SIEMENS

Data sheet 3RP2505-1BT20



Timing relay, Multifunction 2 change-over contacts, 27 functions 7 time ranges (0.05 s...100 h) 400-440 V AC at 50/60 Hz AC with LED, Screw

product brand name product designation design of the product product type designation timing relay 27 functions

General technical data

product component

· relay output

• semi-conductor output

product extension required 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 according to IEC 60068-2-27

vibration resistance according to IEC 60068-2-6 mechanical service life (switching cycles) typical

electrical endurance (switching cycles) at AC-15 at

230 V typical

adjustable time

relative setting accuracy relating to full-scale value

thermal current minimum ON period

recovery time

reference code according to IEC 81346-2

relative repeat accuracy

influence of the surrounding temperature

power supply influence

Substance Prohibitance (Date)

SIRIUS

3RP25

Yes

No

No

No

2 W

500 V

2.5 kV 3

4 000 V

IP20

11g / 15 ms

10 ... 55 Hz / 0.35 mm

10 000 000

100 000

0.05 s ... 100 h

5 %; +/-

5 A

35 ms

150 ms

1 %; +/-

1% in the whole temperature range to the set runtime

1% in the whole voltage range to the set runtime

09/12/2014

Control circuit/ Control

type of voltage of the control supply voltage control supply voltage 1 at AC

• at 50 Hz

• at 60 Hz

control supply voltage frequency 1

operating range factor control supply voltage rated

value at AC at 50 Hz • full-scale value

initial value

AC

400 ... 440 V

400 ... 440 V

50 ... 60 Hz

0.85

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	1.1
• at 440 V	1.5 A
duration of inrush current peak	IJA
• at 440 V	0.1 ms
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 	Yes
start/instantaneous	
 flashing symmetrically with interval start 	Yes
 flashing symmetrically with pulse start/instantaneous 	Yes
flashing symmetrically with pulse start	Yes
flashing symmetrically 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	Yes
 pulse delayed/instantaneous 	Yes
• pulse-shaping	Yes
pulse-shaping/instantaneous	Yes
additive ON-delay/instantaneous	Yes
ON-delay/OFF-delay/instantaneous	Yes
passing make contact	Yes Yes
 passing make contact/instantaneous contact switching function of interval relay with control signal 	Tes
retrotriggerable with deactivated control	Yes
signal/instantaneous contact	163
retrotriggerable with switched-on control signal	Yes
 retrotriggerable with switched-on control 	Yes
signal/instantaneous contact	
retriggerable with deactivated control signal	Yes
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	0
delayed switching instantaneous contact	0
instantaneous contact number of CO contacts	
delayed switching	2
instantaneous contact	0
operational current of auxiliary contacts at AC-15	

