

RP3 THREE - PHASE POWER CONTROLLER

FEATURES:

- Phase control
- ON/OFF control
- Impulse control
- Soft Start
- I_{LIM}
- α_{LIM}

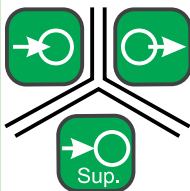
INPUTS:

- 0..10 V
- 0..20 mA

OUTPUTS:

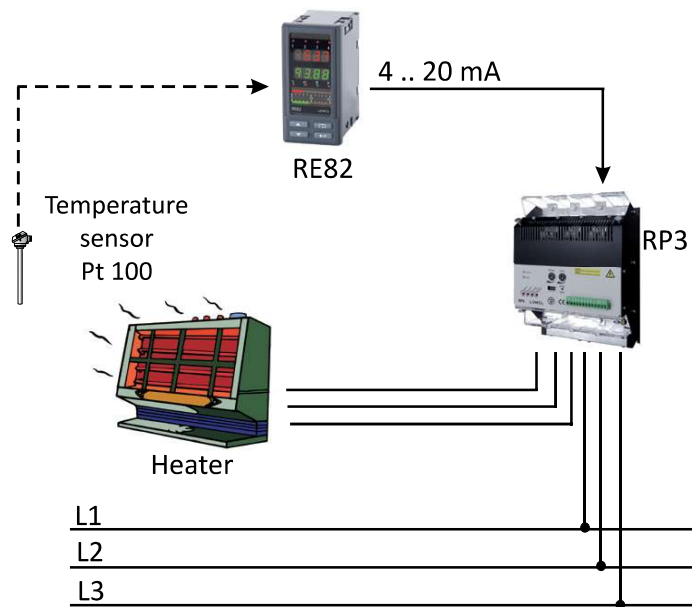
- 450 A
- 2x

GALVANIC ISOLATION:



- Contactless power switching on.
- For power control of resistive and inductive load.
- Output current up to 450 A.
- Signaling of incorrect phase sequence.
- Signalling of fuse damages.
- Trigger deceleration of "softstart " type.
- Control of the initial trigger angle value.
- Load current limitation.
- Trigger stoppage by an external signal.
- Alarming relay outputs.
- Control by an impulse, continuous or potentiometric signal.
- Phase, impulse, on/off control.

EXAMPLE OF APPLICATION



Control of a three-phase heater.

INPUTS

| Input type | Range | Remarks |
|----------------|--------------------|---------------------------------|
| potentiometric | 0 .. 10 k Ω | |
| impulse | 0/4 .. 32 V | $R_{in} = 20 \text{ k } \Omega$ |
| continuous | 0 .. 5 V | $R_{in} = 20 \text{ k } \Omega$ |
| continuous | 0 .. 10 V | $R_{in} = 40 \text{ k } \Omega$ |
| continuous | 0 .. 20 mA | $R_{in} = 125 \Omega$ |
| continuous | 4 .. 20 mA | $R_{in} = 125 \Omega$ |

OUTPUTS

| Output type | Properties | Remarks |
|--------------------|------------------------------------|---------------------------------------------------------------------------------------|
| thyristor | 40, 70, 125, 200, 300, 450 A | 3 ~ 400 V, 50 Hz |
| alarming relay PK1 | 60 mA, 350 V, $R_{on} = 35 \Omega$ | signaling of fuse damages, control error or incorrect supply connection |
| alarming relay PK2 | 60 mA, 350 V, $R_{on} = 35 \Omega$ | signaling of work stoppage (STOP) or overflow of the admissible operation temperature |

Export department:
Tel: +48 68 45 75 139/
276 / 305/ 386
Fax: +48 68 32 54 091
e-mail: export@lumel.com.pl

LUMEL S.A.
ul. Stubiicka 1
65-022 Zielona Góra
POLAND
WWW.LUMEL.COM.PL

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EXTERNAL FEATURES

| | | |
|--------------------|------------------------------------------|--------------------------------------------------|
| Overall dimensions | 212 x 318 x 177 mm 383 x 433 x 281 mm | version 40, 70, 125 A version 200, 300, 450 A |
| Weight | 8.5 kg (version 200, 300, 450 A: 37 kg) | |
| Protection grade | from casing side: IP00 | acc. to EN 60529 |

