

Timing relay, Multifunction 2 change-over contacts, 27 functions 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	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
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
Minimum ON period	35 ms
Recovery time	250 ms
Reference code acc. to DIN 40719 extended according to IEC 204-2 acc. to IEC 750	K
Reference code acc. to DIN EN 81346-2	K
Reference code acc. to DIN EN 61346-2	K
Relative repeat accuracy	1 %

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 at DC	
• initial value	0.85
• Full-scale value	1.1
Operating range factor control supply voltage rated value at AC at 50 Hz	
• initial value	0.85
• Full-scale value	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 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	Yes
• passing make contact	Yes
• passing make contact/instantaneous contact	Yes
• OFF delay	No
Switching function	
• flashing symmetrically starting with interval/instantaneous	Yes
• flashing symmetrically starting with interval	Yes
• flashing symmetrically starting with pulse/instantaneous	Yes
• flashing symmetrically starting with pulse	Yes
• flashing asymmetrically starting with interval	No
• flashing asymmetrically starting with pulse	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 activated control signal	Yes
• retrotriggerable with activated 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

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

Yes

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 removable terminal for auxiliary and control circuit	Yes
Type of electrical connection for auxiliary and control current circuit	screw-type terminals
Type of connectable conductor cross-sections - solid - finely stranded with core end processing - at AWG conductors solid - at AWG conductors stranded	1x (0.5 ... 4.0 mm ²), 2x (0.5 ... 2.5 mm ²) 1x (0.5 ... 4 mm ²), 2x (0.5 ... 1.5 mm ²) 1x (20 ... 12), 2x (20 ... 14) 1x (20 ... 12), 2x (20 ... 14)
Connectable conductor cross-section - solid - finely stranded with core end processing	0.5 ... 4 mm ² 0.5 ... 4 mm ²
AWG number as coded connectable conductor cross section - solid - stranded	20 ... 12 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 - with side-by-side mounting - forwards - Backwards - upwards - downwards - at the side - for grounded parts - forwards - Backwards - upwards - at the side	0 mm 0 mm 0 mm 0 mm 0 mm 0 mm 0 mm 0 mm 0 mm

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

0 mm
0 mm
0 mm
0 mm
0 mm
0 mm

Ambient conditions

Installation altitude at height above sea level • maximum	2 000 m
Relative humidity • during operation	10 ... 95 %

Certificates/ approvals

General Product Approval	EMC	Declaration of Conformity
 CCC	 EAC	 EG-Konf.
 CSA	 UL	 RCM

Declaration of Conformity	Test Certificates	Marine / Shipping
Miscellaneous	Type Test Certificates/Test Report	Special Test Certificate
	 LRS	 PRS
		 RINA

Marine / Shipping	other
 RMRS	 DNV-GL DNVGL.COM/AF
	Confirmation

Further information

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

www.siemens.com/sirius/catalogs

Industry Mall (Online ordering system)

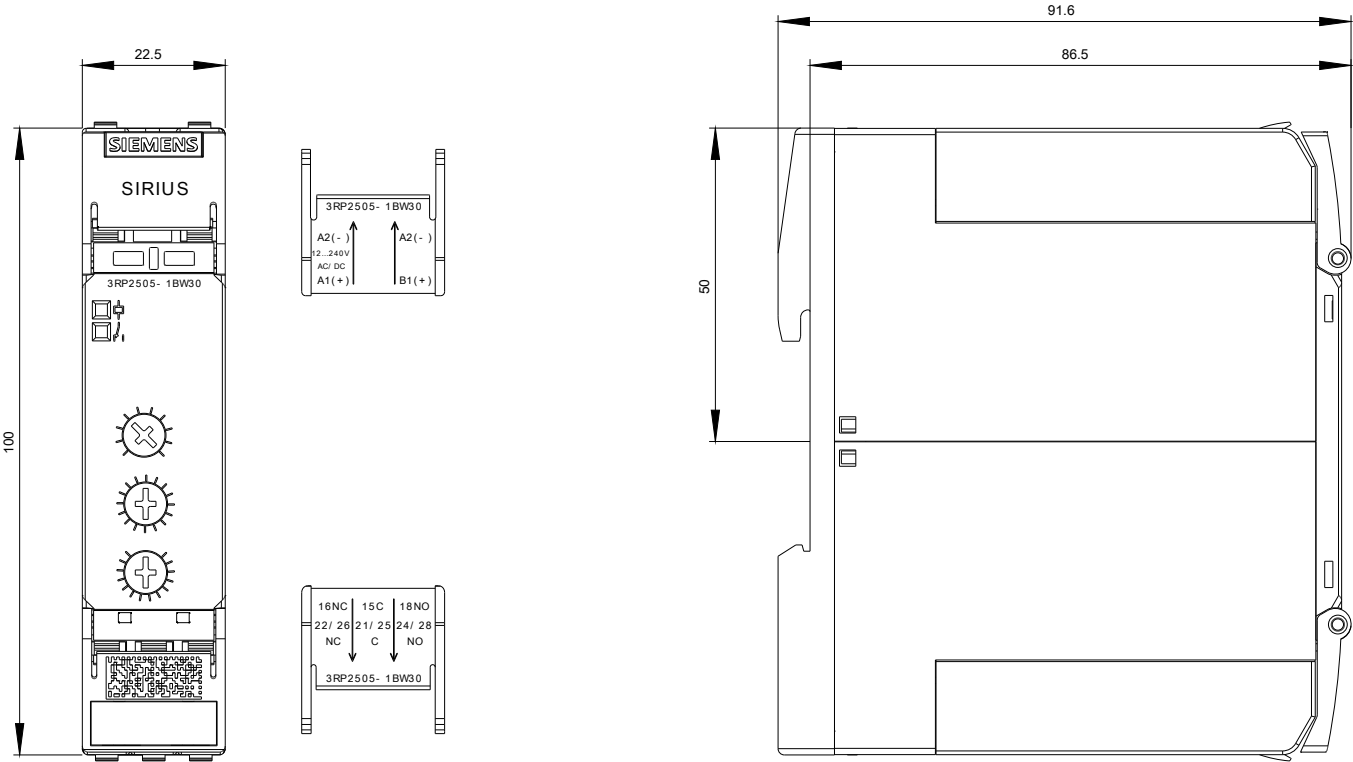
<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RP2505-1BW30>

