## SIEMENS

## Data sheet

## 3RP2505-2BT20



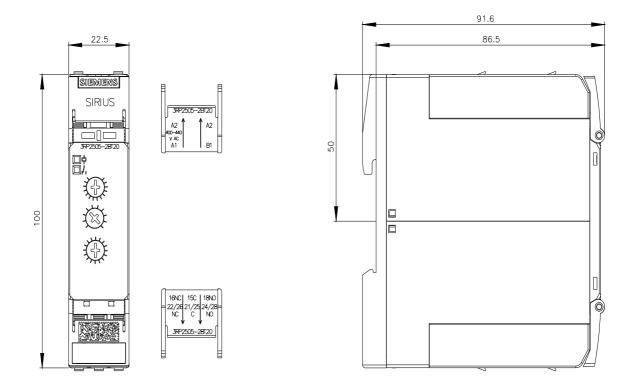
Timing relay, Multifunction 2 change-over contacts, 27 functions 7 time ranges (0.05 s...100 h) 400-440 V AC at 50/60 Hz AC with LED Spring-type terminal (push-in)

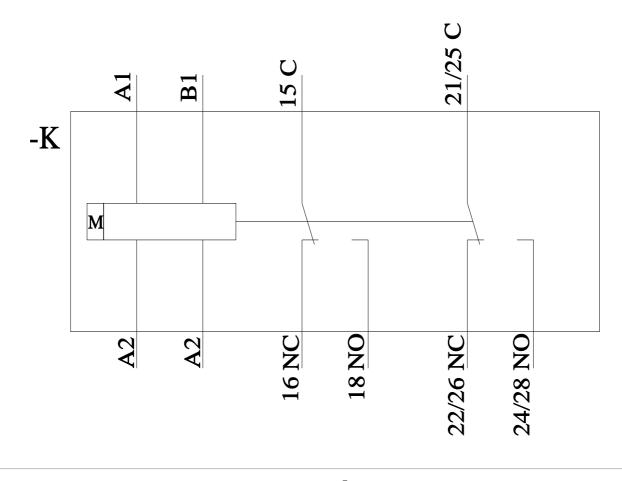
product brand name	SIRIUS
product designation	timing relay
design of the product	27 functions
product type designation	3RP25
General technical data	
product component	
<ul> <li>relay output</li> </ul>	Yes
<ul> <li>semi-conductor output</li> </ul>	No
product extension required remote control	No
product 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
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	К
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
SVHC substance name	Blei - 7439-92-1 Bleimonoxid (Bleioxid) - 1317-36-8
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	

