



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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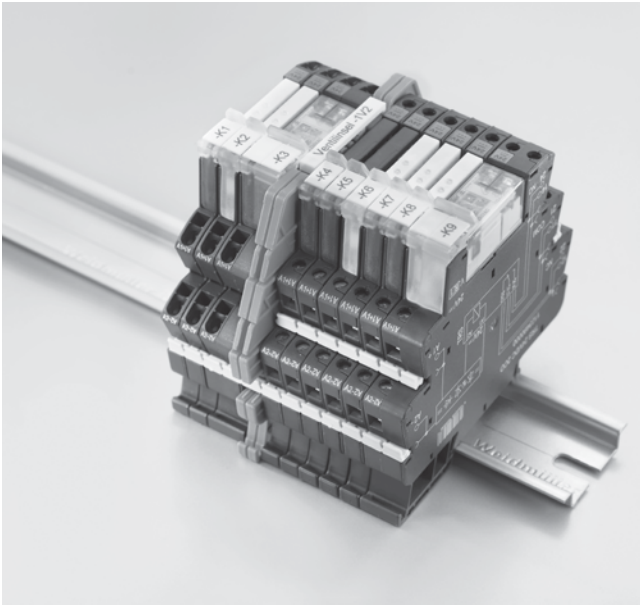
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## Datasheet • Electronic TERMSERIES

Relays and Solid-State Relays

**NEW**



Weidmüller's TERMSERIES offers innovative pluggable electromechanical and solid-state relays equipped with one or two changeover contacts housed in a slim 6.4 mm or 12.8 mm design with matching profiles that can be combined as required in the customer's application and reliably switch loads of up to 8A at 250V.

Depending on the application customers can choose between products with a fixed voltage input or Weidmüller's unique multi-voltage input which allows conditioning signals from 24V up to 230V AC/DC with just one module.

A distinctive status display is available through integrated fiber-optic technology that completely illuminates the ejector. The ejector also ensures the safe removal of the switching element.

The versions with single and dual changeover contacts as well as screw clamp and tension clamp terminals have the same profile and can be jumpered with each other with easy to use cross connectors. Well thought out accessories such as isolation plates used to visibly group signals, electrically isolate two modules for up to 400V, or to add labels for enhanced marking options make this product family a well rounded offering.

- Slim design with 6.4 mm or 12.8 mm width
- 1 CO and 2 CO contact versions
- Screw clamp and tension clamp technology
- Input voltages from 5 up to 230V
- Unique multi-voltage input version for 24V-230V AC/DC
- Distinctive fiber-optic illuminated status display
- 5 cross connection levels
- Clear marking
- Pluggable relays and SSRs
- Wide range of accessories
- CE and cULus approved

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## 1 CO contact AC/DC/UC coil

### Ordering data

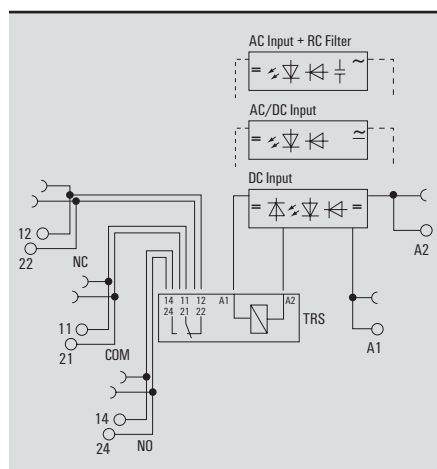
| Input data                |          | 5 V DC                                                        | 12 V DC                                                       | 24 V DC                                                       | 24 V UC                                                       | 48 V UC                                                       |
|---------------------------|----------|---------------------------------------------------------------|---------------------------------------------------------------|---------------------------------------------------------------|---------------------------------------------------------------|---------------------------------------------------------------|
| Rated control voltage     |          | 5 V DC $\pm 20\%$                                             | 5 V DC $\pm 20\%$                                             | 24 V DC $\pm 20\%$                                            | 24 V UC $\pm 10\%$                                            | 48 V UC $\pm 10\%$                                            |
| Rated current AC          |          |                                                               |                                                               |                                                               | 10.1 mA                                                       | 8 mA                                                          |
| Rated current DC          |          | 35.8 mA                                                       | 35.8 mA                                                       | 10 mA                                                         | 6.4 mA                                                        | 7 mA                                                          |
| Power rating              |          | 200 mW                                                        | 200 mW                                                        | 240 mW                                                        | 270 mVA / 154 mW                                              | 240 mVA / 192 mW                                              |
| AC Response/dropout Volt  |          |                                                               |                                                               |                                                               | 16.6 V / 5 V                                                  | 29 V / 10 V                                                   |
| DC Response/dropout Volt  |          | 3.3 V / 1 V                                                   | 3.3 V / 1 V                                                   | 16.6 V / 5 V                                                  | 16.6 V / 5 V                                                  | 29 V / 10 V                                                   |
| AC pickup/dropout current |          |                                                               |                                                               |                                                               | 4 mA / 1 mA                                                   | 4 mA // 1.3 mA                                                |
| DC pickup/dropout current |          | 21.6 mA / 8 mA                                                | 21.6 mA / 8 mA                                                | 7 mA / 2 mA                                                   | 4 mA / 1.2 mA                                                 | 4 mA / 1.2 mA                                                 |
| Free-wheel diode          |          | Yes                                                           | Yes                                                           | Yes                                                           | No                                                            | No                                                            |
| Output                    |          |                                                               |                                                               |                                                               |                                                               |                                                               |
| Switch-on delay           |          | < 7 ms                                                        | < 7 ms                                                        | < 6 ms                                                        | < 4 ms                                                        | < 8 ms                                                        |
| Switch-off delay          |          | < 4 ms                                                        | < 8 ms                                                        | < 7 ms                                                        | < 1.2 ms                                                      | < 4 ms                                                        |
| Ordering data             |          |                                                               |                                                               |                                                               |                                                               |                                                               |
| Screw connection          | Type     | TRS 5VDC 1CO                                                  | TRS 12VDC 1CO                                                 | TRS 24VDC 1CO                                                 | TRS 24VUC 1CO                                                 | TRS 48VUC 1CO                                                 |
|                           | Part No. | <b>1122740000</b>                                             | <b>1122750000</b>                                             | <b>1122770000</b>                                             | <b>1122780000</b>                                             | <b>1122790000</b>                                             |
| Tension clamp connection  | Type     | TRZ 5VDC 1CO                                                  | TRZ 12VDC 1CO                                                 | TRZ 24VDC 1CO                                                 | TRZ 24VUC 1CO                                                 | TRZ 48VUC 1CO                                                 |
|                           | Part No. | <b>1122860000</b>                                             | <b>1122870000</b>                                             | <b>1122880000</b>                                             | <b>1122890000</b>                                             | <b>1122900000</b>                                             |
| Notes                     |          | Spare relay<br>Type: RSS113005<br>Part No.: <b>4061580000</b> | Spare relay<br>Type: RSS113012<br>Part No.: <b>4061610000</b> | Spare relay<br>Type: RSS113024<br>Part No.: <b>4060120000</b> | Spare relay<br>Type: RSS113024<br>Part No.: <b>4060120000</b> | Spare relay<br>Type: RSS113024<br>Part No.: <b>4060120000</b> |
| Ordering data             |          |                                                               |                                                               |                                                               |                                                               |                                                               |
| Screw connection          | Type     | TRS 5VDC 1CO AU                                               | TRS 12VDC 1CO AU                                              | TRS 24VDC 1CO AU                                              | TRS 24VUC 1CO AU                                              | TRS 48VUC 1CO AU                                              |
|                           | Part No. | <b>1122980000</b>                                             | <b>1122990000</b>                                             | <b>1123000000</b>                                             | <b>1123010000</b>                                             | <b>1123020000</b>                                             |
| Tension clamp connection  | Type     | TRZ 5VDC 1CO AU                                               | TRZ 12VDC 1CO AU                                              | TRZ 24VDC 1CO AU                                              | TRZ 24VUC 1CO AU                                              | TRZ 48VUC 1CO AU                                              |
|                           | Part No. | <b>1123100000</b>                                             | <b>1123110000</b>                                             | <b>1123120000</b>                                             | <b>1123130000</b>                                             | <b>1123140000</b>                                             |
| Notes                     |          | Spare relay<br>Type: RSS112005<br>Part No.: <b>1174540000</b> | Spare relay<br>Type: RSS112012<br>Part No.: <b>1220670000</b> | Spare relay<br>Type: RSS112024<br>Part No.: <b>4061590000</b> | Spare relay<br>Type: RSS112024<br>Part No.: <b>4061590000</b> | Spare relay<br>Type: RSS112024<br>Part No.: <b>4061590000</b> |

### Ordering data

| Input data                |          | 60 V UC                                                       | 120 V UC                                                      | 230 V UC                                                      | 120 V AC RC                                                   | 230 V AC RC                                                   |
|---------------------------|----------|---------------------------------------------------------------|---------------------------------------------------------------|---------------------------------------------------------------|---------------------------------------------------------------|---------------------------------------------------------------|
| Rated control voltage     |          | 60 V UC $\pm 10\%$                                            | 120 V UC $\pm 10\%$                                           | 230 V UC $\pm 10\%$                                           | 120 V AC $\pm 10\%$                                           | 230 V AC $\pm 10\%$                                           |
| Rated current AC          |          | 6.1 mA                                                        | 4 mA                                                          | 3.5 mA                                                        | 7 mA                                                          | 10.1 mA                                                       |
| Rated current DC          |          | 3.3 mA                                                        | 3.5 mA                                                        | 2.9 mA                                                        |                                                               |                                                               |
| Power rating              |          | 360 mW                                                        | 0.48 VA, 420 mW                                               | 0.8 VA, 700 mW                                                | 0.84 VA                                                       | 2.3 VA                                                        |
| AC Response/dropout Volt  |          | 35 V / 11 V                                                   | 79 V / 60 V                                                   | 159 V / 100 V                                                 | 79 V / 60 V                                                   | 145 V / 90 V                                                  |
| DC Response/dropout Volt  |          | 40 V / 10 V                                                   |                                                               | 159 V / 99 V                                                  |                                                               |                                                               |
| AC pickup/dropout current |          |                                                               | 4 mA / 2.5 mA                                                 | 2.2 mA / 1.3 mA                                               | 4 mA / 2.5 mA                                                 | 9.13 mA / 4.78 mA                                             |
| DC pickup/dropout current |          |                                                               |                                                               | 1.7 mA / 0.7 mA                                               |                                                               |                                                               |
| Free-wheel diode          |          | No                                                            | No                                                            | No                                                            | No                                                            | No                                                            |
| Output                    |          |                                                               |                                                               |                                                               |                                                               |                                                               |
| Switch-on delay           |          | < 6 ms                                                        | < 8 ms                                                        | < 22 ms                                                       | < 5.3 ms                                                      | < 22 ms                                                       |
| Switch-off delay          |          | < 6.5 ms                                                      | < 7 ms                                                        | < 30 ms                                                       | < 4 ms                                                        | < 30 ms                                                       |
| Ordering data             |          |                                                               |                                                               |                                                               |                                                               |                                                               |
| Screw connection          | Type     | TRS 60VUC 1CO                                                 | TRS 120VUC 1CO                                                | TRS 230VUC 1CO                                                | TRS 120VAC RC 1CO                                             | TRS 230VAC RC 1CO                                             |
|                           | Part No. | <b>1122800000</b>                                             | <b>1122810000</b>                                             | <b>1122820000</b>                                             | <b>1122830000</b>                                             | <b>1122840000</b>                                             |
| Tension clamp connection  | Type     | TRZ 60VUC 1CO                                                 | TRZ 120VUC 1CO                                                | TRZ 230VUC 1CO                                                | TRZ 120VAC RC 1CO                                             | TRZ 230VAC RC 1CO                                             |
|                           | Part No. | <b>1122910000</b>                                             | <b>1122920000</b>                                             | <b>1122930000</b>                                             | <b>1122940000</b>                                             | <b>1122950000</b>                                             |
| Notes                     |          | Spare relay<br>Type: RSS113060<br>Part No.: <b>4061630000</b> | Spare relay<br>Type: RSS113060<br>Part No.: <b>4061630000</b> | Spare relay<br>Type: RSS113060<br>Part No.: <b>4061630000</b> | Spare relay<br>Type: RSS113060<br>Part No.: <b>4061630000</b> | Spare relay<br>Type: RSS113060<br>Part No.: <b>4061630000</b> |
| Ordering data             |          |                                                               |                                                               |                                                               |                                                               |                                                               |
| Screw connection          | Type     | TRS 60VUC 1CO AU                                              | TRS 120VUC 1CO AU                                             | TRS 230VUC 1CO AU                                             | TRS 120VAC RC 1CO AU                                          | TRS 230VAC RC 1CO AU                                          |
|                           | Part No. | <b>1123030000</b>                                             | <b>1123040000</b>                                             | <b>1123050000</b>                                             | <b>1123070000</b>                                             | <b>1123080000</b>                                             |
| Tension clamp connection  | Type     | TRZ 60VUC 1CO AU                                              | TRZ 120VUC 1CO AU                                             | TRZ 230VUC 1CO AU                                             | TRZ 120VAC RC 1CO AU                                          | TRZ 230VAC RC 1CO AU                                          |
|                           | Part No. | <b>1123150000</b>                                             | <b>1123170000</b>                                             | <b>1123180000</b>                                             | <b>1123190000</b>                                             | <b>1123200000</b>                                             |
| Notes                     |          | Spare relay<br>Type: RSS112060<br>Part No.: <b>4061600000</b> | Spare relay<br>Type: RSS112060<br>Part No.: <b>4061600000</b> | Spare relay<br>Type: RSS112060<br>Part No.: <b>4061600000</b> | Spare relay<br>Type: RSS112060<br>Part No.: <b>4061600000</b> | Spare relay<br>Type: RSS112060<br>Part No.: <b>4061600000</b> |

