

Timing relay, electronic on-delay 2 change-over contacts, 7 time ranges 0.05 s...100 h 12-240 V AC/DC at 50/60 Hz AC with LED, screw terminal



Figure similar

|                          |                |
|--------------------------|----------------|
| Product brand name       | SIRIUS         |
| Product designation      | timing relay   |
| Design of the product    | slow-operating |
| Product type designation | 3RP25          |

| General technical data                                |        |
|-------------------------------------------------------|--------|
| Product component                                     |        |
| • Relay output                                        | Yes    |
| • semi-conductor output                               | No     |
| Product extension required remote control             | No     |
| Product extension optional remote control             | No     |
| Power loss [W] total typical                          | 2 W    |
| Insulation voltage                                    |        |
| • for overvoltage category III according to IEC 60664 |        |
| — with degree of pollution 3 rated value              | 300 V  |
| Test voltage for isolation test                       | 2.5 kV |
| Degree of pollution                                   | 3      |

|                                                                                         |                        |
|-----------------------------------------------------------------------------------------|------------------------|
| <b>Surge voltage resistance rated value</b>                                             | 4 000 V                |
| <b>Protection class IP</b>                                                              | IP20                   |
| <b>Shock resistance</b>                                                                 |                        |
| • acc. to IEC 60068-2-27                                                                | 11g / 15 ms            |
| <b>Vibration resistance</b>                                                             |                        |
| • acc. to IEC 60068-2-6                                                                 | 10 ... 55 Hz / 0.35 mm |
| <b>Mechanical service life (switching cycles)</b>                                       |                        |
| • typical                                                                               | 10 000 000             |
| <b>Electrical endurance (switching cycles)</b>                                          |                        |
| • at AC-15 at 230 V typical                                                             | 100 000                |
| <b>Adjustable time</b>                                                                  | 0.05 s ... 100 h       |
| <b>Relative setting accuracy relating to full-scale value</b>                           | 5 %                    |
| <b>Thermal current</b>                                                                  | 5 A                    |
| <b>Recovery time</b>                                                                    | 250 ms                 |
| <b>Reference code acc. to DIN 40719 extended according to IEC 204-2 acc. to IEC 750</b> | K                      |
| <b>Reference code</b>                                                                   |                        |
| • acc. to DIN EN 81346-2                                                                | K                      |
| • acc. to DIN EN 61346-2                                                                | K                      |
| <b>Relative repeat accuracy</b>                                                         | 1 %                    |

#### Control circuit/ Control

|                                                                                 |              |
|---------------------------------------------------------------------------------|--------------|
| <b>Type of voltage of the control supply voltage</b>                            | AC/DC        |
| <b>Control supply voltage 1 at AC</b>                                           |              |
| • at 50 Hz                                                                      | 12 ... 240 V |
| • at 60 Hz                                                                      | 12 ... 240 V |
| <b>Control supply voltage frequency 1</b>                                       | 50 ... 60 Hz |
| <b>Control supply voltage 1</b>                                                 |              |
| • at DC                                                                         | 12 ... 240 V |
| <b>Operating range factor control supply voltage rated value at DC</b>          |              |
| • initial value                                                                 | 0.85         |
| • Full-scale value                                                              | 1.1          |
| <b>Operating range factor control supply voltage rated value at AC at 50 Hz</b> |              |
| • initial value                                                                 | 0.85         |
| • Full-scale value                                                              | 1.1          |
| <b>Operating range factor control supply voltage rated value at AC at 60 Hz</b> |              |
| • initial value                                                                 | 0.85         |
| • Full-scale value                                                              | 1.1          |
| <b>Inrush current peak</b>                                                      |              |
| • at 24 V                                                                       | 0.3 A        |
| • at 240 V                                                                      | 5 A          |

