## SIEMENS

## Data sheet

## 3RP2505-2BB30



Timing relay, Multifunction 2 change-over contacts, 27 functions 7 time ranges (0.05 s...100 h) 24 V AC/DC at 50/60 Hz AC with LED Spring-type terminal (push-in)

| product brand name  | SIRIUS   |
|---|--|
| product designation   | timing relay   |
| design of the product   | 27 functions   |
| product type designation  | 3RP25  |
| General technical data  |  |
| product component   |  |
| <ul> <li>relay output</li> </ul>  | Yes  |
| <ul> <li>semi-conductor output</li> </ul>   | 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   | 2.5 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<br>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  | 1% in the whole temperature range to the set runtime       |
| power supply influence  | 1% in the whole voltage range to the set runtime           |
| Substance Prohibitance (Date)   | 09/12/2014   |
| SVHC substance name   | Lead - 7439-92-1<br>Lead monoxide (lead oxide) - 1317-36-8 |
| Weight  | 0.161 kg   |
| 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 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            |
|  | 1.1             |
| • full-scale value   |                 |
| operating range factor control supply voltage rated value at<br>AC at 50 Hz                    |                 |
| • initial value  | 0.85            |
| 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   | Yes             |
| ON-delay/instantaneous contact   | Yes             |
| passing make contact   | Yes             |
| passing make contact/instantaneous contact   | Yes             |
| • OFF delay  | No              |
| switching function   |                 |
| <ul> <li>flashing symmetrically with interval start/instantaneous</li> </ul>                   | Yes             |
| <ul> <li>flashing symmetrically with interval start</li> </ul>                                 | Yes             |
| <ul> <li>flashing symmetrically with pulse start/instantaneous</li> </ul>                      | Yes             |
| <ul> <li>flashing symmetrically with pulse start</li> </ul>                                    | Yes             |
| <ul> <li>flashing asymmetrically with interval start</li> </ul>                                | No              |
| <ul> <li>flashing asymmetrically with pulse start</li> </ul>                                   | No              |
| switching function   |                 |
| <ul> <li>star-delta circuit with delay time</li> </ul>   | No              |
| • star-delta circuit   | Yes             |
| switching function with control signal   |                 |
| additive ON-delay  | Yes             |
| <ul> <li>passing break contact</li> </ul>  | Yes             |
| <ul> <li>passing break contact/instantaneous</li> </ul>  | Yes             |
| OFF delay  | Yes             |
| <ul> <li>OFF delay/instantaneous</li> </ul>  | Yes             |
| <ul> <li>pulse delayed</li> </ul>  | Yes             |
| <ul> <li>pulse delayed/instantaneous</li> </ul>  | Yes             |
| • pulse-shaping  | Yes             |
| <ul> <li>pulse-shaping/instantaneous</li> </ul>  | Yes             |
| additive ON-delay/instantaneous  | Yes             |
| <ul> <li>ON-delay/OFF-delay/instantaneous</li> </ul>   | Yes             |
| <ul> <li>passing make contact</li> </ul>   | Yes             |
| <ul> <li>passing make contact/instantaneous contact</li> </ul>                                 | Yes             |
| switching function of interval relay with control signal                                       |                 |
| <ul> <li>retrotriggerable with deactivated control<br/>signal/instantaneous contact</li> </ul> | Yes             |
| <ul> <li>retrotriggerable with switched-on control signal</li> </ul>                           | Yes             |
| <ul> <li>retrotriggerable with switched-on control</li> </ul>                                  | Yes             |
| signal/instantaneous contact   | Vez             |
| 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<br>switch required       | fuse gL/gG: 4 A |
| Auxiliary circuit  |                 |
| material of switching contacts   | Ag\$nO2         |
| number of NC contacts  |                 |
| delayed switching  | 0               |
|  |                 |

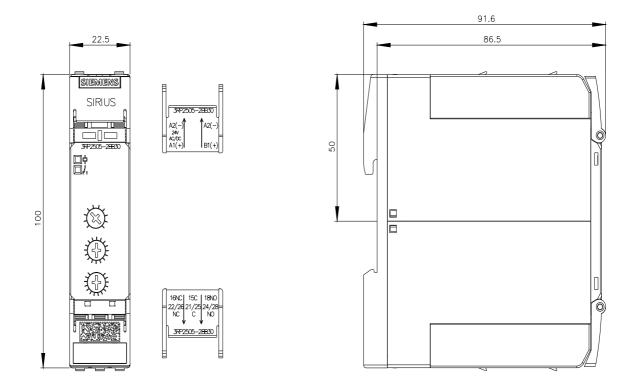
| elistication or settic is elisioned and a setting     elisioned and a setting |   |  |
|---|---|--|
| • of delynd switching0• unstart of Co contacts2• eladys switching2• eladys switching3 A• eladys switching contacts at AC-15-• • elad V3 A• • elad V3 A• • elad V3 A• • elad V0 D• • elad V<   | instantaneous contact                                   | 0  |
| • instraininguis contact0number of CO contacts2• celeged switching2• celeged switching0Operational current of auxiliary contacts at AC-15-• celeged switching3 A• celeged switching3 A• celeged switching0 A• celeged switching specifies0 A• celeged switching specifies0 B• celeged switching specifies0 B• contact reliability of auxiliary contacts according to U1800 films• contact reliability of auxiliary contacts according to U1800 films• switching capacity current with inductive load0 D 3 A• protein functionNo• set the relay courding to EC 01812-1orresponds to degree of severity 3• contact cells functionVes• contact cells function14V• contact contactbiol on the CO 01812-1orresponds to degree of severity 3• contact contactbiol on the CO 01812-1orresponds to degree of severity 3• contact contactbiol on the CO 01812-1orresponds to degree of severity 3• contact contactbiol on the CO 01812-1orresponds to degree of severity 3• contact contactbiol contactor contage to EC 01802-44 Vo metwoic contactor contage to EC 01802-4  | number of NO contacts                                   |  |
| number of CO contacts         -           • delayed switching         2           • instainaneous contact         0           • of 250         3 A           • of 250         0 A           • of 250 </td <td><ul> <li>delayed switching</li> </ul></td> <td>0</td>  | <ul> <li>delayed switching</li> </ul>                   | 0  |
| - elsayed subting     2       - infactionation:contact     0       operational current of suciliary contacts at AC-15     3 A       - el 28 V     3 A       - operational current of suciliary contacts at DC-13     -       - el 28 V     0 A       - el 28 V el 28 V     0 A       - el 28 V el 28 V el 28 V     0 A       - el 28 V el 28 V el 28 V     0 A       - el 28 V el 28 V el 28 V     0 A       - el 28 V     0 A       - el 28 V     0 A       - el 28 V el 28  | instantaneous contact                                   | 0  |
