## **SIEMENS**

Data sheet 3RP2525-1BW30



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

product brand name	SIRIUS
product designation	timing relay
design of the product	slow-operating
product type designation	3RP25
General technical data	
product component	
<ul><li>relay output</li></ul>	Yes
<ul> <li>semi-conductor output</li> </ul>	No
product extension required remote control	No
product extension optional remote control	No
power loss [W] maximum	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
surge voltage resistance rated value	4 000 V
protection class IP	IP20
shock resistance acc. to IEC 60068-2-27	11g / 15 ms
vibration resistance acc. to IEC 60068-2-6	10 55 Hz / 0.35 mm
mechanical service life (switching cycles) typical	10 000 000
electrical endurance (switching cycles) at AC-15 at 230 V typical	100 000
adjustable time	0.05 s 100 h
relative setting accuracy relating to full-scale value	5 %; +/-
thermal current	5 A
recovery time	250 ms
reference code acc. to IEC 81346-2	K
relative repeat accuracy	1 %; +/-
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
Substance Prohibitance (Date)	12.09.2014
Control circuit/ Control	
type of voltage of the control supply voltage	AC/DC
control supply voltage 1 at AC	
• at 50 Hz	12 240 V
● at 60 Hz	12 240 V
control supply voltage frequency 1	50 60 Hz
control supply voltage 1	
• at DC	12 240 V
operating range factor control supply voltage rated	