|                                                                          |        |
|--------------------------------------------------------------------------|--------|
| <b>Duration of inrush current peak</b>                                   |        |
| • at 24 V                                                                | 0.3 ms |
| • at 240 V                                                               | 0.5 ms |
| <b>Switching Function</b>                                                |        |
| <b>Switching function</b>                                                |        |
| • ON-delay                                                               | Yes    |
| • ON-delay/instantaneous contact                                         | No     |
| • passing make contact                                                   | No     |
| • passing make contact/instantaneous contact                             | No     |
| • OFF delay                                                              | No     |
| <b>Switching function</b>                                                |        |
| • flashing symmetrically starting with interval/instantaneous            | No     |
| • flashing symmetrically starting with interval                          | No     |
| • flashing symmetrically starting with pulse/instantaneous               | No     |
| • flashing symmetrically starting with pulse                             | No     |
| • flashing asymmetrically starting with interval                         | No     |
| • flashing asymmetrically starting with pulse                            | No     |
| <b>Switching function</b>                                                |        |
| • star-delta circuit with delay time                                     | No     |
| • star-delta circuit                                                     | No     |
| <b>Switching function with control signal</b>                            |        |
| • additive ON delay                                                      | No     |
| • passing break contact                                                  | No     |
| • passing break contact/instantaneous                                    | No     |
| • OFF delay                                                              | No     |
| • OFF delay/instantaneous                                                | No     |
| • pulse delayed                                                          | No     |
| • pulse delayed/instantaneous                                            | No     |
| • pulse-shaping                                                          | No     |
| • pulse-shaping/instantaneous                                            | No     |
| • additive ON delay/instantaneous                                        | No     |
| • ON-delay/OFF-delay/instantaneous                                       | No     |
| • passing make contact                                                   | No     |
| • passing make contact/instantaneous contact                             | No     |
| <b>Switching function of interval relay with control signal</b>          |        |
| • retrotriggerable with deactivated control signal/instantaneous contact | No     |
| • retrotriggerable with activated control signal                         | No     |
| • retrotriggerable with activated control signal/instantaneous contact   | No     |

- retriggerable with deactivated control signal

No

## Short-circuit protection

### Design of the fuse link

- for short-circuit protection of the auxiliary switch required

fuse gL/gG: 4 A

## Auxiliary circuit

### Material of switching contacts

AgSnO2

### Number of NC contacts

- delayed switching

0

### Number of NO contacts

- delayed switching

0

### Number of CO contacts

- delayed switching

2

### Operating current of auxiliary contacts at AC-15

- at 24 V
- at 250 V

3 A

3 A

### Operating current of auxiliary contacts at DC-13

- at 24 V
- at 125 V
- at 250 V

1 A

0.2 A

0.1 A

### Operating frequency with 3RT2 contactor maximum

5 000 1/h

### Contact reliability of auxiliary contacts

one incorrect switching operation of 100 million switching operations (17 V, 5 mA)

### Contact rating of auxiliary contacts according to UL

R300 / B300

### Influence of the surrounding temperature

1% in the whole temperature range to the set runtime

### Power supply influence

1% in the whole voltage range to the set runtime

### Switching capacity current with inductive load

0.01 ... 3 A

## Inputs/ Outputs

### Product function

- at the relay outputs Switchover delayed/without delay
- non-volatile

No

No

## Electromagnetic compatibility

### EMI immunity

- acc. to IEC 61812-1

EN 61000-6-2

### Conducted interference

- due to burst acc. to IEC 61000-4-4
- due to conductor-earth surge acc. to IEC 61000-4-5
- due to conductor-conductor surge acc. to IEC 61000-4-5

