SIEMENS

Product data sheet 3RH2122-2BW40



CONTACTOR RELAY, 2NO+2NC, DC 48V, SZ S00, SPRING-LOADED TERMINAL

| General technical data: | | |
|---|----|------------------------|
| Product brand name | | SIRIUS |
| Size of the contactor | | S00 |
| Identification number and letter for switching elements | | 22 E |
| Product extension / auxiliary switch | | Yes |
| Protection class IP / on the front | | IP20 |
| Protection against electrical shock | | finger-safe |
| Degree of pollution | | 3 |
| Insulation voltage / with degree of pollution 3 / rated value | V | 690 |
| Installation altitude / at a height over sea level / maximum | m | 2,000 |
| Ambient temperature / during storage | °C | -55 80 |
| Ambient temperature / during operating | °C | -25 60 |
| Shock resistance | | |
| at rectangular impulse | | |
| • at DC | | 10g / 5 ms, 5g / 10 ms |
| • at sine pulse | | |
| • at DC | | 15g / 5 ms, 8g / 10 ms |
| Impulse voltage resistance / rated value | kV | 6 |
| Mechanical operating cycles as operating time | | |
| of the contactor / typical | | 30,000,000 |

of the contactor with added auxiliary switch block / typical
 of the contactor with added electronics-compatible auxiliary switch block / typical
 10,000,000
 10,000,000

| Control circuit: | | |
|---|----|---------|
| Type of voltage / of the controlled supply voltage | | DC |
| Control supply voltage / 1 | | |
| • for DC / rated value | V | 48 |
| Operating range factor control supply voltage rated value / of the solenoid | | |
| • for DC | | 0.8 1.1 |
| Holding power / of the solenoid / for DC | W | 4 |
| Pull-in power / of the solenoid / for DC | W | 4 |
| Closing delay | | |
| • at DC | ms | 30 100 |
| Opening delay | | |
| • at DC | ms | 25 90 |
| Arcing time | S | 10 15 |

| Auxiliary circuit: | | |
|--|---|---|
| Contact reliability / of the auxiliary contacts | | 1 faulty switching per 100 million (17 V, 1 mA) |
| Number of NC contacts / for auxiliary contacts / instantaneous switching | | 2 |
| Number of NO contacts / for auxiliary contacts / instantaneous switching | | 2 |
| Operating current / of the auxiliary contacts / at AC-12 / maximum | А | 10 |
| Operating current / of the auxiliary contacts / at AC-15 | | |
| • at 230 V | Α | 6 |
| • at 400 V | Α | 3 |
| • at 500 V | Α | 2 |
| • at 690 V | Α | 1 |
| Operating current | | |
| • of the auxiliary contacts / with 1 current path / at DC-12 | | |
| • at 24 V | Α | 6 |
| • at 110 V | Α | 3 |
| • at 220 V | А | 1 |
| • with 2 current paths in series / at DC-12 | | |
| • at 24 V / rated value | Α | 10 |
| • at 60 V / rated value | Α | 10 |
| • at 110 V / rated value | Α | 4 |
| • at 220 V / rated value | Α | 2 |