* at 24 V		
and 400 V operational current of auxiliary contacts at DC-13 and 24 V	● at 24 V	3 A
operational current of auxiliary contacts at DC-13 * at 125 V * at 125 V * operating frequency with 3RT2 contactor maximum contact reliability of auxiliary contacts contact reliability of auxiliary contacts contact reliability of auxiliary contacts according to UL switching apacity current with inductive load inputs/ Outputs product function * at the relay outputs witchover delayed/without delay * inon-volatile * ElMC emitted interference according to IEC 61812-1 conducted interference according to IEC 61802-4 * due to conductor-and uctor surge according to IEC 61800-4-3 * due to conductor-onductor surge according to IEC 61800-4-3 * due to conductor-onductor surge according to IEC 61800-4-3 * due to conductor-onductor surge according to IEC 61800-4-3 * due to conductor-onductor surge according to IEC 61800-4-3 * due to conductor-onductor surge according to IEC 61800-4-3 * due to conductor-onductor surge according to IEC 61800-4-3 * due to conductor-onductor surge according to IEC 61800-4-3 * due to conductor-onductor surge according to IEC 61800-4-3 * floid-based interference according to IEC 61800-4-3 * due to conductor-onductor surge according to IEC 61800-4-3 * due to conductor-onductor surge according to IEC 61800-4-3 * floid-based interference according to IEC 61800-4-3 * floid-bas	• at 250 V	3 A
* at 254 V * at 250 V * at 2	● at 400 V	3 A
a 125 V a 225 V operating frequency with 3RT2 contactor maximum contact reliability of auxiliary contacts contact rating of auxiliary contacts according to UL awritching capacity current with inductive load not be reliably outputs product function at the relay outputs whichover delayed/without delay delay product maximum one induction in the reference according to IEC 61812-1 conducted interference according to IEC 61812-1 conducted interference according to IEC 61800-4-3 due to bust according to IEC 61800-4-3 due to conductor-cent surge according to IEC 61800-4-3 due to conductor-cent surge according to IEC 61800-4-3 due to bust according to IEC 61800-4-3 due to conductor-cent surge according to IEC 61800-4-3 due to conductor-cent surge according to IEC 61800-4-3 due to bust according to IEC 61800-4-3 due to conductor-cent surge according to IEC 61800-4-3 due to conductor-cent surge according to IEC 61800-4-3 due to conductor-cent surge according to IEC 61800-4-3 due to conductor result according to IEC 61800-4-3 due to conductor result for IEC 61800-4-3 due to conductor resu	operational current of auxiliary contacts at DC-13	
• et 250 V operating frequency with 3RT2 contactor maximum contact railing of auxiliary contacts according to UL which inductive load 0.013 A 0.013	• at 24 V	
operating frequency with 3RT2 contactor maximum contact reliability of auxiliary contacts according to UL switching apacity current with inductive load (Inputs) Outputs (Inputs) Outputs) Outputs (Inputs) Output	• at 125 V	
contact reliability of auxiliary contacts contact rating of auxiliary contacts according to UL switching apacety current with inductive load nputs/ Outputs product function	● at 250 V	0.1 A
v. 5 mA) switching capacity current with inductive load inputs/ Outputs product function • at the relay outputs switchover delayed/without delay total to a the relay outputs switchover delayed/without delay one with a control of the Control	operating frequency with 3RT2 contactor maximum	5 000 1/h
contact rating of auxiliary contacts according to UL switching capacity current with inductive load (0.01 3 A) Inputs/Outputs product function	contact reliability of auxiliary contacts	
inputs / Outputs Product function at the relay outputs switchover delayed/without delay Yes No		• ,
product function		
product function • at the relay outputs switchover delayed/without delay • at the relay outputs switchover delayed/without delay in onn-volable Electromagnetic compatibility EMC emitted interference according to IEC 61812-1 EMC immunity according to IEC 61800-4-4 • due to conductor-earth surge according to IEC 61000-4-3 • due to conductor-conductor surge according to IEC 61000-4-3 • due to conductor-conductor surge according to IEC 61000-4-3 • due to conductor-conductor surge according to IEC 61000-4-3 • due to conductor-conductor surge according to IEC 61000-4-3 • due to conductor-conductor surge according to IEC 61000-4-3 • due to conductor-conductor surge according to IEC 61000-4-3 • due to conductor-conductor surge according to IEC 61000-4-3 • due to conductor-conductor surge according to IEC 61000-4-3 • all Virginity of the front according to IEC 61000-4-3 • solid • finely standed with core end processing • at AWG cables standed connectable conductor cross-section • solid • finely standed with core end processing • at AWG cables stranded connectable conductor cross-section • solid • finely standed with core end processing • at AWG cables stranded connectable conductor cross-section • solid • finely stranded with core end processing • at AWG cables stranded connectable conductor cross-section • solid • finely stranded with core end processing • at AWG cables stranded connectable conductor cross-section • solid • stranded • finely stranded with core end processing • at AWG cables stranded connectable conductor cross-section • solid • stranded • finely stranded with core end processing • at AWG cables stranded connectable conductor cross-section • solid • finely stranded with core end processing • at AWG cables stranded connectable conductor cross-section • solid • finely stranded with core end processing • at AWG cables stranded connectable conductor cross-section • solid • finely stranded with core end processing • finely stranded with core		0.01 3 A
at the relay outputs switchover delayed-without delay	Inputs/ Outputs	
delay • non-volabile No Electromagnetic compatibility EMC emitted interference according to IEC 61812-1 conducted interference • due to bust according to IEC 61000-4-4 • due to conductor-cearth surge according to IEC 61000-4-5 • due to conductor-conductor surge according to IEC 61000-4-5 • due to conductor-conductor surge according to IEC 61000-4-5 • due to conductor-conductor surge according to IEC 61000-4-5 • due to conductor-conductor surge according to IEC 61000-4-3 • deterostatic discharge according to IEC 61000-4-3 electrostatic discharge according to IEC 61000-4-3 electrostatic discharge according to IEC 61000-4-2 Safety related data protection class IP on the front according to IEC 60829 protection class IP on the	product function	
