SIEMENS

Data sheet 3RP2505-2BT20



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

General technical data

proc	luct	con	nna	nent

· relay output

• semi-conductor output

product extension required remote control

product extension optional remote control

power loss [W] maximum

insulation voltage for overvoltage category III according to

IEC 60664 with degree of pollution 3 rated value

test voltage for isolation test

degree of pollution

surge voltage resistance rated value

protection class IP

shock resistance according to IEC 60068-2-27

vibration resistance according to IEC 60068-2-6 mechanical service life (operating cycles) typical

electrical endurance (operating cycles) at AC-15 at

230 V typical

adjustable time

relative setting accuracy relating to full-scale value

thermal current minimum ON period

recovery time

reference code according to IEC 81346-2

relative repeat accuracy

influence of the surrounding temperature

power supply influence **Substance Prohibitance (Date)** SIRIUS

Yes

No

No

No 2 W

500 V

2.5 kV

3

4 000 V

IP20

11g / 15 ms

10 ... 55 Hz / 0.35 mm

10 000 000

100 000

0.05 s ... 100 h

5 %; +/-

5 A

35 ms

150 ms

1 %; +/-

1% in the whole temperature range to the set runtime

1% in the whole voltage range to the set runtime

09/12/2014

Control circuit/ Control

type of voltage of the control supply voltage control supply voltage 1 at AC

• at 50 Hz

• at 60 Hz

control supply voltage frequency 1

operating range factor control supply voltage rated

value at AC at 50 Hz

 initial value • full-scale value AC

400 ... 440 V

400 ... 440 V

50 ... 60 Hz

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	1.1
• at 440 V	1.5 A
duration of inrush current peak	IJA
• 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 	Yes
start/instantaneous	
 flashing symmetrically with interval start 	Yes
 flashing symmetrically with pulse start/instantaneous 	Yes
flashing symmetrically with pulse start	Yes
flashing symmetrically 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 Yes
 passing make contact/instantaneous contact switching function of interval relay with control signal 	Tes
retrotriggerable with deactivated control	Yes
signal/instantaneous contact	163
retrotriggerable with switched-on control signal	Yes
 retrotriggerable with switched-on control 	Yes
signal/instantaneous contact	
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	0
delayed switching instantaneous contact	0
instantaneous contact number of CO contacts	U .
delayed switching	2
instantaneous contact	0
operational current of auxiliary contacts at AC-15	

• at 24 V	3 A
• at 250 V	3 A
• at 400 V	3 A
operational current of auxiliary contacts at DC-13	
• at 24 V	1 A 0.2 A
at 125 V at 250 V	0.1 A
	5 000 1/h
operating frequency with 3RT2 contactor maximum contact reliability of auxiliary contacts	
contact renability 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	Yes
delay	
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	
 due to burst according to IEC 61000-4-4 	2 kV network connection / 1 kV control connection
due to conductor-earth surge according to IEC 61000 4 5	2 kV
61000-4-5	1 kV
 due to conductor-conductor surge according to IEC 61000-4-5 	INV
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	IP20
60529	
type of insulation	Basic insulation
catagory according to EN 054.1	none
category according to EN 954-1	Homo
Connections/ Terminals	
Connections/ Terminals product component removable terminal for auxiliary	Yes
Connections/ Terminals product component removable terminal for auxiliary and control circuit	Yes
Connections/ Terminals product component removable terminal for auxiliary and control circuit type of electrical connection for auxiliary and control circuit	
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	Yes spring-loaded terminals (push-in)
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	Yes spring-loaded terminals (push-in) 0.5 4 mm²
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	Yes spring-loaded terminals (push-in) 0.5 4 mm² 0.5 2.5 mm²
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product component removable terminal for auxiliary and control circuit type of electrical connection for auxiliary and control circuit type of connectable conductor cross-sections	Yes spring-loaded terminals (push-in) 0.5 4 mm² 0.5 2.5 mm² 0.5 4 mm² 20 12 20 12 0.5 4 mm² 0.5 4 mm² 0.5 4 mm² 0.5 4 mm² 0.5 2.5 mm² 0.5 2.5 mm² 0.5 4 mm²
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• 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
 during storage
 during transport
 during transport
 40 ... +85 °C
 relative humidity during operation
 -25 ... +60 °C
 -40 ... +85 °C
 relative humidity during operation
 10 ... 95 %

Certificates/ approvals

General Product Approval

EMC



Confirmation









Declaration of Conformity

Test Certificates

Marine / Shipping





Type Test Certificates/Test Report







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

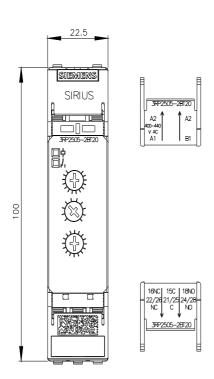
 ${\bf Service \& Support~(Manuals,~Certificates,~Characteristics,~FAQs,...)}$

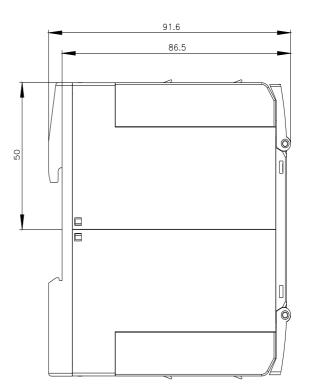
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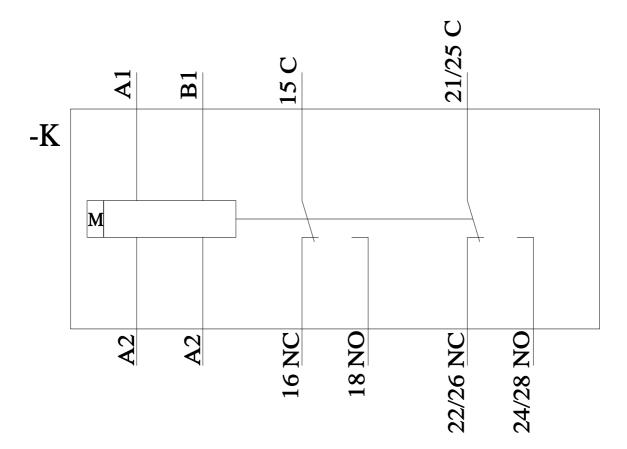
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...) http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RP2505-2BT20&lang=en

Characteristic: Derating

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







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