2 kV network connection / 1 kV control connection

2 kV

1 kV

|                                                                                                                                                                                                                                                                                                                          |                                                                      |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------|
| Field-bound parasitic coupling acc. to IEC 61000-4-3                                                                                                                                                                                                                                                                     | 10 V/m                                                               |
| Electrostatic discharge acc. to IEC 61000-4-2                                                                                                                                                                                                                                                                            | 4 kV contact discharge / 8 kV air discharge                          |
| Safety related data                                                                                                                                                                                                                                                                                                      |                                                                      |
| Protection against electrical shock                                                                                                                                                                                                                                                                                      | finger-safe                                                          |
| Type of insulation                                                                                                                                                                                                                                                                                                       | Basic insulation                                                     |
| Category acc. to EN 954-1                                                                                                                                                                                                                                                                                                | none                                                                 |
| Connections/Terminals                                                                                                                                                                                                                                                                                                    |                                                                      |
| Product function                                                                                                                                                                                                                                                                                                         | Yes                                                                  |
| <ul style="list-style-type: none"> <li>removable terminal for auxiliary and control circuit</li> </ul>                                                                                                                                                                                                                   |                                                                      |
| Type of electrical connection                                                                                                                                                                                                                                                                                            | screw-type terminals                                                 |
| Type of connectable conductor cross-sections                                                                                                                                                                                                                                                                             |                                                                      |
| <ul style="list-style-type: none"> <li>solid</li> </ul>                                                                                                                                                                                                                                                                  | 1x (0.5 ... 4.0 mm <sup>2</sup> ), 2x (0.5 ... 2.5 mm <sup>2</sup> ) |
| <ul style="list-style-type: none"> <li>finely stranded with core end processing</li> </ul>                                                                                                                                                                                                                               | 1x (0.5 ... 4 mm <sup>2</sup> ), 2x (0.5 ... 1.5 mm <sup>2</sup> )   |
| <ul style="list-style-type: none"> <li>at AWG conductors solid</li> </ul>                                                                                                                                                                                                                                                | 1x (20 ... 12), 2x (20 ... 14)                                       |
| <ul style="list-style-type: none"> <li>at AWG conductors stranded</li> </ul>                                                                                                                                                                                                                                             | 1x (20 ... 12), 2x (20 ... 14)                                       |
| Connectable conductor cross-section                                                                                                                                                                                                                                                                                      |                                                                      |
| <ul style="list-style-type: none"> <li>solid</li> </ul>                                                                                                                                                                                                                                                                  | 0.5 ... 4 mm <sup>2</sup>                                            |
| <ul style="list-style-type: none"> <li>finely stranded with core end processing</li> </ul>                                                                                                                                                                                                                               | 0.5 ... 4 mm <sup>2</sup>                                            |
| AWG number as coded connectable conductor cross section                                                                                                                                                                                                                                                                  |                                                                      |
| <ul style="list-style-type: none"> <li>solid</li> </ul>                                                                                                                                                                                                                                                                  | 20 ... 12                                                            |
| <ul style="list-style-type: none"> <li>stranded</li> </ul>                                                                                                                                                                                                                                                               | 20 ... 14                                                            |
| Tightening torque                                                                                                                                                                                                                                                                                                        | 0.6 ... 0.8 N·m                                                      |
| Design of the thread of the connection screw                                                                                                                                                                                                                                                                             | M3                                                                   |
| Installation/ mounting/ dimensions                                                                                                                                                                                                                                                                                       |                                                                      |
| Mounting position                                                                                                                                                                                                                                                                                                        | any                                                                  |
| Mounting type                                                                                                                                                                                                                                                                                                            | screw and snap-on mounting onto 35 mm standard mounting rail         |
| Height                                                                                                                                                                                                                                                                                                                   | 100 mm                                                               |
| Width                                                                                                                                                                                                                                                                                                                    | 22.5 mm                                                              |
| Depth                                                                                                                                                                                                                                                                                                                    | 90 mm                                                                |
| Required spacing                                                                                                                                                                                                                                                                                                         |                                                                      |
| <ul style="list-style-type: none"> <li>with side-by-side mounting <ul style="list-style-type: none"> <li>— forwards</li> <li>— Backwards</li> <li>— upwards</li> <li>— downwards</li> <li>— at the side</li> </ul> </li> <li>for grounded parts <ul style="list-style-type: none"> <li>— forwards</li> </ul> </li> </ul> | 0 mm<br>0 mm<br>0 mm<br>0 mm<br>0 mm<br>0 mm                         |

- Backwards 0 mm
- upwards 0 mm
- at the side 0 mm
- downwards 0 mm
- for live parts
  - forwards 0 mm
  - Backwards 0 mm
  - upwards 0 mm
  - downwards 0 mm
  - at the side 0 mm