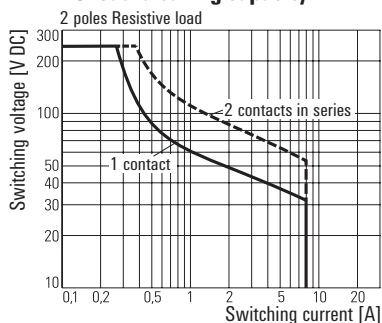
## 2 CO contact AC/DC/UC coil

- Space saving, just 12.8 mm modular width
- AgNi contact with or without gold plating
- Screw and tension clamp connection
- 5 cross connection levels
- Multi-voltage input: 24...230 VUC in one module

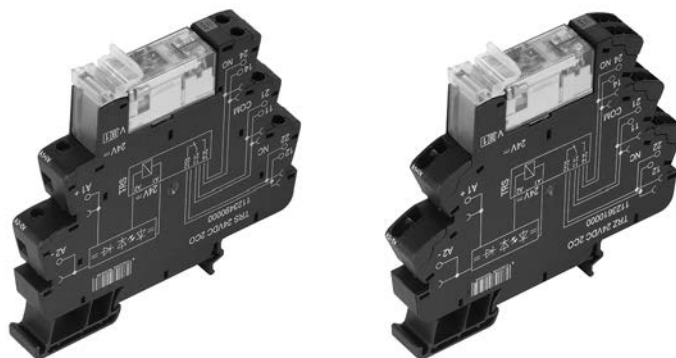
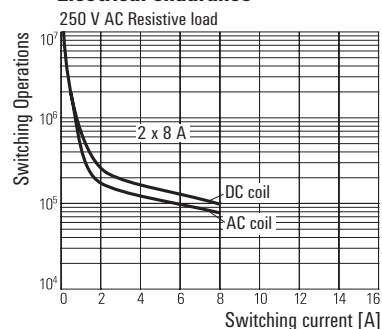


## Applications

### DC load breaking capacity



### Electrical endurance



## Technical data

| Output                                                        | 1 CO                                                              | 1 CO Au     |
|---------------------------------------------------------------|-------------------------------------------------------------------|-------------|
| Max. switching voltage, AC / Continuous current               | 250 V / 8 A                                                       |             |
| Min. switching power                                          | 10 V / 10 mA                                                      | 1 V / 1 mA  |
| Contact material                                              | AgNi                                                              | AgNi 5µm Au |
| Mechanical service life                                       | 30 x 10 <sup>6</sup> switching cycles                             |             |
| Max. switching frequency at rated load                        | 0.1 Hz                                                            |             |
| <b>Rated data</b>                                             |                                                                   |             |
| Status indicator                                              | Green LED                                                         |             |
| Reverse polarity protection                                   | Yes                                                               |             |
| Ambient temperature (operational)                             | -40 °C...+60 °C                                                   |             |
| Storage temperature                                           | -40 °C...+85 °C                                                   |             |
| Humidity                                                      | 5...95 % rel. humidity<br>T <sub>0</sub> = 40 °C, no condensation |             |
| Approvals                                                     | CE, GL, cULus                                                     |             |
| <b>Insulation coordination (EN 50 178)</b>                    |                                                                   |             |
| Rated voltage                                                 | 300 V                                                             |             |
| Impulse withstand voltage                                     | 6 kV (1.2/50 µs)                                                  |             |
| Clearance and creepage distances for control side - load side | ≥ 5.5 mm                                                          |             |
| Surge voltage category                                        | III                                                               |             |
| Pollution severity                                            | 2                                                                 |             |

| Dimensions                             | Screw connection                                                                | Tension clamp connection |
|----------------------------------------|---------------------------------------------------------------------------------|--------------------------|
| Clamping range (nominal / min. / max.) | mm <sup>2</sup> 1.5 / 0.14 / 1.5                                                | 1.5 / 0.14 / 1.5         |
| Length x width x height                | mm 88 / 12.8 / 90                                                               | 88 / 12.8 / 90           |
| Notes                                  | Accessories and dimensional drawings: refer to the TERMSERIES Accessories page. |                          |

## Ordering data

| Input                     | 24 V - 230 V UC                         |
|---------------------------|-----------------------------------------|
| Rated control voltage     | 24...230 V UC ±10 %                     |
| Rated current AC          | 6 mA @ 230 V AC                         |
| Rated current DC          | 45 mA @ 24 V DC                         |
| Power rating              | 530 mW @ 24 V DC,<br>930 mVA @ 230 V AC |
| AC Response/dropout Volt  | 16.6 V / 5 V                            |
| DC Response/dropout Volt  | 16.6 V / 5 V                            |
| AC pickup/dropout current |                                         |
| DC pickup/dropout current |                                         |
| <b>Output</b>             |                                         |
| Switch-on delay           | < 22 ms                                 |
| Switch-off delay          | < 100 ms                                |

| Ordering data            | Type                                               | Part No.   |
|--------------------------|----------------------------------------------------|------------|
| Screw connection         | TRS 24-230VUC 2CO                                  | 1123580000 |
| Tension clamp connection | TRZ 24-230VUC 2CO                                  | 1123700000 |
| Notes                    | Spare relay, Type: RCL424024, Part No.: 4058570000 |            |

| Ordering data            | Type                                               | Part No.   |
|--------------------------|----------------------------------------------------|------------|
| Screw connection         | TRS 24-230VUC 2CO AU                               | 1123820000 |
| Hard Gold-plated contact |                                                    |            |
| Tension clamp connection | TRZ 24-230VUC 2CO AU                               | 1123940000 |
| Hard Gold-plated contact |                                                    |            |
| Notes                    | Spare relay, Type: RCL425024, Part No.: 4058580000 |            |

## 2 CO contact AC/DC/UC coil

### Ordering data

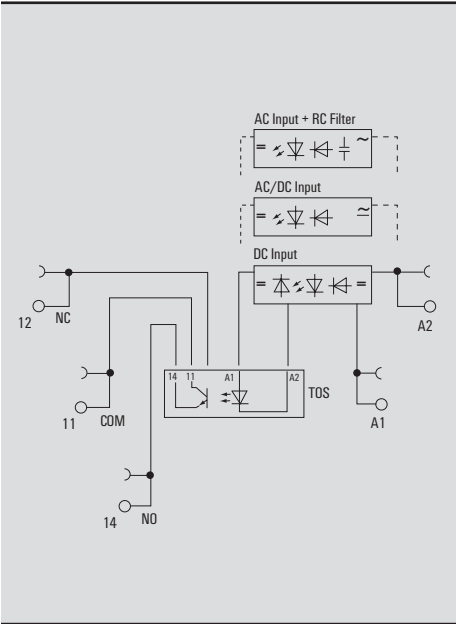
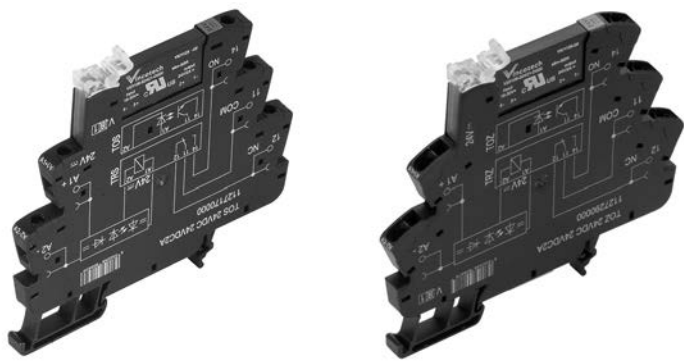
| Input data                |                  | 5 V DC                                                        | 12 V DC                                                       | 24 V DC                                                       | 24 V UC                                                       | 48 V UC                                                       |
|---------------------------|------------------|---------------------------------------------------------------|---------------------------------------------------------------|---------------------------------------------------------------|---------------------------------------------------------------|---------------------------------------------------------------|
| Rated control voltage     |                  | 5 V DC $\pm 20\%$                                             | 12 V DC $\pm 20\%$                                            | 24 V DC $\pm 20\%$                                            | 24 V UC $\pm 10\%$                                            | 48 V UC $\pm 10\%$                                            |
| Rated current AC          |                  |                                                               |                                                               |                                                               | 16 mA                                                         | 9 mA                                                          |
| Rated current DC          |                  | 80 mA                                                         | 33.3 mA                                                       | 16 mA                                                         | 14 mA                                                         | 7 mA                                                          |
| Power rating              |                  | 400 mW                                                        | 420 mW                                                        | 384 mW                                                        | 390 mVA / 350 mW                                              | 340 mW / 0.4 VA                                               |
| AC Response/dropout Volt  |                  |                                                               |                                                               |                                                               | 16 V / 9 V                                                    | 29 V / 11 V                                                   |
| DC Response/dropout Volt  |                  | 3.2 V / 1.6 V                                                 | 8.5 V / 3 V                                                   | 16.6 V / 3.5 V                                                | 18 V / 8 V                                                    | 33 V / 12 V                                                   |
| AC pickup/dropout current |                  |                                                               |                                                               |                                                               | 11 mA / 4 mA                                                  | 6.3 mA / 4.3 mA                                               |
| DC pickup/dropout current |                  | 21.6 mA / 8 mA                                                | 21 mA / 5 mA                                                  | 10 mA / 2 mA                                                  | 10 mA / 2 mA                                                  | 5 mA / 2 mA                                                   |
| Free-wheel diode          |                  | Yes                                                           | Yes                                                           | Yes                                                           | No                                                            | No                                                            |
| Output                    |                  |                                                               |                                                               |                                                               |                                                               |                                                               |
| Switch-on delay           |                  | < 7 ms                                                        | < 7 ms                                                        | < 8 ms                                                        | < 4 ms                                                        | < 8 ms                                                        |
| Switch-off delay          |                  | < 4 ms                                                        | < 8 ms                                                        | < 10 ms                                                       | < 1.2 ms                                                      | < 4 ms                                                        |
| Ordering data             |                  |                                                               |                                                               |                                                               |                                                               |                                                               |
| Screw connection          | Type<br>Part No. | TRS 5VDC 2CO<br><b>1123470000</b>                             | TRS 12VDC 2CO<br><b>1123480000</b>                            | TRS 24VDC 2CO<br><b>1123490000</b>                            | TRS 24VUC 2CO<br><b>1123500000</b>                            | TRS 48VUC 2CO<br><b>1123510000</b>                            |
| Tension clamp connection  | Type<br>Part No. | TRZ 5VDC 2CO<br><b>1123590000</b>                             | TRZ 12VDC 2CO<br><b>1123600000</b>                            | TRZ 24VDC 2CO<br><b>1123610000</b>                            | TRZ 24VUC 2CO<br><b>1123620000</b>                            | TRZ 48VUC 2CO<br><b>1123630000</b>                            |
| Notes                     |                  | Spare relay<br>Type: RCL424005<br>Part No.: <b>8693790000</b> | Spare relay<br>Type: RCL424012<br>Part No.: <b>4058560000</b> | Spare relay<br>Type: RCL424024<br>Part No.: <b>4058570000</b> | Spare relay<br>Type: RCL424024<br>Part No.: <b>4058570000</b> | Spare relay<br>Type: RCL424048<br>Part No.: <b>4058750000</b> |
| Ordering data             |                  |                                                               |                                                               |                                                               |                                                               |                                                               |
| Screw connection          | Type             | TRS 5VDC 2CO AU                                               | TRS 12VDC 2CO AU                                              | TRS 24VDC 2CO AU                                              | TRS 24VUC 2CO AU                                              | TRS 48VUC 2CO AU                                              |
| Hard Gold-plated contact  | Part No.         | <b>1123710000</b>                                             | <b>1123720000</b>                                             | <b>1123730000</b>                                             | <b>1123740000</b>                                             | <b>1123750000</b>                                             |
| Tension clamp connection  | Type             | TRZ 5VDC 2CO AU                                               | TRZ 12VDC 2CO AU                                              | TRZ 24VDC 2CO AU                                              | TRZ 24VUC 2CO AU                                              | TRZ 48VUC 2CO AU                                              |
| Hard Gold-plated contact  | Part No.         | <b>1123830000</b>                                             | <b>1123840000</b>                                             | <b>1123850000</b>                                             | <b>1123870000</b>                                             | <b>1123880000</b>                                             |
| Notes                     |                  | Spare relay<br>Type: RCL425005<br>Part No.: <b>1174490000</b> | Spare relay<br>Type: RCL425012<br>Part No.: <b>4074580000</b> | Spare relay<br>Type: RCL425024<br>Part No.: <b>4058580000</b> | Spare relay<br>Type: RCL425024<br>Part No.: <b>4058580000</b> | Spare relay<br>Type: RCL425048<br>Part No.: <b>1201230000</b> |