| • initial minorial current of auxiliary contacts at AC-15         a A           • at 24 V         3 A           • at 25 V         3 A           • at 25 V         3 A           • at 25 V         0 2 A           • at 25 V         0 1 A           operating frequency with RT2 contacts maximum         50 00 1 h           contact rating of auxiliary contacts according to UL         R300 / E300           exitching appear(out grequency with RT2 contacts according to UL         R300 / E300           exitching appear(out grequency with RT2 contacts according to UL         R300 / E300           exitching appear(out grequency with inductive load         001 - 3 A           Inguist Outputs         witching appear(outputs with inductive load           onto active diversent according to EC 6102-1         contactive according to EC 6102-1           EMC conting interference according to EC 6102-4         24 V network contaction / 14 V control connection           • due to conductor cents auge according to EC 6100-43         14 V           • due to conductor cents auge according to EC 61000-43         14 V           •   | number of CO contacts                                   |  |
| operational current of auxiliary contacts at AC-15         3 Å           • at 24 V         3 Å           • at 25 V         3 Å           • at 24 V         1 Å           • at 25 V         0           • at 25 V         0           • at 25 V         0.1 Å           • at 25 V         0.1 Å           opparational current of auxiliary contacts at DC-13         0.2 Å           • at 25 V         0.1 Å           opparation f auxiliary contacts         one increate withing operation of 100 million switching operations (17 V, 5           contact rating of auxiliary contacts         one increate withing operation of 100 million switching operations (17 V, 5           contact rating of auxiliary contacts         0.0 / 5300           awitching capacity current with inductive load         0.01 3 Å           inputs Curputs         No           Electromagnitic compatibility         Ves           ELC entities inference auxording to EC 61812-1         corresponds to degree of seventy 3           conducted interference         according to EC 61802-4         2 kV network connection / 1 kV control connection           • due to conductor-cenduce sing au according to EC 61000-4.3         10 V/m         defer totacad calcular-cenduce sing au according to EC 61000-4.3           • due to conductor-cenduce sing au according to EC 61000-4.2 </td <td><ul> <li>delayed switching</li> </ul></td> <td>2</td>   | <ul> <li>delayed switching</li> </ul>                   | 2  |
| if 24 V       3 A          ei 250 V       3 A         operational current of auxiliary contacts at DC-13            ei 125 V       0.2 A          ei 125 V       0.1 A          contact reliability of auxiliary contacts according to UL       R300 / 8300          anthering optical Structures according to UC       R300 / 8300          ei atto reliability of auxiliary contacts according to UC       R300 / 8300          ei atto reliability of auxiliary contacts according to UC 61812-1       contacts according to UC 61812-1          conducts according to UC 61812-1       corresponds to degree of seventy 3          conducts according to UC 61812-1       corresponds to degree of seventy 3          conducts according to UC 61800-4.5       2 kV network connection / 1 kV control connection          étabo vancular secording to UC 61802-4       2 kV network connection / 1 kV co  | <ul> <li>instantaneous contact</li> </ul>               | 0  |
| if 250 Y                    | operational current of auxiliary contacts at AC-15      |  |
| operational current of auxiliary contacts at DC-13         1 A           • at 25 V         0.2 A           • at 250 V         0.1 A           operating frequency with 3RT2 contactor maximum 5 000 1/h         one incorrect witching operation of 100 million switching operations (17 V, 5 m/h)           contact rating of auxiliary contacts         one incorrect witching operation of 100 million switching operations (17 V, 5 m/h)           contact rating of auxiliary contacts         0.013 A           inputs/Outputs         Yes           product function         • at the relay outputs switchiover delayed/without delay           Yes         No           Contact function         • own-volatile           externing and comparation (b EC 61912-1         contactor on system           conducted interference         0 ant the relay outputs according to EC 61912-1           conducted interference         0 wite to burst according to EC 61000-4-5         2 kV network connection / 1 kV control connection           elue to conducto-cast surge according to EC 61000-4-5         1 kV         1 kV           elue to conducto-cast surge according to EC 61000-4-5         1 kV           elue to conducto-cast surge according to EC 61000-4-5         1 kV           elue to conducto-cast surge according to EC 61000-4-5         1 kV           related conducto-act surge according to EC 61000-4-5         1   | • at 24 V   | 3 A  |
| <ul> <li>Al 24 V</li> <li>at 25 V</li> <li>at 26 V</li> <li>at 26</li></ul>  | • at 250 V  | 3 A  |
| • atl 259 V     0.2 Å       • atl 259 V     0.1 Å       contact reliability of auxiliary contacts     5000 th       one incorrect witching operation of 100 million switching operations (17 V. 5       mA)     contact rating of auxiliary contacts according to UL       switching capacity current with inductive lead     0.013 A       Implate Outputs     Product function       • at the relay outputs switching capacity current with inductive lead     0.013 A       Implate Outputs     Product function       • at the relay outputs switching to EC 8182-1     ambience A (industrial sector)       EMC emmulse inference according to EC 8100-4.3     at Non-weaked       • due to bornt according to EC 61000-4.5     2 kV network connection 1 kV control connection       • due to conductor-earth surge according to EC 61000-4.5     2 kV       • due to conductor-earth surge according to EC 61000-4.5     2 kV       • due to conductor-earth surge according to EC 61000-4.5     2 kV       • due to conductor-earth surge according to EC 61000-4.5     1 kV       • due to conductor-earth surge according to EC 61000-4.5     2 kV       • due to conductor conductor surge according to EC 61000-4.5     1 kV       • due to conductor conductor surge according to EC 61000-4.5     1 kV       • due to conductor conductor surge according to EC 61000-4.5     1 kV       • field-stand connetion to according to EC 61000-4.5   | operational current of auxiliary contacts at DC-13      |  |
