SIEMENS

Data sheet 3RP2505-1RW30

Timing relay, Multifunction 2 change-over contacts, 13 functions Positively driven Relay contacts 24...240 V AC/DC at 50/60 Hz AC 7 time ranges (0.05 s...100 h) with LED, Screw terminal

Figure similar

Product brand name	SIRIUS
Product designation	timing relay
Design of the product	13 functions, suitable for railway applications
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

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
• 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	24 ... 240 V
• at 60 Hz	24 ... 240 V
Control supply voltage frequency 1	50 ... 60 Hz
Control supply voltage 1	
• at DC	24 ... 240 V
Operating range factor control supply voltage rated value at DC	
• initial value	0.7
• Full-scale value	1.1
Operating range factor control supply voltage rated value at AC at 50 Hz	
• initial value	0.7
• Full-scale value	1.1
Operating range factor control supply voltage rated value at AC at 60 Hz	
• initial value	0.7
• Full-scale value	1.1
Inrush current peak	
• at 24 V	0.5 A

• at 240 V	5 A
Duration of inrush current peak	
• at 24 V	0.4 ms
• at 240 V	0.5 ms

Switching Function

Switching function	
• ON-delay	Yes
• ON-delay/instantaneous contact	No
• passing make contact	Yes
• passing make contact/instantaneous contact	No
• OFF delay	No
Switching function	
• flashing symmetrically starting with interval/instantaneous	No
• flashing symmetrically starting with interval	Yes
• flashing symmetrically starting with pulse/instantaneous	No
• 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	No
Switching function with control signal	
• additive ON delay	Yes
• passing break contact	Yes
• passing break contact/instantaneous	No
• OFF delay	Yes
• OFF delay/instantaneous	No
• pulse delayed	Yes
• pulse delayed/instantaneous	No
• pulse-shaping	Yes
• pulse-shaping/instantaneous	No
• additive ON delay/instantaneous	No
• ON-delay/OFF-delay/instantaneous	No
• passing make contact	Yes
• passing make contact/instantaneous contact	No
Switching function of interval relay with control signal	
• retrotriggerable with deactivated control signal/instantaneous contact	No
• retrotriggerable with activated control signal	Yes

• retrotriggerable with activated control signal/instantaneous contact	No
• 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	3 A
• at 250 V	3 A
Operating 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
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	No
• non-volatile	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	2 kV network connection / 1 kV control connection

• due to conductor-earth surge acc. to IEC 61000-4-5	2 kV
• due to conductor-conductor surge acc. to IEC 61000-4-5	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	1x (0.5 ... 4.0 mm²), 2x (0.5 ... 2.5 mm²)
• finely stranded with core end processing	1x (0.5 ... 4 mm²), 2x (0.5 ... 1.5 mm²)
• at AWG conductors solid	1x (20 ... 12), 2x (20 ... 14)
• at AWG conductors stranded	1x (20 ... 12), 2x (20 ... 14)
Connectable conductor cross-section	
• solid	0.5 ... 4 mm²
• finely stranded with core end processing	0.5 ... 4 mm²
AWG number as coded connectable conductor cross section	
• solid	20 ... 12
• stranded	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	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

Ambient temperature	
• during operation	-40 ... +70 °C
• during storage	-40 ... +85 °C
• during transport	-40 ... +85 °C
Relative humidity	
• during operation	10 ... 95 %

Certificates/approvals

General Product Approval				Declaration of Conformity	Test Certificates
CCC	CSA	UL	EAC	EG-Konf.	Type Test Certificates/Test Report

Test Certificates	Marine / Shipping				other
Special Test Certificate	LRS	RINA	RMRS	DNVGL.COM/AF	Confirmation

Railway
Confirmation

Further information

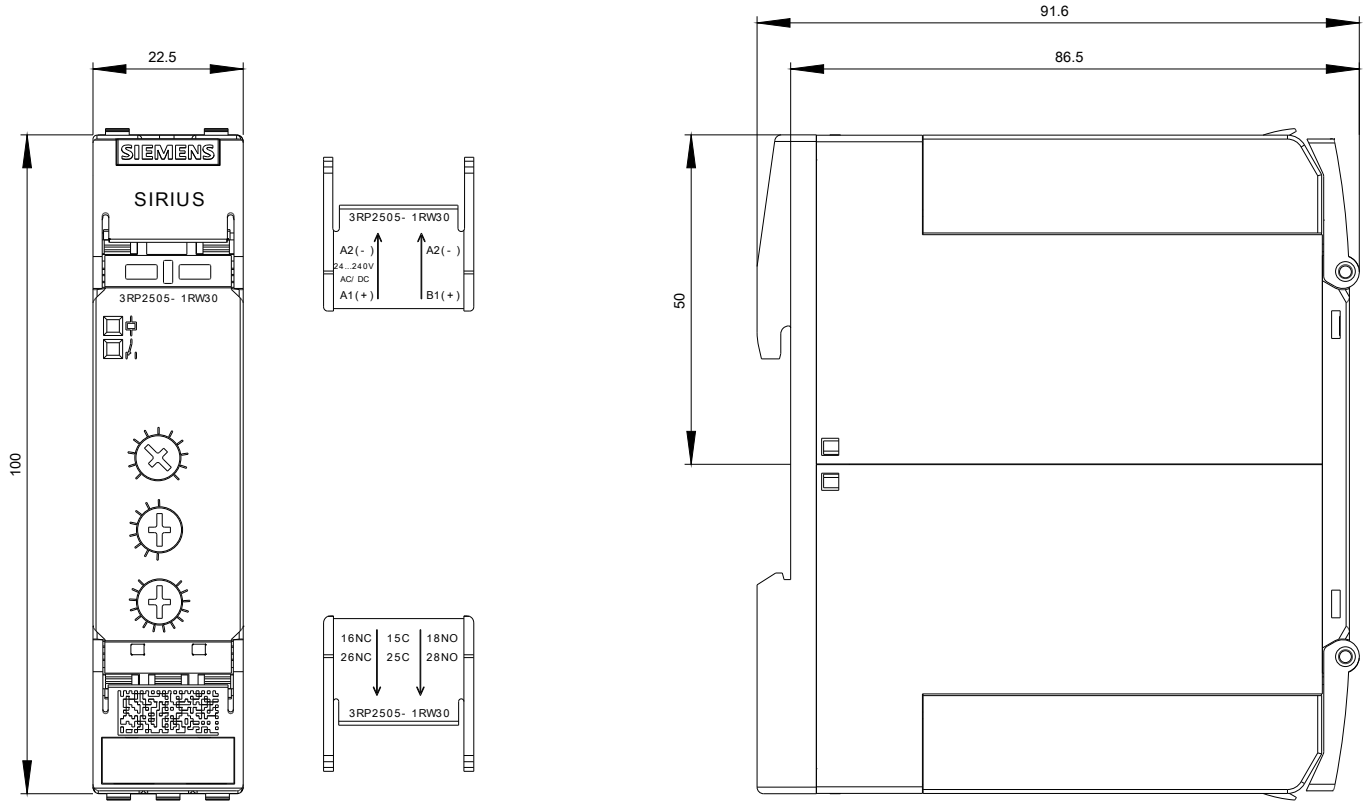
Information- and Downloadcenter (Catalogs, Brochures,…)
http://www.siemens.com/industrial-controls/catalogs