| • at 440 V / rated value | | | |
|--|--|-----|--------|
| • with 3 current paths in series / at DC-12 • at 24 V / rated value | • at 440 V / rated value | Α | 1.3 |
| - at 24 V / rated value | • at 600 V / rated value | Α | 0.65 |
| • at 60 V / rated value • at 110 V / rated value • at 220 V / rated value • at 220 V / rated value • at 440 V / rated value • at 600 V / rated value • of the auxiliary contacts / with 1 current path / at DC-13 • at 24 V • at 110 V • at 220 V • at 110 V • at 220 V • with 2 current paths in series / at DC-13 • at 24 V / rated value • at 60 V / rated value • at 60 V / rated value • at 100 V / rated value • at 400 V / rated value • at 600 V / rated value • at 24 V / rated value • at 600 V / rated value • at 600 V / rated value • at 600 V / rated value • at 24 V / rated value • at 600 V / rated value • at 24 V / rated value • at 25 V / rated value • at 26 V / rated value • at 26 V / rated value • at 26 V / | • with 3 current paths in series / at DC-12 | | |
| * at 110 V / rated value | • at 24 V / rated value | Α | 10 |
| * at 220 V / rated value | • at 60 V / rated value | Α | 10 |
| • at 440 V / rated value • at 600 V / rated value • at 600 V / rated value • of the auxiliary contacts / with 1 current path / at DC-13 • at 24 V • at 110 V • at 120 V • with 2 current paths in series / at DC-13 • at 24 V / rated value • at 60 V / rated value • at 60 V / rated value • at 60 V / rated value • at 40 V / rated value • at 600 V / rated value • at 110 V / rated value • at 600 V / | • at 110 V / rated value | Α | 10 |
| • at 600 V / rated value Operating current • of the auxiliary contacts / with 1 current path / at DC-13 • at 24 V • at 110 V • at 220 V • with 2 current paths in series / at DC-13 • at 24 V / rated value • at 60 V / rated value • at 10 V / rated value • at 10 V / rated value • at 220 V / rated value • at 220 V / rated value • at 40 V / rated value • at 40 V / rated value • at 600 V / rated value • at 600 V / rated value • at 600 V / rated value • at 60 V / rated value • at 110 V / rated value • at 60 V / rated value • at 440 V / rated value • at 600 V / rated value • a | • at 220 V / rated value | Α | 3.6 |
| Operating current • of the auxiliary contacts / with 1 current path / at DC-13 • at 24 V A 6 • at 110 V A 1 • at 220 V A 0.3 • with 2 current paths in series / at DC-13 A 10 • at 24 V / rated value A 3.5 • at 110 V / rated value A 3.5 • at 110 V / rated value A 0.9 • at 440 V / rated value A 0.1 • with 3 current paths in series / at DC-13 A 10 • at 60 V / rated value A 0.1 • at 24 V / rated value A 4.7 • at 110 V / rated value A 3 • at 220 V / rated value A 3 • at 440 V / rated value A 1.2 • at 440 V / rated value A 0.5 • at 600 V / rated value A 0.26 Off-load operating frequency A 0.26 off-load operating frequency A 1/h 10,000 • at DC 1 | • at 440 V / rated value | Α | 2.5 |
| • of the auxiliary contacts / with 1 current path / at DC-13 • at 24 V • at 110 V • at 120 V • with 2 current paths in series / at DC-13 • at 24 V / rated value • at 60 V / rated value • at 60 V / rated value • at 110 V rated value • at 440 V / rated value • at 600 V / rated value • with 3 current paths in series / at DC-13 • at 22 V / rated value • at 600 V / rated value • at 60 V / rated value • at 110 V / rated value • at 110 V / rated value • at 60 V / rated value • at 60 V / rated value • at 440 V / rated value • at 20 V / rated value • at 440 V / rated value • at 40 V / rated value • at 600 V / rated value • at | • at 600 V / rated value | Α | 1.8 |
| * at 24 V | Operating current | | |
| *at 110 V *at 220 V *with 2 current paths in series / at DC-13 *at 24 V / rated value A 10 *at 60 V / rated value A 1.3 *at 220 V *with 2 current paths in series / at DC-13 *at 24 V / rated value A 3.5 *at 110 V / rated value A 1.3 *at 220 V / rated value A 0.9 *at 440 V / rated value A 0.1 *with 3 current paths in series / at DC-13 *at 24 V / rated value A 10 *at 60 V / rated value A 4.7 *at 110 V / rated value A 3 *at 220 V / rated value A 3 *at 24 V / rated value A 5 *at 110 V / rated value A 5 *at 110 V / rated value A 5 *at 110 V / rated value A 6 *at 110 V / rated value A 5 *at 220 V / rated value A 6 *at 220 V / rated value A 7 *at 240 V / rated value A 7 *at 220 V / rated value A 8 *at 220 V / rated val | • of the auxiliary contacts / with 1 current path / at DC-13 | | |