e non-volatile Electromagnetic compatibility EMC emitted interference according to IEC 61812-1 EMC Immunity according to IEC 61812-1 conducted interference • due to burst according to IEC 61800-4-4 • due to conductor-earth surge according to IEC 61000-4-5 • due to conductor-conductor surge according to IEC 61000-4-5 • due to conductor-conductor surge according to IEC 61000-4-5 • due to conductor-conductor surge according to IEC 61000-4-5 • due to conductor-conductor surge according to IEC 61000-4-5 • due to conductor-conductor surge according to IEC 61000-4-5 • due to conductor-conductor surge according to IEC 61000-4-5 • due to conductor-conductor surge according to IEC 61000-4-3 • field-based interference according to IEC 61000-4-2 • deve to conductor-conductor surge according to IEC 61000-4-3 • field-based interference according to IEC 61000-4-2 • deve to conductor-conductor for IEC 61000-4-3 • field-based interference according to IEC 61000-4-2 • Safety rolated data protection class IP on the front according to IEC 61000-4-2 • Safety rolated data protection class IP on the front according to IEC 61000-4-2 • Revision of the front according to IEC 61000-4-2 • Revision of the front according to IEC 61000-4-2 • Safety rolated data protection class IP on the front according to IEC 61000-4-2 • Revision of the front according to IEC 61000-4-2 • Revision of the front according to IEC 61000-4-2 • Revision of the front according to IEC 61000-4-2 • Revision of the front according to IEC 61000-4-2 • Revision of the front according to IEC 61000-4-2 • Revision of the front according to IEC 61000-4-2 • Revision of the front according to IEC 61000-4-2 • Revision of the front according to IEC 61000-4-2 • Revision of the front according to IEC 61000-4-2 • Revision of the front according to IEC 61000-4-2 • Revision of the front according to IEC 61000-4-2 • Revision of the front according to IEC 61000-4-2 • Revision of the front according to IEC 61000-4-2 • Revision of the front according to IEC 61000-4-2 • Revision of	 at the relay outputs switchover delayed/without 	Yes
Electromagnetic compatibility EMC emitted interference according to IEC 61812-1 conducted interference • due to burst according to IEC 6100-4-4 • due to conductor-earth surge according to IEC 6100-4-5 • due to conductor-conductor surge according to IEC 6100-4-5 • due to conductor-conductor surge according to IEC 6100-4-5 filled-based interference according to IEC 61000-4-3 electrostatic discharge according to IEC 61000-4-3 electrostatic discharge according to IEC 61000-4-2 Safety related data protection class IP on the front according to IEC 60029 protection class IP on the front a	,	
EMC emitted interference according to IEC 61812-1 EMC immunity according to IEC 61812-1 Conducted interference • due to burst according to IEC 61000-4-2 • due to conductor-earth surge according to IEC 61000-4-5 • due to conductor-conductor surge according to IEC 61000-4-5 • due to conductor-conductor surge according to IEC 61000-4-5 • field-based interference according to IEC 61000-4-3 • electrostatic discharge according to IEC 61000-4-3 • electrostatic discharge according to IEC 61000-4-3 • protection class IP on the front according to IEC 62529 • type of insulation category according to EN 954-1 Connections/ Torminals product component removable terminal for auxiliary and control circuit type of electrical connectable conductor cross-sections • solid • sinely stranded with core end processing • at AWG cables stranded • at AWG cables stranded • stranded	non-volatile	No
EMC immunity according to IEC 61812-1 conducted interference	Electromagnetic compatibility	
conducted interference • due to burst according to IEC 61000-4-4 • due to conductor-earth surge according to IEC 61000-4-5 • due to conductor-conductor surge according to IEC 61000-4-5 field-based interference according to IEC 61000-4-2 electrostatic discharge according to IEC 61000-4-2 Safety rolated data protection class IP on the front according to IEC 60529 Safety rolated of the connection of auxiliary and control circuit type of insulation category according to EN 954-1 Connections/ Terminals Product component removable terminal for auxiliary and control circuit type of connectable conductor cross-sections • solid • shelly stranded with core end processing • at AWG cables stranded connectable conductor cross-section • solid • stranded • 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 material stranded tightening torque design of the thread of the connection screw material stranded tightening position fastening method height width depth required spacing • with side-by-side mounting • throwards • Do mm - downwards • O mm	· · · · · · · · · · · · · · · · · · ·	ambience A (industrial sector)
• due to burst according to IEC 61000-4-4 • due to conductor-earth surge according to IEC 61000-4-5 • due to conductor-conductor surge according to IEC 61000-4-5 • due to conductor-conductor surge according to IEC 61000-4-3 • field-based interference according to IEC 61000-4-3 • due to conductor according to IEC 61000-4-2 Safety related data protection class IP on the front according to IEC 6529 type of insulation category according to EN 954-1 Connections/ Terminals product component removable terminal for auxillary 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 • at AWG cables solid • at AWG cables stranded connectable conductor cross-section • solid • finely stranded with core end processing • finely stranded with core end processing • AWG number as coded connectable conductor cross-section • solid • finely stranded with core end processing AWG number as coded connectable conductor cross-section • solid • solid • finely stranded with core end processing AWG number as coded connectable conductor cross-section • solid • solid • solid • stranded † stranded	EMC immunity according to IEC 61812-1	corresponds to degree of severity 3
due to conductor-earth surge according to IEC	conducted interference	