| • sit 250 V     0.1 A       operating frequency with 372 contacts     5000 1/h       contact rating of auxiliary contacts according to UL     R800 / B300       switching capacity current with inductive load     0.013 A <b>Paptis Outputs</b> Yes       product function     No       EMC emitted interference according to IEC 61912-1     corresponds to degree of seventy 3       conductor Interference     2 kV network connection / 1 kV control connection       EMC emitted interference according to IEC 6100-4-4     2 kV network connection / 1 kV control connection       • due to burst according to IEC 6100-4-2     4 kV control connection       • due to conductor conductor supe according to IEC 61000-4-2     1 kV       • due to conductor conductor supe according to IEC 61000-4-2     1 kV       • due to conductor conductor supe according to IEC 61000-4-2     1 kV       • due to conductor conductor supe according to IEC 61000-4-2     1 kV       • due to conductor conductor supe according to IEC 61000-4-2     1 kV       • due to conductor conductor supe according to IEC 61000-4-2     1 kV       • due to conductor conductor supe according to IEC 61000-4-2     1 kV       • due to conductor conductor supe according to IEC 61000-4-2     1 kV       • due to conductor conductor supe according to IEC 61000-4-2     1 kV       • due to conductor conductor supe according to IEC 61000-4-2     1 kV  | • at 24 V   | 1 A  |
| operating frequency with 3RT2 contactor maximum         5 000 1/h           contact reliability of auxiliary contacts according to UL         R300 / B300           switching capacity current with inductive load         0.13 A           indication contact according to UL         R300 / B300           switching capacity current with inductive load         0.13 A           indication contact according to UL         R300 / B300           switching capacity current with inductive load         Vis           indication constantiation constantiation constantiation constantiation         Vis           indication constantiation constantia constantia constantiation constantiation constantiation constanti   | • at 125 V  | 0.2 A  |
| contact rollability of auxiliary contacts         one incorrect switching operation of 100 million switching operations (17 V, 5           contact rating of auxiliary contacts according to UL         R300 / B300           switching capacity current with inductive load         0.01 3 A           Imputs/ Outputs         Product function           e at the relay outputs switchover delayed/without delay         Yes           product function         ambience A (industrial sector)           EMC emitted interference         corresponds to degree of severity 3           conducted interference according to IEC 61000-4-4         e kiv to basit according to IEC 61000-4-5           - due to basit according to IEC 61000-4-3         2 kV network connection / 1 kV control connection           - due to basit according to IEC 61000-4-3         1 kV           electrostatic discharge according to IEC 61000-4-3         10 V/m           electrostatic discharge according to   | • at 250 V  | 0.1 A  |
| mA)         model           mA)         model           switching capacity current with inductive load         0.01 3 A           Inputs/Outputs         model           product function         at the relay outputs switchover delayed/without delay           in at the relay outputs switchover delayed/without delay         Yes           in at the relay outputs switchover delayed/without delay         Yes           in at the relay outputs switchover delayed/without delay         Yes           in at the relay outputs switchover delayed/without delay         Yes           in at the relay outputs switchover delayed/without delay         Yes           in at the relay outputs switchover delayed/without delay         Yes           Electromagnetic compatibility         armbience A (industrial sector)           EMC immunity according to EC 61812-1         corresponds to degree of severity 3           conductor earth surge according to EC 61000-4-2         2 kV at work connection / 1 kV control connection           i due to ounductor earth surge according to EC 61000-4-3         10 V/m           electrostatic discharge according to EC 61000-4-2         4 kV contact discharge / 8 kV at discharge           Safety related data         conductor earth surge according to EC 61000-4-2         10 V/m           conductor earth surge according to EC 61000-4-2         10 V/m         10 V/m  | operating frequency with 3RT2 contactor maximum         | 5 000 1/h  |
| contact rating of auxiliary contacts according to UL         R300 / B300           switching capacity current with inductive load         0.01 3 A           Inputs/ Outputs         Yes           product function         No           e at the relay outputs switchover delayed/without delay         Yes           in one outputs         No           Electromagnetic compatibility         Interference according to IEC 61812.1           conducted interference according to IEC 6100.4.4         2 kV network connection / 1 kV control connection           i due to basit according to IEC 6100.4.4         2 kV network connection / 1 kV control connection           i due to bonductor-earth surge according to IEC 6100.4.3         10 V/m           electrostatic discharge according to IEC 6100.4.3         10 V/m           electrostatic discharge according to IEC 600.4.3         10 V/m           electrostatic discharge according to IEC 600.4.3         10 V/m           electrostatic discharge according to IEC 600.4.3         10 V/m           protection class IP on the front according to IEC 600.4.3         10 V/m           electrostatic discharge according to IEC 600.4.3         10 V/m           protection class IP on the front according to IEC 600.4.3         10 V/m           electrostatic discharge according to IEC 600.4.3         10 V/m           product component moreable terminal f   | contact reliability of auxiliary contacts               |  |
| switching capacity current with inductive load         0.01 3 A           inputs/Outputs         Inputs/Outputs           product function         • at the relay outputs switchover delayed/without delay         Yes           • non-volatile         No           EMC emitted interference according to IEC 61812.1         corresponds to degree of severity 3           • due to burst according to IEC 61000-4.3         2 kV network connection / 1 kV control connection           • due to conductor-earth supe according to IEC 61000-4.3         10 V/m           field-based interference according to IEC 61000-4.3         10 V/m           electrostatic discharge according to IEC 61000-4.3         10 V/m           category according to IEC 61000-4.3         10 V/m           p  | contact rating of auviliary contacts according to III   |  |