| * at 220 V * with 2 current paths in series / at DC-13 * at 24 V / rated value * at 60 V / rated value * at 110 V / rated value * at 440 V / rated value * at 600 V / rated value * at 110 V / rated value * at 600 V / rated value * at 600 V / rated value * at 110 V / rated value * at 220 V / rated value * at 440 V / rated value * at 440 V / rated value * at 600 V / ra | • at 24 V | Α | 6 |
| * with 2 current paths in series / at DC-13 * at 24 V / rated value * at 60 V / rated value * at 110 V / rated value * at 110 V / rated value * at 220 V / rated value * at 220 V / rated value * at 440 V / rated value * at 600 V / rated value * at 24 V / rated value * at 24 V / rated value * at 110 V / rated value * at 110 V / rated value * at 220 V / rated value * at 440 V / rated value * at 220 V / rated value * at 440 V / rated value * at 600 V / rated value | • at 110 V | Α | 1 |
| • at 24 V / rated value A 10 • at 60 V / rated value A 3.5 • at 110 V / rated value A 1.3 • at 220 V / rated value A 0.9 • at 440 V / rated value A 0.1 • with 3 current paths in series / at DC-13 Image: series / at DC-13 • at 24 V / rated value A 4.7 • at 60 V / rated value A 4.7 • at 110 V / rated value A 3 • at 220 V / rated value A 1.2 • at 440 V / rated value A 0.5 • at 600 V / rated value A 0.5 • at 600 V / rated value A 0.26 Off-load operating frequency • at AC 1/h 10,000 • at DC 1/h 10,000 Frequency of operation • at AC-12 / maximum 1/h 1,000 • at AC-15 / maximum 1/h 1,000 • at DC-12 / maximum 1/h 1,000 | • at 220 V | Α | 0.3 |
| at 60 V / rated value at 110 V / rated value at 220 V / rated value at 440 V / rated value at 600 V / rated value with 3 current paths in series / at DC-13 at 24 V / rated value at 60 V / rated value at 110 V / rated value at 110 V / rated value at 110 V / rated value at 220 V / rated value at 220 V / rated value at 440 V / rated value at 600 V / rated value at 700 V / rated value at 70 | • with 2 current paths in series / at DC-13 | | |
| at 110 V / rated value at 220 V / rated value at 440 V / rated value at 600 V / rated value with 3 current paths in series / at DC-13 at 24 V / rated value at 600 V / rated value at 110 V / rated value at 110 V / rated value at 220 V / rated value at 220 V / rated value at 220 V / rated value at 200 V / rated value at 440 V / rated value at 600 V / rated value at 700 V / rated value at | • at 24 V / rated value | Α | 10 |
| at 220 V / rated value at 440 V / rated value at 600 V / rated value with 3 current paths in series / at DC-13 at 24 V / rated value at 60 V / rated value at 60 V / rated value at 110 V / rated value at 220 V / rated value at 220 V / rated value at 440 V / rated value at 600 V / rated value at AC at AC at AC at AC at AC at AC-12 / maximum at AC-14 / maximum at AC-15 / maximum at AC-12 / maximum at DC-12 / maximum at DC-13 / maximum at DC-12 / maximum at DC- | • at 60 V / rated value | Α | 3.5 |
| at 440 V / rated value at 600 V / rated value with 3 current paths in series / at DC-13 at 24 V / rated value at 60 V / rated value at 110 V / rated value at 110 V / rated value at 110 V / rated value at 220 V / rated value at 440 V / rated value at 600 V / rated value at AC - 1/h 10,000 at AC at AC at AC at AC-12 / maximum at AC-14 / maximum at AC-15 / maximum at AC-12 / maximum at AC-12 / maximum at AC-12 / maximum at AC-14 / maximum at AC-15 / maximum at DC-12 / | • at 110 V / rated value | Α | 1.3 |
| at 600 V / rated value with 3 current paths in series / at DC-13 at 24 V / rated value at 60 V / rated value at 10 V / rated value at 110 V / rated value at 120 V / rated value at 220 V / rated value at 440 V / rated value at 600 V / rated value at 600 V / rated value at AC at AC at DC 1/h 10,000 at AC-12 / maximum at AC-14 / maximum at AC-15 / maximum at AC-12 / maximum at AC-14 / maximum at DC-12 / maximum 1/h 1,000 | • at 220 V / rated value | Α | 0.9 |
