SIEMENS

Data sheet 3RP2540-1AB30



Timing relay, electronic OFF delay without control signal or smooth passing make contact non-volatile 24 V AC/DC, 1 change-over contact 7 time ranges, 0.05...600 s with LED, Screw terminal

product designation design of the product product type designation General technical data product component • relay output • relay output product extension output output product extension product extension optional remote control product extension optional remote control power loss [W] maximum insulation voltage for overvoltage category III according to IEC 60664 with degree of pollution 3 rated value test voltage for isolation test degree of pollution surge voltage resistance rated value protection class IP shock resistance acc. to IEC 60068-2-6 mechanical service life (switching cycles) typical electrical endurance (switching cycles) at AC-15 at 230 V typical adjustable time reference code acc. to IEC 81346-2 relative repeat a curracy type of voltage of the control supply voltage output of voltage of pollution AC/DC control supply voltage of the control supply voltage frequency 1	product brand name	SIRIUS	
einschaltwischend general technical data product component	product designation	timing relay	
General technical data product component • relay output • semi-conductor output product extension required remote control product extension pequired remote control power loss [W] maximum 2 W insulation voltage for overvoltage category III according to IEC 60064 with degree of pollution 3 rated value test voltage for isolation test degree of pollution 3 urge voltage resistance rated value protection class IP ivibration resistance acc. to IEC 60068-2-27 ivibration resistance acc. to IEC 60068-2-6 mechanical service life (switching cycles) typical electrical endurance (switching cycles) typical adjustable time cleativical endurance (switching cycles) at AC-15 at 230 V typical adjustable time cleative setting accuracy relating to full-scale value thermal current 5 A minimum ON period recovery time reference code acc. to IEC 81346-2 k relative repeat accuracy 1 % Substance Prohibitance (Date) Control circuit/ Control type of voltage of the control supply voltage at 50 Hz rated value 24 V at 50 Hz rated value 24 V control supply voltage frequency 1 50 60 Hz control supply voltage frequency 1	design of the product		
product component	product type designation	3RP25	
• relay output • semi-conductor output product extension required 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 test voltage for isolation test degree of pollution 3 urge voltage resistance rated value 4 000 V protection class IP IP20 shock resistance acc. to IEC 60068-2-7 11g / 15 ms vibration resistance acc. to IEC 60068-2-6 10 55 Hz / 0.35 mm mechanical service life (switching cycles) typical electrical endurance (switching cycles) typical adjustable time relative setting accuracy relating to full-scale value thermal current 5 A minimum ON period 250 ms reference code acc. to IEC 81346-2 relative repeat accuracy 1 1 % Substance Prohibitance (Date) 24 V eat 50 Hz rated value at 60 Hz rated value 4 V eat 60 Hz rated value 24 V eat 60 Hz rated value 6 Control supply voltage frequency 1 5 60 Hz	General technical data		
semi-conductor output product extension required remote control product extension optional remote control power loss [W] maximum 2 W insulation voltage for overvoltage category III according to IEC 60664 with degree of pollution 3 rated value test voltage for isolation test degree of pollution 3 surge voltage resistance rated value protection class IP insulation voltage resistance rated value protection class IP insulation resistance acc. to IEC 60068-2-27 inj / 15 ms vibration resistance acc. to IEC 60068-2-6 in 55 Hz / 0.35 mm mechanical service life (switching cycles) typical algustable time relative setting accuracy relating to full-scale value thermal current insulative setting accuracy relating to full-scale value thermal current insulative repeat accuracy 1 % Substance Prohibitance (Date) Control circuit/ Control type of voltage of the control supply voltage at 50 Hz rated value at 60 Hz rated value control supply voltage frequency 1 so 60 Hz	product component		
product extension required remote control 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 test voltage for isolation test degree of pollution 3 surge voltage resistance rated value 4 000 V protection class IP IP20 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 electrical endurance (switching cycles) at AC-15 at 230 V typical adjustable time cleating accuracy relating to full-scale value thermal current 5 A minimum ON period 250 ms recovery time 250 ms reference code acc. to IEC 81346-2 Krelative repeat accuracy 1 % Substance Prohibitance (Date) 12.09.2014 00:00:00 Control circuit/ Control type of voltage of the control supply voltage at 50 Hz rated value 4 V control supply voltage frequency 1 50 60 Hz	relay output	Yes	
