



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


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
influence of the surrounding temperature	±5 %
power supply influence	±1 %
Inputs/ Outputs	
product function	
<ul style="list-style-type: none"> • non-volatile 	No
Electromagnetic compatibility	
EMC immunity acc. to IEC 61812-1	EN 61000-6-2
conducted interference	
<ul style="list-style-type: none"> • 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-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	
touch protection against electrical shock	finger-safe
type of insulation	Basic insulation
category acc. to EN 954-1	none
Connections/ Terminals	
product function removable terminal for auxiliary and control circuit	No
type of electrical connection for auxiliary and control circuit	spring-loaded terminals
type of connectable conductor cross-sections	
<ul style="list-style-type: none"> • solid • finely stranded with core end processing • finely stranded without core end processing • at AWG cables solid • at AWG cables stranded 	2x (0,25 ... 2,5 mm ²) 2 x (0.25 ... 1.5 mm ²) 2x (0.25 ... 2.5 mm ²) 2x (24 ... 14) 2x (24 ... 14)
<ul style="list-style-type: none"> • connectable conductor cross-section solid • connectable conductor cross-section finely stranded with core end processing • connectable conductor cross-section finely stranded without core end processing 	0.25 ... 2.5 mm ² 0.25 ... 1.5 mm ² 2.5 ... 2.5 mm ²
<ul style="list-style-type: none"> • AWG number as coded connectable conductor cross section solid • AWG number as coded connectable conductor cross section stranded 	24 ... 14 24 ... 14
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	
<ul style="list-style-type: none"> • with side-by-side mounting <ul style="list-style-type: none"> — forwards — backwards — upwards 	0 mm 0 mm 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
• ambient temperature during storage	-40 ... +85 °C
• ambient temperature during transport	-40 ... +85 °C
relative humidity during operation	10 ... 95 %

Certificates/ approvals

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

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

Marine / Shipping	other
 DNV-GIL	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=3RP2005-2AQ30>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RP2005-2AQ30>

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

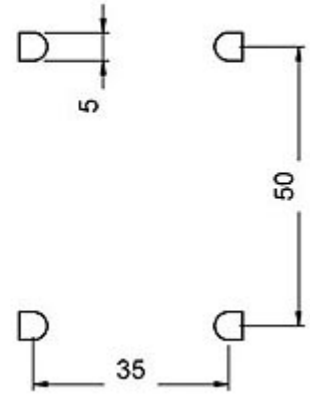
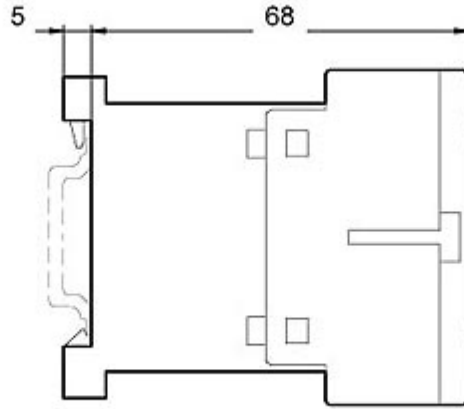
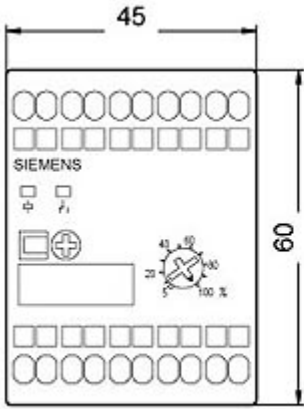
<https://support.industry.siemens.com/cs/ww/en/ps/3RP2005-2AQ30>

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

http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RP2005-2AQ30&lang=en

Characteristic: Derating

<https://support.industry.siemens.com/cs/ww/en/ps/3RP2005-2AQ30/manual>



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