61000-4-5 • due to conductor-conductor surge according to IEC 61000-4-5 field-based interference according to IEC 61000-4-2 selectrostatic discharge according to IEC 61000-4-2 Safety related data protection class IP on the front according to IEC 60529 type of insulation category according to EN 954-1 Connections/Torminals 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 at AWG cables stranded connectable conductor cross-section • solid • finely stranded with core end processing AWG number as coded connectable conductor cross-section • solid • solid • finely stranded with core end processing AWG number as coded connectable conductor cross-section • solid • solid • solid • stranded tightening torque design of the thread of the connection screw mounting position fastening method height width depth required spacing • with side-by-side mounting • with side-by-side mounting • with side-by-side mounting • chorwards • omm • omm • omm • omm • owmards • omm •		2 kV network connection / 1 kV control connection
due to conductor-conductor surge according to IEC filed-based interference according to IEC 61000-4-2 lelectrostatic discharge according to IEC 61000-4-2 A kV contact discharge / 8 kV air discharge protection class IP on the front according to IEC 60529 type of insulation category according to EN 954-1 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		2 kV
field-based interference according to IEC 61000-4-2 Safety related data protection class IP on the front according to IEC 6000-4-2 type of insulation category according to EN 954-1 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 • at AWG cables stranded connectable conductor cross-section • solid • solid • finely stranded with core end processing • at AWG cables stranded connectable conductor cross-section • solid • solid • finely stranded with core end processing AWG number as coded connectable conductor cross-section • solid • since y type of the thread of the connection screw M3 Installation/ mounting/ dimensions mounting position fastening method height width depth required spacing • with side-by-side mounting • forwards — backwards — downwards O mm		4114
field-based interference according to IEC 61000-4-2 electrostatic discharge according to IEC 61000-4-2 Safety related data protection class IP on the front according to IEC 61000-4-2 type of insulation category according to EN 954-1 Connections/ Terminals product component removable terminal for auxiliary and control circuit type of electrical connection 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 • at AWG cables solid • at AWG cables stranded connectable conductor cross-section • solid • finely stranded with core end processing • solid • finely stranded with core end processing • solid • finely stranded with core end processing • solid • finely stranded with core end processing • solid • finely stranded with core end processing • solid • solid • solid • stranded • tightening torque design of the thread of the connection screw M3 Installation/ mounting/ dimensions mounting position fastening method height vidth 22.5 mm depth required spacing • with side-by-side mounting • with side-by-side mounting • monwards • downwards • o mm o mm - downwards • o mm		1 kV
satety related data protection class IP on the front according to IEC 61000-4-2 type of insulation category according to EN 554-1 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-section		10 V/m
P20		
protection class IP on the front according to IEC 60529 type of insulation category according to EN 954-1 none Connections/ Torminals product component removable terminal for auxiliary and control circuit type of electrical connection for auxiliary and control circuit type of electrical connection for auxiliary and control circuit type of connectable conductor cross-sections • solid • solid 1x (0.5 4.0 mm²), 2x (0.5 2.5 mm²) • inely stranded with core end processing 1x (0.5 4.0 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) • finely stranded with core end processing 0.5 4 mm² • solid 0.5 4 mm² AWG number as coded connectable conductor cross-section • solid 0.5 4 mm² • solid 20 12 • stranded tightening torque 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 rall height 100 mm screw and snap-on mounting onto 35 mm standard mounting rall height 90 mm required spacing • with side-by-side mounting • forwards 0 mm • forwards 0 mm - forwards 0 mm - downwards 0 mm		4 KV Contact alconarge / C KV all alconarge
type of insulation attegory according to EN 954-1 none Connections/ Terminals product component removable terminal for auxiliary and control circuit type of electrical connection for auxiliary and control circuit type of electrical connection for auxiliary and control circuit type of electrical connection for auxiliary and control circuit type of electrical connection for auxiliary and control circuit type of electrical connection for auxiliary and control circuit type of connectable conductor cross-sections • solid • solid • at AWG cables solid • at AWG cables stranded • at AWG cables stranded • solid • stranded with core end processing AWG number as coded connectable conductor cross section • solid • stranded • stranded • stranded tightening torque design of the thread of the connection screw M3 Installation/ mounting/ dimensions mounting position fastening method height width • 22.5 mm depth required spacing • with side-by-side mounting — forwards — backwards — upwards — downwards O mm O mm O mm		IDOO
type of insulation category according to EN 954-1 Connections/ Terminals product component removable terminal for auxiliary and control circuit type of connectable conductor cross-sections • solid • solid • at AWG cables stranded • finely stranded with core end processing • solid • finely stranded with core end processing • solid • finely stranded with core end processing • solid • at AWG cables stranded connectable conductor cross-section • solid • finely stranded with core end processing AWG number as coded connectable conductor cross section • solid • stranded • stranded • stranded • tightening torque design of the thread of the connection screw M3 Installation/ mounting/ dimensions mounting position fastening method height width 22.5 mm depth required spacing • with side-by-side mounting — forwards — backwards — upwards — downwards • omm • downwards • omm • om		IP20
category according to EN 954-1 Connections/ Terminals product component removable terminal for auxillary 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 • at AWG cables solid • at AWG cables stranded connectable conductor cross-section • solid • finely stranded with core end processing • at AWG cables stranded connectable conductor cross-section • solid • finely stranded with core end processing AWG number as coded connectable conductor cross-section • solid • solid • stranded • stranded • stranded • tightening torque design of the thread of the connection screw M3 Installation/ mounting/ dimensions mounting position fastening method height width 22.5 mm epot mm • forwards — backwards — upwards — upwards — downwards vession Yes screw-type terminals Yes screw-type terminals 1x (0.5 4.0 mm²), 2x (0.5 2.5 mm²) 1x (0.5 4.0 mm²), 2x (0.5 2.5 mm²) 1x (20 12), 2x (20 14) 1x (20		Rasic insulation
