



Timing relay, Multifunction 2 change-over contacts, 27 functions 7 time ranges (0.05 s...100 h) 400-440 V AC at 50/60 Hz AC with LED Spring-type terminal (push-in)

product brand name	SIRIUS
product designation	timing relay
design of the product	27 functions
product type designation	3RP25

General technical data

product component	Yes
<ul style="list-style-type: none"> relay output semi-conductor output 	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	500 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 according to IEC 60068-2-27	11g / 15 ms
vibration resistance according to IEC 60068-2-6	10 ... 55 Hz / 0.35 mm
mechanical service life (operating cycles) typical	10 000 000
electrical endurance (operating 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
minimum ON period	35 ms
recovery time	150 ms
reference code according 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)	09/12/2014

Control circuit/ Control

type of voltage of the control supply voltage	AC
control supply voltage 1 at AC	
<ul style="list-style-type: none"> at 50 Hz at 60 Hz 	400 ... 440 V
control supply voltage frequency 1	400 ... 440 V
operating range factor control supply voltage rated value at AC at 50 Hz	50 ... 60 Hz
<ul style="list-style-type: none"> initial value full-scale value 	0.85
	1.1

operating range factor control supply voltage rated value at AC at 60 Hz

• initial value	0.85
• full-scale value	1.1
inrush current peak	
• at 440 V	1.5 A
duration of inrush current peak	
• at 440 V	0.1 ms

Switching Function**switching function**

• ON-delay	Yes
• ON-delay/instantaneous contact	Yes
• passing make contact	Yes
• passing make contact/instantaneous contact	Yes
• OFF delay	No

switching function

• flashing symmetrically with interval start/instantaneous	Yes
• flashing symmetrically with interval start	Yes
• flashing symmetrically with pulse start/instantaneous	Yes
• flashing symmetrically with pulse start	Yes
• flashing asymmetrically with interval start	No
• flashing asymmetrically with pulse start	No

switching function

• star-delta circuit with delay time	No
• star-delta circuit	Yes

switching function with control signal

• additive ON-delay	Yes
• passing break contact	Yes
• passing break contact/instantaneous	Yes
• OFF delay	Yes
• OFF delay/instantaneous	Yes
• pulse delayed	Yes
• pulse delayed/instantaneous	Yes
• pulse-shaping	Yes
• pulse-shaping/instantaneous	Yes
• additive ON-delay/instantaneous	Yes
• ON-delay/OFF-delay/instantaneous	Yes
• passing make contact	Yes
• passing make contact/instantaneous contact	Yes

switching function of interval relay with control signal

• retrotriggerable with deactivated control signal/instantaneous contact	Yes
• retrotriggerable with switched-on control signal	Yes
• retrotriggerable with switched-on control signal/instantaneous contact	Yes
• retriggerable with deactivated control signal	Yes

design of the control terminal non-floating

Yes

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
• instantaneous contact	0

number of NO contacts

• delayed switching	0
• instantaneous contact	0

number of CO contacts

• delayed switching	2
• instantaneous contact	0

operational current of auxiliary contacts at AC-15

<ul style="list-style-type: none"> • at 24 V • at 250 V • at 400 V 	3 A
operational current of auxiliary contacts at DC-13	3 A
<ul style="list-style-type: none"> • at 24 V • at 125 V • at 250 V 	3 A
operating frequency with 3RT2 contactor maximum contact reliability of auxiliary contacts	1 A
	0.2 A
	0.1 A
	5 000 1/h
contact rating of auxiliary contacts according to UL switching capacity current with inductive load	one incorrect switching operation of 100 million switching operations (17 V, 5 mA)
	R300 / B300
	0.01 ... 3 A
Inputs/ Outputs	
product function	
<ul style="list-style-type: none"> • at the relay outputs switchover delayed/without delay 	Yes
<ul style="list-style-type: none"> • non-volatile 	No
Electromagnetic compatibility	
EMC emitted interference according to IEC 61812-1	ambience A (industrial sector)
EMC immunity according to IEC 61812-1	corresponds to degree of severity 3
conducted interference	
<ul style="list-style-type: none"> • due to burst according to IEC 61000-4-4 	2 kV network connection / 1 kV control connection
<ul style="list-style-type: none"> • due to conductor-earth surge according to IEC 61000-4-5 	2 kV
<ul style="list-style-type: none"> • due to conductor-conductor surge according to IEC 61000-4-5 	1 kV
field-based interference according to IEC 61000-4-3	10 V/m
electrostatic discharge according to IEC 61000-4-2	4 kV contact discharge / 8 kV air discharge
Safety related data	
protection class IP on the front according to IEC 60529	IP20
type of insulation	Basic insulation
category according to EN 954-1	none
Connections/ Terminals	
product component removable terminal for auxiliary and control circuit	Yes
type of electrical connection for auxiliary and control circuit	spring-loaded terminals (push-in)
type of connectable conductor cross-sections	
<ul style="list-style-type: none"> • solid 	0.5 ... 4 mm ²
<ul style="list-style-type: none"> • finely stranded with core end processing 	0.5 ... 2.5 mm ²
<ul style="list-style-type: none"> • finely stranded without core end processing 	0.5 ... 4 mm ²
<ul style="list-style-type: none"> • at AWG cables solid 	20 ... 12
<ul style="list-style-type: none"> • at AWG cables stranded 	20 ... 12
connectable conductor cross-section	
<ul style="list-style-type: none"> • solid 	0.5 ... 4 mm ²
<ul style="list-style-type: none"> • finely stranded with core end processing 	0.5 ... 2.5 mm ²
<ul style="list-style-type: none"> • finely stranded without core end processing 	0.5 ... 4 mm ²
AWG number as coded connectable conductor cross section	
<ul style="list-style-type: none"> • solid 	20 ... 12
<ul style="list-style-type: none"> • stranded 	20 ... 12
Installation/ mounting/ dimensions	
mounting position	any
fastening method	screw and snap-on mounting onto 35 mm DIN rail
height	100 mm
width	22.5 mm
depth	90 mm
required spacing	
<ul style="list-style-type: none"> • with side-by-side mounting 	
— forwards	0 mm
— backwards	0 mm
— upwards	0 mm
— downwards	0 mm
— at the side	0 mm

- for grounded parts
 - 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	
• during operation	-25 ... +60 °C
• during storage	-40 ... +85 °C
• during transport	-40 ... +85 °C
relative humidity during operation	10 ... 95 %

Certificates/ approvals

General Product Approval

EMC



[Confirmation](#)



Declaration of Conformity

Test Certificates

Marine / Shipping



EG-Konf.

[Type Test Certificates/Test Report](#)



URS



PRS

Marine / Shipping

other



[Confirmation](#)

Further information

Information on the packaging

<https://support.industry.siemens.com/cs/ww/en/view/109813875>

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=3RP2505-2BT20>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RP2505-2BT20>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RP2505-2BT20>

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

http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RP2505-2BT20&lang=en

Characteristic: Derating

<https://support.industry.siemens.com/cs/ww/en/ps/3RP2505-2BT20/manual>