value of DC	
value at DC  ● initial value	0.8
	1.1
• full-scale value	1.1
operating range factor control supply voltage rated value at AC at 50 Hz	
• initial value	0.8
• full-scale value	1.1
operating range factor control supply voltage rated	
value at AC at 60 Hz	
• initial value	0.8
• full-scale value	1.1
inrush current peak	
• at 24 V	0.3 A
• at 240 V	5 A
duration of inrush current peak	
• at 24 V	0.3 ms
• at 240 V	0.5 ms
Switching Function	
switching function	
ON-delay	Yes
ON-delay/instantaneous contact	No
passing make contact	No
<ul> <li>passing make contact/instantaneous contact</li> </ul>	No
OFF delay	No
switching function	
<ul> <li>flashing symmetrically with interval</li> </ul>	No
start/instantaneous	
<ul> <li>flashing symmetrically with interval start</li> </ul>	No
<ul> <li>flashing symmetrically with pulse start/instantaneous</li> </ul>	No
<ul> <li>flashing symmetrically with pulse start</li> </ul>	No
<ul> <li>flashing asymmetrically with interval start</li> </ul>	No
<ul> <li>flashing asymmetrically with pulse start</li> </ul>	No
switching function	
<ul> <li>star-delta circuit with delay time</li> </ul>	No
star-delta circuit	No
switching function with control signal	
<ul> <li>additive ON-delay</li> </ul>	No
<ul> <li>passing break contact</li> </ul>	No
<ul> <li>passing break contact/instantaneous</li> </ul>	No
OFF delay	No
OFF delay/instantaneous	No
pulse delayed	No
<ul> <li>pulse delayed/instantaneous</li> </ul>	No
<ul><li>pulse-shaping</li></ul>	No
<ul><li>pulse-shaping/instantaneous</li></ul>	No
<ul> <li>additive ON-delay/instantaneous</li> </ul>	No
<ul> <li>ON-delay/OFF-delay/instantaneous</li> </ul>	No
passing make contact	No
passing make contact/instantaneous contact	No
switching function of interval relay with control signal	
<ul> <li>retrotriggerable with deactivated control signal/instantaneous contact</li> </ul>	No
<ul> <li>retrotriggerable with switched-on control signal</li> </ul>	No
<ul> <li>retrotriggerable with switched-on control signal/instantaneous contact</li> </ul>	No
retriggerable with deactivated control signal	No
Short-circuit protection	
design of the fuse link for short-circuit protection of the	fuse gL/gG: 4 A
auxiliary switch required	g <b></b> g
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
operational current of auxiliary contacts at AC-15	
● at 24 V	3 A
● at 250 V	3 A
operational current of auxiliary contacts at DC-13	
● at 24 V	1 A
• at 125 V	0.2 A
● at 250 V	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
switching capacity current with inductive load	0.01 3 A
Inputs/ Outputs	
product function	
at the relay outputs switchover delayed/without delay	No
non-volatile	No
Electromagnetic compatibility	
EMC emitted interference acc. to IEC 61812-1	ambience A (industrial sector)
EMC immunity acc. to IEC 61812-1	corresponds to degree of severity 3
conducted interference	corresponds to degree or severity 5
	2 kV network connection / 1 kV central connection
due to burst acc. to IEC 61000-4-4      due to conductor conth pures acc. to IEC 61000-4.5	2 kV network connection / 1 kV control connection
due to conductor-earth surge acc. to IEC 61000-4-5      due to conductor conductor surge acc. to IEC	2 kV
due to conductor-conductor surge acc. to IEC 61000-4-5  field beautiful for the formula and the IEC 64000 4.2.	1 kV
field-based interference 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 class IP on the front acc. to IEC 60529	IP20
type of insulation	Basic insulation
type of insulation category acc. to EN 954-1	
type of insulation	Basic insulation
type of insulation category acc. to EN 954-1 Connections/ Terminals product component removable terminal for auxiliary and control circuit	Basic insulation none  Yes
type of insulation category acc. to EN 954-1  Connections/ Terminals  product component removable terminal for auxiliary and control circuit  type of electrical connection for auxiliary and control circuit	Basic insulation none
type of insulation category acc. to EN 954-1  Connections/ Terminals product component removable terminal for auxiliary and control circuit type of electrical connection for auxiliary and control circuit type of connectable conductor cross-sections	Basic insulation none  Yes  screw-type terminals
type of insulation category acc. to EN 954-1 Connections/ Terminals product component removable terminal for auxiliary and control circuit type of electrical connection for auxiliary and control circuit type of connectable conductor cross-sections • solid	Basic insulation none  Yes  screw-type terminals  1x (0.5 4.0 mm²), 2x (0.5 2.5 mm²)
type of insulation category acc. to EN 954-1  Connections/ Terminals product component removable terminal for auxiliary and control circuit type of electrical connection for auxiliary and control circuit type of connectable conductor cross-sections	Basic insulation none  Yes  screw-type terminals
type of insulation category acc. to EN 954-1 Connections/ Terminals product component removable terminal for auxiliary and control circuit type of electrical connection for auxiliary and control circuit type of connectable conductor cross-sections • solid	Basic insulation none  Yes  screw-type terminals  1x (0.5 4.0 mm²), 2x (0.5 2.5 mm²) 1x (0.5 4 mm²), 2x (0.5 1.5 mm²) 1x (20 12), 2x (20 14)
type of insulation category acc. to EN 954-1  Connections/ Terminals  product component removable terminal for auxiliary and control circuit  type of electrical connection for auxiliary and control circuit  type of connectable conductor cross-sections  • solid • finely stranded with core end processing	Basic insulation none  Yes  screw-type terminals  1x (0.5 4.0 mm²), 2x (0.5 2.5 mm²) 1x (0.5 4 mm²), 2x (0.5 1.5 mm²)
type of insulation category acc. to EN 954-1  Connections/ Terminals  product component removable terminal for auxiliary and control circuit  type of electrical connection for auxiliary and control circuit  type of connectable conductor cross-sections  • solid • finely stranded with core end processing • at AWG cables solid	Basic insulation none  Yes  screw-type terminals  1x (0.5 4.0 mm²), 2x (0.5 2.5 mm²) 1x (0.5 4 mm²), 2x (0.5 1.5 mm²) 1x (20 12), 2x (20 14)
type of insulation category acc. to EN 954-1  Connections/ Terminals  product component removable terminal for auxiliary and control circuit  type of electrical connection for auxiliary and control circuit type of connectable conductor cross-sections  • solid • finely stranded with core end processing • at AWG cables solid • at AWG cables stranded	Basic insulation none  Yes  screw-type terminals  1x (0.5 4.0 mm²), 2x (0.5 2.5 mm²) 1x (0.5 4 mm²), 2x (0.5 1.5 mm²) 1x (20 12), 2x (20 14)
