SIEMENS

Data sheet 3RP20 05-2AP30



SOLID-STATE TIME-DELAY RELAY MULTI-FUNCTION, 8 FUNCTIONS 1 CHANGEOVER CONTACT AC/DC 24V, AC 200 TO 240V 0.05 S TO 100H WIDTH 45MM CAGE CLAMP

General technical data:		
product brand name		SIRIUS
Product designation	timing relay	
mounting position	any	
Product function non-volatile		No
Product component		
Relay output		Yes
 semi-conductor output 		No
Installation altitude at height above sea level maximum	m	2 000
Ambient temperature		
during operation	°C	-25 + 60
 during storage 	°C	-40 + 85
 during transport 	°C	-40 + 85
Relative humidity during operation	%	10 95
EMC emitted interference acc. to IEC 61812-1		EN 61000-6-4(3)
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
Conducted interference due to conductor-earth surge acc. to IEC 61000-4-5		2 kV
Conducted interference due to conductor-conductor surge acc. to IEC 61000-4-5		1 kV
Electrostatic discharge acc. to IEC 61000-4-2		4 kV contact discharge / 8 kV air discharge
Field-bound parasitic coupling acc. to IEC 61000-4-3		10 V/m
Surge voltage resistance Rated value	V	4 000

Active power loss total typical	W	2
Equipment marking acc. to DIN 40719 extended		К
according to IEC 204-2 acc. to IEC 750		
Equipment marking acc. to DIN EN 81346-2		K
Category acc. to EN 954-1		none
Protection against electrical shock		finger-safe
Protection class IP		IP20
Mechanical service life (switching cycles) typical		10 000 000
Electrical endurance (switching cycles) at AC-15 at		100 000
230 V typical		
Operating frequency with 3RT2 contactor maximum	1/h	5 000
Shock resistance acc. to IEC 60068-2-27		11g / 15 ms
Relative repeat accuracy	%	1
Recovery time	ms	150
Minimum ON period	ms	35
Degree of pollution		3
Insulation voltage for overvoltage category III	V	300
according to IEC 60664 with degree of pollution 3		
Rated value		
Relative setting accuracy relating to full-scale value	%	5

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
 flashing asymmetrically starting with interval 	No
 flashing asymmetrically starting with pulse 	No
 flashing symmetrically starting with pulse 	No
 flashing symmetrically starting with pulse/instantaneous 	No
 flashing symmetrically starting with interval 	Yes
 flashing symmetrically starting with interval/instantaneous 	No
• star-delta circuit	No
 star-delta circuit with delay time 	No
Switching function with control signal	
 additive ON delay 	Yes
 passing break contact 	Yes
OFF delay	Yes
• pulse-shaping	Yes
OFF delay/instantaneous	No

 ON-delay/OFF-delay/instantaneous 	No	
 passing break contact/instantaneous 	No	
 additive ON delay/instantaneous 	No	
ON-delay/OFF-delay	Yes	
passing make contact	No	
 passing make contact/instantaneous contact 	No	
• pulse delayed	No	
 pulse delayed/instantaneous 	No	
 pulse-shaping/instantaneous 	No	
Switching function of interval relay with control signal		
 retrotriggerable with deactivated control signal/instantaneous contact 	No	
 retrotriggerable with activated control signal 	No	
 retrotriggerable with activated control signal/instantaneous contact 	No	
 retriggerable with deactivated control signal 	No	
Design of the control terminal non-floating	Yes	

Control circuit/ Control:		
Adjustable time	S	0.05 360 000
Type of voltage of the control supply voltage		AC/DC
Control supply voltage frequency 1	Hz	50 60
Control supply voltage frequency 2	Hz	50 60
Control supply voltage 2 with AC		
● at 50 Hz	V	200 240
● at 60 Hz	V	200 240
Operating range factor control supply voltage rated		
value		
• with AC		
— at 50 Hz		0.85 1.1
— at 60 Hz		0.85 1.1
• for DC		0.7 1.1

Auxiliary circuit:			
Contact reliability of the auxiliary contacts		one incorrect switching operation of 100 million switching operations (17 V, 5 mA)	
		· · · · · · · · · · · · · · · · · · ·	
Material of switching contacts		AgSnO2	
Operating current of the auxiliary contacts			
● at AC-15			
— at 24 V	Α	3	
— at 250 V	Α	3	
• at DC-13			
— at 24 V	Α	1	
— at 125 V	Α	0.2	

— at 250 V	Α	0.1	
Design of the fuse link for short-circuit protection of		fuse gL/gG: 4 A	
the auxiliary switch required			
Thermal current	А	5	
Number of NC contacts			
 delayed switching 		0	
• instantaneous contact		0	
Number of NO contacts			
 delayed switching 		0	
• instantaneous contact		0	
Number of CO contacts			
 delayed switching 		1	
• instantaneous contact		0	
Installation/mounting/dimensioner			
Installation/ mounting/ dimensions: Mounting type		screw and snap-on mounting onto 35 mm standard	
		mounting rail	
Width	mm	45	
Height	mm	57	
Depth	mm	73	
Required spacing with side-by-side mounting			
• upwards	mm	0	
• forwards	mm	0	
• at the side	mm	0	
Backwards	mm	0	
• downwards	mm	0	
Required spacing for grounded parts			
Backwards	mm	0	
• at the side	mm	0	
• upwards	mm	0	
• forwards	mm	0	
• downwards	mm	0	
Required spacing for live parts			
• downwards	mm	0	
Backwards	mm	0	
• at the side	mm	0	
• forwards	mm	0	
• upwards	mm	0	
Connections/ Terminals:			
Type of electrical connection for auxiliary and control current circuit		spring-loaded terminals	
Type of connectable conductor cross-section			

• solid

2x (0,25 ... 2,5 mm²)

- finely stranded
 - without core end processing
 - with core end processing
- for AWG conductors
 - stranded
 - solid

2x (0.25 ... 2.5 mm²)

2 x (0.25 ... 1.5 mm²)

2x (24 ... 14)

2x (24 ... 14)

Certificates/ approvals:

General Product Approval	EMC	Declaration of	Test
		Conformity	Certificates











Special Test Certificate

Shipping Approval

















Shipping other Approval



Environmental Confirmations

Further information

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

http://www.siemens.com/industrial-controls/catalogs

Industry Mall (Online ordering system)

http://www.siemens.com/industrymall

Cax online generator

 $\underline{\text{http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en\&mlfb=3RP20052AP30}$

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

http://support.automation.siemens.com/WW/view/en/3RP20052AP30/all

Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...) http://www.automation.siemens.com/bilddb/index.aspx?attID9=3RP20052AP30&lang=en

