SIEMENS

Data sheet 3RP2005-1AP30



Timing relay, electronic Multifunction, 8 functions 1 change-over contact 24 V AC/DC, 200 to 240 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 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 according to IEC 81346-2	К
relative repeat accuracy	1 %; +/-
influence of the surrounding temperature	±5 %
power supply influence	±1 %
Substance Prohibitance (Date)	05/01/2012
SVHC substance name	Lead - 7439-92-1 Lead monoxide (lead oxide) - 1317-36-8
Weight	123 g
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	200 240 V

* at 60 Hz control supply voltage 1 at Dor rated value control supply voltage 1 at Dor rated value control supply voltage 5 at Dor rated value control supply voltage 1 at Dor rated value control supply voltage 1 at Dor rated value control supply voltage 1 at Dor rated value control supply voltage rated value control supply voltag		
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number of NC contacts • delayed switching 0		AgSnO2
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▼ Instantaneous Contact		
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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	1 kV
61000-4-5	1 IVV
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
category according to EN 954-1 Electrical Safety	none
	IP20
Electrical Safety	
Electrical Safety protection class IP on the front according to IEC 60529	IP20
Electrical Safety protection class IP on the front according to IEC 60529 touch protection on the front according to IEC 60529	IP20 finger-safe, for vertical contact from the front
Electrical Safety protection class IP on the front according to IEC 60529 touch protection on the front according to IEC 60529 type of insulation Connections/ Terminals	IP20 finger-safe, for vertical contact from the front
Electrical Safety protection class IP on the front according to IEC 60529 touch protection on the front according to IEC 60529 type of insulation	IP20 finger-safe, for vertical contact from the front Basic insulation
Electrical Safety protection class IP on the front according to IEC 60529 touch protection on the front according to IEC 60529 type of insulation Connections/ Terminals product component removable terminal for auxiliary and	IP20 finger-safe, for vertical contact from the front Basic insulation
Electrical Safety protection class IP on the front according to IEC 60529 touch protection on the front according to IEC 60529 type of insulation Connections/ Terminals product component removable terminal for auxiliary and control circuit	IP20 finger-safe, for vertical contact from the front Basic insulation No
Electrical Safety protection class IP on the front according to IEC 60529 touch protection on the front according to IEC 60529 type of insulation Connections/ Terminals product component removable terminal for auxiliary and control circuit type of electrical connection for auxiliary and control circuit	IP20 finger-safe, for vertical contact from the front Basic insulation No
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Electrical Safety protection class IP on the front according to IEC 60529 touch protection on the front according to IEC 60529 type of insulation Connections/ Terminals product component removable terminal for auxiliary and control circuit type of electrical connection for auxiliary and control circuit type of connectable conductor cross-sections • solid	IP20 finger-safe, for vertical contact from the front Basic insulation No screw-type terminals 2x (0,51,5 mm²), 2x (0,75 2,5 mm²)
Electrical Safety protection class IP on the front according to IEC 60529 touch protection on the front according to IEC 60529 type of insulation Connections/ Terminals product component removable terminal for auxiliary and control circuit type of electrical connection for auxiliary and control circuit type of connectable conductor cross-sections • solid • finely stranded with core end processing	IP20 finger-safe, for vertical contact from the front Basic insulation No screw-type terminals 2x (0,51,5 mm²), 2x (0,75 2,5 mm²) 2x (0,51,5 mm²), 2x (0,75 2,5 mm²)
