

Timing relay, electronic Multifunction, 8 functions 1 change-over contact 24 V AC/DC, 100 to 127 V AC at 50/60 Hz AC 0.05 s to 100 h Overall width 45 mm screw terminal



Figure similar

Article number		
Product brand name		SIRIUS
Product designation		timing relay
Design of the product		Multifunctional
Product type designation		3RP20

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	W	2
Insulation voltage		
• for overvoltage category III according to IEC 60664		
— with degree of pollution 3 rated value	V	300
Test voltage for isolation test	kV	2
Degree of pollution		3

Surge voltage resistance rated value	V	4 000
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	s	0.05 ... 100 h
Relative setting accuracy relating to full-scale value	%	5
Thermal current	A	5
Minimum ON period	ms	35
Recovery time	ms	150
• Reference identifier acc. to DIN 40719 extended according to IEC 204-2 acc. to IEC 750		K
• Reference identifier acc. to DIN EN 61346-2		K
• Reference identifier acc. to DIN EN 81346-2		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 rated value	V	24
• at 60 Hz rated value	V	24
Control supply voltage 1		
• at DC rated value	V	24
Control supply voltage 2 at AC		
• at 50 Hz	V	100 ... 127
• at 60 Hz	V	100 ... 127
Control supply voltage frequency 1	Hz	50 ... 60
Operating range factor control supply voltage rated value at DC		
• initial value		0.85
• Full-scale value		1.1
Operating range factor control supply voltage rated value at AC at 50 Hz		
• 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

Switching Function

Switching function <ul style="list-style-type: none"> • ON-delay • ON-delay/instantaneous contact • passing make contact • passing make contact/instantaneous contact • OFF delay 		Yes No Yes No No
Switching function <ul style="list-style-type: none"> • flashing symmetrically starting with interval/instantaneous • flashing symmetrically starting with interval • flashing symmetrically starting with pulse/instantaneous • flashing symmetrically starting with pulse • flashing asymmetrically starting with interval • flashing asymmetrically starting with pulse 		No Yes No No No No
Switching function <ul style="list-style-type: none"> • star-delta circuit with delay time • star-delta circuit 		No No
Switching function with control signal <ul style="list-style-type: none"> • additive ON delay • passing break contact • passing break contact/instantaneous • OFF delay • OFF delay/instantaneous • pulse delayed • pulse delayed/instantaneous • pulse-shaping • pulse-shaping/instantaneous • additive ON delay/instantaneous • ON-delay/OFF-delay/instantaneous • passing make contact • passing make contact/instantaneous contact 		Yes Yes No Yes No No No Yes No No No No No No
Switching function of interval relay with control signal <ul style="list-style-type: none"> • retrotriggerable with deactivated control signal/instantaneous contact • retrotriggerable with activated control signal • retrotriggerable with activated control signal/instantaneous contact • retriggerable with deactivated control signal 		No No No No
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

1

Operating current of auxiliary contacts at AC-15

- at 24 V
- at 250 V

A

3

A

3

Operating current of auxiliary contacts at DC-13

- at 24 V
- at 125 V
- at 250 V

A

1

A

0.2

A

0.1

Operating frequency with 3RT2 contactor maximum

1/h

5 000

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

±5 %

Power supply influence

±1 %

Inputs/ Outputs

Product function

- 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
- due to conductor-earth surge acc. to IEC 61000-4-5
- due to conductor-conductor surge acc. to IEC 61000-4-5