product component removable terminal for auxiliary and control circuit type of electrical connection for auxiliary and control circuit type of electrical connection for auxiliary and control circuit type of electrical connection for auxiliary and control circuit type of connectable conductor cross-sections • solid • sinely stranded with core end processing • at AWG cables solid • at 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 mounting position fastening method height width depth required spacing • with side-by-side mounting — forwards — backwards — upwards — downwards Ves screw-type terminals 1x (20 4.0 mm²), 2x (0.5 2.5 mm²) 1x (20 1.5 mm²) 1x (20 12, 2x (20 14) 1x (20 12), 2x (20 14	••	
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 • at AWG cables stranded • at AWG cables stranded connectable conductor cross-section • solid • finely stranded with core end processing • solid • finely stranded with core end processing • Solid • solid • solid • solid • solid • solid • stranded with core end processing AWG number as coded connectable conductor cross-section • solid • stranded • stranded • stranded • tightening torque design of the thread of the connection screw M3 Installation/mounting/dimensions mounting position fastening method height width depth required spacing • with side-by-side mounting - forwards - backwards - upwards - downwards • omm - downwards - downwards • omm - downwards - downwards - screw-type terminals tx (0.5 4.0 mm²), 2x (0.5 2.5 mm²) 1x (0.5 4.0 mm²), 2x (0.5 2.5 mm²) 1x (0.5 4 mm²), 2x (0.5 1.5 mm²) 1x (20 12), 2x (20 14) 1x (20 12), 2x (20 14 1x (20 12), 2x (20 1	category according to EN 954-1	none
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 • at AWG cables solid • at AWG cables stranded • solid • solid • solid • solid • solid • finely stranded with core end processing • solid • solid • solid • finely stranded with core end processing AWG number as coded connectable conductor cross-section • solid • solid • solid • stranded • stranded • stranded • tightening torque design of the thread of the connection screw M3 Installation/ mounting/ dimensions mounting position fastening method height width depth required spacing • with side-by-side mounting • with side-by-side mounting — forwards — backwards — backwards — downwards • onm		none
type of electrical connection for auxiliary and control circuit type of connectable conductor cross-sections • solid • finely stranded with core end processing • at AWG cables solid • at AWG cables stranded • at AWG cables stranded • at AWG cables stranded • finely stranded with core end processing • solid • at AWG cables stranded • at AWG cables stranded • solid • finely stranded with core end processing AWG number as coded connectable conductor cross-section • solid • stranded • stranded • stranded • stranded • stranded • stranded • tightening torque design of the thread of the connection screw M3 Installation/ mounting/ dimensions mounting position fastening method height width • gen and snap-on mounting onto 35 mm standard mounting rail height width 22.5 mm 90 mm required spacing • with side-by-side mounting — forwards — backwards — backwards — upwards — downwards 0 mm 0 mm	Connections/ Terminals	
type of connectable conductor cross-sections • solid finely stranded with core end processing • at AWG cables solid • at AWG cables stranded • solid • at AWG cables stranded • solid • finely stranded with core end processing • solid • finely stranded with core end processing • solid • finely stranded with core end processing AWG number as coded connectable conductor crosssection • solid • solid • stranded • stranded • stranded • stranded • stranded • stranded • solid • stranded • stranded • solid • stranded • stranded • solid • stranded • stranded • solid	Connections/ Terminals product component removable terminal for auxiliary	
	Connections/ Terminals product component removable terminal for auxiliary and control circuit	Yes
 finely stranded with core end processing at AWG cables solid at AWG cables stranded (20 12), 2x (20 14) at AWG cables stranded (20 12), 2x (20 14) connectable conductor cross-section solid finely stranded with core end processing AWG number as coded connectable conductor cross section solid stranded stranded tightening torque design of the thread of the connection screw mounting position fastening method screw and snap-on mounting onto 35 mm standard mounting rail height width 22.5 mm depth required spacing with side-by-side mounting — forwards — backwards — upwards — upwards — downwards 0 mm 	Connections/ Terminals product component removable terminal for auxiliary and control circuit type of electrical connection for auxiliary and control circuit	Yes
 at AWG cables solid at AWG cables stranded tx (20 12), 2x (20 14) at AWG cables stranded tx (20 12), 2x (20 14) connectable conductor cross-section solid finely stranded with core end processing AWG number as coded connectable conductor cross section solid stranded stranded tghtening torque design of the thread of the connection screw mounting position fastening method height with side-by-side mounting with side-by-side mounting - forwards - backwards - upwards - downwards 0 mm 0 mm - downwards 0 mm 0 mm 	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	Yes screw-type terminals
at AWG cables stranded connectable conductor cross-section solid finely stranded with core end processing AWG number as coded connectable conductor cross section solid solid solid solid solid solid solid solid stranded stranded stranded stranded design of the thread of the connection screw M3 Installation/ mounting/ dimensions mounting position fastening method height socrew and snap-on mounting onto 35 mm standard mounting rail height width depth sorew and snap-on mounting onto 35 mm standard mounting rail height width depth sorew and snap-on mounting onto 35 mm standard mounting rail with side-by-side mounting with side-by-side mounting - forwards - backwards - backwards - upwards - downwards 0 mm o mm downwards 0 mm o mm	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	Yes screw-type terminals 1x (0.5 4.0 mm²), 2x (0.5 2.5 mm²)