### Ordering data

| Input data                |                  | 60 V UC                                                       | 120 V UC                                                      | 230 V UC                                                      | 120 V AC RC                                                   | 230 V AC RC                                                   |
|---------------------------|------------------|---------------------------------------------------------------|---------------------------------------------------------------|---------------------------------------------------------------|---------------------------------------------------------------|---------------------------------------------------------------|
| Rated control voltage     |                  | 60 V UC $\pm 10\%$                                            | 129 V UC $\pm 10\%$                                           | 230 V UC $\pm 5\%$                                            | 120 V AC $\pm 10\%$                                           | 230 V AC $\pm 5\%$                                            |
| Rated current AC          |                  | 8 mA                                                          | 3.5 mA                                                        | 4 mA                                                          | 6.1 mA                                                        | 10.1 mA                                                       |
| Rated current DC          |                  | 6.1 mA                                                        | 3.5 mA                                                        | 4 mA                                                          |                                                               |                                                               |
| Power rating              |                  | 480 mVA / 360 mW                                              | 420 mVA / 420 mW                                              | 920 mVA / 920 mW                                              | 0.73 VA                                                       | 2.3 VA                                                        |
| AC Response/dropout Volt  |                  | 36 V / 13 V                                                   | 64 V / 26 V                                                   | 112 / 43 V                                                    | 65 V / 23 V                                                   | 112 V / 45 V                                                  |
| DC Response/dropout Volt  |                  | 40 / 14 V                                                     | 69 V / 22 V                                                   | 129 V / 36 V                                                  |                                                               |                                                               |
| AC pickup/dropout current |                  | 5 mA / 2.5 mA                                                 | 2 mA / 1 mA                                                   | 2 mA / 1 mA                                                   | 3.6 mA / 1.3 mA                                               | 5 mA / 2.5 mA                                                 |
| DC pickup/dropout current |                  | 4 mA / 1.2 mA                                                 | 2 mA / 1 mA                                                   | 2 mA / 1 mA                                                   |                                                               |                                                               |
| Free-wheel diode          |                  | No                                                            | No                                                            | No                                                            | No                                                            | No                                                            |
| Output                    |                  |                                                               |                                                               |                                                               |                                                               |                                                               |
| Switch-on delay           |                  | < 6 ms                                                        | < 8 ms                                                        | < 14 ms                                                       | < 5 ms                                                        | < 14 ms                                                       |
| Switch-off delay          |                  | < 7 ms                                                        | < 7 ms                                                        | < 22 ms                                                       | < 4 ms                                                        | < 12 ms                                                       |
| Ordering data             |                  |                                                               |                                                               |                                                               |                                                               |                                                               |
| Screw connection          | Type<br>Part No. | TRS 60 VUC 2CO<br><b>1123520000</b>                           | TRS 120VUC 2CO<br><b>1123530000</b>                           | TRS 230VUC 2CO<br><b>1123540000</b>                           | TRS 120VAC RC 2CO<br><b>1123550000</b>                        | TRS 230VAC RC 2CO<br><b>1123570000</b>                        |
| Tension clamp connection  | Type<br>Part No. | TRZ 60VUC 2CO<br><b>1123640000</b>                            | TRZ 120VUC 2CO<br><b>1123650000</b>                           | TRZ 230VUC 2CO<br><b>1123670000</b>                           | TRZ 120VAC RC 2CO<br><b>1123680000</b>                        | TRZ 230VAC RC 2CO<br><b>1123690000</b>                        |
| Notes                     |                  | Spare relay<br>Type: RCL424060<br>Part No.: <b>4058760000</b> | Spare relay<br>Type: RCL424110<br>Part No.: <b>4058590000</b> | Spare relay<br>Type: RCL424110<br>Part No.: <b>4058590000</b> | Spare relay<br>Type: RCL424110<br>Part No.: <b>4058590000</b> | Spare relay<br>Type: RCL424110<br>Part No.: <b>4058590000</b> |
| Ordering data             |                  |                                                               |                                                               |                                                               |                                                               |                                                               |
| Screw connection          | Type             | TRS 60 VUC 2CO AU                                             | TRS 120VUC 2CO AU                                             | TRS 230VUC 2CO AU                                             | TRS 120VAC RC 2CO AU                                          | TRS 230VAC RC 2CO AU                                          |
| Hard Gold-plated contact  | Part No.         | <b>1123770000</b>                                             | <b>1123780000</b>                                             | <b>1123790000</b>                                             | <b>1123800000</b>                                             | <b>1123810000</b>                                             |
| Tension clamp connection  | Type             | TRZ 60VUC 2CO AU                                              | TRZ 120VUC 2CO AU                                             | TRZ 230VUC 2CO AU                                             | TRZ 120VAC RC 2CO AU                                          | TRZ 230VAC RC 2CO AU                                          |
| Hard Gold-plated contact  | Part No.         | <b>1123890000</b>                                             | <b>1123900000</b>                                             | <b>1123910000</b>                                             | <b>1123920000</b>                                             | <b>1123930000</b>                                             |
| Notes                     |                  | Spare relay<br>Type: RCL425060<br>Part No.: <b>1201260000</b> | Spare relay<br>Type: RCL425110<br>Part No.: <b>8828370000</b> | Spare relay<br>Type: RCL425110<br>Part No.: <b>8828370000</b> | Spare relay<br>Type: RCL425110<br>Part No.: <b>8828370000</b> | Spare relay<br>Type: RCL425110<br>Part No.: <b>8828370000</b> |

Solid-state relays,  
3 - 48 V DC / 100 mA  
Output versions

- Space saving, just 6.4 mm modular width
- 5 cross-connection levels
- Screw and tension clamp connection
- Multi-voltage input: 24...230 VUC in one module



Technical data

| Load side                                                     |                                                                   |
|---------------------------------------------------------------|-------------------------------------------------------------------|
| Solid-state type                                              | Bipolar transistor                                                |
| Nominal switching voltage / current                           | 3 V...48 V DC / 100 mA                                            |
| Voltage drop at max. load                                     | ≤ 1 V                                                             |
| Short-circuit-proof / Protective circuit, load side           | No / Integrated free-wheel diode                                  |
| Continuous current                                            | 100 mA                                                            |
| General data                                                  |                                                                   |
| Ambient temperature (operational)                             | -40 °C...+60 °C                                                   |
| Storage temperature                                           | -40 °C...+85 °C                                                   |
| Humidity                                                      | 5...95 % rel. humidity<br>T <sub>h</sub> = 40 °C, no condensation |
| Approvals                                                     | CE, GL, cULus                                                     |
| Insulation coordination (EN 50 178)                           |                                                                   |
| Rated voltage                                                 | 300 V                                                             |
| Rated impulse withstand voltage                               | 6 kV (1.2/50 µs)                                                  |
| Clearance and creepage distances for control side - load side | ≥ 5.5 mm                                                          |
| Surge voltage category                                        | III                                                               |
| Pollution severity                                            | 2                                                                 |

| Dimensions                             | Screw connection                                                                | Tension clamp connection |
|----------------------------------------|---------------------------------------------------------------------------------|--------------------------|
| Clamping range (nominal / min. / max.) | mm <sup>2</sup> 1.5 / 0.14 / 1.5                                                | 1.5 / 0.14 / 1.5         |
| Length x width x height                | mm 88 / 6.4 / 90                                                                | 88 / 6.4 / 90            |
| Notes                                  | Accessories and dimensional drawings: refer to the TERMSERIES Accessories page. |                          |

Ordering data

| Control side               |                                         | 24 V - 230 V UC |
|----------------------------|-----------------------------------------|-----------------|
| Rated control voltage      | 24...230 V UC ±10 %                     |                 |
| Nominal control current    | 22 mA @ 24 V DC,<br>4 mA @ 230 V AC     |                 |
| Power rating               | 530 mW @ 24 V DC,<br>930 mVA @ 230 V AC |                 |
| Cut-in (switch-on) voltage | ≥ 9.6 V AC, ≥ 9.6 V DC                  |                 |
| Dropout voltage            | ≤ 7.5 V AC, ≤ 6 V DC                    |                 |
| Input frequency            | 3 Hz                                    |                 |
| Status indicator           | Green LED                               |                 |
| Protective circuit         | Rectifier                               |                 |
| Load side                  |                                         |                 |
| Switch-on delay            | < 22 ms                                 |                 |
| Switch-off delay           | < 100 ms                                |                 |

| Ordering data            | Type                                                                       | Part No.   |
|--------------------------|----------------------------------------------------------------------------|------------|
| Screw connection         | TOS 24-230VUC 48VDC 0.1A                                                   | 1127020000 |
| Tension clamp connection | TOZ 24-230VUC 48VDC 0.1A                                                   | 1127130000 |
| Notes                    | Spare solid-state relay, Type: SSS 24 V/24 V 0.1A DC, Part No.: 4061180000 |            |

## Solid-state relays, 3 - 48 V DC / 100 mA Output versions

### Ordering data

| Control side               |          | 5 V DC                                                                                | 12 V DC                                                                               | 24 V DC                                                                                | 24 V UC                                                                                | 48 V UC                                                                                |
|----------------------------|----------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|
| Rated control voltage      |          | 5 V DC $\pm 20\%$                                                                     | 12 V DC $\pm 20\%$                                                                    | 24 V DC $\pm 20\%$                                                                     | 24 V UC $\pm 10\%$                                                                     | 48 V UC $\pm 10\%$                                                                     |
| Nominal control current    |          | 7 mA DC ( $\pm 20\%$ )                                                                | 9.6 mA DC ( $\pm 20\%$ )                                                              | 10 mA DC $\pm 20\%$                                                                    | 10 mA AC $\pm 20\%$ ,<br>6 mA DC ( $\pm 20\%$ )                                        | 8 mA AC ( $\pm 20\%$ ),<br>7 mA DC ( $\pm 20\%$ )                                      |
| Power rating               |          | 35 mW                                                                                 | 112 mW                                                                                | 240 mW                                                                                 | 154 mW                                                                                 | 290 mVA / 192 mW                                                                       |
| Cut-in (switch-on) voltage |          | $\geq 3$ V DC                                                                         | $\geq 4$ V DC                                                                         | $\geq 15$ V DC                                                                         | $\geq 14.4$ V AC, $\geq 11.2$ V DC                                                     | $\geq 28$ V AC, $\geq 28$ V DC                                                         |
| Dropout voltage            |          | $\leq 1.7$ V DC                                                                       | $\leq 6$ V DC                                                                         | $\leq 15$ V DC                                                                         | $\leq 15.7$ V AC, $\leq 15.7$ V DC                                                     | $\leq 24$ V AC, $\leq 24$ V DC                                                         |
| Input frequency            |          | 10 Hz                                                                                 | 10 Hz                                                                                 | 300 Hz                                                                                 | DC: 100 Hz / AC: 3 Hz                                                                  | DC: 100 Hz / AC: 3 Hz                                                                  |
| Status indicator           |          | Green LED                                                                             | Green LED                                                                             | Green LED                                                                              | Green LED                                                                              | Green LED                                                                              |
| Protective circuit         |          | Reverse polarity protection, Integrated free-wheel diode                              | Reverse polarity protection, Integrated free-wheel diode                              | Reverse polarity protection, Integrated free-wheel diode                               | Rectifier                                                                              | Rectifier                                                                              |
| Load side                  |          |                                                                                       |                                                                                       |                                                                                        |                                                                                        |                                                                                        |
| Switch-on delay            |          | < 6.5 ms                                                                              | < 6.5 ms                                                                              | < 35 $\mu$ s                                                                           | < 55 $\mu$ s                                                                           | < 55 $\mu$ s                                                                           |
| Switch-off delay           |          | < 10 ms                                                                               | < 10 ms                                                                               | < 355 $\mu$ s                                                                          | < 4 ms                                                                                 | < 4 ms                                                                                 |
| Ordering data              |          |                                                                                       |                                                                                       |                                                                                        |                                                                                        |                                                                                        |
| Screw connection           | Type     | TOS 5VDC 48VDC0,1A                                                                    | TOS 12VDC 48VDC0,1A                                                                   | TOS 24VDC 48VDC0,1A                                                                    | TOS 24VUC 48VDC0,1A                                                                    | TOS 48VUC 48VDC0,1A                                                                    |
|                            | Part No. | <b>1126920000</b>                                                                     | <b>1126930000</b>                                                                     | <b>1126940000</b>                                                                      | <b>1126950000</b>                                                                      | <b>1126960000</b>                                                                      |
| Tension clamp connection   | Type     | TOZ 5VDC 48VDC0,1A                                                                    | TOZ 12VDC 48VDC0,1A                                                                   | TOZ 24VDC 48VDC0,1A                                                                    | TOZ 24VUC 48VDC0,1A                                                                    | TOZ 48VUC 48VDC0,1A                                                                    |
|                            | Part No. | <b>1127030000</b>                                                                     | <b>1127040000</b>                                                                     | <b>1127050000</b>                                                                      | <b>1127060000</b>                                                                      | <b>1127070000</b>                                                                      |
| Notes                      |          | Spare solid-state relay<br>Type: SSS 5 V/24 V 0.1 A DC<br>Part No.: <b>4064320000</b> | Spare solid-state relay<br>Type: SSS 5 V/24 V 0.1 A DC<br>Part No.: <b>4064320000</b> | Spare solid-state relay<br>Type: SSS 24 V/24 V 0.1 A DC<br>Part No.: <b>4061180000</b> | Spare solid-state relay<br>Type: SSS 24 V/24 V 0.1 A DC<br>Part No.: <b>4061180000</b> | Spare solid-state relay<br>Type: SSS 24 V/24 V 0.1 A DC<br>Part No.: <b>4061180000</b> |