| with 3 current paths in series / at DC-13 at 24 V / rated value at 60 V / rated value at 110 V / rated value at 1220 V / rated value at 220 V / rated value at 440 V / rated value at 600 V / rated value at 600 V / rated value at AC at AC at DC 1/h 10,000 Frequency of operation at AC-12 / maximum at AC-14 / maximum at AC-15 / maximum at AC-12 / maximum at DC-12 / | • at 440 V / rated value | Α | 0.2 |
| at 24 V / rated value at 60 V / rated value at 110 V / rated value at 110 V / rated value at 220 V / rated value at 440 V / rated value at 600 V / rated value A 0.5 at 600 V / rated value A 0.26 Off-load operating frequency at AC at DC 1/h 10,000 Frequency of operation at AC-12 / maximum at AC-14 / maximum at AC-15 / maximum at AC-15 / maximum at DC-12 / maximum | • at 600 V / rated value | Α | 0.1 |
| at 60 V / rated value at 110 V / rated value at 220 V / rated value at 440 V / rated value at 600 V / rated value at 600 V / rated value A 0.5 at 600 V / rated value A 0.26 Off-load operating frequency at AC 1/h 10,000 at DC Frequency of operation at AC-12 / maximum at AC-14 / maximum at AC-15 / maximum at AC-15 / maximum at AC-15 / maximum at DC-12 / maximum at DC-12 / maximum 1/h 1,000 | • with 3 current paths in series / at DC-13 | | |
| • at 110 V / rated value • at 220 V / rated value • at 440 V / rated value • at 600 V / rated value • at AC • at AC • at DC Frequency of operation • at AC-12 / maximum • at AC-15 / maximum • at DC-12 / maximum | • at 24 V / rated value | Α | 10 |
| • at 220 V / rated value • at 440 V / rated value • at 600 V / rated value • at AC • at AC • at DC Frequency of operation • at AC-12 / maximum • at AC-15 / maximum • at DC-12 / maximum | • at 60 V / rated value | Α | 4.7 |
| at 440 V / rated value at 600 V / rated value Off-load operating frequency at AC 1/h 10,000 at DC I/h 10,000 Trequency of operation at AC-12 / maximum at AC-14 / maximum at AC-15 / maximum at AC-15 / maximum at DC-12 / maximum 1/h 1,000 1/h 1,000 1/h 1,000 | • at 110 V / rated value | Α | 3 |
| ◆ at 600 V / rated value A 0.26 Off-load operating frequency I/h 10,000 ◆ at AC 1/h 10,000 Frequency of operation I/h 1,000 ◆ at AC-12 / maximum 1/h 1,000 ◆ at AC-14 / maximum 1/h 1,000 ◆ at DC-12 / maximum 1/h 1,000 ◆ at DC-12 / maximum 1/h 1,000 | • at 220 V / rated value | Α | 1.2 |
| Off-load operating frequency 1/h 10,000 • at DC 1/h 10,000 Frequency of operation • at AC-12 / maximum 1/h 1,000 • at AC-14 / maximum 1/h 1,000 • at AC-15 / maximum 1/h 1,000 • at DC-12 / maximum 1/h 1,000 | • at 440 V / rated value | Α | 0.5 |
| • at AC 1/h 10,000 • at DC 1/h 10,000 Frequency of operation • at AC-12 / maximum 1/h 1,000 • at AC-14 / maximum 1/h 1,000 • at AC-15 / maximum 1/h 1,000 • at DC-12 / maximum 1/h 1,000 | • at 600 V / rated value | Α | 0.26 |
| • at DC 1/h 10,000 Frequency of operation • at AC-12 / maximum 1/h 1,000 • at AC-14 / maximum 1/h 1,000 • at AC-15 / maximum 1/h 1,000 • at DC-12 / maximum 1/h 1,000 | Off-load operating frequency | | |
| Frequency of operation • at AC-12 / maximum 1/h 1,000 • at AC-14 / maximum 1/h 1,000 • at AC-15 / maximum 1/h 1,000 • at DC-12 / maximum 1/h 1,000 | • at AC | 1/h | 10,000 |
| • at AC-12 / maximum 1/h 1,000 • at AC-14 / maximum 1/h 1,000 • at AC-15 / maximum 1/h 1,000 • at DC-12 / maximum 1/h 1,000 | • at DC | 1/h | 10,000 |
| • at AC-14 / maximum 1/h 1,000 • at AC-15 / maximum 1/h 1,000 • at DC-12 / maximum 1/h 1,000 | Frequency of operation | | |
| • at AC-15 / maximum 1/h 1,000 • at DC-12 / maximum 1/h 1,000 | • at AC-12 / maximum | 1/h | 1,000 |
| • at DC-12 / maximum 1/h 1,000 | • at AC-14 / maximum | 1/h | 1,000 |
| | • at AC-15 / maximum | 1/h | 1,000 |
| • at DC-13 / maximum 1/h 1,000 | at DC-12 / maximum | 1/h | 1,000 |
| | • at DC-13 / maximum | 1/h | 1,000 |