connectable conductor cross-section • solid • finely stranded with core end processing AWG number as coded connectable conductor cross section • solid • stranded •	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	Yes screw-type terminals 1x (0.5 4.0 mm²), 2x (0.5 2.5 mm²) 1x (0.5 4 mm²), 2x (0.5 1.5 mm²)
• finely stranded with core end processing AWG number as coded connectable conductor cross section • solid • solid • stranded • stranded • stranded itightening torque design of the thread of the connection screw M3 Installation/ mounting/ dimensions mounting position fastening method height width depth required spacing • with side-by-side mounting — forwards — backwards — upwards — downwards O mm o mm dedownwards O mm	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 • at AWG cables solid	Yes screw-type terminals 1x (0.5 4.0 mm²), 2x (0.5 2.5 mm²) 1x (0.5 4 mm²), 2x (0.5 1.5 mm²) 1x (20 12), 2x (20 14)
AWG number as coded connectable conductor cross section • solid • stranded 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 fastening method height sold sold sold sold sold sold sold sold	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 • at AWG cables solid • at AWG cables stranded	Yes screw-type terminals 1x (0.5 4.0 mm²), 2x (0.5 2.5 mm²) 1x (0.5 4 mm²), 2x (0.5 1.5 mm²) 1x (20 12), 2x (20 14)
AWG number as coded connectable conductor cross section • solid • stranded 20 14 tightening torque design of the thread of the connection screw M3 Installation/ mounting/ dimensions mounting position fastening method height 100 mm width 22.5 mm depth required spacing • with side-by-side mounting — forwards — backwards — upwards — downwards 0 mm 0 mm 0 mm	product component removable terminal for auxiliary and control circuit type of electrical connection for auxiliary and control circuit type of connectable conductor cross-sections	Yes screw-type terminals 1x (0.5 4.0 mm²), 2x (0.5 2.5 mm²) 1x (0.5 4 mm²), 2x (0.5 1.5 mm²) 1x (20 12), 2x (20 14) 1x (20 12), 2x (20 14)
 solid stranded tightening torque design of the thread of the connection screw M3 Installation/ mounting/ dimensions mounting position fastening method height width 22.5 mm depth 90 mm required spacing with side-by-side mounting - forwards - backwards - upwards - downwards 0 mm 0 mm 0 mm 0 mm 0 mm 0 mm 0 mm 0 mm 0 mm 0 mm 0 mm 0 mm 0 mm 0 mm 0 mm 0 mm 0 mm 0 mm 0 mm 0 mm 0 mm 0 mm 0 mm 0 mm 0 mm 0 mm 0 mm 0 mm 0 mm 0 mm 0 mm 0 mm 0 mm 0 mm 0 mm 0 mm 0 mm 0 mm 0 mm 0 mm 0 mm 0 mm 0 mm 0 mm 0 mm 0 mm <u< th=""><th>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 • at AWG cables solid • at AWG cables stranded connectable conductor cross-section • solid</th><th>Yes screw-type terminals 1x (0.5 4.0 mm²), 2x (0.5 2.5 mm²) 1x (0.5 4 mm²), 2x (0.5 1.5 mm²) 1x (20 12), 2x (20 14) 1x (20 12), 2x (20 14) 0.5 4 mm²</th></u<>	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 • at AWG cables solid • at AWG cables stranded connectable conductor cross-section • solid	Yes screw-type terminals 1x (0.5 4.0 mm²), 2x (0.5 2.5 mm²) 1x (0.5 4 mm²), 2x (0.5 1.5 mm²) 1x (20 12), 2x (20 14) 1x (20 12), 2x (20 14) 0.5 4 mm²
 stranded tightening torque design of the thread of the connection screw M3 Installation/ mounting/ dimensions mounting position fastening method height uith uith 22.5 mm depth required spacing with side-by-side mounting - forwards - backwards - upwards - downwards 0 mm 0 mm - downwards 0 mm 0 mm 	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 • at AWG cables solid • at AWG cables stranded connectable conductor cross-section • solid • finely stranded with core end processing AWG number as coded connectable conductor cross	Yes screw-type terminals 1x (0.5 4.0 mm²), 2x (0.5 2.5 mm²) 1x (0.5 4 mm²), 2x (0.5 1.5 mm²) 1x (20 12), 2x (20 14) 1x (20 12), 2x (20 14) 0.5 4 mm²
tightening torque design of the thread of the connection screw Installation/ mounting/ dimensions mounting position fastening method height width 22.5 mm depth required spacing • with side-by-side mounting — forwards — backwards — upwards — downwards 0 mm	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 • at AWG cables solid • at AWG cables stranded connectable conductor cross-section • solid • finely stranded with core end processing AWG number as coded connectable conductor cross section	Yes screw-type terminals 1x (0.5 4.0 mm²), 2x (0.5 2.5 mm²) 1x (0.5 4 mm²), 2x (0.5 1.5 mm²) 1x (20 12), 2x (20 14) 1x (20 12), 2x (20 14) 0.5 4 mm² 0.5 4 mm²
design of the thread of the connection screw Installation/ mounting/ dimensions mounting position fastening method height width clepth required spacing • with side-by-side mounting — forwards — backwards — upwards — downwards M3 any screw and snap-on mounting onto 35 mm standard mounting rail 100 mm 22.5 mm 90 mm 90 mm 0 mm 0 mm 0 mm 0 mm 0	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 • at AWG cables solid • at AWG cables stranded connectable conductor cross-section • solid • finely stranded with core end processing AWG number as coded connectable conductor cross section • solid	Yes screw-type terminals 1x (0.5 4.0 mm²), 2x (0.5 2.5 mm²) 1x (0.5 4 mm²), 2x (0.5 1.5 mm²) 1x (20 12), 2x (20 14) 1x (20 12), 2x (20 14) 0.5 4 mm² 0.5 4 mm² 20 12
Installation/ mounting/ dimensions mounting position fastening method height width 22.5 mm depth required spacing • with side-by-side mounting — forwards — backwards — upwards — downwards i any any screw and snap-on mounting onto 35 mm standard mounting rail 100 mm 22.5 mm 90 mm o mm o mm o mm o mm o mm o mm o mm o mm o mm o mm o mm o mm	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 • at AWG cables solid • at AWG cables stranded connectable conductor cross-section • solid • finely stranded with core end processing AWG number as coded connectable conductor cross section • solid	Yes screw-type terminals 1x (0.5 4.0 mm²), 2x (0.5 2.5 mm²) 1x (0.5 4 mm²), 2x (0.5 1.5 mm²) 1x (20 12), 2x (20 14) 1x (20 12), 2x (20 14) 0.5 4 mm² 0.5 4 mm² 20 12 20 14
mounting position fastening method height width depth required spacing • with side-by-side mounting — forwards — backwards — upwards — downwards any screw and snap-on mounting onto 35 mm standard mounting rail 100 mm 90 mm 90 mm 0 mm 0 mm 0 mm 0 mm 0 mm	product component removable terminal for auxiliary and control circuit type of electrical connection for auxiliary and control circuit type of connectable conductor cross-sections	Yes screw-type terminals 1x (0.5 4.0 mm²), 2x (0.5 2.5 mm²) 1x (0.5 4 mm²), 2x (0.5 1.5 mm²) 1x (20 12), 2x (20 14) 1x (20 12), 2x (20 14) 0.5 4 mm² 0.5 4 mm² 20 12 20 14 0.6 0.8 N·m