product extension optional remote control power loss [W] maximum 2 W	 semi-conductor output 	No	
power loss [W] maximum insulation voltage for overvoltage category III according to IEC 60664 with degree of pollution 3 rated value test voltage for isolation test degree of pollution surge voltage resistance rated value protection class IP IP20 shock resistance acc. to IEC 60068-2-27 vibration resistance acc. to IEC 60068-2-27 mechanical service life (switching cycles) typical electrical endurance (switching cycles) at AC-15 at 230 V typical electrical endurance (switching cycles) at AC-15 at 230 V typical electrical endurance (switching cycles) at AC-15 at 230 V typical electrical endurance (switching cycles) at AC-15 at 250 V typical electrical endurance (switching cycles) at AC-15 at 250 V typical electrical endurance (switching cycles) at AC-15 at 250 V typical electrical endurance (switching cycles) at AC-15 at 250 V typical electrical endurance (switching cycles) at AC-15 at 250 V typical electrical endurance (switching cycles) at AC-15 at 250 V typical frelative settling accuracy relating to full-scale value thermal current inimimum ON period recovery time 250 ms reference code acc. to IEC 81346-2 k relative repeat accuracy 1 % Substance Prohibitance (Date) 12.09.2014 00:00:00 Control circuit/ Control type of voltage of the control supply voltage control supply voltage 1 at AC at 50 Hz rated value at 50 Hz rated value 24 V control supply voltage frequency 1 50 60 Hz	product extension required remote control	No	
insulation voltage for overvoltage category III according to IEC 60664 with degree of pollution 3 rated value test voltage for isolation test degree of pollution surge voltage resistance rated value 4 000 V protection class IP IP20 shock resistance acc. to IEC 60068-2-27 shock resistance acc. to IEC 60068-2-66 resistance acc. to IEC 60068-2-6 rechanical service life (switching cycles) typical electrical endurance (switching cycles) typical adjustable time relative setting accuracy relating to full-scale value thermal current shommon No period recovery time reference code acc. to IEC 81346-2 relative repeat accuracy 1 % Substance Prohibitance (Date) Control circuit/ Control type of voltage of the control supply voltage at 50 Hz rated value 4 000 V 2.5 kV done V 4 000 V 1 19 / 15 ms 1 10 /	product extension optional remote control	No	
test voltage for isolation test degree of pollution 3 surge voltage resistance rated value protection class IP 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 electrical endurance (switching cycles) at AC-15 at 230 V typical adjustable time elettive setting accuracy relating to full-scale value thermal current 5 A minimum ON period recovery time reference code acc. to IEC 81346-2 relative repeat accuracy 1 % Substance Prohibitance (Date) Control circuit/ Control type of voltage of the control supply voltage at 50 Hz rated value 4 000 V 2.5 kV 4 000 V 100 00 100 000 000 000 000 000 000 00	power loss [W] maximum	2 W	
degree of pollution surge voltage resistance rated value protection class IP shock resistance acc. to IEC 60068-2-27 vibration resistance acc. to IEC 60068-2-6 mechanical service life (switching cycles) typical electrical endurance (switching cycles) at AC-15 at 230 V typical adjustable time claive setting accuracy relating to full-scale value thermal current minimum ON period recovery time reference code acc. to IEC 81346-2 relative repeat accuracy 1 % Substance Prohibitance (Date) Control circuit/ Control type of voltage of the control supply voltage control supply voltage 1 at AC at 60 Hz rated value at 60 Hz rated value control supply voltage frequency 1 50 60 Hz		300 V	
surge voltage resistance rated value 4 000 V protection class IP IP20 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 0.05 600 s relative setting accuracy relating to full-scale value 5 % thermal current 5 A minimum ON period 250 ms recovery time 250 ms reference code acc. to IEC 81346-2 K relative repeat accuracy 1 % Substance Prohibitance (Date) 12.09.2014 00:00:00 Control circuit/ Control 4C/DC control supply voltage 1 at AC 4 C/DC • at 50 Hz rated value 24 V • at 60 Hz rated value 24 V • at 60 Hz rated value 24 V • control supply voltage frequency 1 50 60 Hz	test voltage for isolation test	2.5 kV	
protection class IP 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 electrical endurance (switching cycles) at AC-15 at 230 V typical adjustable time 0.05 600 s relative setting accuracy relating to full-scale value thermal current 5 A minimum ON period 250 ms recovery time 250 ms reference code acc. to IEC 81346-2 K relative repeat accuracy 1 % Substance Prohibitance (Date) 12.09.2014 00:00:00 Control circuit/ Control type of voltage of the control supply voltage at 60 Hz rated value 44 V control supply voltage frequency 1 50 60 Hz	degree of pollution	3	