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Electrical Safety protection class IP on the front according to IEC 60529 touch protection on the front according to IEC 60529 type of insulation Connections/ Terminals product component removable terminal for auxiliary and control circuit type of electrical connection for auxiliary and control circuit type of connectable conductor cross-sections	IP20 finger-safe, for vertical contact from the front Basic insulation No screw-type terminals 2x (0,51,5 mm²), 2x (0,75 2,5 mm²) 2x (0,51,5 mm²), 2x (0,75 2,5 mm²) 2x (18 14) 2x (18 14) 0.5 2.5 mm²
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Electrical Safety protection class IP on the front according to IEC 60529 touch protection on the front according to IEC 60529 type of insulation Connections/ Terminals product component removable terminal for auxiliary and control circuit type of electrical connection for auxiliary and control circuit type of connectable conductor cross-sections	IP20 finger-safe, for vertical contact from the front Basic insulation No screw-type terminals 2x (0,51,5 mm²), 2x (0,75 2,5 mm²) 2x (0,51,5 mm²), 2x (0,75 2,5 mm²) 2x (18 14) 2x (18 14) 0.5 2.5 mm² 0.5 2.5 mm²
Electrical Safety protection class IP on the front according to IEC 60529 touch protection on the front according to IEC 60529 type of insulation Connections/ Terminals product component removable terminal for auxiliary and control circuit type of electrical connection for auxiliary and control circuit type of connectable conductor cross-sections	IP20 finger-safe, for vertical contact from the front Basic insulation No screw-type terminals 2x (0,51,5 mm²), 2x (0,75 2,5 mm²) 2x (0,51,5 mm²), 2x (0,75 2,5 mm²) 2x (18 14) 2x (18 14) 0.5 2.5 mm² 0.5 2.5 mm²
Electrical Safety protection class IP on the front according to IEC 60529 touch protection on the front according to IEC 60529 type of insulation Connections/ Terminals product component removable terminal for auxiliary and control circuit type of electrical connection for auxiliary and control circuit type of connectable conductor cross-sections	IP20 finger-safe, for vertical contact from the front Basic insulation No screw-type terminals 2x (0,51,5 mm²), 2x (0,75 2,5 mm²) 2x (0,51,5 mm²), 2x (0,75 2,5 mm²) 2x (18 14) 2x (18 14) 0.5 2.5 mm² 18 14 18 14
Electrical Safety protection class IP on the front according to IEC 60529 touch protection on the front according to IEC 60529 type of insulation Connections/ Terminals product component removable terminal for auxiliary and control circuit type of electrical connection for auxiliary and control circuit type of connectable conductor cross-sections	IP20 finger-safe, for vertical contact from the front Basic insulation No screw-type terminals 2x (0,51,5 mm²), 2x (0,75 2,5 mm²) 2x (0,51,5 mm²), 2x (0,75 2,5 mm²) 2x (18 14) 2x (18 14) 0.5 2.5 mm² 18 14 18 14 18 14 0.8 1.2 N·m
Electrical Safety protection class IP on the front according to IEC 60529 touch protection on the front according to IEC 60529 type of insulation Connections/ Terminals product component removable terminal for auxiliary and control circuit type of electrical connection for auxiliary and control circuit type of connectable conductor cross-sections	IP20 finger-safe, for vertical contact from the front Basic insulation No screw-type terminals 2x (0,51,5 mm²), 2x (0,75 2,5 mm²) 2x (0,51,5 mm²), 2x (0,75 2,5 mm²) 2x (18 14) 2x (18 14) 0.5 2.5 mm² 18 14 18 14 0.8 1.2 N·m
Electrical Safety protection class IP on the front according to IEC 60529 touch protection on the front according to IEC 60529 type of insulation Connections/ Terminals product component removable terminal for auxiliary and control circuit type of electrical connection for auxiliary and control circuit type of connectable conductor cross-sections	IP20 finger-safe, for vertical contact from the front Basic insulation No screw-type terminals 2x (0,51,5 mm²), 2x (0,75 2,5 mm²) 2x (0,51,5 mm²), 2x (0,75 2,5 mm²) 2x (18 14) 2x (18 14) 0.5 2.5 mm² 0.5 2.5 mm² 18 14 18 14 18 14 0.8 1.2 N·m M3