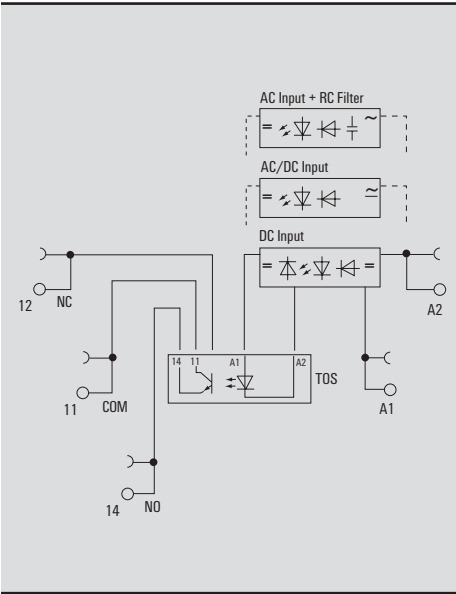
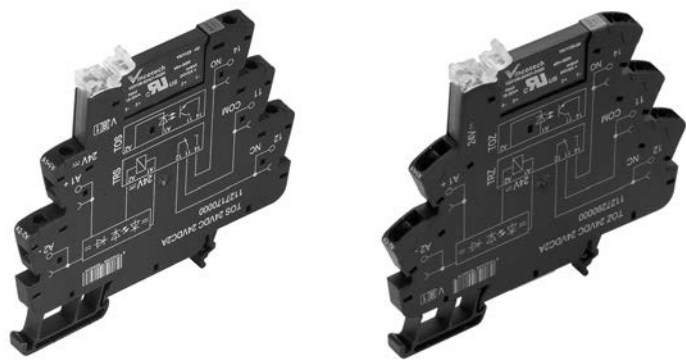
### Ordering data

| Control side               |          | 60 V UC                                                                                | 120 V UC                                                                               | 230 V UC                                                                               | 120 V AC RC                                                                            | 230 V AC RC                                                                            |
|----------------------------|----------|----------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|
| Rated control voltage      |          | 60 V UC $\pm 10\%$                                                                     | 120 V UC $\pm 10\%$                                                                    | 230 V UC $\pm 10\%$                                                                    | 120 V AC $\pm 10\%$                                                                    | 230 V AC $\pm 10\%$                                                                    |
| Nominal control current    |          | 5 mA AC ( $\pm 20\%$ ),<br>3 mA DC ( $\pm 20\%$ )                                      | 5 mA AC ( $\pm 30\%$ ),<br>3 mA DC ( $\pm 30\%$ )                                      | 3.5 mA AC ( $\pm 30\%$ ),<br>3 mA DC ( $\pm 30\%$ )                                    | 7 mA AC ( $\pm 20\%$ )                                                                 | 9 mA AC                                                                                |
| Power rating               |          | < 300 mW                                                                               | 0.48 VA                                                                                | 0.8 VA / 660 mW                                                                        | 0.84 VA                                                                                | 2.1 VA                                                                                 |
| Cut-in (switch-on) voltage |          | $\geq 28$ V AC, $\geq 28$ V DC                                                         | $\geq 65$ V AC, $\geq 63$ V DC                                                         | $\geq 130$ V AC, $\geq 107$ V DC                                                       | $\geq 65$ V AC                                                                         | $\geq 103$ V AC                                                                        |
| Dropout voltage            |          | $\leq 24$ V AC, $\leq 31.2$ V DC                                                       | $\leq 78$ V AC, $\leq 89$ V DC                                                         | $\leq 126$ V AC, $\leq 153$ V DC                                                       | $\leq 71.5$ V AC                                                                       | $\leq 109$ V AC                                                                        |
| Input frequency            |          | DC: 10 Hz / AC: 3 Hz                                                                   | 3 Hz                                                                                   | 3 Hz                                                                                   | 3 Hz                                                                                   | 3 Hz                                                                                   |
| Status indicator           |          | Green LED                                                                              | Green LED                                                                              | Green LED                                                                              | Green LED                                                                              | Green LED                                                                              |
| Protective circuit         |          | Rectifier                                                                              | Rectifier                                                                              | Rectifier                                                                              | RC element                                                                             | RC element                                                                             |
| Load side                  |          |                                                                                        |                                                                                        |                                                                                        |                                                                                        |                                                                                        |
| Switch-on delay            |          | < 6.5 ms                                                                               | < 6.5 ms                                                                               | < 7 ms                                                                                 | < 6.5 ms                                                                               | < 7 ms                                                                                 |
| Switch-off delay           |          | < 10 ms                                                                                | < 10 ms                                                                                | < 10 ms                                                                                | < 10 ms                                                                                | < 10 ms                                                                                |
| Ordering data              |          |                                                                                        |                                                                                        |                                                                                        |                                                                                        |                                                                                        |
| Screw connection           | Type     | TOS 60VUC 48VDC0,1A                                                                    | TOS 120VUC 48VDC0,1A                                                                   | TOS 230VUC 48VDC0,1A                                                                   | TOS 120VAC RC 48VDC0,1A                                                                | TOS 230VAC RC 48VDC0,1A                                                                |
|                            | Part No. | <b>1126970000</b>                                                                      | <b>1126980000</b>                                                                      | <b>1126990000</b>                                                                      | <b>1127000000</b>                                                                      | <b>1127010000</b>                                                                      |
| Tension clamp connection   | Type     | TOZ 60VUC 48VDC0,1A                                                                    | TOZ 120VUC 48VDC0,1A                                                                   | TOZ 230VUC 48VDC0,1A                                                                   | TOZ 120VAC RC 48VDC0,1A                                                                | TOZ 230VAC RC 48VDC0,1A                                                                |
|                            | Part No. | <b>1127080000</b>                                                                      | <b>1127090000</b>                                                                      | <b>1127100000</b>                                                                      | <b>1127110000</b>                                                                      | <b>1127120000</b>                                                                      |
| Notes                      |          | Spare solid-state relay<br>Type: SSS 60 V/24 V 0.1 A DC<br>Part No.: <b>4061230000</b> | Spare solid-state relay<br>Type: SSS 60 V/24 V 0.1 A DC<br>Part No.: <b>4061230000</b> | Spare solid-state relay<br>Type: SSS 60 V/24 V 0.1 A DC<br>Part No.: <b>4061230000</b> | Spare solid-state relay<br>Type: SSS 60 V/24 V 0.1 A DC<br>Part No.: <b>4061230000</b> | Spare solid-state relay<br>Type: SSS 60 V/24 V 0.1 A DC<br>Part No.: <b>4061230000</b> |



Solid-state relays,  
3 - 33 V DC / 2 A  
Output versions

- Space saving, just 6.4 mm modular width
- 5 cross-connection levels
- Screw and tension clamp connection
- Multi-voltage input: 24...230 VUC in one module



Technical data

| Load side                                                     |                                                                   |
|---------------------------------------------------------------|-------------------------------------------------------------------|
| Solid-state type                                              | POWER MOS-FET                                                     |
| Nominal switching voltage / current                           | 3 V...33 V DC / 2 A                                               |
| Voltage drop at max. load                                     | ≤ 120 mV                                                          |
| Short-circuit-proof / Protective circuit, load side           | No / Integrated free-wheel diode                                  |
| Continuous current                                            | 2 A                                                               |
| General data                                                  |                                                                   |
| Ambient temperature (operational)                             | -40 °C...+60 °C                                                   |
| Storage temperature                                           | -40 °C...+85 °C                                                   |
| Humidity                                                      | 5...95 % rel. humidity<br>T <sub>0</sub> = 40 °C, no condensation |
| Approvals                                                     | CE, GL, cULus                                                     |
| Insulation coordination (EN 50 178)                           |                                                                   |
| Rated voltage                                                 | 300 V                                                             |
| Rated impulse withstand voltage                               | 6 kV (1.2/50 µs)                                                  |
| Clearance and creepage distances for control side - load side | ≥ 5.5 mm                                                          |
| Surge voltage category                                        | III                                                               |
| Pollution severity                                            | 2                                                                 |

| Dimensions                             | Screw connection                 | Tension clamp connection |
|----------------------------------------|----------------------------------|--------------------------|
| Clamping range (nominal / min. / max.) | mm <sup>2</sup> 1.5 / 0.14 / 1.5 | 1.5 / 0.14 / 1.5         |
| Length x width x height                | mm 88 / 6.4 / 90                 | 88 / 6.4 / 90            |

| Notes                                                                           |  |
|---------------------------------------------------------------------------------|--|
| Accessories and dimensional drawings: refer to the TERMSERIES Accessories page. |  |

Ordering data

| Control side               |                                         | 24 V - 230 V UC |
|----------------------------|-----------------------------------------|-----------------|
| Rated control voltage      | 24...230 V UC ±10 %                     |                 |
| Nominal control current    | 22 mA @ 24 V DC,<br>4 mA @ 230 V AC     |                 |
| Power rating               | 530 mW @ 24 V DC,<br>930 mVA @ 230 V AC |                 |
| Cut-in (switch-on) voltage | ≥ 9.6 V AC, ≥ 9.6 V DC                  |                 |
| Dropout voltage            | ≤ 7.5 V AC, ≤ 6 V DC                    |                 |
| Input frequency            | 3 Hz                                    |                 |
| Status indicator           | Green LED                               |                 |
| Protective circuit         | Rectifier                               |                 |
| Load side                  |                                         |                 |
| Switch-on delay            | < 20 ms                                 |                 |
| Switch-off delay           | < 100 ms                                |                 |

| Ordering data            | Type                  | Part No.   |
|--------------------------|-----------------------|------------|
| Screw connection         | TOS 24-230VUC 24VDC2A | 1127250000 |
| Tension clamp connection | TOZ 24-230VUC 24VDC2A | 1127380000 |

| Notes                                                                     |  |
|---------------------------------------------------------------------------|--|
| Spare solid-state relay, Type: SSS 24 V/24 V 2 A DC, Part No.: 4061190000 |  |

