SIEMENS

Data sheet 3RP25 05-1AB30

TIME RELAY, MULTI-FUNCTION, 1 CHANGEOVER, 13 FUNCTIONS, 15 TIME SETTING RANGES, (1, 3, 10, 30, 100), 24V AC/DC, AT 50/60HZ, LED, SCREW TERMINAL

Figure similar

General technical data:		
product brandname		SIRIUS
Product designation		timing relay
Design of the product		13 functions
Mounting position		any
Product function at the relay outputs Switchover delayed/without delay		No
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
Power loss [W] total typical	W	2
Equipment marking		
• acc. to DIN 40719 extended according to IEC 204-2 acc. to IEC 750		K
• acc. to DIN EN 61346-2		K
• acc. to DIN EN 81346-2		K
Category acc. to EN 954-1		none
Protection against electrical shock		finger-safe
Protection class IP		IP20
Type of insulation		Basic insulation
Mechanical service life (switching cycles) typical		10 000 000
Electrical endurance (switching cycles) at AC-15 at 230 V typical		100 000
Operating frequency with 3RT2 contactor maximum	1/h	5 000
Vibration resistance acc. to IEC 60068-2-6		10 ... 55 Hz / 0.35 mm
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 according to IEC 60664 with degree of pollution 3 rated value	V	300
Relative setting accuracy relating to full-scale value	%	5
Product extension required remote control		No
Product extension optional remote control		No

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		Yes
• 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		Yes
• passing make contact/instantaneous contact		No
• pulse delayed		Yes
• 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		Yes
• retrotriggerable with activated control signal/instantaneous contact		No
• retriggerable with deactivated control signal		Yes
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 1		
• at AC at 50 Hz rated value	V	24
• at AC at 60 Hz rated value	V	24
• at DC rated value	V	24

Operating range factor control supply voltage rated value		
• at AC		
— at 50 Hz		0.85 ... 1.1
— at 60 Hz		0.85 ... 1.1
• at DC		0.85 ... 1.1
Inrush current peak		
• at 24 V	A	2
Duration of inrush current peak		
• at 24 V	ms	1
Power loss [W] at AC maximum	W	0.44
Power loss [V•A] at AC maximum	V·A	0.44
Auxiliary circuit:		
Contact reliability of auxiliary contacts		one incorrect switching operation of 100 million switching operations (17 V, 5 mA)
Material of switching contacts		AgSnO2
Operating current of auxiliary contacts		
• **at AC-15**		
— at 24 V	A	3
— at 250 V	A	3
• **at DC-13**		
— at 24 V	A	1
— at 125 V	A	0.2
— at 250 V	A	0.1
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
Test voltage for isolation test	kV	2.5
Design of the fuse link for short-circuit protection of the auxiliary switch required		fuse gL/gG: 4 A
Thermal current	A	5
Switching capacity current with inductive load	A	0.01 ... 3
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
Contact rating of auxiliary contacts according to UL		R300 / B300
Installation/ mounting/ dimensions:		

Mounting type		screw and snap-on mounting onto 35 mm standard mounting rail
Width	mm	17.5
Height	mm	100
Depth	mm	90
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		screw-type terminals
Product function removable terminal for auxiliary and control circuit		Yes
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		
— stranded		1x (20 ... 12), 2x (20 ... 14)
— solid		1x (20 ... 12), 2x (20 ... 14)
Tightening torque	N·m	0.6 ... 0.8
Design of the thread of the connection screw		M3
Ampacity of the bridge terminals maximum	A	10

Certificates/approvals

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

Shipping Approval				other	
LRS	PRS	RINA	RMRS	Environmental Confirmations	Confirmation