Electrical Safety protection class IP on the front according to IEC 60529 touch protection on the front according to IEC 60529 type of insulation Connections/ Terminals product component removable terminal for auxiliary and control circuit type of electrical connection for auxiliary and control circuit type of connectable conductor cross-sections	IP20 finger-safe, for vertical contact from the front Basic insulation No screw-type terminals 2x (0,51,5 mm²), 2x (0,75 2,5 mm²) 2x (0,51,5 mm²), 2x (0,75 2,5 mm²) 2x (18 14) 2x (18 14) 0.5 2.5 mm² 0.5 2.5 mm² 18 14 18 14 0.8 1.2 N·m M3
Electrical Safety protection class IP on the front according to IEC 60529 touch protection on the front according to IEC 60529 type of insulation Connections/ Terminals product component removable terminal for auxiliary and control circuit type of electrical connection for auxiliary and control circuit type of connectable conductor cross-sections	IP20 finger-safe, for vertical contact from the front Basic insulation No screw-type terminals 2x (0,51,5 mm²), 2x (0,75 2,5 mm²) 2x (0,51,5 mm²), 2x (0,75 2,5 mm²) 2x (18 14) 2x (18 14) 0.5 2.5 mm² 0.5 2.5 mm² 18 14 18 14 0.8 1.2 N·m M3 any screw and snap-on mounting onto 35 mm DIN rail
Electrical Safety protection class IP on the front according to IEC 60529 touch protection on the front according to IEC 60529 type of insulation Connections/ Terminals product component removable terminal for auxiliary and control circuit type of electrical connection for auxiliary and control circuit type of connectable conductor cross-sections	IP20 finger-safe, for vertical contact from the front Basic insulation No screw-type terminals 2x (0,51,5 mm²), 2x (0,75 2,5 mm²) 2x (0,51,5 mm²), 2x (0,75 2,5 mm²) 2x (18 14) 2x (18 14) 0.5 2.5 mm² 0.5 2.5 mm² 18 14 18 14 0.8 1.2 N·m M3 any screw and snap-on mounting onto 35 mm DIN rail 57 mm
Electrical Safety protection class IP on the front according to IEC 60529 touch protection on the front according to IEC 60529 type of insulation Connections/ Terminals product component removable terminal for auxiliary and control circuit type of electrical connection for auxiliary and control circuit type of connectable conductor cross-sections • solid • finely stranded with core end processing • for AWG cables solid • for AWG cables stranded connectable conductor cross-section • solid • finely stranded with core end processing AWG number as coded connectable conductor cross section • solid • stranded tightening torque design of the thread of the connection screw Installation/ mounting/ dimensions mounting position fastening method height width depth	IP20 finger-safe, for vertical contact from the front Basic insulation No screw-type terminals 2x (0,51,5 mm²), 2x (0,75 2,5 mm²) 2x (0,51,5 mm²), 2x (0,75 2,5 mm²) 2x (18 14) 2x (18 14) 0.5 2.5 mm² 0.5 2.5 mm² 18 14 18 14 0.8 1.2 N·m M3 any screw and snap-on mounting onto 35 mm DIN rail 57 mm 45 mm
Electrical Safety protection class IP on the front according to IEC 60529 touch protection on the front according to IEC 60529 type of insulation Connections/ Terminals product component removable terminal for auxiliary and control circuit type of electrical connection for auxiliary and control circuit type of connectable conductor cross-sections	IP20 finger-safe, for vertical contact from the front Basic insulation No screw-type terminals 2x (0,51,5 mm²), 2x (0,75 2,5 mm²) 2x (0,51,5 mm²), 2x (0,75 2,5 mm²) 2x (18 14) 2x (18 14) 0.5 2.5 mm² 0.5 2.5 mm² 18 14 18 14 0.8 1.2 N·m M3 any screw and snap-on mounting onto 35 mm DIN rail 57 mm 45 mm

— 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		



General Product Approval











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Type Test Certificates/Test Report









Marine / Shipping **Environment** other



Confirmation

Environmental Confirmations

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=3RP2005-1AP30

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RP2005-1AP30

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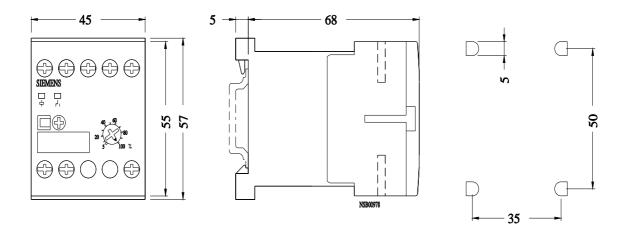
https://support.industry.siemens.com/cs/ww/en/ps/3RP2005-1AP30

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

http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RP2005-1AP30&lang=en

Characteristic: Derating

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