## Solid-state relays, 3 - 33 V DC / 2 A Output versions

### Ordering data

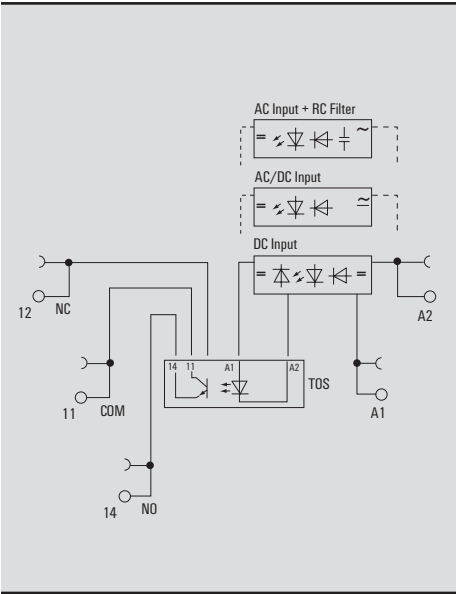
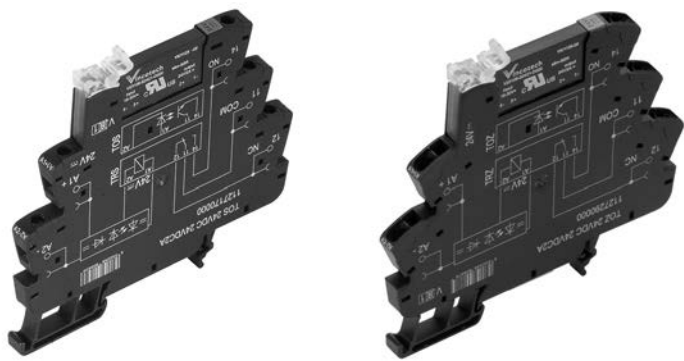
| Control side               |          | 5 V DC                                                                              | 12 V DC                                                                             | 24 V DC                                                                              | 24 V UC                                                                              | 48 V UC                                                                              |
|----------------------------|----------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
| Rated control voltage      |          | 5 V DC $\pm 20\%$                                                                   | 12 V DC $\pm 20\%$                                                                  | 24 V DC $\pm 20\%$                                                                   | 24 V UC $\pm 10\%$                                                                   | 48 V UC $\pm 10\%$                                                                   |
| Nominal control current    |          | 10 mA DC $\pm 20\%$                                                                 | 9.6 mA DC ( $\pm 20\%$ )                                                            | 10 mA DC $\pm 20\%$                                                                  | 10 mA AC $\pm 20\%$ ,<br>6 mA DC ( $\pm 20\%$ )                                      | 8 mA AC ( $\pm 20\%$ ),<br>7 mA DC ( $\pm 20\%$ )                                    |
| Power rating               |          | 50 mW                                                                               | 112 mW                                                                              | 240 mW                                                                               | 154 mW                                                                               | 290 mVA / 192 mW                                                                     |
| Cut-in (switch-on) voltage |          | $\geq 3$ V DC                                                                       | $\geq 4$ V DC                                                                       | $\geq 15$ V DC                                                                       | $\geq 14.4$ V AC, $\geq 11.2$ V DC                                                   | $\geq 28$ V AC, $\geq 28$ V DC                                                       |
| Dropout voltage            |          | $\leq 1.7$ V DC                                                                     | $\leq 6$ V DC                                                                       | $\leq 15$ V DC                                                                       | $\leq 15.7$ V AC, $\leq 15.7$ V DC                                                   | $\leq 24$ V AC, $\leq 24$ V DC                                                       |
| Input frequency            |          | 300 Hz                                                                              | 300 Hz                                                                              | 300 Hz                                                                               | DC: 10 Hz / AC: 3 Hz                                                                 | DC: 10 Hz / AC: 3 Hz                                                                 |
| Status indicator           |          | Green LED                                                                           | Green LED                                                                           | Green LED                                                                            | Green LED                                                                            | Green LED                                                                            |
| Protective circuit         |          | Reverse polarity protection, Integrated free-wheel diode                            | Reverse polarity protection, Integrated free-wheel diode                            | Reverse polarity protection, Integrated free-wheel diode                             | Rectifier                                                                            | Rectifier                                                                            |
| Load side                  |          |                                                                                     |                                                                                     |                                                                                      |                                                                                      |                                                                                      |
| Switch-on delay            |          | $< 55\ \mu\text{s}$                                                                 | $< 55\ \mu\text{s}$                                                                 | $< 55\ \mu\text{s}$                                                                  | $< 6.5\ \text{ms}$                                                                   | $< 6.5\ \text{ms}$                                                                   |
| Switch-off delay           |          | $< 1\ \text{ms}$                                                                    | $< 1.2\ \text{ms}$                                                                  | $< 1.2\ \text{ms}$                                                                   | $< 10\ \text{ms}$                                                                    | $< 10\ \text{ms}$                                                                    |
| Ordering data              |          |                                                                                     |                                                                                     |                                                                                      |                                                                                      |                                                                                      |
| Screw connection           | Type     | TOS 5VDC 24VDC2A                                                                    | TOS 12VDC 24VDC2A                                                                   | TOS 24VDC 24VDC2A                                                                    | TOS 24VUC 24VDC2A                                                                    | TOS 48VUC 24VDC2A                                                                    |
|                            | Part No. | <b>1127140000</b>                                                                   | <b>1127150000</b>                                                                   | <b>1127170000</b>                                                                    | <b>1127180000</b>                                                                    | <b>1127190000</b>                                                                    |
| Tension clamp connection   | Type     | TOZ 5VDC 24VDC2A                                                                    | TOZ 12VDC 24VDC2A                                                                   | TOZ 24VDC 24VDC2A                                                                    | TOZ 24VUC 24VDC2A                                                                    | TOZ 48VUC 24VDC2A                                                                    |
|                            | Part No. | <b>1127270000</b>                                                                   | <b>1127280000</b>                                                                   | <b>1127290000</b>                                                                    | <b>1127300000</b>                                                                    | <b>1127310000</b>                                                                    |
| Notes                      |          | Spare solid-state relay<br>Type: SSS 5 V/24 V 2 A DC<br>Part No.: <b>4064310000</b> | Spare solid-state relay<br>Type: SSS 5 V/24 V 2 A DC<br>Part No.: <b>4064310000</b> | Spare solid-state relay<br>Type: SSS 24 V/24 V 2 A DC<br>Part No.: <b>4061190000</b> | Spare solid-state relay<br>Type: SSS 24 V/24 V 2 A DC<br>Part No.: <b>4061190000</b> | Spare solid-state relay<br>Type: SSS 24 V/24 V 2 A DC<br>Part No.: <b>4061190000</b> |

### Ordering data

| Control side               |          | 60 V UC                                                                              | 120 V UC                                                                             | 230 V UC                                                                             | 120 V AC RC                                                                          | 230 V AC RC                                                                          |
|----------------------------|----------|--------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
| Rated control voltage      |          | 60 V UC $\pm 10\%$                                                                   | 120 V UC $\pm 10\%$                                                                  | 230 V UC $\pm 10\%$                                                                  | 120 V AC $\pm 10\%$                                                                  | 230 V AC $\pm 10\%$                                                                  |
| Nominal control current    |          | 5 mA AC ( $\pm 20\%$ ),<br>3 mA DC ( $\pm 20\%$ )                                    | 5 mA AC ( $\pm 30\%$ ),<br>3 mA DC ( $\pm 30\%$ )                                    | 3.5 mA AC ( $\pm 30\%$ ),<br>3 mA DC ( $\pm 30\%$ )                                  | 7 mA AC ( $\pm 20\%$ )                                                               | 9 mA AC                                                                              |
| Power rating               |          | $< 300\ \text{mW}$                                                                   | 0.48 VA                                                                              | 0.8 VA / 660 mW                                                                      | 0.84 VA                                                                              | 2.1 VA                                                                               |
| Cut-in (switch-on) voltage |          | $\geq 28$ V AC, $\geq 28$ V DC                                                       | $\geq 65$ V AC, $\geq 63$ V DC                                                       | $\geq 130$ V AC, $\geq 107$ V DC                                                     | $\geq 65$ V AC                                                                       | $\geq 103$ V AC                                                                      |
| Dropout voltage            |          | $\leq 24$ V AC, $\leq 31.2$ V DC                                                     | $\leq 78$ V AC, $\leq 89$ V DC                                                       | $\leq 126$ V AC, $\leq 153$ V DC                                                     | $\leq 71.5$ V AC                                                                     | $\leq 109$ V AC                                                                      |
| Input frequency            |          | DC: 10 Hz / AC: 3 Hz                                                                 | 3 Hz                                                                                 | 3 Hz                                                                                 | 3 Hz                                                                                 | 3 Hz                                                                                 |
| Status indicator           |          | Green LED                                                                            | Green LED                                                                            | Green LED                                                                            | Green LED                                                                            | Green LED                                                                            |
| Protective circuit         |          | Rectifier                                                                            | Rectifier                                                                            | Rectifier                                                                            | RC element                                                                           | RC element                                                                           |
| Load side                  |          |                                                                                      |                                                                                      |                                                                                      |                                                                                      |                                                                                      |
| Switch-on delay            |          | $< 6.5\ \text{ms}$                                                                   | $< 6.5\ \text{ms}$                                                                   | $< 7\ \text{ms}$                                                                     | $< 6.5\ \text{ms}$                                                                   | $< 7\ \text{ms}$                                                                     |
| Switch-off delay           |          | $< 10\ \text{ms}$                                                                    | $< 10\ \text{ms}$                                                                    | $< 10\ \text{ms}$                                                                    | $< 10\ \text{ms}$                                                                    | $< 10\ \text{ms}$                                                                    |
| Ordering data              |          |                                                                                      |                                                                                      |                                                                                      |                                                                                      |                                                                                      |
| Screw connection           | Type     | TOS 60VUC 24VDC2A                                                                    | TOS 120VUC 24VDC2A                                                                   | TOS 230VUC 24VDC2A                                                                   | TOS 120VAC RC 24VDC2A                                                                | TOS 230VAC RC 24VDC2A                                                                |
|                            | Part No. | <b>1127200000</b>                                                                    | <b>1127210000</b>                                                                    | <b>1127220000</b>                                                                    | <b>1127230000</b>                                                                    | <b>1127240000</b>                                                                    |
| Tension clamp connection   | Type     | TOZ 60VUC 24VDC2A                                                                    | TOZ 120VUC 24VDC2A                                                                   | TOZ 230VUC 24VDC2A                                                                   | TOZ 120VAC RC 24VDC2A                                                                | TOZ 230VAC RC 24VDC2A                                                                |
|                            | Part No. | <b>1127320000</b>                                                                    | <b>1127330000</b>                                                                    | <b>1127340000</b>                                                                    | <b>1127350000</b>                                                                    | <b>1127370000</b>                                                                    |
| Notes                      |          | Spare solid-state relay<br>Type: SSS 60 V/24 V 2 A DC<br>Part No.: <b>4061200000</b> | Spare solid-state relay<br>Type: SSS 60 V/24 V 2 A DC<br>Part No.: <b>4061200000</b> | Spare solid-state relay<br>Type: SSS 60 V/24 V 2 A DC<br>Part No.: <b>4061200000</b> | Spare solid-state relay<br>Type: SSS 60 V/24 V 2 A DC<br>Part No.: <b>4061200000</b> | Spare solid-state relay<br>Type: SSS 60 V/24 V 2 A DC<br>Part No.: <b>4061200000</b> |

Solid-state relays,  
24 - 230 V AC / 1 A  
Output versions

- Space saving, just 6.4 mm modular width
- 5 cross-connection levels
- Screw and tension clamp connection
- Multi-voltage input: 24...230 VUC in one module



Technical data

| Load side                                                                       |                                                                    |
|---------------------------------------------------------------------------------|--------------------------------------------------------------------|
| Solid-state type                                                                | Triac                                                              |
| Nominal switching voltage / current                                             | 24 V AC ... 250 V AC / min. 20 mA / max. 1 A                       |
| Voltage drop at max. load                                                       | ≤ 1.6 V                                                            |
| Short-circuit-proof / Protective circuit, load side                             | No / No                                                            |
| Continuous current                                                              | 1 A                                                                |
| General data                                                                    |                                                                    |
| Ambient temperature (operational)                                               | -40 °C...+60 °C                                                    |
| Storage temperature                                                             | -40 °C...+85 °C                                                    |
| Humidity                                                                        | 5...95 % rel. humidity<br>T <sub>st</sub> = 40 °C, no condensation |
| Approvals                                                                       | CE, GL, cULus                                                      |
| Insulation coordination (EN 50 178)                                             |                                                                    |
| Rated voltage                                                                   | 300 V                                                              |
| Rated impulse withstand voltage                                                 | 6 kV (1.2/50 µs)                                                   |
| Clearance and creepage distances for control side - load side                   | ≥ 5.5 mm                                                           |
| Surge voltage category                                                          | III                                                                |
| Pollution severity                                                              | 2                                                                  |
|                                                                                 |                                                                    |
| Dimensions                                                                      |                                                                    |
| Clamping range (nominal / min. / max.)                                          | mm <sup>2</sup>                                                    |
| Length x width x height                                                         | mm                                                                 |
| Notes                                                                           |                                                                    |
| Accessories and dimensional drawings: refer to the TERMSERIES Accessories page. |                                                                    |

Ordering data

| Control side               | 24 V - 230 V UC                                                                   |            |
|----------------------------|-----------------------------------------------------------------------------------|------------|
| Rated control voltage      | 24...230 V UC ±10 %                                                               |            |
| Nominal control current    | 22 mA @ 24 V DC,<br>4 mA @ 230 V AC                                               |            |
| Power rating               | 530 mW @ 24 V DC,<br>930 mVA @ 230 V AC                                           |            |
| Cut-in (switch-on) voltage | ≥ 9.6 V AC, ≥ 9.6 V DC                                                            |            |
| Dropout voltage            | ≤ 7.5 V AC, ≤ 6 V DC                                                              |            |
| Input frequency            | 3 Hz                                                                              |            |
| Status indicator           | Green LED                                                                         |            |
| Protective circuit         | Rectifier                                                                         |            |
| Load side                  |                                                                                   |            |
| Switch-on delay            | < 20 ms                                                                           |            |
| Switch-off delay           | < 100 ms                                                                          |            |
| Ordering data              | Type                                                                              | Part No.   |
| Screw connection           | TOS 24-230VUC 230VAC1A                                                            | 1127500000 |
| Tension clamp connection   | TOZ 24-230VUC 230VAC1A                                                            | 1127620000 |
| Notes                      | Spare solid-state relay, Type: SSS 24 V/230 V 1 A AC, <b>Part No.: 4061210000</b> |            |