Short-circuit:

Design of the fuse link / for short-circuit protection of the auxiliary switch

• required

Fuse gL/gG: 10 A, miniature circuit breaker C 6 A (short-circuit current lk < 400 A)

| Installation/mounting/dimensions: | | |
|---|----|--|
| Built in orientation | | vertical |
| Type of mounting | | screw and snap-on mounting onto 35 mm standard mounting rail |
| Width | mm | 45 |
| Height | mm | 70 |
| Depth | mm | 73 |
| Distance, to be maintained, to the ranks assembly / sidewards | mm | 0 |

| Connections: | |
|---|-------------------------|
| Design of the electrical connection | |
| • for auxiliary and control current circuit | spring-loaded terminals |
| Type of the connectable conductor cross-section | |
| for auxiliary contacts | |
| • solid | 2x (0.5 4 mm²) |
| • finely stranded | |
| with conductor end processing | 2x (0.5 2.5 mm²) |
| without conductor final cutting | 2x (0.5 2.5 mm²) |
| • for AWG conductors / for auxiliary contacts | 2x (20 12) |

Certificates/approvals:

General Product Approval

ROSTEST



Test Certificates

Manufacturer















Shipping Approval

Shipping Approval







| | 1001 | | |
|----------|-----------------------|------------|--|
| | $\alpha \sim 10^{-1}$ | ratings | |
| <u>u</u> | COA | I dtillige | |

Contact rating designation / for auxiliary contacts / according to UL

A600 / Q600

| Safety:related Parameter: | | |
|---|-----|-----------|
| B10 value / with high demand rate | | |
| • according to SN 31920 | | 1,000,000 |
| T1 value / for proof test interval or service life | | |
| according to IEC 61508 | а | 10 |
| Proportion of dangerous failures | | |
| • with low demand rate / according to SN 31920 | % | 40 |
| with high demand rate / according to SN 31920 | % | 73 |
| Failure rate (FIT value) / with low demand rate | | |
| according to SN 31920 | FIT | 100 |
| Product function / positively driven operation to IEC 60947-5-1 | | Yes |

Further information:

Information- and Downloadcenter (Catalogs, Brochures,...)

http://www.siemens.com/industrial-controls/catalogs

Industry Mall (Online ordering system)

http://www.siemens.com/industrial-controls/mall

Cax online generator:

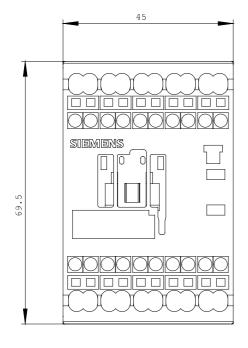
http://www.siemens.com/cax

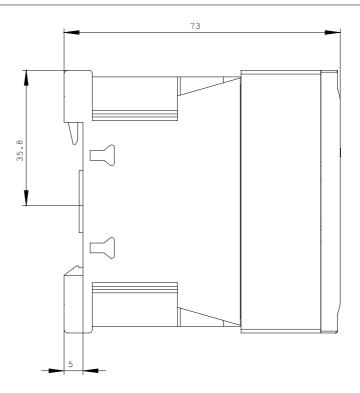
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

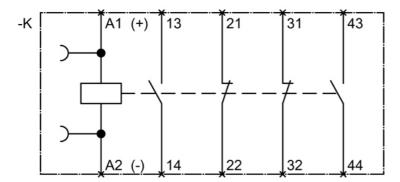
 $\underline{\text{http://support.automation.siemens.com/WW/view/en/3RH2122-2BW40/all}}$

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

 $\underline{\text{http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3RH2122-2BW40}$







last change: Oct 24, 2011