#### Ambient conditions

|                                                        |                |
|--------------------------------------------------------|----------------|
| <b>Installation altitude at height above sea level</b> |                |
| • maximum                                              | 2 000 m        |
| <b>Ambient temperature</b>                             |                |
| • during operation                                     | -25 ... +60 °C |
| • during storage                                       | -40 ... +85 °C |
| • during transport                                     | -40 ... +85 °C |
| <b>Relative humidity</b>                               |                |
| • during operation                                     | 10 ... 95 %    |

#### Certificates/approvals

| General Product Approval                                                                   | EMC                                                                                        | Declaration of Conformity                                                                         |
|--------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------|
| <br>CCC | <br>EAC | <br>EG-Konf. |
| <br>CSA | <br>UL  | <br>C-Tick   |

| Test Certificates                                  | Marine / Shipping                                                                                               |
|----------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|
| <a href="#">Type Test Certificates/Test Report</a> | <br>LRS                      |
|                                                    | <br>PRS                      |
|                                                    | <br>RINA                     |
|                                                    | <br>RMRS                   |
|                                                    | <br>DNV-GL<br>DNVGL.COM/AF |

#### other

[Confirmation](#)

#### Further information

**Information- and Downloadcenter (Catalogs, Brochures,...)**

<http://www.siemens.com/industrial-controls/catalogs>

**Industry Mall (Online ordering system)**

<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RP2525-1BW30>

**Cax online generator**

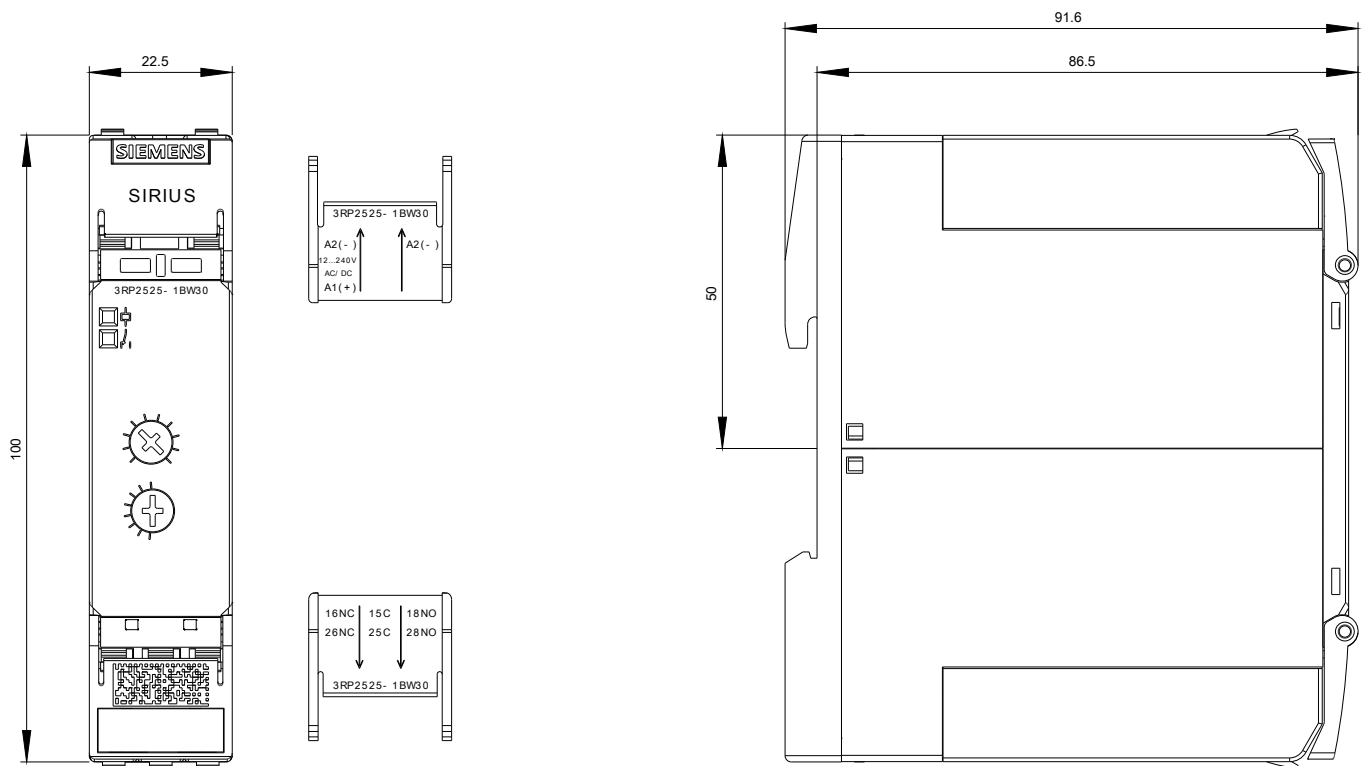
<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RP2525-1BW30>