## Solid-state relays, 24 - 230 V AC / 1 A Output versions

### Ordering data

| Control side               |          | 5 V DC                                                                               | 12 V DC                                                                              | 24 V DC                                                                               | 24 V UC                                                                               | 48 V UC                                                                               |
|----------------------------|----------|--------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| Rated control voltage      |          | 5 V DC $\pm 20$ %                                                                    | 12 V DC $\pm 20$ %                                                                   | 24 V DC $\pm 20$ %                                                                    | 24 V UC $\pm 10$ %                                                                    | 48 V UC $\pm 10$ %                                                                    |
| Nominal control current    |          | 15 mA DC ( $\pm 20$ %)                                                               | 9.6 mA DC ( $\pm 20$ %)                                                              | 10 mA DC $\pm 20$ %                                                                   | 10 mA AC $\pm 20$ %, 6 mA DC ( $\pm 20$ %)                                            | 6 mA AC ( $\pm 20$ %), 4 mA DC ( $\pm 20$ %)                                          |
| Power rating               |          | 75 mW                                                                                | 112 mW                                                                               | 260 mW                                                                                | 154 mW                                                                                | 290 mVA / 192 mW                                                                      |
| Cut-in (switch-on) voltage |          | $\geq 3$ V DC                                                                        | $\geq 4$ V DC                                                                        | $\geq 15$ V DC                                                                        | $\geq 14.4$ V AC, $\geq 11.2$ V DC                                                    | $\geq 28$ V AC, $\geq 28$ V DC                                                        |
| Dropout voltage            |          | $\leq 1.7$ V DC                                                                      | $\leq 6$ V DC                                                                        | $\leq 15$ V DC                                                                        | $\leq 15.7$ V AC, $\leq 15.7$ V DC                                                    | $\leq 24$ V AC, $\leq 24$ V DC                                                        |
| Input frequency            |          | 3 Hz                                                                                 | 3 Hz                                                                                 | 3 Hz                                                                                  | 3 Hz                                                                                  | 3 Hz                                                                                  |
| Status indicator           |          | Green LED                                                                            | Green LED                                                                            | Green LED                                                                             | Green LED                                                                             | Green LED                                                                             |
| Protective circuit         |          | Reverse polarity protection, Integrated free-wheel diode                             | Reverse polarity protection, Integrated free-wheel diode                             | Reverse polarity protection, Integrated free-wheel diode                              | Rectifier                                                                             | Rectifier                                                                             |
| Load side                  |          |                                                                                      |                                                                                      |                                                                                       |                                                                                       |                                                                                       |
| Switch-on delay            |          | < 12 ms                                                                              | < 12 ms                                                                              | < 11 ms                                                                               | < 11 ms                                                                               | < 11 ms                                                                               |
| Switch-off delay           |          | < 12 ms                                                                              | < 12 ms                                                                              | < 11 ms                                                                               | < 11 ms                                                                               | < 11 ms                                                                               |
| Ordering data              |          |                                                                                      |                                                                                      |                                                                                       |                                                                                       |                                                                                       |
| Screw connection           | Type     | TOS 5VDC 230VAC1A                                                                    | TOS 12VDC 230VAC1A                                                                   | TOS 24VDC 230VAC1A                                                                    | TOS 24VUC 230VAC1A                                                                    | TOS 48VUC 230VAC1A                                                                    |
|                            | Part No. | <b>1127390000</b>                                                                    | <b>1127400000</b>                                                                    | <b>1127410000</b>                                                                     | <b>1127420000</b>                                                                     | <b>1127430000</b>                                                                     |
| Tension clamp connection   | Type     | TOZ 5VDC 230VAC1A                                                                    | TOZ 12VDC 230VAC1A                                                                   | TOZ 24VDC 230VAC1A                                                                    | TOZ 24VUC 230VAC1A                                                                    | TOZ 48VUC 230VAC1A                                                                    |
|                            | Part No. | <b>1127510000</b>                                                                    | <b>1127520000</b>                                                                    | <b>1127530000</b>                                                                     | <b>1127540000</b>                                                                     | <b>1127550000</b>                                                                     |
| Notes                      |          | Spare solid-state relay<br>Type: SSS 5 V/230 V 1 A AC<br>Part No.: <b>1132260000</b> | Spare solid-state relay<br>Type: SSS 5 V/230 V 1 A AC<br>Part No.: <b>1132260000</b> | Spare solid-state relay<br>Type: SSS 24 V/230 V 1 A AC<br>Part No.: <b>4061210000</b> | Spare solid-state relay<br>Type: SSS 24 V/230 V 1 A AC<br>Part No.: <b>4061210000</b> | Spare solid-state relay<br>Type: SSS 24 V/230 V 1 A AC<br>Part No.: <b>4061210000</b> |

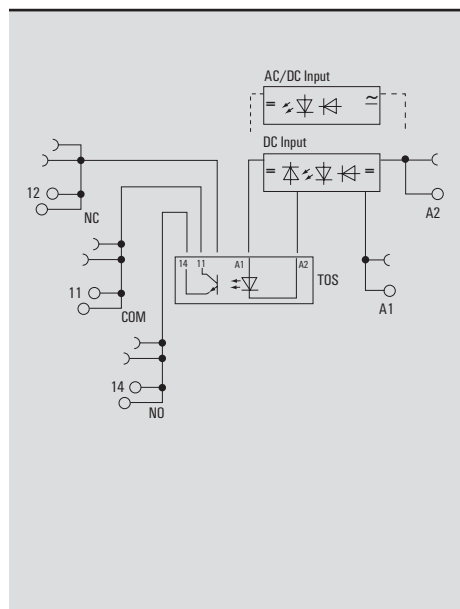
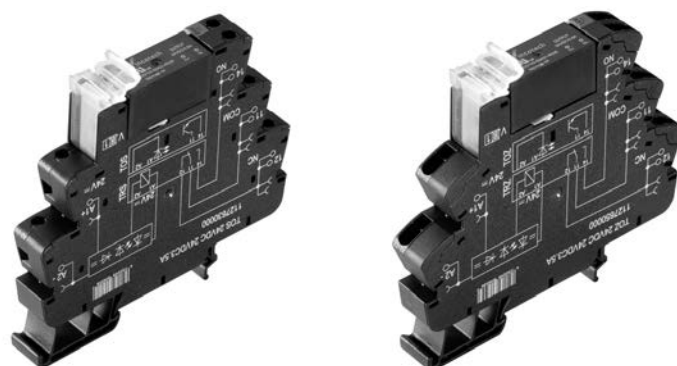
### Ordering data

| Control side               |          | 60 V UC                                                                               | 120 V UC                                                                              | 230 V UC                                                                              | 120 V AC RC                                                                           | 230 V AC RC                                                                           |
|----------------------------|----------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| Rated control voltage      |          | 60 V UC $\pm 10$ %                                                                    | 120 V UC $\pm 10$ %                                                                   | 230 V UC +5 %/ -10 %                                                                  | 120 V AC $\pm 10$ %                                                                   | 230 V AC $\pm 10$ %                                                                   |
| Nominal control current    |          | 5 mA AC ( $\pm 20$ %), 3 mA DC ( $\pm 20$ %)                                          | 5 mA AC ( $\pm 30$ %), 3 mA DC ( $\pm 30$ %)                                          | 3.5 mA AC ( $\pm 30$ %), 3 mA DC ( $\pm 30$ %)                                        | 7 mA AC ( $\pm 20$ %)                                                                 | 9 mA AC                                                                               |
| Power rating               |          | < 300 mW                                                                              | 0.48 VA                                                                               | 0.8 VA / 660 mW                                                                       | 0.84 VA                                                                               | 2.1 VA                                                                                |
| Cut-in (switch-on) voltage |          | $\geq 28$ V AC, $\geq 28$ V DC                                                        | $\geq 65$ V AC, $\geq 63$ V DC                                                        | $\geq 130$ V AC, $\geq 107$ V DC                                                      | $\geq 65$ V AC                                                                        | $\geq 103$ V AC                                                                       |
| Dropout voltage            |          | $\leq 22$ V AC, $\leq 28.6$ V DC                                                      | $\leq 78$ V AC, $\leq 89$ V DC                                                        | $\leq 126$ V AC, $\leq 153$ V DC                                                      | $\leq 71.5$ V AC                                                                      | $\leq 109$ V AC                                                                       |
| Input frequency            |          | 3 Hz                                                                                  | 3 Hz                                                                                  | 3 Hz                                                                                  | 3 Hz                                                                                  | 3 Hz                                                                                  |
| Status indicator           |          | Green LED                                                                             | Green LED                                                                             | Green LED                                                                             | Green LED                                                                             | Green LED                                                                             |
| Protective circuit         |          | Rectifier                                                                             | Rectifier                                                                             | Rectifier                                                                             | RC element                                                                            | RC element                                                                            |
| Load side                  |          |                                                                                       |                                                                                       |                                                                                       |                                                                                       |                                                                                       |
| Switch-on delay            |          | < 11 ms                                                                               | < 11 ms                                                                               | < 20 ms                                                                               | < 11 ms                                                                               | < 20 ms                                                                               |
| Switch-off delay           |          | < 11 ms                                                                               | < 11 ms                                                                               | < 20 ms                                                                               | < 11 ms                                                                               | < 20 ms                                                                               |
| Ordering data              |          |                                                                                       |                                                                                       |                                                                                       |                                                                                       |                                                                                       |
| Screw connection           | Type     | TOS 60VUC 230VAC1A                                                                    | TOS 120VUC 230VAC1A                                                                   | TOS 230VUC 230VAC1A                                                                   | TOS 120VAC RC 230VAC1A                                                                | TOS 230VAC RC 230VAC1A                                                                |
|                            | Part No. | <b>1127440000</b>                                                                     | <b>1127450000</b>                                                                     | <b>1127470000</b>                                                                     | <b>1127480000</b>                                                                     | <b>1127490000</b>                                                                     |
| Tension clamp connection   | Type     | TOZ 60VUC 230VAC1A                                                                    | TOZ 120VUC 230VAC1A                                                                   | TOZ 230VUC 230VAC1A                                                                   | TOZ 120VAC RC 230VAC1A                                                                | TOZ 230VAC RC 230VAC1A                                                                |
|                            | Part No. | <b>1127570000</b>                                                                     | <b>1127580000</b>                                                                     | <b>1127590000</b>                                                                     | <b>1127600000</b>                                                                     | <b>1127610000</b>                                                                     |
| Notes                      |          | Spare solid-state relay<br>Type: SSS 60 V/230 V 1 A AC<br>Part No.: <b>4061220000</b> | Spare solid-state relay<br>Type: SSS 60 V/230 V 1 A AC<br>Part No.: <b>4061220000</b> | Spare solid-state relay<br>Type: SSS 60 V/230 V 1 A AC<br>Part No.: <b>4061220000</b> | Spare solid-state relay<br>Type: SSS 60 V/230 V 1 A AC<br>Part No.: <b>4061220000</b> | Spare solid-state relay<br>Type: SSS 60 V/230 V 1 A AC<br>Part No.: <b>4061220000</b> |



## Solid-state relays, 0 - 33 V DC / 3.5 A 12 - 275 V AC / 1 A Output versions

- Space saving, just 12.8 mm modular width
- 5 cross-connection levels
- Screw and tension clamp connection
- Multi-voltage input: 24...230 VUC in one module