| Inputs/ Outputs         Implementation           ext the relay outputs switchover delayed/without delay         Yes           in on-volatile         No           Elactromagnetic compatibility         ambience A (industrial sector)           EMC emitted interference according to IEC 61812-1         conducted interference           idue to burst according to IEC 61802-1         corresponds to degree of seventy 3           conducted interference         idue to burst according to IEC 61802-1.4         2 kV network connection / 1 kV control connection           idue to outputs reveares using according to IEC 61000-4.5         1 kV         1 kV           edue to outputs reveares using according to IEC 61000-4.5         1 kV         1 kV           elactorstatic discharge according to IEC 61000-4.3         10 V/m         elactorsponds to molutor conductor down and the conductor according to IEC 61000-4.5         1 kV           estepsy according to EI N 564-1         none         elactorsponds to molutor conductor according to IEC 60529         IP20           type of elactical Stately         protection class IP on the front according to IEC 60529         IP20         Exectical Stately           product component removable terminal for auxiliary and control circuit         spring-loaded terminals (push-in)         type of elactical connection for auxiliary and control circuit         spring-loaded terminals (push-in)           type of elactical connecti   |   |  |
| product function         e at the relay outputs switchover delayed/without delay         Yes           endor-volabile         No           EMC consumption         ambience A (industrial sector)           EMC immunity according to EC 61812-1         corresponds to degree of severity 3           conducted interference         2 kV network connection / 1 kV control connection           • due to conductor-conductor surge according to EC 61000-4-3         2 kV           • field-based interference         2 kV network connection / 1 kV control connection           • due to conductor-conductor surge according to EC 61000-4-3         10 V/m           electrostatic discharge according to EC 61000-4-3         10 V/m           electrostatic Glass IP on the front according to IEC 61000-4-3         10 V/m           of fisultation         Desite         10 D   |   |  |
| • at the relay outputs switchover delayed/without delay       Yes         • non-volatile       No         EMC emitted interference according to IEC 61812-1       ambience A (industrial sector)         EMC immunity according to IEC 61812-1       corresponds to degree of severity 3         conducted interference       -         • due to burst according to IEC 61000-4-4       2 kV network connection / 1 kV control connection         • due to conductor-conductor surge according to IEC 61000-4-5       2 kV         • due to conductor-conductor surge according to IEC 61000-4-2       4 kV contract discharge / 8 kV air discharge         Safety related data       -         catlegory according to IEC 61000-4-2       4 kV contract discharge / 8 kV air discharge         Safety related data       -         catlegory according to IEC 61000-4-2       4 kV contract discharge / 8 kV air discharge         Safety related data       -         catlegory according to EN 96-1       none         Electrical Safety       PP20         protection class IP on the front according to IEC 60529       PP20         type of insulation       Spring-loaded terminals (push-in)         type of electrical connection for auxiliary and control circuit       spring-loaded terminals (push-in)         type of contactable conductor cross-section       0.5 4 mm <sup>2</sup> <td< td=""><td></td><td></td></td<>  |   |  |
| Inc. volatile         No           Electronagnetic compatibility         Interference according to IEC 61812-1         corresponds to degree of severity 3           Conducted interference         2 kV network connection / 1 kV control connection         2 kV network connection / 1 kV control connection           - due to conductor-earth surge according to IEC 61000-4-4         2 kV network connection / 1 kV control connection           - due to conductor-earth surge according to IEC 61000-4-3         2 kV           - field-based interference according to IEC 61000-4-3         10 V/m           electrostatic discharge according to IEC 61000-4-3         10 V/m           electrostatic discharge according to IEC 6000-4-3         10 V/m           electrostatic discharge according to IEC 6000-4-2         4 kV control discharge / 8 kV air discharge           Safety related data  |   | Vec  |
| Electromagnetic compatibility           ENC emitted interference according to IEC 61812-1         ambience A (industrial sector)           EMC immunity according to IEC 61812-1         corresponds to degree of severity 3           conducted interference         4 ue to burst according to IEC 61000-4.4         2 kV network connection / 1 kV control connection           • due to conductor-enductor surge according to IEC 61000-4.5         2 kV         1 kV           • due to conductor-enductor surge according to IEC 61000-4.2         4 kV contract discharge / 8 kV air discharge           Safety rolated data         category according to IEC 61000-4.2         4 kV contract discharge / 8 kV air discharge           Safety rolated data         category according to IEC 61000-4.2         4 kV contract discharge / 8 kV air discharge           Safety rolated data         category according to IEC 61000-4.2         4 kV contract discharge / 8 kV air discharge           Safety rolated data         category according to EN 654-1         none           Electrical Safety         protoction class IP on the front according to IEC 60529         IP20           type of insulation         gening-loaded terminals (push-in)         type of caterial connectable conductor cross-sections           • solid         0.5 4 mm²         of incle stranded with core end processing         0.5 4 mm²           • finely stranded with core end processing         0.5 4 mm²  |   |  |