type of insulation category acc. to EN 954-1  Connections/ Terminals  product component removable terminal for auxiliary and control circuit  type of electrical connection for auxiliary and control circuit  type of connectable conductor cross-sections  • solid  • finely stranded with core end processing  • at AWG cables solid  • at AWG cables stranded  connectable conductor cross-section	Pasic insulation none  Yes  screw-type terminals  1x (0.5 4.0 mm²), 2x (0.5 2.5 mm²) 1x (0.5 4 mm²), 2x (0.5 1.5 mm²) 1x (20 12), 2x (20 14) 1x (20 12), 2x (20 14)
type of insulation category acc. to EN 954-1  Connections/ Terminals  product component removable terminal for auxiliary and control circuit  type of electrical connection for auxiliary and control circuit  type of connectable conductor cross-sections  • solid  • finely stranded with core end processing  • at AWG cables solid  • at AWG cables stranded  connectable conductor cross-section  • solid	Pasic insulation none  Yes  screw-type terminals  1x (0.5 4.0 mm²), 2x (0.5 2.5 mm²) 1x (0.5 4 mm²), 2x (0.5 1.5 mm²) 1x (20 12), 2x (20 14) 1x (20 12), 2x (20 14)  0.5 4 mm²
type of insulation category acc. to EN 954-1  Connections/ Terminals  product component removable terminal for auxiliary and control circuit  type of electrical connection for auxiliary and control circuit  type of connectable conductor cross-sections  • solid  • finely stranded with core end processing  • at AWG cables solid  • at AWG cables stranded  connectable conductor cross-section  • solid  • finely stranded with core end processing  AWG number as coded connectable conductor cross	Pasic insulation none  Yes  screw-type terminals  1x (0.5 4.0 mm²), 2x (0.5 2.5 mm²) 1x (0.5 4 mm²), 2x (0.5 1.5 mm²) 1x (20 12), 2x (20 14) 1x (20 12), 2x (20 14)  0.5 4 mm²
type of insulation category acc. to EN 954-1  Connections/ Terminals  product component removable terminal for auxiliary and control circuit  type of electrical connection for auxiliary and control circuit type of connectable conductor cross-sections  • solid  • finely stranded with core end processing  • at AWG cables solid  • at AWG cables stranded  connectable conductor cross-section  • solid  • finely stranded with core end processing  AWG number as coded connectable conductor cross section	Pasic insulation none  Yes  screw-type terminals  1x (0.5 4.0 mm²), 2x (0.5 2.5 mm²) 1x (0.5 4 mm²), 2x (0.5 1.5 mm²) 1x (20 12), 2x (20 14) 1x (20 12), 2x (20 14)  0.5 4 mm² 0.5 4 mm²
type of insulation category acc. to EN 954-1  Connections/ Terminals  product component removable terminal for auxiliary and control circuit  type of electrical connection for auxiliary and control circuit  type of connectable conductor cross-sections	Pasic insulation none  Yes  screw-type terminals  1x (0.5 4.0 mm²), 2x (0.5 2.5 mm²)  1x (0.5 4 mm²), 2x (0.5 1.5 mm²)  1x (20 12), 2x (20 14)  1x (20 12), 2x (20 14)  0.5 4 mm²  0.5 4 mm²
type of insulation category acc. to EN 954-1  Connections/ Terminals  product component removable terminal for auxiliary and control circuit  type of electrical connection for auxiliary and control circuit  type of connectable conductor cross-sections	Pasic insulation none  Yes  screw-type terminals  1x (0.5 4.0 mm²), 2x (0.5 2.5 mm²) 1x (0.5 4 mm²), 2x (0.5 1.5 mm²) 1x (20 12), 2x (20 14) 1x (20 12), 2x (20 14)  0.5 4 mm² 0.5 4 mm² 20 12 20 14
type of insulation category acc. to EN 954-1  Connections/ Terminals  product component removable terminal for auxiliary and control circuit  type of electrical connection for auxiliary and control circuit  type of connectable conductor cross-sections	Basic insulation none  Yes  screw-type terminals  1x (0.5 4.0 mm²), 2x (0.5 2.5 mm²) 1x (0.5 4 mm²), 2x (0.5 1.5 mm²) 1x (20 12), 2x (20 14) 1x (20 12), 2x (20 14)  0.5 4 mm²  0.5 4 mm²  20 12 20 14 0.6 0.8 N·m
type of insulation category acc. to EN 954-1  Connections/ Terminals  product component removable terminal for auxiliary and control circuit type of electrical connection for auxiliary and control circuit type of connectable conductor cross-sections	Basic insulation none  Yes  screw-type terminals  1x (0.5 4.0 mm²), 2x (0.5 2.5 mm²) 1x (0.5 4 mm²), 2x (0.5 1.5 mm²) 1x (20 12), 2x (20 14) 1x (20 12), 2x (20 14)  0.5 4 mm²  0.5 4 mm²  20 12 20 14 0.6 0.8 N·m
type of insulation category acc. to EN 954-1  Connections/ Terminals  product component removable terminal for auxiliary and control circuit  type of electrical connection for auxiliary and control circuit  type of connectable conductor cross-sections	Basic insulation none         Yes         screw-type terminals         1x (0.5 4.0 mm²), 2x (0.5 2.5 mm²)         1x (0.5 4 mm²), 2x (0.5 1.5 mm²)         1x (20 12), 2x (20 14)         1x (20 12), 2x (20 14)         0.5 4 mm²         0.5 4 mm²         20 12         20 14         0.6 0.8 N⋅m         M3
type of insulation category acc. to EN 954-1  Connections/ Terminals  product component removable terminal for auxiliary and control circuit type of electrical connection for auxiliary and control circuit type of connectable conductor cross-sections	Basic insulation none         Yes         screw-type terminals         1x (0.5 4.0 mm²), 2x (0.5 2.5 mm²)         1x (0.5 4 mm²), 2x (0.5 1.5 mm²)         1x (20 12), 2x (20 14)         1x (20 12), 2x (20 14)         0.5 4 mm²         0.5 4 mm²         20 12         20 14         0.6 0.8 N⋅m         M3    any screw and snap-on mounting onto 35 mm standard mounting rail
type of insulation category acc. to EN 954-1  Connections/ Terminals  product component removable terminal for auxiliary and control circuit  type of electrical connection for auxiliary and control circuit  type of connectable conductor cross-sections	Basic insulation none         Yes         screw-type terminals         1x (0.5 4.0 mm²), 2x (0.5 2.5 mm²)         1x (0.5 4 mm²), 2x (0.5 1.5 mm²)         1x (20 12), 2x (20 14)         1x (20 12), 2x (20 14)         0.5 4 mm²         0.5 4 mm²         20 12         20 14         0.6 0.8 N⋅m         M3
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type of insulation category acc. to EN 954-1  Connections/ Terminals  product component removable terminal for auxiliary and control circuit  type of electrical connection for auxiliary and control circuit  type of connectable conductor cross-sections	Basic insulation none  Yes  screw-type terminals  1x (0.5 4.0 mm²), 2x (0.5 2.5 mm²) 1x (0.5 4 mm²), 2x (0.5 1.5 mm²) 1x (20 12), 2x (20 14) 1x (20 12), 2x (20 14)  0.5 4 mm² 0.5 4 mm²  20 12 20 14 0.6 0.8 N·m M3  any screw and snap-on mounting onto 35 mm standard mounting rail 100 mm
type of insulation category acc. to EN 954-1  Connections/ Terminals  product component removable terminal for auxiliary and control circuit type of electrical connection for auxiliary and control circuit type of connectable conductor cross-sections	Basic insulation none  Yes  screw-type terminals  1x (0.5 4.0 mm²), 2x (0.5 2.5 mm²) 1x (0.5 4 mm²), 2x (0.5 1.5 mm²) 1x (20 12), 2x (20 14) 1x (20 12), 2x (20 14)  0.5 4 mm² 0.5 4 mm²  20 12 20 14 0.6 0.8 N·m M3  any screw and snap-on mounting onto 35 mm standard mounting rail 100 mm 22.5 mm