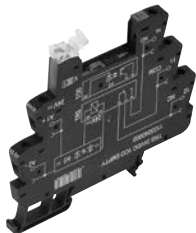
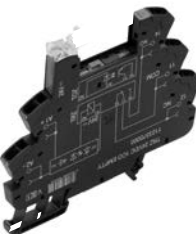
### Technical data

| Technical data                                                |                                                                   |                                                                                 |
|---------------------------------------------------------------|-------------------------------------------------------------------|---------------------------------------------------------------------------------|
| Load side                                                     | 0-33 V DC / 3.5 A                                                 | 12-275 V AC / 1 A                                                               |
| Solid-state type                                              | Bipolar transistor                                                | Triac                                                                           |
| Nominal switching voltage / current                           | 3...33 V DC / 3.5 A                                               | 12-275 V AC / 1 A                                                               |
| Voltage drop at max. load                                     | ≤ 0.3 V                                                           | ≤ 1.1 V                                                                         |
| Short-circuit-proof / Protective circuit, load side           | No / Integrated free-wheel diode                                  | No / No                                                                         |
| Continuous current                                            | 3.5 A                                                             | 1 A                                                                             |
| General data                                                  |                                                                   |                                                                                 |
| Ambient temperature (operational)                             | -40 °C...+60 °C                                                   |                                                                                 |
| Storage temperature                                           | -40 °C...+85 °C                                                   |                                                                                 |
| Humidity                                                      | 5...95 % rel. humidity<br>T <sub>u</sub> = 40 °C, no condensation |                                                                                 |
| Approvals                                                     | CE, GL, cULus                                                     |                                                                                 |
| Insulation coordination (EN 50 178)                           |                                                                   |                                                                                 |
| Rated voltage                                                 | 300 V                                                             |                                                                                 |
| Rated impulse withstand voltage                               | 6 kV (1.2/50 µs)                                                  |                                                                                 |
| Clearance and creepage distances for control side - load side | ≥ 5.5 mm                                                          |                                                                                 |
| Surge voltage category                                        | III                                                               |                                                                                 |
| Pollution severity                                            | 2                                                                 |                                                                                 |
|                                                               |                                                                   |                                                                                 |
| Dimensions                                                    |                                                                   | Screw connection                                                                |
| Clamping range (nominal / min. / max.)                        | mm <sup>2</sup>                                                   | 1.5 / 0.14 / 1.5                                                                |
| Length x width x height                                       | mm                                                                | 88 / 12.8 / 90                                                                  |
| Notes                                                         |                                                                   | Tension clamp connection                                                        |
|                                                               |                                                                   | 88 / 12.8 / 90                                                                  |
|                                                               |                                                                   | Accessories and dimensional drawings: refer to the TERMSERIES Accessories page. |

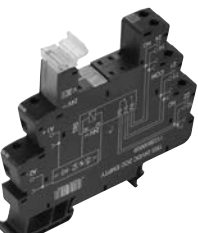
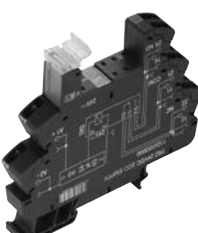
### Ordering data

| Control side                                                                         | 24 V DC                                                     | 24 V - 230 V UC                         |
|--------------------------------------------------------------------------------------|-------------------------------------------------------------|-----------------------------------------|
| Rated control voltage                                                                | 24 V DC ±20 %                                               | 24...230 V UC ±10 %                     |
| Nominal control current                                                              | 8 mA DC (±20 %)                                             | 22 mA @ 24 V DC,<br>4 mA @ 230 V AC     |
| Power rating                                                                         | ≤ 200 mW                                                    | 530 mW @ 24 V DC,<br>930 mVA @ 230 V AC |
| Cut-in (switch-on) voltage                                                           | ≥ 11.2 V DC                                                 | ≥ 9.6 V AC, ≥ 9.6 V DC                  |
| Dropout voltage                                                                      | ≤ 13 V DC                                                   | ≤ 7.5 V AC, ≤ 6 V DC                    |
| Input frequency                                                                      | 300 Hz                                                      | 3 Hz                                    |
| Status indicator                                                                     | Green LED                                                   | Green LED                               |
| Protective circuit                                                                   | Reverse polarity protection,<br>Integrated free-wheel diode | Rectifier                               |
| <b>Load side</b>                                                                     |                                                             |                                         |
| Switch-on delay                                                                      | < 50 µs                                                     | < 20 ms                                 |
| Switch-off delay                                                                     | < 250 µs                                                    | < 100 ms                                |
| <b>Ordering data</b>                                                                 |                                                             |                                         |
| Screw connection                                                                     | Type                                                        | Part No.                                |
| 0-33 VDC/3.5A                                                                        | TOS 24VDC 24VDC3.5A                                         | 1127630000                              |
| Tension clamp connection                                                             | Type                                                        | Part No.                                |
| 0-33 VDC/3.5A                                                                        | TOZ 24VDC 24VDC3.5A                                         | 1127650000                              |
| <b>Notes</b>                                                                         |                                                             |                                         |
| Spare solid-state relay, Type: SSR 10-32 V DC/0-35 V DC 5 A, Part No.: 1132310000    |                                                             |                                         |
| <b>Ordering data</b>                                                                 |                                                             |                                         |
| Screw connection                                                                     | Type                                                        | Part No.                                |
| 12-275 VAC/1A                                                                        | TOS 24VDC 230VAC1A                                          | 1127680000                              |
| Tension clamp connection                                                             | Type                                                        | Part No.                                |
| 12-275 VAC/1A                                                                        | TOZ 24VDC 230VAC1A                                          | 1127700000                              |
| <b>Notes</b>                                                                         |                                                             |                                         |
| Spare solid-state relay, Type: SSR 10 - 32 VDC/12 - 275 VAC 3A, Part No.: 1132290000 |                                                             |                                         |

## Empty socket 6.4 mm

|                                                                                                                                                 | Type / 1 CO, Screw connection         | Input voltage                    | Qty. | Part No.   |
|-------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------|----------------------------------|------|------------|
|                                                                | TRS 5VDC 1CO empty                    | 5 V DC <sup>1)</sup>             | 10   | 1123220000 |
|                                                                                                                                                 | TRS 12VDC 1CO empty                   | 12 V DC <sup>2)</sup>            | 10   | 1123230000 |
|                                                                                                                                                 | TRS 24VDC 1CO empty                   | 24 V DC <sup>3)</sup>            | 10   | 1123240000 |
|                                                                                                                                                 | TRS 24VUC 1CO empty                   | 24 V AC / DC <sup>3)</sup>       | 10   | 1123250000 |
|                                                                                                                                                 | TRS 48VUC 1CO empty                   | 48 V AC / DC <sup>3)</sup>       | 10   | 1123270000 |
|                                                                                                                                                 | TRS 60VUC 1CO empty                   | 60 V AC / DC <sup>4)</sup>       | 10   | 1123280000 |
|                                                                                                                                                 | TRS 120VUC 1CO empty                  | 120 V AC / DC <sup>4)</sup>      | 10   | 1123290000 |
|                                                                                                                                                 | TRS 230VUC 1CO empty                  | 230 V AC / DC <sup>4)</sup>      | 10   | 1123300000 |
|                                                                                                                                                 | TRS 120VAC RC 1CO empty               | 120 V AC <sup>4)</sup>           | 10   | 1123310000 |
|                                                                                                                                                 | TRS 230VAC RC 1CO empty               | 230 V AC <sup>4)</sup>           | 10   | 1123320000 |
|                                                                                                                                                 | TRS 24-230VUC 1CO empty               | 24...230 V AC / DC <sup>3)</sup> | 10   | 1123330000 |
|                                                                                                                                                 | Type / 1 CO, Tension clamp connection |                                  |      |            |
|                                                                | TRZ 5VDC 1CO empty                    | 5 V DC <sup>1)</sup>             | 10   | 1123340000 |
|                                                                                                                                                 | TRZ 12VDC 1CO empty                   | 12 V DC <sup>2)</sup>            | 10   | 1123350000 |
|                                                                                                                                                 | TRZ 24VDC 1CO empty                   | 24 V DC <sup>3)</sup>            | 10   | 1123370000 |
|                                                                                                                                                 | TRZ 24VUC 1CO empty                   | 24 V AC / DC <sup>3)</sup>       | 10   | 1123380000 |
|                                                                                                                                                 | TRZ 48VUC 1CO empty                   | 48 V AC / DC <sup>3)</sup>       | 10   | 1123390000 |
|                                                                                                                                                 | TRZ 60VUC 1CO empty                   | 60 V AC / DC <sup>4)</sup>       | 10   | 1123400000 |
|                                                                                                                                                 | TRZ 120VUC 1CO empty                  | 120 V AC / DC <sup>4)</sup>      | 10   | 1123410000 |
|                                                                                                                                                 | TRZ 230VUC 1CO empty                  | 230 V AC / DC <sup>4)</sup>      | 10   | 1123420000 |
|                                                                                                                                                 | TRZ 120VAC RC 1CO empty               | 120 V AC <sup>4)</sup>           | 10   | 1123430000 |
|                                                                                                                                                 | TRZ 230VAC RC 1CO empty               | 230 V AC <sup>4)</sup>           | 10   | 1123440000 |
|                                                                                                                                                 | TRZ 24-230VUC 1CO empty               | 24...230 V AC / DC <sup>3)</sup> | 10   | 1123450000 |
| Useable with <sup>1)</sup> RSS...005; SSS 5V... <sup>2)</sup> RSS...012 <sup>3)</sup> RSS...024; SSS 24V... <sup>4)</sup> RSS...060; SSS 60V... |                                       |                                  |      |            |

## Empty socket 12.8 mm

|                                                                                                                       | Type / 1 CO, Screw connection         | Input voltage                    | Qty.       | Part No.   |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------|----------------------------------|------------|------------|
|                                                                                                                                                                                                          | TOS 24VDC empty                       | 24 V DC <sup>1)</sup>            | 10         | 1127720000 |
|                                                                                                                                                                                                          | TOS 24-230VUC empty                   | 24...230 V AC / DC <sup>1)</sup> | 10         | 1127730000 |
|                                                                                                                                                                                                          | Type / 2 CO, Screw connection         |                                  |            |            |
|                                                                                                                                                                                                          | TRS 5VDC 2CO empty                    | 5 V DC <sup>2)</sup>             | 10         | 1123950000 |
|                                                                                                                                                                                                          | TRS 12VDC 2CO empty                   | 12 V DC <sup>3)</sup>            | 10         | 1123970000 |
|                                                                                                                                                                                                          | TRS 24VDC 2CO empty                   | 24 V DC <sup>4)</sup>            | 10         | 1123980000 |
|                                                                                                                                                                                                          | TRS 24VUC 2CO empty                   | 24 V AC / DC <sup>4)</sup>       | 10         | 1123990000 |
|                                                                                                                                                                                                          | TRS 48VUC 2CO empty                   | 48 V AC / DC <sup>5)</sup>       | 10         | 1124000000 |
|                                                                                                                                                                                                          | TRS 60VUC 2CO empty                   | 60 V AC / DC <sup>6)</sup>       | 10         | 1124010000 |
|                                                                                                                                                                                                          | TRS 120VUC 2CO empty                  | 120 V AC / DC <sup>7)</sup>      | 10         | 1124020000 |
|                                                                                                                                                                                                          | TRS 230VUC 2CO empty                  | 230 V AC / DC <sup>7)</sup>      | 10         | 1124030000 |
|                                                                                                                                                                                                          | TRS 120VAC RC 2CO empty               | 120 V AC <sup>7)</sup>           | 10         | 1124040000 |
| TRS 230VAC RC 2CO empty                                                                                                                                                                                  | 230 V AC <sup>7)</sup>                | 10                               | 1124050000 |            |
| TRS 24-230VUC 2CO empty                                                                                                                                                                                  | 24...230 V AC / DC <sup>4)</sup>      | 10                               | 1124070000 |            |
|                                                                                                                       | Type / 1 CO, Tension clamp connection |                                  |            |            |
|                                                                                                                                                                                                          | TOZ 24VDC empty                       | 24 V DC <sup>1)</sup>            | 10         | 1127740000 |
|                                                                                                                                                                                                          | TOZ 24-230VUC empty                   | 24...230 V AC / DC <sup>1)</sup> | 10         | 1127750000 |
|                                                                                                                                                                                                          | Type / 2 CO, Tension clamp connection |                                  |            |            |
|                                                                                                                                                                                                          | TRZ 5VDC 2CO empty                    | 5 V DC <sup>2)</sup>             | 10         | 1124080000 |
|                                                                                                                                                                                                          | TRZ 12VDC 2CO empty                   | 12 V DC <sup>3)</sup>            | 10         | 1124090000 |
|                                                                                                                                                                                                          | TRZ 24VDC 2CO empty                   | 24 V DC <sup>4)</sup>            | 10         | 1124100000 |
|                                                                                                                                                                                                          | TRZ 24VUC 2CO empty                   | 24 V AC / DC <sup>4)</sup>       | 10         | 1124110000 |
|                                                                                                                                                                                                          | TRZ 48VUC 2CO empty                   | 48 V AC / DC <sup>5)</sup>       | 10         | 1124120000 |
|                                                                                                                                                                                                          | TRZ 60VUC 2CO empty                   | 60 V AC / DC <sup>6)</sup>       | 10         | 1124130000 |
|                                                                                                                                                                                                          | TRZ 120VUC 2CO empty                  | 120 V AC / DC <sup>7)</sup>      | 10         | 1124140000 |
|                                                                                                                                                                                                          | TRZ 230VUC 2CO empty                  | 230 V AC / DC <sup>7)</sup>      | 10         | 1124150000 |
|                                                                                                                                                                                                          | TRZ 120VAC RC 2CO empty               | 120 V AC <sup>7)</sup>           | 10         | 1124170000 |
| TRZ 230VAC RC 2CO empty                                                                                                                                                                                  | 230 V AC <sup>7)</sup>                | 10                               | 1124180000 |            |
| TRZ 24-230VUC 2CO empty                                                                                                                                                                                  | 24...230 V AC / DC <sup>4)</sup>      | 10                               | 1124190000 |            |
| Useable with <sup>1)</sup> RCL31.024; SSR 10...32VDC/... <sup>2)</sup> RCL42.005 <sup>3)</sup> RCL42.012 <sup>4)</sup> RCL42.024 <sup>5)</sup> RCL42.048 <sup>6)</sup> RCL42.060 <sup>7)</sup> RCL42.110 |                                       |                                  |            |            |