fastening method height width cepth equired spacing ● with side-by-side mounting — forwards — backwards — upwards — downwards screw and snap-on mounting onto 35 mm standard mounting rail 100 mm 90 mm 90 mm 0 mm 0 mm 0 mm 0 mm 0 mm	product component removable terminal for auxiliary and control circuit type of electrical connection for auxiliary and control circuit type of connectable conductor cross-sections	Yes screw-type terminals 1x (0.5 4.0 mm²), 2x (0.5 2.5 mm²) 1x (0.5 4 mm²), 2x (0.5 1.5 mm²) 1x (20 12), 2x (20 14) 1x (20 12), 2x (20 14) 0.5 4 mm² 0.5 4 mm² 20 12 20 14 0.6 0.8 N·m
height 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	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 • at AWG cables solid • at 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	Yes screw-type terminals 1x (0.5 4.0 mm²), 2x (0.5 2.5 mm²) 1x (0.5 4 mm²), 2x (0.5 1.5 mm²) 1x (20 12), 2x (20 14) 1x (20 12), 2x (20 14) 0.5 4 mm² 0.5 4 mm² 20 12 20 14 0.6 0.8 N·m
width depth 90 mm required spacing • with side-by-side mounting — forwards — backwards — upwards — downwards 0 mm 0 mm 0 mm	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 • at AWG cables solid • at 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	Yes screw-type terminals 1x (0.5 4.0 mm²), 2x (0.5 2.5 mm²) 1x (0.5 4 mm²), 2x (0.5 1.5 mm²) 1x (20 12), 2x (20 14) 1x (20 12), 2x (20 14) 0.5 4 mm² 0.5 4 mm² 20 12 20 14 0.6 0.8 N·m M3
depth 90 mm required spacing • with side-by-side mounting — forwards — backwards — upwards — upwards — downwards 0 mm 0 mm	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 • at AWG cables solid • at 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	Yes screw-type terminals 1x (0.5 4.0 mm²), 2x (0.5 2.5 mm²) 1x (0.5 4 mm²), 2x (0.5 1.5 mm²) 1x (20 12), 2x (20 14) 1x (20 12), 2x (20 14) 0.5 4 mm² 0.5 4 mm² 20 12 20 14 0.6 0.8 N·m M3 any screw and snap-on mounting onto 35 mm standard mounting rail
required spacing • with side-by-side mounting — forwards — backwards — upwards — upwards — downwards 0 mm 0 mm	product component removable terminal for auxiliary and control circuit type of electrical connection for auxiliary and control circuit type of connectable conductor cross-sections	Yes screw-type terminals 1x (0.5 4.0 mm²), 2x (0.5 2.5 mm²) 1x (0.5 4 mm²), 2x (0.5 1.5 mm²) 1x (20 12), 2x (20 14) 1x (20 12), 2x (20 14) 0.5 4 mm² 0.5 4 mm² 20 12 20 14 0.6 0.8 N·m M3 any screw and snap-on mounting onto 35 mm standard mounting rail 100 mm
 with side-by-side mounting — forwards — backwards — upwards — downwards 0 mm 0 mm 0 mm 	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 • at AWG cables solid • at 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	Yes screw-type terminals 1x (0.5 4.0 mm²), 2x (0.5 2.5 mm²) 1x (0.5 4 mm²), 2x (0.5 1.5 mm²) 1x (20 12), 2x (20 14) 1x (20 12), 2x (20 14) 0.5 4 mm² 0.5 4 mm² 20 12 20 14 0.6 0.8 N·m M3 any screw and snap-on mounting onto 35 mm standard mounting rail 100 mm 22.5 mm
 forwards backwards upwards downwards 0 mm 0 mm 0 mm 	product component removable terminal for auxiliary and control circuit type of electrical connection for auxiliary and control circuit type of connectable conductor cross-sections	Yes screw-type terminals 1x (0.5 4.0 mm²), 2x (0.5 2.5 mm²) 1x (0.5 4 mm²), 2x (0.5 1.5 mm²) 1x (20 12), 2x (20 14) 1x (20 12), 2x (20 14) 0.5 4 mm² 0.5 4 mm² 20 12 20 14 0.6 0.8 N·m M3 any screw and snap-on mounting onto 35 mm standard mounting rail 100 mm 22.5 mm
 backwards upwards downwards 0 mm 0 mm 	product component removable terminal for auxiliary and control circuit type of electrical connection for auxiliary and control circuit type of connectable conductor cross-sections	Yes screw-type terminals 1x (0.5 4.0 mm²), 2x (0.5 2.5 mm²) 1x (0.5 4 mm²), 2x (0.5 1.5 mm²) 1x (20 12), 2x (20 14) 1x (20 12), 2x (20 14) 0.5 4 mm² 0.5 4 mm² 20 12 20 14 0.6 0.8 N·m M3 any screw and snap-on mounting onto 35 mm standard mounting rail 100 mm 22.5 mm
upwardsdownwards0 mm0 mm	product component removable terminal for auxiliary and control circuit type of electrical connection for auxiliary and control circuit type of connectable conductor cross-sections	Yes screw-type terminals 1x (0.5 4.0 mm²), 2x (0.5 2.5 mm²) 1x (0.5 4 mm²), 2x (0.5 1.5 mm²) 1x (20 12), 2x (20 14) 1x (20 12), 2x (20 14) 0.5 4 mm² 0.5 4 mm² 20 12 20 14 0.6 0.8 N·m M3 any screw and snap-on mounting onto 35 mm standard mounting rail 100 mm 22.5 mm 90 mm
— downwards 0 mm	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 • at AWG cables solid • at 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 required spacing • with side-by-side mounting — forwards	Yes screw-type terminals 1x (0.5 4.0 mm²), 2x (0.5 2.5 mm²) 1x (0.5 4 mm²), 2x (0.5 1.5 mm²) 1x (20 12), 2x (20 14) 1x (20 12), 2x (20 14) 0.5 4 mm² 0.5 4 mm² 20 12 20 14 0.6 0.8 N·m M3 any screw and snap-on mounting onto 35 mm standard mounting rail 100 mm 22.5 mm 90 mm
	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 • at AWG cables solid • at 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 required spacing • with side-by-side mounting — forwards — backwards	Yes screw-type terminals 1x (0.5 4.0 mm²), 2x (0.5 2.5 mm²) 1x (0.5 4 mm²), 2x (0.5 1.5 mm²) 1x (20 12), 2x (20 14) 1x (20 12), 2x (20 14) 0.5 4 mm² 0.5 4 mm² 20 12 20 14 0.6 0.8 N·m M3 any screw and snap-on mounting onto 35 mm standard mounting rail 100 mm 22.5 mm 90 mm 0 mm 0 mm
— at the side 0 mm	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 • at AWG cables solid • at 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 required spacing • with side-by-side mounting — forwards — backwards — backwards — upwards	Yes screw-type terminals 1x (0.5 4.0 mm²), 2x (0.5 2.5 mm²) 1x (0.5 4 mm²), 2x (0.5 1.5 mm²) 1x (20 12), 2x (20 14) 1x (20 12), 2x (20 14) 0.5 4 mm² 0.5 4 mm² 20 12 20 14 0.6 0.8 N·m M3 any screw and snap-on mounting onto 35 mm standard mounting rail 100 mm 22.5 mm 90 mm 0 mm 0 mm 0 mm 0 mm 0 mm
	product component removable terminal for auxiliary and control circuit type of electrical connection for auxiliary and control circuit type of connectable conductor cross-sections	Yes screw-type terminals 1x (0.5 4.0 mm²), 2x (0.5 2.5 mm²) 1x (0.5 4 mm²), 2x (0.5 1.5 mm²) 1x (20 12), 2x (20 14) 1x (20 12), 2x (20 14) 0.5 4 mm² 0.5 4 mm² 20 12 20 14 0.6 0.8 N·m M3 any screw and snap-on mounting onto 35 mm standard mounting rail 100 mm 22.5 mm 90 mm 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