shock resistance acc. to IEC 60068-2-27 vibration resistance acc. to IEC 60068-2-6 nechanical service life (switching cycles) typical electrical endurance (switching cycles) at AC-15 at 230 V typical adjustable time 0.05 600 s relative setting accuracy relating to full-scale value thermal current 5 A minimum ON period 250 ms reference code acc. to IEC 81346-2 relative repeat accuracy 1 % Substance Prohibitance (Date) type of voltage of the control supply voltage at 50 Hz rated value at 60 Hz rated value 24 V control supply voltage frequency 1 50 60 Hz	surge voltage resistance rated value	4 000 V	
vibration resistance acc. to IEC 60068-2-6 mechanical service life (switching cycles) typical electrical endurance (switching cycles) at AC-15 at 230 V typical adjustable time crelative setting accuracy relating to full-scale value thermal current 5 A minimum ON period recovery time reference code acc. to IEC 81346-2 relative repeat accuracy 1 % Substance Prohibitance (Date) Control circuit/ Control type of voltage of the control supply voltage at 60 Hz rated value at 60 Hz rated value at 00 Mz	protection class IP	IP20	
mechanical service life (switching cycles) typical electrical endurance (switching cycles) at AC-15 at 230 V typical adjustable time 0.05 600 s relative setting accuracy relating to full-scale value thermal current 5 A minimum ON period 250 ms recovery time 250 ms reference code acc. to IEC 81346-2 K relative repeat accuracy 1 % Substance Prohibitance (Date) Control circuit/ Control type of voltage of the control supply voltage e at 50 Hz rated value e at 60 Hz rated value 5 % 100 000 100 000 100 000 100 000 100 000 5 % 4 K F (C) C Control supply voltage 1 at AC e at 50 Hz rated value 24 V control supply voltage frequency 1 50 60 Hz	shock resistance acc. to IEC 60068-2-27	11g / 15 ms	
electrical endurance (switching cycles) at AC-15 at 230 V typical adjustable time 0.05 600 s relative setting accuracy relating to full-scale value thermal current 5 A minimum ON period 250 ms recovery time 250 ms reference code acc. to IEC 81346-2 K relative repeat accuracy 1 % Substance Prohibitance (Date) Control circuit/ Control type of voltage of the control supply voltage at 50 Hz rated value at 60 Hz rated value 24 V control supply voltage frequency 1 50 60 Hz	vibration resistance acc. to IEC 60068-2-6	10 55 Hz / 0.35 mm	
adjustable time adjustable time relative setting accuracy relating to full-scale value thermal current 5 A minimum ON period 250 ms recovery time 250 ms reference code acc. to IEC 81346-2 K relative repeat accuracy 1 % Substance Prohibitance (Date) 12.09.2014 00:00:00 Control circuit/ Control type of voltage of the control supply voltage control supply voltage 1 at AC • at 50 Hz rated value • at 60 Hz rated value control supply voltage frequency 1 5 % 0.05 60 Hz	mechanical service life (switching cycles) typical	10 000 000	
relative setting accuracy relating to full-scale value thermal current 5 A minimum ON period 250 ms recovery time 250 ms reference code acc. to IEC 81346-2 K relative repeat accuracy 1 % Substance Prohibitance (Date) 12.09.2014 00:00:00 Control circuit/ Control type of voltage of the control supply voltage control supply voltage 1 at AC • at 50 Hz rated value • at 60 Hz rated value 24 V control supply voltage frequency 1 5 % 4 So Mz	· · · · · · · · · · · · · · · · · · ·	100 000	
thermal current minimum ON period z50 ms recovery time z50 ms reference code acc. to IEC 81346-2 K relative repeat accuracy 1 % Substance Prohibitance (Date) 12.09.2014 00:00:00 Control circuit/ Control type of voltage of the control supply voltage control supply voltage 1 at AC at 50 Hz rated value at 60 Hz rated value 24 V control supply voltage frequency 1 50 60 Hz	adjustable time	0.05 600 s	
minimum ON period recovery time 250 ms reference code acc. to IEC 81346-2 K relative repeat accuracy 1 % Substance Prohibitance (Date) 12.09.2014 00:00:00 Control circuit/ Control type of voltage of the control supply voltage control supply voltage 1 at AC at 50 Hz rated value at 60 Hz rated value 24 V control supply voltage frequency 1 50 60 Hz	relative setting accuracy relating to full-scale value	5 %	
recovery time reference code acc. to IEC 81346-2 K relative repeat accuracy Substance Prohibitance (Date) 12.09.2014 00:00:00 Control circuit/ Control type of voltage of the control supply voltage control supply voltage 1 at AC at 50 Hz rated value at 60 Hz rated value control supply voltage frequency 1 250 ms K AC/DC	thermal current	5 A	