	0.95
• 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 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
<ul> <li>passing make contact/instantaneous contact</li> </ul>	Yes
• OFF delay	No
switching function	
<ul> <li>flashing symmetrically with interval start/instantaneous</li> </ul>	Yes
flashing symmetrically with interval start	Yes
<ul> <li>flashing symmetrically with pulse start/instantaneous</li> </ul>	Yes
flashing symmetrically with pulse start	Yes
<ul> <li>flashing asymmetrically with interval start</li> </ul>	No
<ul> <li>flashing asymmetrically with pulse start</li> </ul>	No
switching function	
<ul> <li>star-delta circuit with delay time</li> </ul>	No
star-delta circuit	Yes
switching function with control signal	
additive ON-delay	Yes
<ul> <li>passing break contact</li> </ul>	Yes
<ul> <li>passing break contact/instantaneous</li> </ul>	Yes
• OFF delay	Yes
OFF delay/instantaneous	Yes
• pulse delayed	Yes
pulse delayed/instantaneous	Yes
• pulse-shaping	Yes
<ul> <li>pulse-shaping/instantaneous</li> </ul>	Yes
<ul> <li>additive ON-delay/instantaneous</li> </ul>	Yes
<ul> <li>ON-delay/OFF-delay/instantaneous</li> </ul>	Yes
<ul> <li>passing make contact</li> </ul>	Yes
<ul> <li>passing make contact/instantaneous contact</li> </ul>	Yes
switching function of interval relay with control signal	
<ul> <li>retrotriggerable with deactivated control</li> </ul>	Yes
signal/instantaneous contact	
retrotriggerable with switched-on control signal	Yes
<ul> <li>retrotriggerable with switched-on control signal/instantaneous contact</li> </ul>	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	fuse gL/gG: 4 A
switch required	
Auxiliary circuit	
material of switching contacts	AgSnO2
number of NC contacts	
<ul> <li>delayed switching</li> </ul>	0
instantaneous contact	0
number of NO contacts	
<ul> <li>delayed switching</li> </ul>	0
instantaneous contact	0
number of CO contacts	
<ul> <li>delayed switching</li> </ul>	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			
• 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			
switching capacity current with inductive load	0.01 3 A			
Inputs/ Outputs				
product function				
at the relay outputs switchover delayed/without delay	Yes			
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 build according to IEC 01000-4-4	2 kV			
due to conductor-conductor surge according to IEC	1 kV			
61000-4-5				
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				
category according to EN 954-1	none			
protection class IP on the front according to IEC 60529	IP20			
type of insulation	Basic insulation			
	Basic insulation			
type of insulation	Yes			
type of insulation Connections/ Terminals product component removable terminal for auxiliary and control circuit type of electrical connection for auxiliary and control circuit				
type of insulation         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)			
type of insulation 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 mm <sup>2</sup>			
type of insulation 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 mm <sup>2</sup> 0.5 2.5 mm <sup>2</sup>			
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type of insulation 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)         0.5 4 mm²         0.5 2.5 mm²         0.5 4 mm²         20 12         0.5 4 mm²         any         screw and snap-on mounting onto 35 mm DIN rail			
type of insulation 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) 0.5 4 mm <sup>2</sup> 0.5 2.5 mm <sup>2</sup> 0.5 4 mm <sup>2</sup> 20 12 0.5 4 mm <sup>2</sup> 0.5 4 mm <sup>2</sup> 0.5 2.5 mm <sup>2</sup> 0.5 4 mm <sup>2</sup> 20 12 20 12			
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— at the side			0 mm		
<ul> <li>for grounded part</li> </ul>	ts				
— forwards			0 mm		
- backwards			0 mm		
— upwards			0 mm		
— at the side			0 mm		
— downwards			0 mm		
<ul> <li>for live parts</li> </ul>					
— forwards			0 mm		
— backwards			0 mm		
— upwards			0 mm		
— downwards			0 mm		
— at the side			0 mm		
Ambient conditions					
	eight above sea level max	rimum	2 000 m		
ambient temperature			2 000 111		
during operation			-25 +60 °C		
during operation     orage			-25 +60 °C -40 +85 °C		
0 0					
during transport			-40 +85 °C		
relative humidity during	operation		10 95 %		
Approvals Certificates					
General Product App	roval			EMC	Declaration of Con- formity
<u>Confirmation</u>		Ű	EAC	RCM	UK CA
Declaration of Con- formity	Test Certificates	Marine / Shipp	Ing Lloyd's Register Lits	PRS	RINA
Marine / Shipping		other			
RMRS RMRS	DNV-GL DNV-GL	<u>Confirmatio</u>	n		
Further information					
	to exit the Russian mar				
https://press.siemens.com/global/en/pressrelease/siemens-wind-down-russian-business					
Siemens is working on the renewal of the current EAC certificates. Please contact your local Siemens office on the status of validity of the EAC certification if you intend to import or offer to supply these products to an					
EAC relevant market (other than the sanctioned EAEU member states Russia or Belarus).					
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. Image database (prod	<u>siemens.com/cs/ww/en/p</u> uct images, 2D dimensi	s/3RP2505-2BT20 on drawings, 3D r	models, device circuit di	agrams, EPLAN macro	s,)
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RP2505-2BT20⟨=en					
Characteristic: Deratin https://support.industry.	1g siemens.com/cs/ww/en/p	s/3RP2505-2RT20	l/manual		
<u></u>	e.e.none.com/co/ww/ch/p	<u></u>			





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