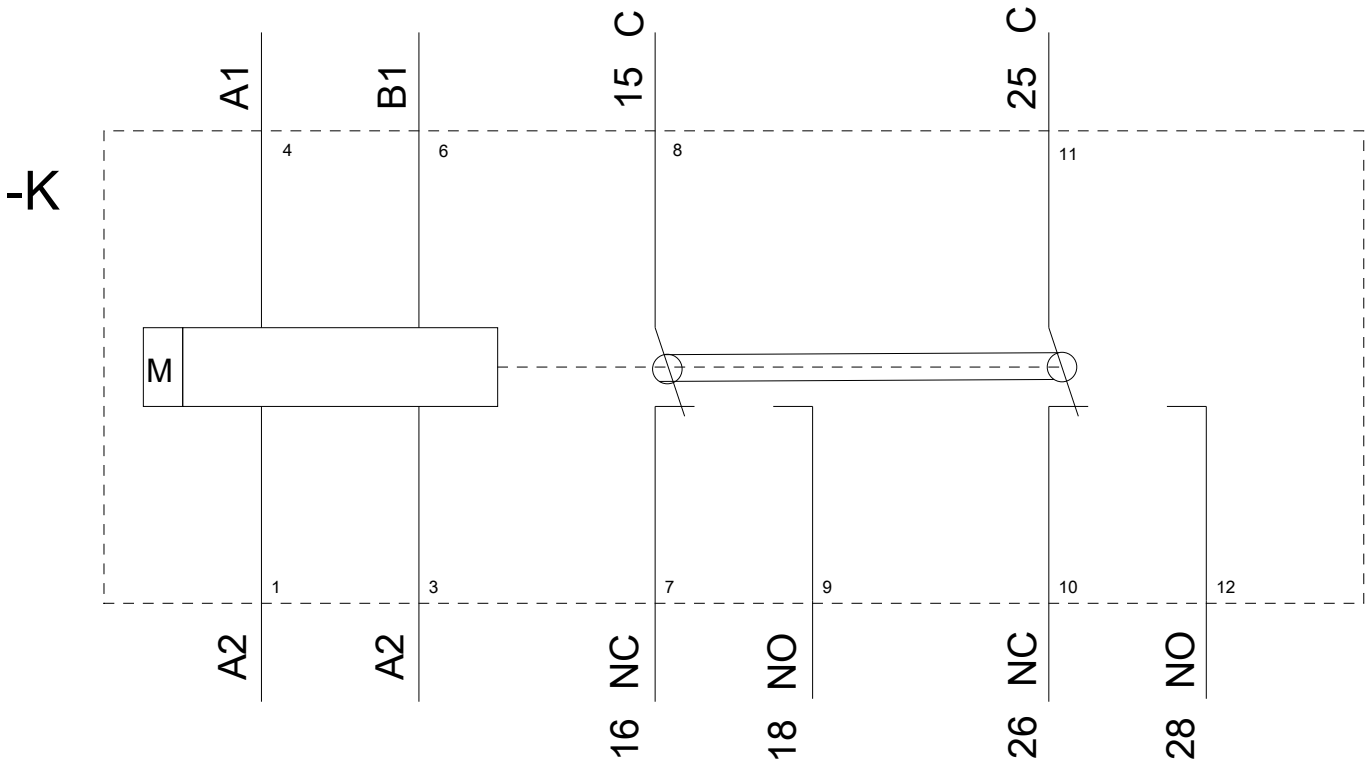
Industry Mall (Online ordering system)
https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RP2505-1RW30

Cax online generator
http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RP2505-1RW30

Service&Support (Manuals, Certificates, Characteristics, FAQs,...)
https://support.industry.siemens.com/cs/ww/en/ps/3RP2505-1RW30

Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RP2505-1RW30&lang=en





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