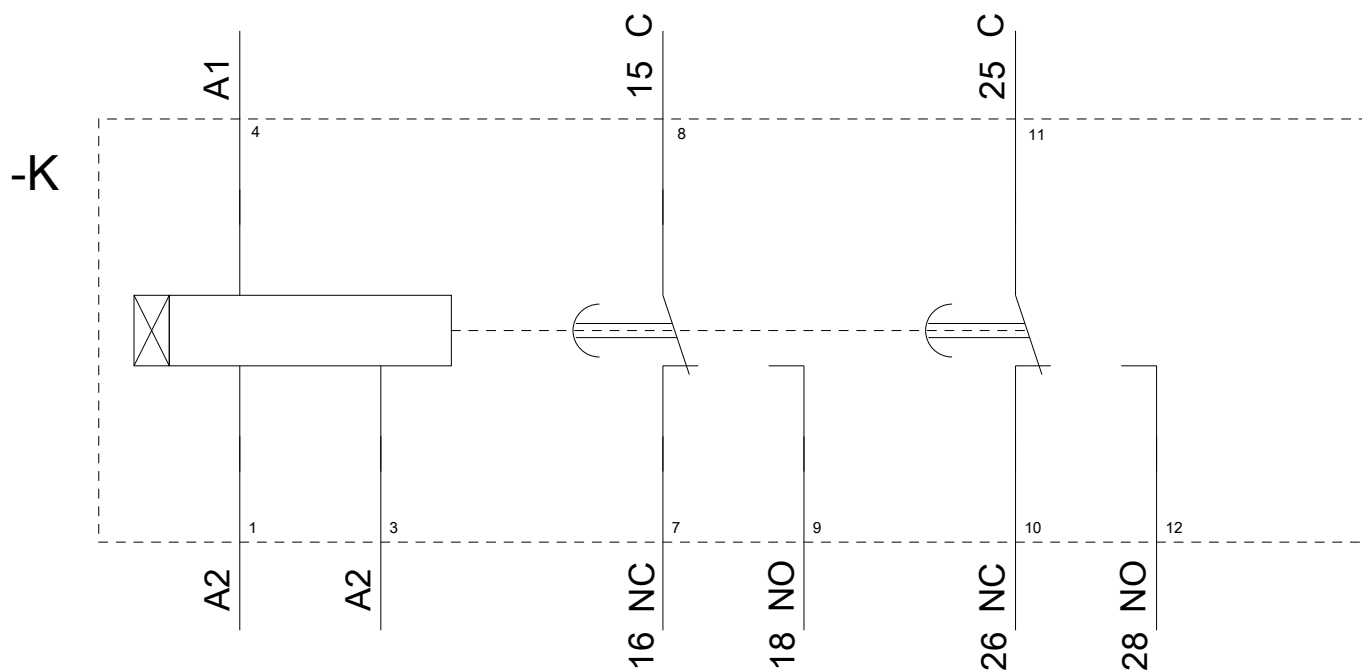
**Service&Support (Manuals, Certificates, Characteristics, FAQs,...)**

<https://support.industry.siemens.com/cs/ww/en/ps/3RP2525-1BW30>

**Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)**

[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RP2525-1BW30&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RP2525-1BW30&lang=en)





last modified:

04/27/2018