



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

product brand name	SIRIUS
product designation	timing relay
design of the product	Multifunctional
product type designation	3RP20
General technical data	
product feature protective coating on printed-circuit board	No
product component	
• relay output	Yes
• semi-conductor output	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	300 V
test voltage for isolation test	2 kV
degree of pollution	3
surge voltage resistance rated value	4 000 V
shock resistance according to IEC 60068-2-27	11 g / 15 ms
vibration resistance according to IEC 60068-2-6	10 ... 55 Hz / 0.35 mm
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
ON period/maximum minimum	35 ms
recovery time	150 ms
reference code according to IEC 81346-2	K
relative repeat accuracy	1 %; +/-
influence of the surrounding temperature	±5 %
power supply influence	±1 %
Substance Prohibitance (day/month/year)	05/01/2012
SVHC substance name	Lead CAS-No. 7439-92-1 Lead monoxide (lead oxide) CAS-No. 1317-36-8 2-methyl-1-(4-methylthiophenyl)-2-morpholinopropan-1-one CAS-No. 71868-10-5 Melamine CAS-No. 108-78-1
Net Weight	0.121 kg
Control circuit/ Control	
type of voltage of the control supply voltage	AC/DC
control supply voltage at AC	

<ul style="list-style-type: none"> • at 50 Hz rated value • at 60 Hz rated value 	24 V 24 V
control supply voltage 1 at AC	
<ul style="list-style-type: none"> • at 50 Hz rated value • at 60 Hz rated value 	24 V 24 V
control supply voltage 2 at AC	
<ul style="list-style-type: none"> • at 50 Hz • at 60 Hz 	100 ... 127 V 100 ... 127 V
control supply voltage frequency 1	50 ... 60 Hz
control supply voltage at DC rated value	24 V
control supply voltage 1 at DC rated value	24 V
operating range factor control supply voltage rated value at DC	
<ul style="list-style-type: none"> • initial value • full-scale value 	0.85 1.1
operating range factor control supply voltage rated value at AC at 50 Hz	
<ul style="list-style-type: none"> • initial value • full-scale value 	0.85 1.1
operating range factor control supply voltage rated value at AC at 60 Hz	
<ul style="list-style-type: none"> • initial value • full-scale value 	0.85 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 with interval start/instantaneous • flashing symmetrically with interval start • flashing symmetrically with pulse start/instantaneous • flashing symmetrically with pulse start • flashing asymmetrically with interval start • flashing asymmetrically with pulse start 	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
switching function of interval relay with control signal	
<ul style="list-style-type: none"> • retrotriggerable with deactivated control signal/instantaneous contact • retrotriggerable with switched-on control signal • retrotriggerable with switched-on control signal/instantaneous contact 	No No No

<ul style="list-style-type: none"> retriggerable with deactivated control signal 	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	
<ul style="list-style-type: none"> delayed switching instantaneous contact 	0 0
number of NO contacts	
<ul style="list-style-type: none"> delayed switching instantaneous contact 	0 0
number of CO contacts	
<ul style="list-style-type: none"> delayed switching instantaneous contact 	1 0
operational current of auxiliary contacts at AC-15	
<ul style="list-style-type: none"> at 24 V at 250 V 	3 A 3 A
operational current of auxiliary contacts at DC-13	
<ul style="list-style-type: none"> at 24 V at 125 V at 250 V 	1 A 0.2 A 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
Inputs/ Outputs	
product function	
<ul style="list-style-type: none"> non-volatile 	No
Electromagnetic compatibility	
EMC emitted interference according to IEC 61812-1	EN 61000-6-4(3)
EMC immunity according to IEC 61812-1	EN 61000-6-2
conducted interference	
<ul style="list-style-type: none"> due to burst according to IEC 61000-4-4 due to conductor-earth surge according to IEC 61000-4-5 due to conductor-conductor surge according to IEC 61000-4-5 	2 kV network connection / 1 kV control connection 2 kV 1 kV
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
Electrical Safety	
protection class IP on the front according to IEC 60529	IP20
touch protection on the front according to IEC 60529	finger-safe, for vertical contact from the front
type of insulation	Basic insulation
Connections/ Terminals	
product component removable terminal for auxiliary and control circuit	No
type of electrical connection	
<ul style="list-style-type: none"> for auxiliary and control circuit 	screw-type terminals
type of connectable conductor cross-sections	
<ul style="list-style-type: none"> solid finely stranded with core end processing for AWG cables solid for AWG cables stranded 	2x (0,5 ... 1,5 mm ²), 2x (0,75 ... 2,5 mm ²) 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 	0.5 ... 2.5 mm ² 0.5 ... 2.5 mm ²
AWG number as coded connectable conductor cross	

section	
• solid	18 ... 14
• stranded	18 ... 14
tightening torque	0.8 ... 1.2 N·m
design of the thread of the connection screw	M3

Installation/ mounting/ dimensions

mounting position	any
fastening method	screw and snap-on mounting onto 35 mm DIN rail
height	57 mm
width	45 mm
depth	73 mm
required spacing	
• with side-by-side mounting	
— forwards	0 mm
— backwards	0 mm
— upwards	0 mm
— downwards	0 mm
— at the side	0 mm
• 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	-25 ... +60 °C
• during storage	-40 ... +85 °C
• during transport	-40 ... +85 °C
relative humidity during operation	10 ... 95 %

Approvals Certificates

Environment	General Product Approval
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[Environmental Con-
firmations](#)



EMV	Test Certificates	Maritime application
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[Type Test Certificates/Test Report](#)



Maritime application	other
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[Confirmation](#)



Further information

Information on the packaging

<https://support.industry.siemens.com/cs/ww/en/view/109813875>

Information for data generation and storage

<https://support.industry.siemens.com/cs/ww/en/view/109995012>

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=3RP2005-1AQ30>

Cax online generator

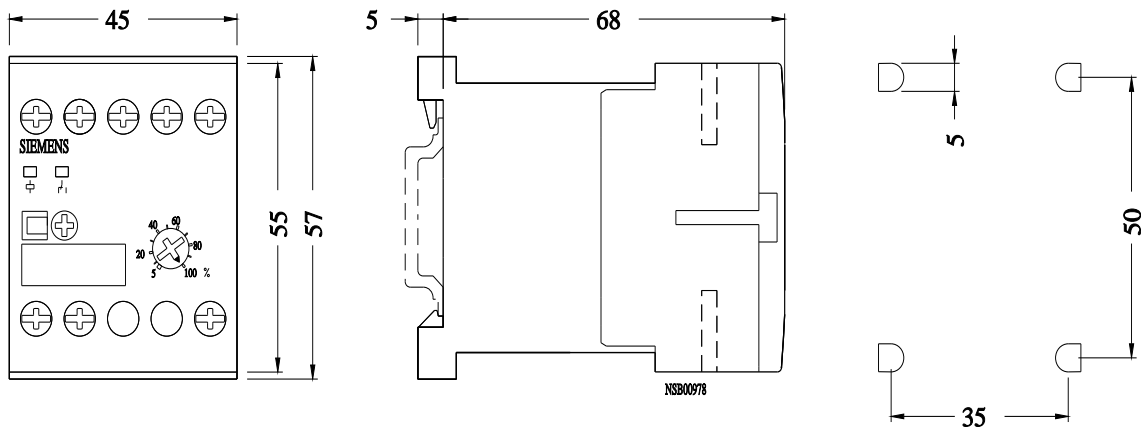
<https://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RP2005-1AQ30>

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, ...)

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



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