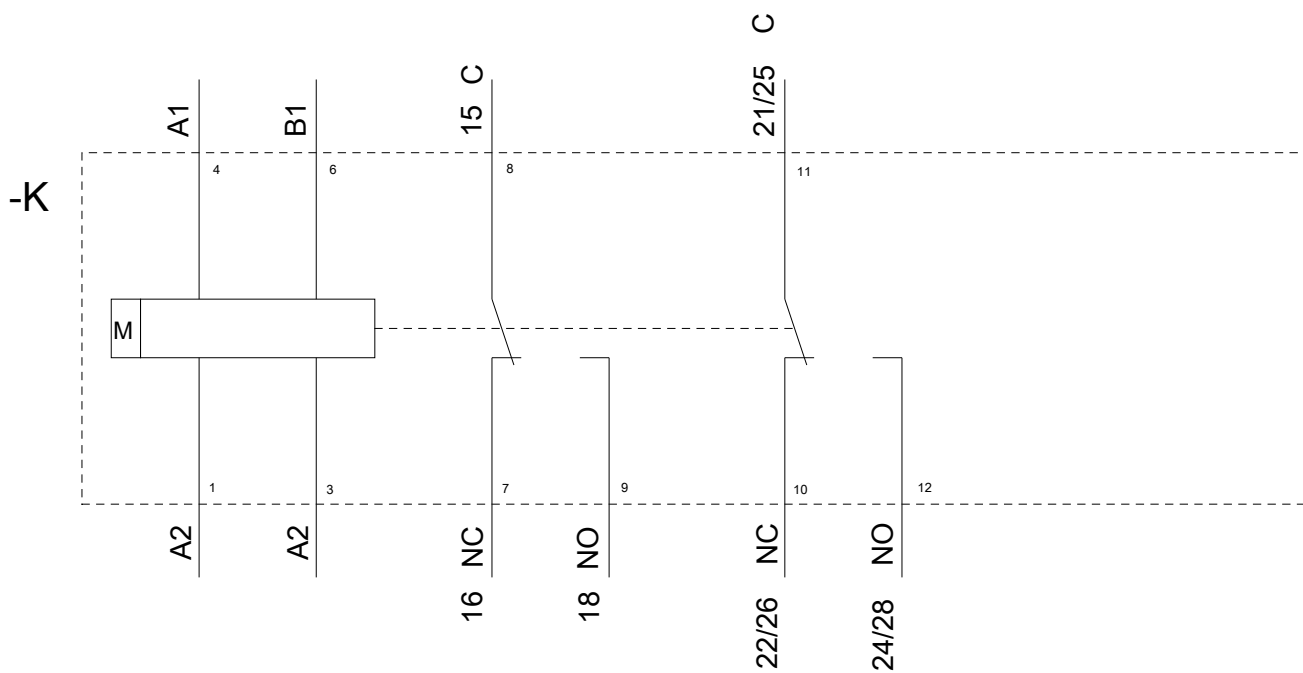
Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RP2505-1BW30>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RP2505-1BW30>





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