



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	
• relay output	Yes
• 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 (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
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	
• at 50 Hz	400 ... 440 V
• at 60 Hz	400 ... 440 V
control supply voltage frequency 1	50 ... 60 Hz
operating range factor control supply voltage rated value at AC at 50 Hz	

<ul style="list-style-type: none"> initial value 	0.85
<ul style="list-style-type: none"> full-scale value 	1.1
operating range factor control supply voltage rated value at AC at 60 Hz	
<ul style="list-style-type: none"> initial value 	0.85
<ul style="list-style-type: none"> full-scale value 	1.1
inrush current peak	
<ul style="list-style-type: none"> at 440 V 	1.5 A
duration of inrush current peak	
<ul style="list-style-type: none"> at 440 V 	0.1 ms
Switching Function	
switching function	
<ul style="list-style-type: none"> ON-delay 	Yes
<ul style="list-style-type: none"> ON-delay/instantaneous contact 	Yes
<ul style="list-style-type: none"> passing make contact 	Yes
<ul style="list-style-type: none"> passing make contact/instantaneous contact 	Yes
<ul style="list-style-type: none"> OFF delay 	No
switching function	
<ul style="list-style-type: none"> flashing symmetrically with interval start/instantaneous 	Yes
<ul style="list-style-type: none"> flashing symmetrically with interval start 	Yes
<ul style="list-style-type: none"> flashing symmetrically with pulse start/instantaneous 	Yes
<ul style="list-style-type: none"> flashing symmetrically with pulse start 	Yes
<ul style="list-style-type: none"> flashing asymmetrically with interval start 	No
<ul style="list-style-type: none"> flashing asymmetrically with pulse start 	No
switching function	
<ul style="list-style-type: none"> star-delta circuit with delay time 	No
<ul style="list-style-type: none"> star-delta circuit 	Yes
switching function with control signal	
<ul style="list-style-type: none"> additive ON-delay 	Yes
<ul style="list-style-type: none"> passing break contact 	Yes
<ul style="list-style-type: none"> passing break contact/instantaneous 	Yes
<ul style="list-style-type: none"> OFF delay 	Yes
<ul style="list-style-type: none"> OFF delay/instantaneous 	Yes
<ul style="list-style-type: none"> pulse delayed 	Yes
<ul style="list-style-type: none"> pulse delayed/instantaneous 	Yes
<ul style="list-style-type: none"> pulse-shaping 	Yes
<ul style="list-style-type: none"> pulse-shaping/instantaneous 	Yes
<ul style="list-style-type: none"> additive ON-delay/instantaneous 	Yes
<ul style="list-style-type: none"> ON-delay/OFF-delay/instantaneous 	Yes
<ul style="list-style-type: none"> passing make contact 	Yes
<ul style="list-style-type: none"> passing make contact/instantaneous contact 	Yes
switching function of interval relay with control signal	
<ul style="list-style-type: none"> retrotriggerable with deactivated control signal/instantaneous contact 	Yes
<ul style="list-style-type: none"> retrotriggerable with switched-on control signal 	Yes
<ul style="list-style-type: none"> retrotriggerable with switched-on control signal/instantaneous contact 	Yes
<ul style="list-style-type: none"> 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	
<ul style="list-style-type: none"> delayed switching 	0
<ul style="list-style-type: none"> instantaneous contact 	0
number of NO contacts	
<ul style="list-style-type: none"> delayed switching 	0

<ul style="list-style-type: none"> instantaneous contact 	0
number of CO contacts	
<ul style="list-style-type: none"> delayed switching instantaneous contact 	2 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 3 A 3 A
operational current of auxiliary contacts at DC-13	
<ul style="list-style-type: none"> 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
switching capacity current with inductive load	0.01 ... 3 A
Inputs/ Outputs	
product function	
<ul style="list-style-type: none"> at the relay outputs switchover delayed/without delay non-volatile 	Yes 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 due to conductor-earth surge according to IEC 61000-4-5 due to conductor-conductor surge according to IEC 61000-4-5 	2 kV network connection / 1 kV control connection 2 kV 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 finely stranded with core end processing finely stranded without core end processing at AWG cables solid at AWG cables stranded 	0.5 ... 4 mm ² 0.5 ... 2.5 mm ² 0.5 ... 4 mm ² 20 ... 12 20 ... 12
connectable conductor cross-section	
<ul style="list-style-type: none"> solid finely stranded with core end processing finely stranded without core end processing 	0.5 ... 4 mm ² 0.5 ... 2.5 mm ² 0.5 ... 4 mm ²
AWG number as coded connectable conductor cross section	
<ul style="list-style-type: none"> solid stranded 	20 ... 12 20 ... 12
Installation/ mounting/ dimensions	
mounting position	any
fastening method	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"> • with side-by-side mounting <ul style="list-style-type: none"> — forwards 0 mm — backwards 0 mm — upwards 0 mm — downwards 0 mm — at the side 0 mm • for grounded parts <ul style="list-style-type: none"> — forwards 0 mm — backwards 0 mm — upwards 0 mm — at the side 0 mm — downwards 0 mm • for live parts <ul style="list-style-type: none"> — 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 style="list-style-type: none"> • 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
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[Confirmation](#)



Declaration of Conformity	Test Certificates	Marine / Shipping
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EG-Konf.

[Type Test Certificates/Test Report](#)



LRS



PRS

Marine / Shipping	other
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RINA



RMRS



DNV GL

[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?mfb=3RP2505-2BT20>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mfb=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>

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