-40 ... +85 °C

10 ... 95 %

Ambient conditions

installation altitude at height above sea level maximum

ambient temperature

• during operation

• during storage

2 000 m

-25 ... +60 °C

-40 ... +85 °C

relative humidity during operation

Certificates/ approvals General Product Approval

• during transport

EMC





Confirmation







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=3RP2505-1BT20

Cax online generator

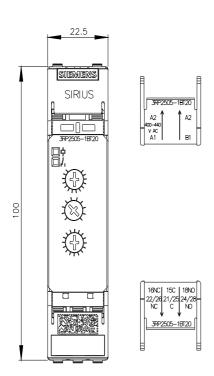
 $\underline{\text{http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en\&mlfb=3RP2505-1BT20}$

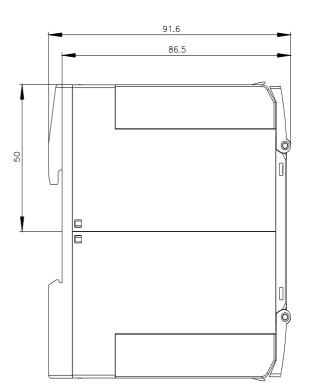
Service&Support (Manuals, Certificates, Characteristics, FAQs,...) https://support.industry.siemens.com/cs/ww/en/ps/3RP2505-1BT20

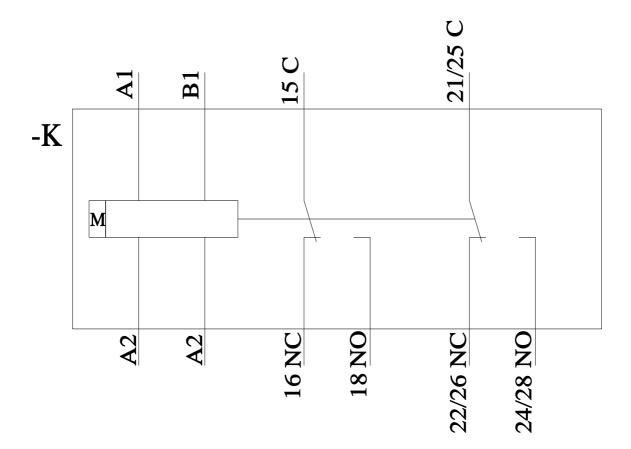
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...) http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RP2505-1BT20&lang=en

Characteristic: Derating

https://support.industry.siemens.com/cs/ww/en/ps/3RP2505-1BT20/manual







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