2 kV network connection / 1 kV control connection

2 kV

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		No
<ul style="list-style-type: none"> removable terminal for auxiliary and control circuit 		
Type of electrical connection		screw-type terminals
<ul style="list-style-type: none"> for auxiliary and control current circuit 		
Type of connectable conductor cross-sections		2x (0,5 ... 1,5 mm ²), 2x (0,75 ... 2,5 mm ²)
<ul style="list-style-type: none"> solid finely stranded with core end processing at AWG conductors solid at AWG conductors stranded 		2x (0,5 ... 1,5 mm ²), 2x (0,75 ... 2,5 mm ²) 2x (18 ... 14) 2x (18 ... 14)
Connectable conductor cross-section		
<ul style="list-style-type: none"> solid finely stranded with core end processing 	mm ² mm ²	0.5 ... 2.5 0.5 ... 2.5
AWG number as coded connectable conductor cross section		
<ul style="list-style-type: none"> solid stranded 		18 ... 14 18 ... 14
Tightening torque	N·m	0.8 ... 1.2
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	mm	57
Width	mm	45
Depth	mm	73
Required spacing		
<ul style="list-style-type: none"> with side-by-side mounting <ul style="list-style-type: none"> forwards Backwards upwards downwards at the side for grounded parts <ul style="list-style-type: none"> forwards Backwards upwards at the side downwards 	mm mm mm mm mm mm mm mm mm mm	0 0 0 0 0 0 0 0 0 0






- for live parts
 - forwards
 - Backwards
 - upwards
 - downwards
 - at the side






mm	0
mm	0
mm	0
mm	0
mm	0



Ambient conditions

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

Certificates/approvals

General Product Approval	EMC	Declaration of Conformity	Test Certificates
 CCC	 UL	 EAC	 C-Tick
 EG-Konf.			Special Test Certificate

Test Certificates	Marine / Shipping
Type Test Certificates/Test Report	 BUREAU VERITAS
	 GL
	 LRS
	 PRS
	 RINA

Marine / Shipping	other
 RMRS	Confirmation
 DNV-GL DNVGL.COM/AF	

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?mfb=3RP2005-1AQ30>

Cax online generator

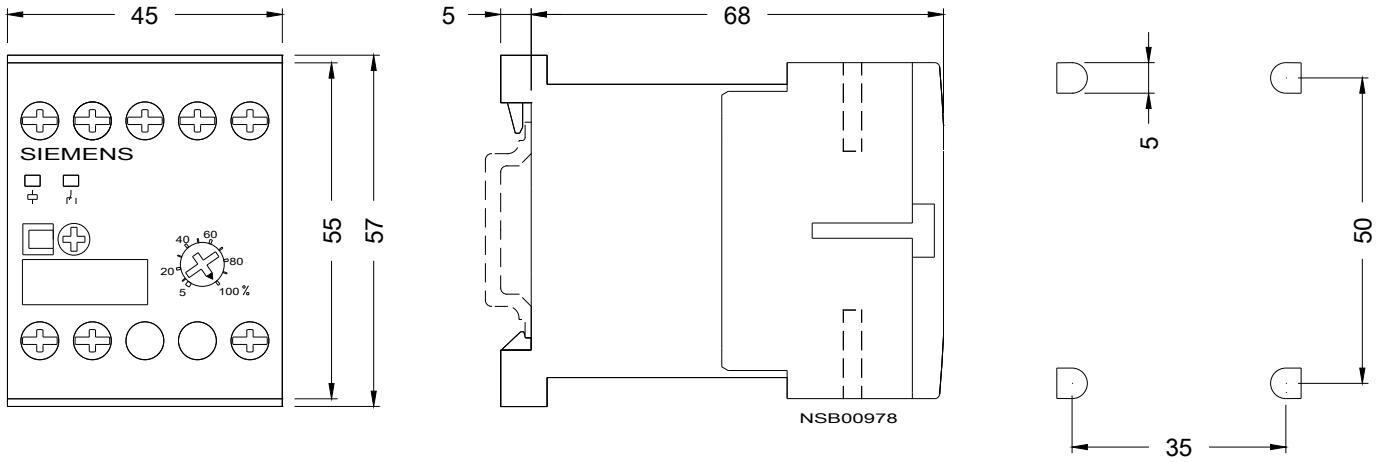
<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mfb=3RP2005-1AQ30>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RP2005-1AQ30>

Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)

http://www.automation.siemens.com/bilddb/cax_de.aspx?mfb=3RP2005-1AQ30&lang=en



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