaration does not imply any warranty of properties in respect to product liability.  
The safety instructions of the accompanying product documentation shall be observed.