| EMC emitted interference according to IEC 61812-1       ambience A (industrial sector)         EMC immunity according to IEC 61812-1       corresponds to degree of severity 3         conducted interference       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 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       relation       0         category according to IEC 61000-4-3       10 V/m         electrostatic discharge       protection class IP on the front according to IEC 60529         type of electrical connection for auxiliary and control circuit       spring-loaded terminals (push-in)         type of electrical connection for auxiliary and control circuit       spring-loaded terminals (push-in)         type of electrical connection for auxiliary and control circuit       spring-loaded terminals (push-in)         type of electrical connectable conductor cross-section       0.5 4 m   |   |  |
| EMC immunity according to IEC 61812-1       corresponds to degree of severity 3         conducted interference       2 kV network connection / 1 kV control connection         • due to conductor-conductor surge according to IEC 61000-4-5       2 kV         efield-based interference       2 kV network connection / 1 kV control connection         field-based interference       2 kV         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       mone         category according to IEC 6100       P20         type of insulation       Basic insulation         Connections/ Terminals       product component removable terminal for auxiliary and control circuit         type of electrical connection for auxiliary and control circuit       spring-loaded terminals (push-in)         type of electrical connectable conductor cross-sections       0.5 4 mm²         • finely stranded with core end processing       0.5 4 mm²         • for AWG cables solid       20 12         • for AWG cables solid       0.5 4 mm²         • fore strand   |   | ambiones (industrial sector)                           |
| conducted interference       2 kV network connection / 1 kV control connection         • due to burst according to IEC 61000-4-5       2 kV         • due to conductor-earth surge according to IEC 61000-4-5       2 kV         • due to conductor-conductor surge according to IEC 61000-4-5       1 kV         • 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         Safaty rolated data   | · · · · · · · · · · · · · · · · · · ·                   |  |
| • due to burst according to IEC 61000-4-5       2 kV         • uue to conductor-earth surge according to IEC 61000-4-5       2 kV         • field-based interference according to IEC 61000-4-3       10 V/m         electrostatic discharge according to IEC 61000-4-3       10 V/m         electrostatic discharge 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         Stafty rolated dat  |   | corresponds to degree of severity 3                    |
| • due to conductor-conductor surge according to IEC 61000-4-5       2 kV         field-based interference according to IEC 61000-4-3       1 kV         electrostatic discharge 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         Safdy related data   |   | O 12/ and under some offen / 4 12/ and the lange offen |
| • due to conductor-conductor surge according to IEC       1 kV         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  | -   |  |
| 61000-4-5       10 V/m         field-based interference according to IEC 61000-4-2       4 kV contact discharge / 8 kV air discharge         Safety related data  |   |  |
| electrostatic discharge according to IEC 61000-4-2       4 kV contact discharge / 8 kV air discharge         Safety related data       none         category according to EN 954-1       none         Electrical Safety       protection class IP on the front according to IEC 60529       IP20         type of insulation       Basic insulation       Connections/ Terminals         product component removable terminal for auxiliary and control circuit       spring-loaded terminals (push-in)         type of electrical connection for auxiliary and control circuit       spring-loaded terminals (push-in)         type of connectable conductor cross-sections       0.5 4 mm²         • solid       0.5 4 mm²         • finely stranded without core end processing       0.5 4 mm²         • for AWG cables solid       20 12         • for AWG cables stranded       20 12         connectable conductor cross-section       0.5 4 mm²         • solid       0.5 4 mm²         • finely stranded with core end processing       0.5 4 mm²         • solid       0.5 4 mm²         • for AWG cables solid       20 12         connectable conductor cross-section       0.5 4 mm²         • solid       0.5 4 mm²         • solid       0.5 4 mm²         • solid       <  |   | 1 KV   |
| Safety related data         category according to EN 954-1       none         Electrical Safety         protection class IP on the front according to IEC 60529       IP20         type of insulation       Basic insulation         Connections/Terminals       Yes         product component removable terminal for auxiliary and control circuit       Spring-loaded terminals (push-in)         type of electrical connection for auxiliary and control circuit       spring-loaded terminals (push-in)         type of electrical connectable conductor cross-sections       0.5 4 mm²         • solid       0.5 4 mm²         • finely stranded with core end processing       0.5 4 mm²         • for AWG cables solid       20 12         • for AWG cables solid       0.5 4 mm²         • finely stranded with core end processing       0.5 2.5 mm²         • finely stranded with core end processing       0.5 4 mm²         • for AWG cables stranded       20 12         connectable conductor cross-section       0.5 4 mm²         • finely stranded with core end processing       0.5 4 mm²         • solid       0.5 2.5 mm²         • solid       20 12         • stranded       20 12         • stranded       20 12         • str   | field-based interference according to IEC 61000-4-3     | 10 V/m   |
| category according to EN 954-1       none         Electrical Safety       protection class IP on the front according to IEC 60529       IP20         type of insulation       Basic insulation       Connections/ Terminals         product component removable terminal for auxiliary and control circuit       spring-loaded terminals (push-in)         type of electrical connection for auxiliary and control circuit       spring-loaded terminals (push-in)         type of electrical connectable conductor cross-sections       0.5 4 mm <sup>2</sup> • solid       0.5 4 mm <sup>2</sup> • finely stranded with core end processing       0.5 4 mm <sup>2</sup> • for AWG cables solid       20 12         • for AWG cables solid       20 12         • for AWG cables stranded       co 4 mm <sup>2</sup> • finely stranded with core end processing       0.5 2.5 mm <sup>2</sup> • finely stranded with core end processing       0.5 2.5 mm <sup>2</sup> • finely stranded without core end processing       0.5 4 mm <sup>2</sup> • finely stranded with core end processing       0.5 4 mm <sup>2</sup> • solid       0.5 4 mm <sup>2</sup> • solid       0.5 4 mm <sup>2</sup> • stranded       20 12         • stranded       20 12         • stranded       20 12         • stranded </td <td>electrostatic discharge according to IEC 61000-4-2</td> <td>4 kV contact discharge / 8 kV air discharge</td>   | electrostatic discharge according to IEC 61000-4-2      | 4 kV contact discharge / 8 kV air discharge            |
