SIEMENS

Data sheet 3RP2005-1AQ30

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 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	11g / 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 ... 100 s
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	K
relative repeat accuracy	1 %; +/-
influence of the surrounding temperature	±5 %
power supply influence	±1 %
Substance Prohibitance (Date)	05/01/2012
Control circuit/ Control	
type of voltage of the control supply voltage	AC/DC
control supply voltage 1 at AC	
● at 50 Hz rated value	24 V
● at 60 Hz rated value	24 V
control supply voltage 2 at AC	
● at 50 Hz	100 ... 127 V
● at 60 Hz	100 ... 127 V
control supply voltage frequency 1	50 ... 60 Hz
control supply voltage 1	

● at DC rated value	24 V
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	
● ON-delay	Yes
● ON-delay/instantaneous contact	No
● passing make contact	Yes
● passing make contact/instantaneous contact	No
● OFF delay	No
switching function	
● flashing symmetrically with interval start/instantaneous	No
● flashing symmetrically with interval start	Yes
● flashing symmetrically with pulse start/instantaneous	No
● flashing symmetrically with pulse start	No
● flashing asymmetrically with interval start	No
● flashing asymmetrically with pulse start	No
switching function	
● star-delta circuit with delay time	No
● star-delta circuit	No
switching function with control signal	
● additive ON-delay	Yes
● passing break contact	Yes
● passing break contact/instantaneous	No
● OFF delay	Yes
● OFF delay/instantaneous	No
● pulse delayed	No
● pulse delayed/instantaneous	No
● pulse-shaping	Yes
● pulse-shaping/instantaneous	No
● additive ON-delay/instantaneous	No
● ON-delay/OFF-delay/instantaneous	No
● passing make contact	No
● passing make contact/instantaneous contact	No
switching function of interval relay with control signal	
● retrotriggerable with deactivated control signal/instantaneous contact	No
● retrotriggerable with switched-on control signal	No
● retrotriggerable with switched-on control signal/instantaneous contact	No
● 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	
● 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
operational current of auxiliary contacts at AC-15	
● at 24 V	3 A
● at 250 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
Inputs/ Outputs	
product function	
● 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	
● due to burst according to IEC 61000-4-4	2 kV network connection / 1 kV control connection
● due to conductor-earth surge according to IEC 61000-4-5	2 kV
● due to conductor-conductor surge according to IEC 61000-4-5	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	
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
category according to EN 954-1	none
Connections/ Terminals	
product component removable terminal for auxiliary and control circuit	No
type of electrical connection for auxiliary and control circuit	screw-type terminals
type of connectable conductor cross-sections	
● solid	2x (0,5 ...1,5 mm²), 2x (0,75 ... 2,5 mm²)
● finely stranded with core end processing	2x (0,5 ...1,5 mm²), 2x (0,75 ... 2,5 mm²)
● at AWG cables solid	2x (18 ... 14)
● at AWG cables stranded	2x (18 ... 14)
connectable conductor cross-section	
● solid	0.5 ... 2.5 mm²
● finely stranded with core end processing	0.5 ... 2.5 mm²
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 %

Certificates/ approvals

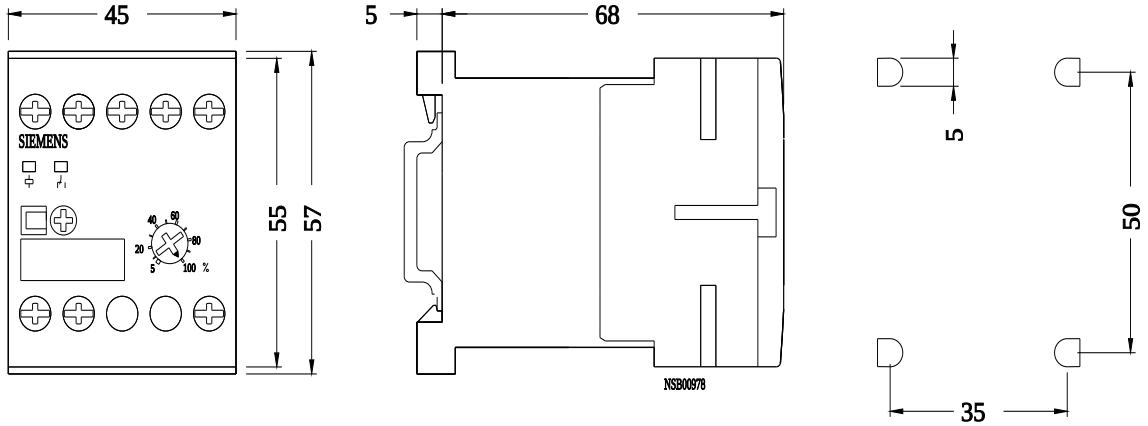
General Product Approval				EMC	Declaration of Conformity
CCC	Confirmation	UL	EAC	RCM	EG-Konf.

Declaration of Conformity	Test Certificates	Marine / Shipping			
UKCA	Type Test Certificates/Test Report	BUREAU VERITAS	Lloyd's Register LRS	RINA	RMRS

Marine / Shipping	other
DNV·GL	Confirmation

Further information

Siemens has decided to exit the Russian market (see here).
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=3RP2005-1AQ30
Cax online generator
http://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, ...)
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RP2005-1AQ30&lang=en
Characteristic: Derating
https://support.industry.siemens.com/cs/ww/en/ps/3RP2005-1AQ30/manual



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