RATED OPERATING CONDITIONS

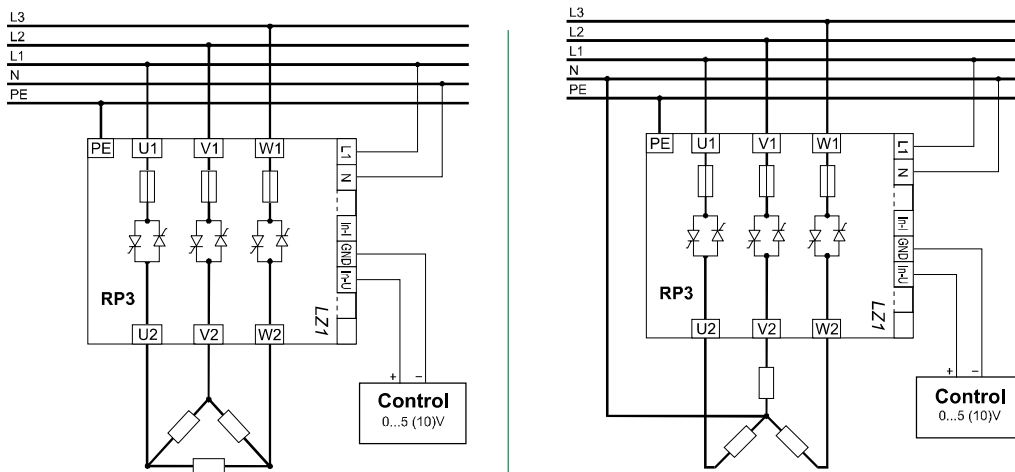
| | | |
|-------------------------|--------------------------|----------------------|
| Supply voltage GTS | 195 .. 230 .. 253 V a.c. | |
| Temperature | ambient: 0 .. 40°C | storage: -25...55°C |
| Humidity | < 90 % | without condensation |
| Operating position | vertical | |
| External magnetic field | < 400 A/m | |

SAFETY AND COMPATIBILITY REQUIREMENTS

| | | |
|------------------------------------------|-----------------------------------------------------------------|--------------------------|
| Electromagnetic compatibility | noise immunity | acc. to EN 60947-4-3 |
| | noise emissions | acc. to EN 60947-4-3 |
| Pollution level | 2 | |
| Installation category | III | |
| Maximal phase-to-earth operating voltage | 320 V for power circuits and supply, 50 V for other circuits | for input circuits: 50 V |

CONNECTION DIAGRAMS

Fig.1. Connection of load in a 3 and 4-wire system.



a) 3-wire load

b) 4-wire load

ORDERING

| | | RP3 - | X | X |
|----------------------------------------------------|---------------|-------|---|---|
| Current range: | | | | |
| maximal output current 40 A | load voltage: | | 1 | |
| maximal output current 70 A | 3 ~ 400V | | 2 | |
| maximal output current 125 A | 50/60 Hz | | 3 | |
| maximal output current 200 A | | | 4 | |
| maximal output current 300 A | | | 5 | |
| maximal output current 450 A | | | 6 | |
| Acceptance tests: | | | | |
| without additional quality inspection requirements | | | 8 | |
| with an extra quality inspection certificate | | | 7 | |
| other requirements* | | | X | |

* after agreeing with the manufacturer

Ordering example:

The code: **RP3 - 2 - 8** means:

- RP3** - power controller of RP3 type
- 3** - input current 70 A, in the range of voltages supplying the load circuit: 3 ~ 400V
- 8** - without additional quality inspection requirements.

SEE ALSO:



Controllers.

For more information about LUMEL's products please visit our website:
www.lumel.com.pl

Export department:
Tel: +48 68 45 75 139/
276 / 305/ 386
Fax: +48 68 32 54 091
e-mail: export@lumel.com.pl

LUMEL S.A.
ul. Sulechowska 1
65-022 Zielona Góra
POLAND
WWW.LUMEL.COM.PL