reference code acc. to IEC 81346-2 Relative repeat accuracy Substance Prohibitance (Date) 12.09.2014 00:00:00 Control circuit/ Control type of voltage of the control supply voltage control supply voltage 1 at AC at 50 Hz rated value at 60 Hz rated value control supply voltage frequency 1 Control supply voltage frequency 1	minimum ON period	250 ms	
relative repeat accuracy Substance Prohibitance (Date) 12.09.2014 00:00:00 Control circuit/ Control type of voltage of the control supply voltage control supply voltage 1 at AC at 50 Hz rated value at 60 Hz rated value control supply voltage frequency 1 50 60 Hz	recovery time	250 ms	
Substance Prohibitance (Date) Control circuit/ Control type of voltage of the control supply voltage control supply voltage 1 at AC at 50 Hz rated value at 60 Hz rated value control supply voltage frequency 1 control supply voltage frequency 1	reference code acc. to IEC 81346-2	K	
type of voltage of the control supply voltage control supply voltage 1 at AC at 50 Hz rated value at 60 Hz rated value control supply voltage frequency 1 control supply voltage frequency 1 control supply voltage frequency 1	relative repeat accuracy	1 %	
type of voltage of the control supply voltage control supply voltage 1 at AC at 50 Hz rated value at 60 Hz rated value control supply voltage frequency 1 control supply voltage frequency 1	Substance Prohibitance (Date)	12.09.2014 00:00:00	
control supply voltage 1 at AC • at 50 Hz rated value • at 60 Hz rated value control supply voltage frequency 1 50 60 Hz	Control circuit/ Control		
 at 50 Hz rated value at 60 Hz rated value control supply voltage frequency 1 50 60 Hz 	type of voltage of the control supply voltage	AC/DC	
• at 60 Hz rated value 24 V control supply voltage frequency 1 50 60 Hz	control supply voltage 1 at AC		
control supply voltage frequency 1 50 60 Hz	at 50 Hz rated value	24 V	
	at 60 Hz rated value	24 V	
control supply voltage 1	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
	1.1
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
inrush current peak	
• at 24 V	2 A
duration of inrush current peak	
• at 24 V	1 ms
Switching Function	
switching function	
ON-delay	No
ON-delay/instantaneous contact	No
passing make contact	Yes
passing make contact/instantaneous contact	No
OFF delay	Yes
switching function	165
flashing symmetrically with interval start/instantaneous	No
flashing symmetrically with interval start	No
flashing symmetrically with pulse	No
start/instantaneous • flashing symmetrically with pulse start	No
flashing symmetrically with interval start	No
flashing asymmetrically with pulse start	No
switching function	110
star-delta circuit with delay time	No
star-delta circuit star-delta circuit	No
switching function with control signal	
additive ON-delay	No
passing break contact	No
passing break contact passing break contact/instantaneous	No
OFF delay	No
OFF delay/instantaneous	No
pulse delayed	No
pulse delayedpulse delayed/instantaneous	No
pulse delayed/instantaneouspulse-shaping	No
pulse-shapingpulse-shaping/instantaneous	No
pulse-shaping/instantaneousadditive ON-delay/instantaneous	No
-	No
ON-delay/OFF-delay/instantaneous passing make contact	No
passing make contactpassing make contact/instantaneous contact	No
switching function of interval relay with control signal	110
	No
retrotriggerable with deactivated control signal/instantaneous contact	
retrotriggerable with switched-on control signal	No No
 retrotriggerable with switched-on control signal/instantaneous contact 	No
retriggerable with deactivated control signal	No
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	
• 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, 5mA)
influence of the surrounding temperature	1% in the whole temperature range to the set runtime
power supply influence	1% in the whole voltage range to the set runtime
switching capacity current with inductive load	0.01 3 A
Inputs/ Outputs	
product function	
 at the relay outputs switchover delayed/without delay 	No
• non-volatile	Yes
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
type of insulation	Basic insulation
category acc. to EN 954-1	none
Connections/ Terminals	
product component removable terminal for auxiliary and control circuit	Yes
type of electrical connection for auxiliary and control circuit	screw-type terminals
type of connectable conductor cross-sections	
• solid	1x (0.5 4.0 mm²), 2x (0.5 2.5 mm²)
 finely stranded with core end processing 	1x (0.5 4 mm²), 2x (0.5 1.5 mm²)
 at AWG cables solid 	1x (20 12), 2x (20 14)
at AWG cables stranded	1x (20 12), 2x (20 14)
connectable conductor cross-section	
• solid	0.5 4 mm²
finely stranded with core end processing	0.5 4 mm²
AWG number as coded connectable conductor cross section	00 40
• solid	20 12
• stranded	20 14
tightening torque	0.6 0.8 N·m
design of the thread of the connection screw	M3
Installation/ mounting/ dimensions	
mounting position	any
fastening method height	screw and snap-on mounting onto 35 mm standard mounting rail 100 mm