| Electrical Safety       IP20         type of insulation       Basic insulation         Connections/Terminals       Product component removable terminal for auxiliary and control circuit       Yes         type of electrical connection for auxiliary and control circuit       spring-loaded terminals (push-in)         type of connectable conductor cross-sections       solid       0.5 4 mm²         • solid       0.5 4 mm²       20 12         • finely stranded with core end processing       0.5 4 mm²         • for AWG cables solid       20 12         • for AWG cables stranded       20 12         • finely stranded with core end processing       0.5 4 mm²         • solid       0.5 4 mm²         • finely stranded with core end processing       0.5 4 mm²         • for AWG cables stranded       20 12         connectable conductor cross-section       4 mm²         • finely stranded with core end processing       0.5 4 mm²         • finely stranded with core end processing       0.5 4 mm²         • solid       0.5 4 mm²         • solid       0.5 4 mm²         • finely stranded without core end processing       0.5 4 mm²         • solid       20 12         • solid       20 12  | Safety related data                                     |  |
| protection class IP on the front according to IEC 60529         IP20           type of insulation         Basic insulation           Connections/ Terminals         Forminals           product component removable terminal for auxiliary and control circuit         Yes           type of electrical connection for auxiliary and control circuit         spring-loaded terminals (push-in)           type of connectable conductor cross-sections        4 mm²           • solid         0.5 4 mm²           • finely stranded with core end processing         0.5 2.5 mm²           • for AWG cables solid         20 12           • for AWG cables stranded         20 12           connectable conductor cross-section         4 mm²           • finely stranded with core end processing         0.5 4 mm²           • for AWG cables solid         20 12           connectable conductor cross-section         4 mm²           • finely stranded with core end processing         0.5 4 mm²           • finely stranded with core end processing         0.5 4 mm²           • solid         20 12           • solid         20 12           • str  | category according to EN 954-1                          | none   |
| type of insulation         Basic insulation           Connections/ Terminals         Connections/ Terminals           product component removable terminal for auxiliary and control circuit         Yes           type of electrical connection for auxiliary and control circuit         spring-loaded terminals (push-in)           type of connectable conductor cross-sections         spring-loaded terminals (push-in)           type of connectable conductor cross-sections         0.5 4 mm²           • solid         0.5 4 mm²           • finely stranded with core end processing         0.5 4 mm²           • for AWG cables solid         20 12           • for AWG cables stranded         20 12           connectable conductor cross-section         4 mm²           • finely stranded with core end processing         0.5 4 mm²           • solid         0.5 4 mm²           • finely stranded with core end processing         0.5 4 mm²           • finely stranded with core end processing         0.5 4 mm²           • solid         0.5 4 mm²           • solid         0.5 4 mm²           • solid         20 12           • solid         20 12           • stranded         20 12           Installation/ mounting/ dimensions         any   | Electrical Safety                                       |  |
| Connections/Terminals           product component removable terminal for auxiliary and<br>control circuit         Yes           type of electrical connection for auxiliary and control circuit         spring-loaded terminals (push-in)           type of connectable conductor cross-sections         spring-loaded terminals (push-in)           is solid         0.5 4 mm²           if nely stranded with core end processing         0.5 4 mm²           if nely stranded without core end processing         0.5 4 mm²           if or AWG cables solid         20 12           if or AWG cables stranded         20 12           connectable conductor cross-section         0.5 4 mm²           if nely stranded with core end processing         0.5 4 mm²           is solid         0.5 4 mm²           if nely stranded with core end processing         0.5 4 mm²           is solid         0.5 4 mm²           if nely stranded without core end processing         0.5 4 mm²           is solid         0.5 2.5 mm²           is solid         20 12           is stranded         20 12 <td>protection class IP on the front according to IEC 60529</td> <td>IP20</td>   | protection class IP on the front according to IEC 60529 | IP20   |
| product component removable terminal for auxiliary and<br>control circuit         Yes           type of electrical connection for auxiliary and control circuit         spring-loaded terminals (push-in)           type of connectable conductor cross-sections            • solid         0.5 4 mm²           • finely stranded with core end processing         0.5 4 mm²           • finely stranded without core end processing         0.5 4 mm²           • for AWG cables solid         20 12           • for AWG cables stranded         20 12           • finely stranded with core end processing         0.5 4 mm²           • finely stranded with core end processing         0.5 4 mm²           • for AWG cables stranded         20 12           • for AWG cables of a difference end processing         0.5 4 mm²           • solid         0.5 2.5 mm²           • solid         0.5 4 mm²           • solid         0.5 2.5 mm²           • solid         20 12           • stranded         20 12           • stranded         20 12           Installation/ mounting/ dimensions         any  | type of insulation                                      | Basic insulation                                       |