## RSS relay module



| Technical data                       |
|--------------------------------------|
| Type of contact / Number of contacts |
| Contact material                     |
| Max. switching voltage / current     |
| Min. switching voltage / current     |
| Min. mechanical lifetime             |
| Min. electrical lifetime             |
| Max. switch-on / switch-off delay    |
| Ambient temperature (operational)    |
| Making / Dropout voltage coil        |
| <b>Notes</b>                         |

| RSS113...                                                                                                                  | RSS112...                                                       |
|----------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------|
| 1 CO contact                                                                                                               | 1 CO contact                                                    |
| AgNi                                                                                                                       | AgNi 5uAu <sup>3)</sup>                                         |
| 250 V / 6 A <sup>1)</sup>                                                                                                  | 250 V / 6 A <sup>1)</sup>                                       |
| 5 V / 100 mA <sup>2)</sup>                                                                                                 | 1 V / 1 mA                                                      |
| 5 x 10 <sup>6</sup> <sup>1)</sup>                                                                                          | 5 x 10 <sup>6</sup> <sup>1)</sup>                               |
| NO: 5 x 10 <sup>4</sup> ; NC: 3 x 10 <sup>4</sup> <sup>1)</sup>                                                            | NO: 5 x 10 <sup>4</sup> ; NC: 3 x 10 <sup>4</sup> <sup>1)</sup> |
| 8 / 4 ms                                                                                                                   | 8 / 4 ms                                                        |
| -40...+85 °C                                                                                                               | -40...+85 °C                                                    |
| typ. 70 % / 5 % U <sub>NOM</sub>                                                                                           | typ. 70 % / 5 % U <sub>NOM</sub>                                |
| <sup>1)</sup> At resistive load<br><sup>2)</sup> 10 V / 10 mA; 24 V / 1 mA<br><sup>3)</sup> Au- plate operate up to 0.25 W |                                                                 |

| Coil data |
|-----------|
| RSS...005 |
| RSS...012 |
| RSS...024 |
| RSS...060 |

| Nom. voltage / current |
|------------------------|
| 5 V DC / 34 mA         |
| 12 V DC / 14 mA        |
| 24 V DC / 7 mA         |
| 60 V DC / 3 mA         |

| Part No.          | Part No.          |
|-------------------|-------------------|
| <b>4061580000</b> | <b>1174540000</b> |
| <b>4061610000</b> | <b>1220670000</b> |
| <b>4060120000</b> | <b>4061590000</b> |
| <b>4061630000</b> | <b>4061600000</b> |

## RCL relay module



| Technical data                       |
|--------------------------------------|
| Type of contact / Number of contacts |
| Contact material                     |
| Max. switching voltage / current     |
| Min. switching voltage / current     |
| Min. mechanical lifetime             |
| Min. electrical lifetime             |
| Max. switch-on / switch-off delay    |
| Ambient temperature (operational)    |
| Making / Dropout voltage coil        |
| <b>Notes</b>                         |

| RCL424...                                                                                                                  | RCL425...                          |
|----------------------------------------------------------------------------------------------------------------------------|------------------------------------|
| 2 CO contact                                                                                                               | 2 CO contact                       |
| AgNi                                                                                                                       | AgNi 5uAu <sup>3)</sup>            |
| 250 V / 8 A <sup>1)</sup>                                                                                                  | 250 V / 8 A <sup>1)</sup>          |
| 5 V / 100 mA <sup>2)</sup>                                                                                                 | 1 V / 1 mA                         |
| 30 x 10 <sup>6</sup> <sup>1)</sup>                                                                                         | 30 x 10 <sup>6</sup> <sup>1)</sup> |
| 10 x 10 <sup>3</sup> <sup>1)</sup>                                                                                         | 10 x 10 <sup>3</sup> <sup>1)</sup> |
| 8 / 6 ms                                                                                                                   | 8 / 6 ms                           |
| -40...+85 °C                                                                                                               | -40...+85 °C                       |
| typ. 70 % / 10 % U <sub>NOM</sub>                                                                                          | typ. 70 % / 10 % U <sub>NOM</sub>  |
| <sup>1)</sup> At resistive load<br><sup>2)</sup> 10 V / 10 mA; 24 V / 1 mA<br><sup>3)</sup> Au- plate operate up to 0.25 W |                                    |

| Coil data |
|-----------|
| RCL...005 |
| RCL...012 |
| RCL...024 |
| RCL...048 |
| RCL...060 |
| RCL...110 |

| Nom. voltage / current | Nominal current |
|------------------------|-----------------|
| 5 V DC / 80 mA         | 80 mA           |
| 12 V DC / 33 mA        | 33 mA           |
| 24 V DC / 16 mA        | 16 mA           |
| 48 V DC / 8 mA         | 8 mA            |
| 60 V DC / 6 mA         | 6 mA            |
| 110 V DC / 3 mA        | 3 mA            |

| Part No.          | Part No.          |
|-------------------|-------------------|
| <b>8693790000</b> | <b>1174490000</b> |
| <b>4058560000</b> | <b>4074580000</b> |
| <b>4058570000</b> | <b>4058580000</b> |
| <b>4058750000</b> | <b>1201230000</b> |
| <b>4058760000</b> | <b>1201260000</b> |
| <b>4058590000</b> | <b>8828370000</b> |

## Small solid-state relay



Similar to illustration

| Coil data   | Nom. voltage / current | Part No.          | Part No.          | Part No.          |
|-------------|------------------------|-------------------|-------------------|-------------------|
| SSS 5 V...  | 2,5...6 V DC / 4 mA    | <b>4064320000</b> | —                 | —                 |
| SSS 24 V... | 16...30 V DC / 7 mA    | <b>4061180000</b> | —                 | —                 |
| SSS 60 V... | 52...72 V DC / 3 mA    | <b>4061230000</b> | —                 | —                 |
| SSS 5 V...  | 2,5...6 V DC / 9 mA    | —                 | <b>4064310000</b> | —                 |
| SSS 24 V... | 18...30 V DC / 7 mA    | —                 | <b>4061190000</b> | —                 |
| SSS 60 V... | 40...72 V DC / 3 mA    | —                 | <b>4061200000</b> | —                 |
| SSS 5 V...  | 2,5...6 V DC / 15 mA   | —                 | —                 | <b>1132260000</b> |
| SSS 24 V... | 18...30 V DC / 7 mA    | —                 | —                 | <b>4061210000</b> |
| SSS 60 V... | 40...72 V DC / 3 mA    | —                 | —                 | <b>4061220000</b> |

## Solid-state relay



Similar to illustration

| Coil data           | Nom. voltage / current | Part No.          | Part No.          |
|---------------------|------------------------|-------------------|-------------------|
| SSR10...32 V DC/... | 10...32 V/3...13 mA    | <b>1132310000</b> | <b>1132290000</b> |

| Technical data                    | SSS...24 V 0.1 A DC | SSS...24 V 2 A DC | SSS...230 V 1 A AC |
|-----------------------------------|---------------------|-------------------|--------------------|
| Output                            | Bipolar transistor  | MOS-FET           | Triac              |
| Switching voltage                 | 0...48 V DC         | 0...24 V DC       | 24...240 V AC      |
| Continuous current                | 100 mA              | 2 A               | 1 A                |
| Peak reverse voltage              | 54 V                | 33 V              | 600 V              |
| Forward voltage                   | < 1 V DC            | < 120 mV          | < 1 V              |
| Test voltage input / output       | 2.5 kV              | 2.5 kV            | 3.75 kV            |
| Ambient temperature (operational) | -20...+60 °C        | -20...+60 °C      | -20...+60 °C       |
| Storage temperature               | -40...+70 °C        | -40...+70 °C      | -40...+70 °C       |
| Notes                             |                     |                   |                    |

| Technical data                    | SSR.../0-35 V DC 5A | SSR.../12-275 V AC 3A    |
|-----------------------------------|---------------------|--------------------------|
| Output                            | MOS-FET             | TRIAC, zero cross switch |
| Switching voltage                 | 0...33 V DC         | 12...275 V AC            |
| Continuous current                | 1 mA...5 A          | 50 mA...3 A              |
| Peak reverse voltage              | 35 V                | 600 V                    |
| Forward voltage                   | < 300 mV            | < 1.1 V                  |
| Test voltage input / output       | 2.5 kV              |                          |
| Ambient temperature (operational) | -20...+80 °C        |                          |
| Storage temperature               | -40...+100 °C       |                          |
| Notes                             |                     |                          |

Plug-in cross-connection

|  | Type                 | Number of poles / Pitch | Qty. | Part No.   |
|-----------------------------------------------------------------------------------|----------------------|-------------------------|------|------------|
|                                                                                   | ZQV 1.5N/R6.4/2 GE   | 2 / 6.4                 | 10   | 1193670000 |
|                                                                                   | ZQV 1.5N/R6.4/10 GE  | 10 / 6.4                | 10   | 1193680000 |
|                                                                                   | ZQV 1.5N/R6.4/19 GE  | 19 / 6.4                | 10   | 1193690000 |
|                                                                                   | ZQV 1.5N/R12.8/10 GE | 10 / 12.8               | 10   | 1193700000 |

Supply terminal

|  | Type       | Connection technology    | Qty. | Part No.   |
|-----------------------------------------------------------------------------------|------------|--------------------------|------|------------|
|                                                                                   | TXS SUPPLY | Screw connection         | 10   | 1240780000 |
|                                                                                   | TXZ SUPPLY | Tension clamp connection | 10   | 1240790000 |

Other accessories

|  | Type / Isolation plate |                               |     |            |
|-----------------------------------------------------------------------------------|------------------------|-------------------------------|-----|------------|
|                                                                                   | TW TXS/TXZ R3.2        | Isolation plate 3.2 mm pitch  | 10  | 1240800000 |
|                                                                                   | Markers                |                               |     |            |
|                                                                                   | WS 10/6 MC Middle      | 10 x 6 mm                     | 600 | 1818400000 |
|                                                                                   | Screwdriver            |                               |     |            |
|                                                                                   | SDK PH0                | only screw connection         | 1   | 9008470000 |
|                                                                                   | SD 0.6 x 3.5 x 100     |                               | 1   | 9008330000 |
|                                                                                   | SD TO 0.6 X 3.0        | only tension clamp connection | 1   | 1323880000 |
|                                                                                   | End bracket            |                               |     |            |
|                                                                                   | WEW35/2 SW             |                               | 100 | 1061210000 |

Technical data

| Conductor                                     |      | Screw connection |  | Tension clamp connection |  |
|-----------------------------------------------|------|------------------|--|--------------------------|--|
| 1 conductor                                   |      |                  |  |                          |  |
| Solid H07V-U                                  | mm²  | 0.14...2.5       |  | 0.14...1.5               |  |
| Stranded H07V-K                               | mm²  | 0.14...1.5       |  | 0.14...1.5               |  |
| ... with wire end ferrule                     | mm²  | 0.25...1.5       |  | 0.14...1.5               |  |
| ... with wire end ferrule with plastic collar | mm²  | 0.25...1.5       |  | 0.14...1.5               |  |
| 2 conductor with same size                    |      |                  |  |                          |  |
| Solid H07V-U                                  | mm²  | 0.5...1.0        |  | 0.5...1.0                |  |
| Stranded H07V-K                               | mm²  | 0.5...1.0        |  | 0.5...1.0                |  |
| ... with twin wire end ferrule H...D ZH       | mm²  | 0.5...1.5        |  | 0.5...1.0                |  |
| Clamping range AWG.../1                       | AWG  | 26...14          |  | 26...16                  |  |
| Clamping range AWG.../7                       | AWG  | 26...16          |  | 26...16                  |  |
| Clamping range AWG.../19                      | AWG  | 26...16          |  | 26...16                  |  |
| Plug guage to IEC 60947-1                     | Size | A1 / B1          |  | A1 / B1                  |  |
| General data                                  |      |                  |  |                          |  |
| Nominal torque                                | Nm   | 0.4              |  |                          |  |
| Stripping length                              | mm   | 8                |  | 8                        |  |
| Continuous current ZQV 1.5N/R6.4              | A    | UL: 10           |  | UL: 10                   |  |
| No. Contact durability relay / ZQV            |      | 10               |  | 10                       |  |
| Notes                                         |      |                  |  |                          |  |

Dimensions