Further information

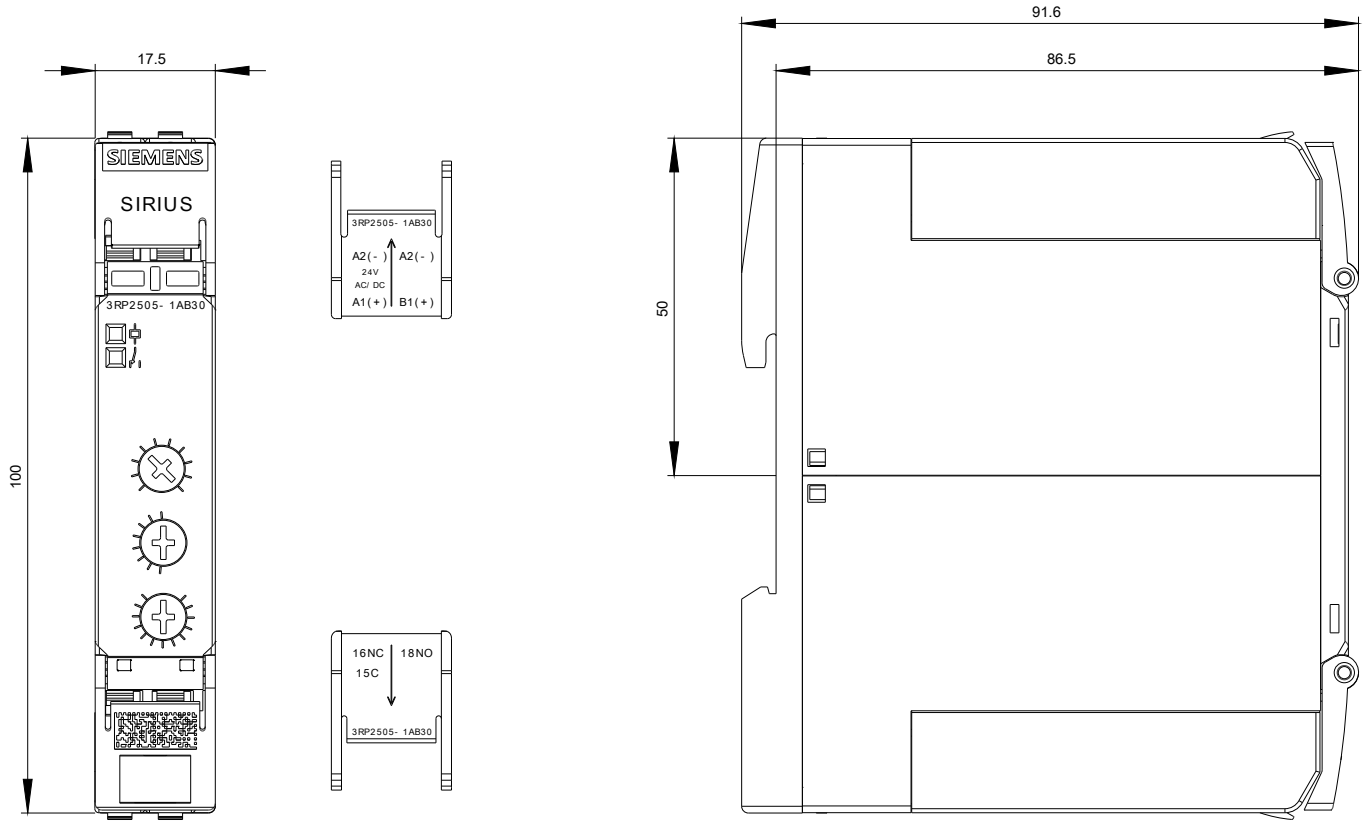
Information- and Downloadcenter (Catalogs, Brochures,…)
http://www.siemens.com/industrial-controls/catalogs

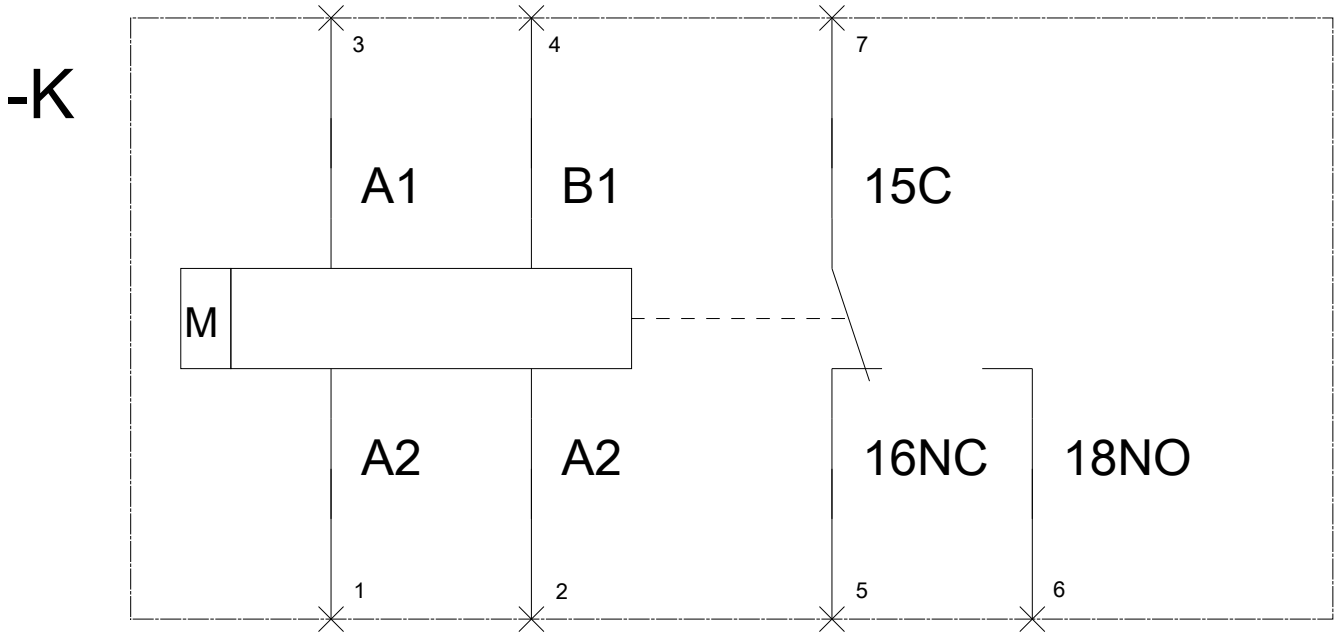
Industry Mall (Online ordering system)
https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RP2505-1AB30

Cax online generator
http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RP2505-1AB30

Service&Support (Manuals, Certificates, Characteristics, FAQs,...)
https://support.industry.siemens.com/cs/ww/en/ps/3RP2505-1AB30

Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RP2505-1AB30&lang=en





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