| control circuitspring-loaded terminals (push-in)type of electrical connection for auxilliary and control circuitspring-loaded terminals (push-in)type of connectable conductor cross-sections   | Connections/ Terminals                                  |  |
| type of electrical connection for auxiliary and control circuitspring-loaded terminals (push-in)type of connectable conductor cross-sections 4 mm²• solid0.5 4 mm²• finely stranded with core end processing0.5 4 mm²• finely stranded without core end processing0.5 4 mm²• for AWG cables solid20 12• for AWG cables stranded20 12connectable conductor cross-section 4 mm²• solid0.5 4 mm²• solid0.5 4 mm²• finely stranded with core end processing0.5 4 mm²• finely stranded without core end processing0.5 4 mm²• solid20 12• stranded20 12Installation/ mounting/ dimensionsanyfastening methodanyheight100 mmwidth22.5 mm  |   | Yes  |
| type of connectable conductor cross-sections       0.5 4 mm²         • finely stranded with core end processing       0.5 4 mm²         • finely stranded without core end processing       0.5 4 mm²         • for AWG cables solid       20 12         • for AWG cables stranded       0.5 4 mm²         • solid       0.5 4 mm²         • finely stranded with core end processing       0.5 4 mm²         • finely stranded with core end processing       0.5 4 mm²         • finely stranded with core end processing       0.5 4 mm²         • finely stranded without core end processing       0.5 4 mm²         • finely stranded without core end processing       0.5 4 mm²         • solid       20 12         • stranded       20 12         • stranded       20 12         Installation/ mounting/ dimensions       any         fastening method       screw and snap-on mounting onto 35 mm DIN rail         height       100 mm         width       22.5 mm  |   | arring loaded terminals (nuch in)                      |
| • solid       0.5 4 mm²         • finely stranded with core end processing       0.5 2.5 mm²         • finely stranded without core end processing       0.5 4 mm²         • for AWG cables solid       20 12         • for AWG cables stranded       20 12         • for AWG cables stranded       20 12         connectable conductor cross-section       0.5 4 mm²         • solid       0.5 4 mm²         • finely stranded with core end processing       0.5 4 mm²         • finely stranded with core end processing       0.5 4 mm²         • finely stranded with core end processing       0.5 4 mm²         • finely stranded with core end processing       0.5 4 mm²         • finely stranded without core end processing       0.5 4 mm²         • solid       0.5 4 mm²         • solid       0.5 4 mm²         • stranded       20 12         Installation/ mounting/ dimensions       20 12         installation/ mounting position       any         fastening method       screw and snap-on mounting onto 35 mm DIN rail         height       100 mm         width       22.5 mm   |   | spring-loaded terminals (push-in)                      |
| <ul> <li>finely stranded with core end processing</li> <li>finely stranded without core end processing</li> <li>for AWG cables solid</li> <li>for AWG cables solid</li> <li>for AWG cables stranded</li> <li>20 12</li> <li>connectable conductor cross-section         <ul> <li>solid</li> <li>0.5 4 mm<sup>2</sup></li> <li>finely stranded with core end processing</li> <li>0.5 4 mm<sup>2</sup></li> </ul> </li> <li>AWG number as coded connectable conductor cross section         <ul> <li>solid</li> <li>0.5 4 mm<sup>2</sup></li> <li>0.5 4 mm<sup>2</sup></li> </ul> </li> <li>AWG number as coded connectable conductor cross section         <ul> <li>solid</li> <li>solid</li> <li>20 12</li> </ul> </li> <li>Installation/ mounting/ dimensions         <ul> <li>mounting position</li> <li>any</li> <li>fastening method</li> <li>screw and snap-on mounting onto 35 mm DIN rail</li> <li>height</li> <li>100 mm</li> <li>width</li> </ul> </li> </ul>  |   | 0.5 4 mm <sup>2</sup>                                  |
| • finely stranded without core end processing0.5 4 mm²• for AWG cables solid20 12• for AWG cables stranded20 12connectable conductor cross-section0.5 4 mm²• solid0.5 4 mm²• finely stranded with core end processing0.5 4 mm²• finely stranded without core end processing0.5 4 mm²• solid20 12• solid20 12• solid20 12• stranded20 12Installation/ mounting/ dimensionsanyfastening methodscrew and snap-on mounting onto 35 mm DIN railheight100 mmwidth22.5 mm  |   |  |
| • for AWG cables solid20 12• for AWG cables stranded20 12connectable conductor cross-section0.5 4 mm²• solid0.5 4 mm²• finely stranded with core end processing0.5 2.5 mm²• finely stranded without core end processing0.5 4 mm²AWG number as coded connectable conductor cross<br>section20 12• solid20 12• solid20 12• stranded20 12Installation/ mounting/ dimensionsanyfastening methodscrew and snap-on mounting onto 35 mm DIN railheight100 mmwidth22.5 mm   |   |  |
| • for AWG cables stranded20 12connectable conductor cross-section 4 mm²• solid0.5 4 mm²• finely stranded with core end processing0.5 2.5 mm²• finely stranded without core end processing0.5 4 mm²• finely stranded without core end processing0.5 4 mm²• solid0.5 4 mm²• solid20 12• solid20 12• stranded20 12Installation/ mounting/ dimensionsanymounting positionanyfastening methodscrew and snap-on mounting onto 35 mm DIN railheight100 mmwidth22.5 mm  |   |  |
| connectable conductor cross-section0.5 4 mm²• solid0.5 2.5 mm²• finely stranded with core end processing0.5 2.5 mm²• finely stranded without core end processing0.5 4 mm²AWG number as coded connectable conductor cross<br>section20 12• solid20 12• stranded20 12Installation/ mounting/ dimensionsanyfastening methodscrew and snap-on mounting onto 35 mm DIN railheight100 mmwidth22.5 mm  |   |  |
| • solid0.5 4 mm²• finely stranded with core end processing0.5 2.5 mm²• finely stranded without core end processing0.5 4 mm²AWG number as coded connectable conductor cross<br>section20 12• solid20 12• stranded20 12Installation/ mounting/ dimensionsanyfastening methodscrew and snap-on mounting onto 35 mm DIN railheight100 mmwidth22.5 mm  |   | 20 12  |
| • finely stranded with core end processing       0.5 2.5 mm²         • finely stranded without core end processing       0.5 4 mm²         AWG number as coded connectable conductor cross section       -         • solid       20 12         • stranded       20 12         Installation/ mounting/ dimensions       -         mounting position       any         fastening method       screw and snap-on mounting onto 35 mm DIN rail         height       100 mm         width       22.5 mm  |   | 0.5 4 mm²  |
