SIEMENS

Data sheet 3RP2005-1BW30

Timing relay, electronic Multifunction, 16 functions 2 change-over contacts 24 to 240 V AC/DC 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 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	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 acc. to IEC 81346-2	K
relative repeat accuracy	1 %
Substance Prohibitance (Date)	01.05.2012 00:00:00
Control circuit/ Control	
type of voltage of the control supply voltage	AC/DC
control supply voltage 1 at AC	
● at 50 Hz	24 ... 240 V
● at 60 Hz	24 ... 240 V
control supply voltage frequency 1	50 ... 60 Hz
control supply voltage 1	
● at DC	24 ... 240 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	0.8
● full-scale value	1.1
operating range factor control supply voltage rated value at AC at 60 Hz	
● initial value	0.8
● full-scale value	1.1
Switching Function	
switching function	
● ON-delay	Yes
● ON-delay/instantaneous contact	Yes
● passing make contact	Yes
● passing make contact/instantaneous contact	Yes
● OFF delay	No
switching function	
● flashing symmetrically with interval start/instantaneous	Yes
● 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	Yes
switching function with control signal	
● additive ON-delay	Yes
● passing break contact	Yes
● passing break contact/instantaneous	Yes
● OFF delay	Yes
● OFF delay/instantaneous	Yes
● pulse delayed	No
● pulse delayed/instantaneous	No
● pulse-shaping	Yes
● pulse-shaping/instantaneous	Yes
● additive ON-delay/instantaneous	Yes
● ON-delay/OFF-delay/instantaneous	Yes
● passing make contact	No
● passing make contact/instantaneous contact	Yes
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
number of NO contacts delayed switching	0
number of CO contacts delayed switching	2

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
influence of the surrounding temperature	±5 %
power supply influence	±1 %
Inputs/ Outputs	
product function	
● non-volatile	No
Electromagnetic compatibility	
EMC emitted interference acc. to IEC 61812-1	EN 61000-6-4(3)
EMC 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
● due to conductor-earth surge acc. to IEC 61000-4-5	2 kV
● due to conductor-conductor surge acc. to IEC 61000-4-5	1 kV
field-based interference 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 class IP on the front acc. to IEC 60529	IP20
touch protection on the front acc. to IEC 60529	finger-safe, for vertical contact from the front
type of insulation	Basic insulation
category acc. 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 standard mounting 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

Miscellaneous

Test Certificates	Marine / Shipping

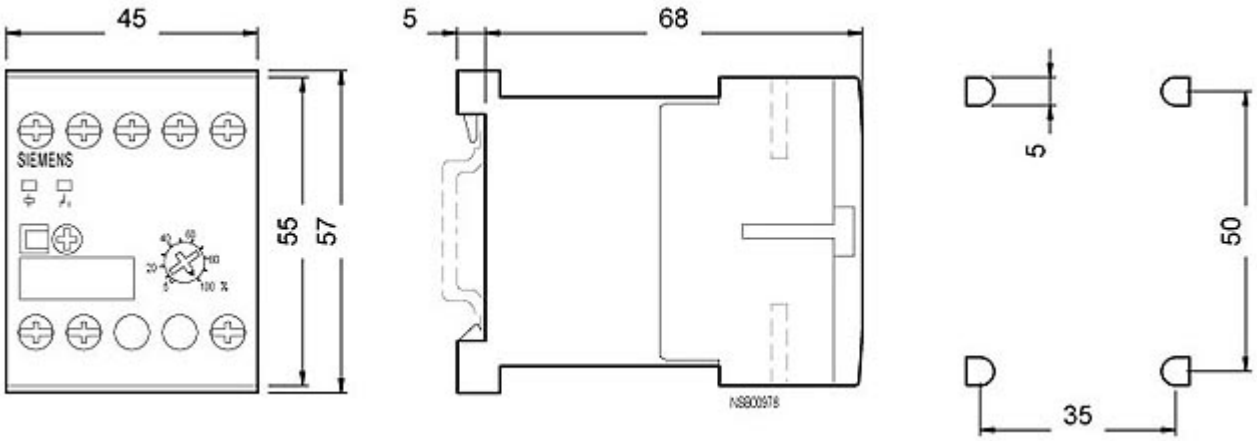
Type Test Certificates/Test Report

Marine / Shipping	other

Confirmation

Further information

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=3RP2005-1BW30
Cax online generator
http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RP2005-1BW30
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)
https://support.industry.siemens.com/cs/ww/en/ps/3RP2005-1BW30
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RP2005-1BW30&lang=en
Characteristic: Derating
https://support.industry.siemens.com/cs/ww/en/ps/3RP2005-1BW30/manual



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