— forwards	0 mm
— backwards	0 mm
— upwards	0 mm
— downwards	0 mm
— at the side	0 mm
<ul> <li>for grounded parts</li> </ul>	
— forwards	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	
installation altitude at height above sea level maximum	2 000 m
ambient temperature	
<ul><li>during operation</li></ul>	-25 +60 °C

-40 ... +85 °C

-40 ... +85 °C 10 ... 95 %

relative humidity during operation Certificates/ approvals

during storageduring transport

## **General Product Approval**

EMC

**Declaration of Conformity** 













Declaration of Conformity

**Test Certificates** 

Marine / Shipping

**Miscellaneous** 

Type Test Certificates/Test Report









Marine / Shipping

other





Confirmation

## **Further information**

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

https://www.siemens.com/ic10

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

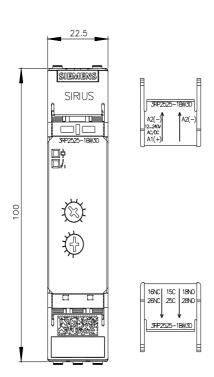
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

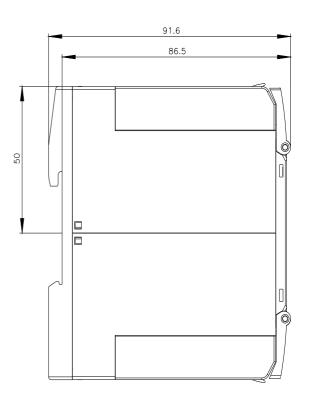
https://support.industry.siemens.com/cs/ww/en/ps/3RP2525-1BW30

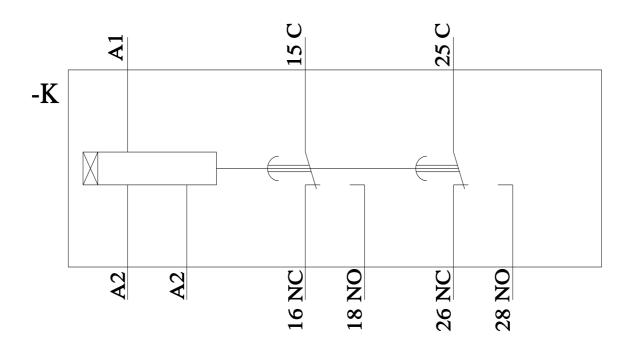
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)

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

Characteristic: Derating







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