width	22.5 mm		
depth	90 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

Declaration of Conformity

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=3RP2540-1AB30

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RP2540-1AB30

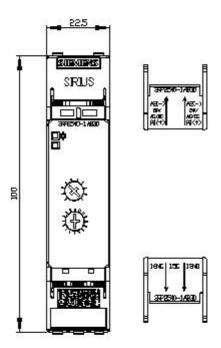
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

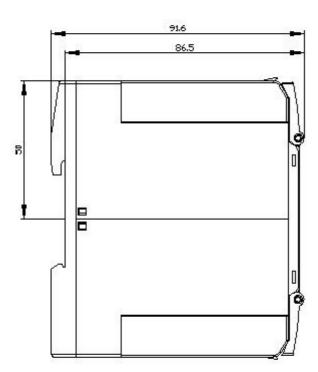
https://support.industry.siemens.com/cs/ww/en/ps/3RP2540-1AB30

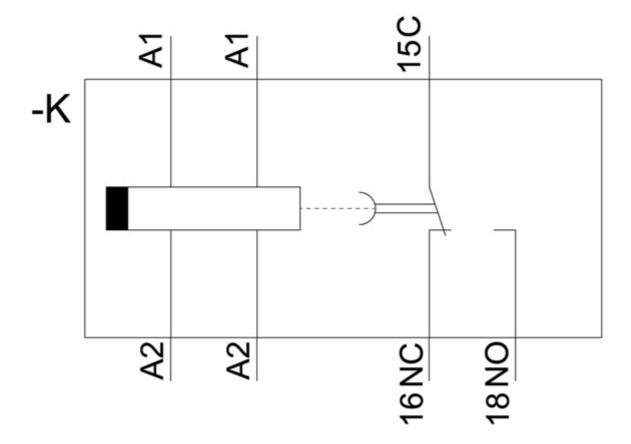
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...) http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RP2540-1AB30&lang=en

Characteristic: Derating

https://support.industry.siemens.com/cs/ww/en/ps/3RP2540-1AB30/manual







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