| • finely stranded without core end processing       0.5 4 mm²         AWG number as coded connectable conductor cross section       20 12         • solid       20 12         • stranded       20 12         Installation/ mounting/ dimensions       any         fastening method       screw and snap-on mounting onto 35 mm DIN rail         height       100 mm         width       22.5 mm   |   |  |
| AWG number as coded connectable conductor cross section         • solid       20 12         • stranded       20 12         Installation/ mounting/ dimensions       any         fastening method       screw and snap-on mounting onto 35 mm DIN rail         height       100 mm         width       22.5 mm   |   |  |
| section     2012       • stranded     2012       Installation/ mounting/ dimensions     2012       Installation/ mounting position     any       fastening method     screw and snap-on mounting onto 35 mm DIN rail       height     100 mm       width     22.5 mm  |   | U.S 4 MM*  |
| • stranded     20 12       Installation/ mounting/ dimensions     any       mounting position     any       fastening method     screw and snap-on mounting onto 35 mm DIN rail       height     100 mm       width     22.5 mm   |   |  |
| Installation/ mounting/ dimensions         mounting position       any         fastening method       screw and snap-on mounting onto 35 mm DIN rail         height       100 mm         width       22.5 mm  | • solid   | 20 12  |
| mounting position     any       fastening method     screw and snap-on mounting onto 35 mm DIN rail       height     100 mm       width     22.5 mm   | stranded  | 20 12  |
| fastening method     screw and snap-on mounting onto 35 mm DIN rail       height     100 mm       width     22.5 mm   | Installation/ mounting/ dimensions                      |  |
| height         100 mm           width         22.5 mm   | mounting position                                       | any  |
| width         22.5 mm   | fastening method  | screw and snap-on mounting onto 35 mm DIN rail         |
| width 22.5 mm   |   |  |
| depth 90 mm   | width   | 22.5 mm  |
|   | depth   | 90 mm  |

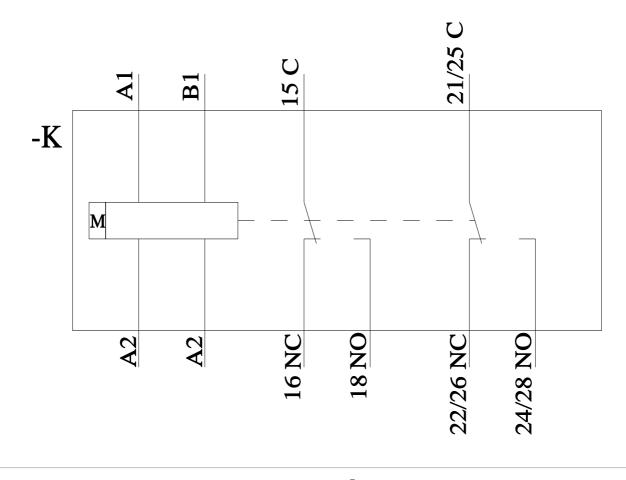
| required spacing                                      |   |                                   |          |                               |
|---|---|-----------------------------------|----------|-------------------------------|
| with side-by-side mounting                            |   |                                   |          |                               |
| — forwards  | 0 m   | ım                                |          |                               |
| — backwards   | 0 m   |                                   |          |                               |
| — upwards   | 0 m   |                                   |          |                               |
| — downwards   | 0 m   | im                                |          |                               |
| — at the side   | 0 m   |                                   |          |                               |
| <ul> <li>for grounded parts</li> </ul>                |   |                                   |          |                               |
| — forwards  | 0 m   | ım                                |          |                               |
| — backwards   | 0 m   | ım                                |          |                               |
| — upwards   | 0 m   | ım                                |          |                               |
| — at the side   | 0 m   | ım                                |          |                               |
| — downwards   | 0 m   | ım                                |          |                               |
| • for live parts                                      |   |                                   |          |                               |
| — forwards  | 0 m   | ım                                |          |                               |
| — backwards   | 0 m   | ım                                |          |                               |
| — upwards   | 0 m   | Im                                |          |                               |
| — downwards   | 0 m   | ım                                |          |                               |
| — at the side   | 0 m   | ım                                |          |                               |
| mbient conditions                                     |   |                                   |          |                               |
| installation altitude at height above sea level maxin | num 2 0   | 00 m                              |          |                               |
| ambient temperature                                   |   |                                   |          |                               |
| <ul> <li>during operation</li> </ul>                  | -25   | +60 °C                            |          |                               |
| <ul> <li>during storage</li> </ul>                    | -40   | +85 °C                            |          |                               |
| <ul> <li>during transport</li> </ul>                  | -40   | +85 °C                            |          |                               |
| relative humidity during operation                    | 10  | 95 %                              |          |                               |
| pprovals Certificates<br>General Product Approval     | UK  | Confirmation                      | ſ        | ror                           |
|   | UK<br>CA  | Confirmation                      | UL<br>UL | EAC                           |
| General Product Approval                              | UK<br>CA<br>Test Certificates                             | Confirmation<br>Marine / Shipping | UL.      | EAC                           |
| General Product Approval                              |   |                                   |          | Effective<br>Kegister<br>Liks |
| General Product Approval                              | Test Certificates   | Marine / Shipping                 |          | Lloyds<br>Register            |
| General Product Approval                              | Test Certificates   | Marine / Shipping                 |          | Lloyds<br>Register            |
| General Product Approval                              | Test Certificates Type Test Certificates ates/Test Report | Marine / Shipping                 |          | Lloyds<br>Register            |

https://support.industry.siemens.com/cs/ww/en/ps/3RP2505-2BB30 Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...) http://www.automation.siemens.com/bilddb/cax\_de.aspx?mlfb=3RP2505-2BB30&lang=en

Characteristic: Derating

https://support.industry.siemens.com/cs/ww/en/ps/3RP2505-2BB30/manual





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