## SIEMENS

## Product data sheet

## 3RT2038-1AP64



CONTACTOR,AC3:37KW/400V, 1NO+1NC,220VAC 50HZ/240V 60HZ, 3-POLE, SIZE S2, SCREW TERMINAL

| General technical data:   |    |            |
|---|----|------------|
| product brand name  |    | SIRIUS     |
| Size of contactor   |    | S2         |
| Product expansion   |    |            |
| Auxiliary switch  |    | No         |
| function module for communication   |    | No         |
| Protection class IP / on the front  |    | IP20       |
| Degree of pollution   |    | 3          |
| Installation altitude / at height above sea level / maximum   | m  | 2,000      |
| Ambient temperature   |    |            |
| during storage  | °C | -55 +80    |
| • during operation  | °C | -25 +60    |
| Surge voltage resistance / Rated value  | kV | 6          |
| Insulation voltage / Rated value  | V  | 690        |
| maximum permissible voltage for safe isolation / between coil and main contacts / acc. to EN 60947-1        | V  | 400        |
| Mechanical service life (switching cycles)  |    |            |
| of the contactor / typical  |    | 10,000,000 |
| of the contactor with added auxiliary switch block / typical  |    | 10,000,000 |
| <ul> <li>of the contactor with added electronics-compatible auxiliary<br/>switch block / typical</li> </ul> |    | 5,000,000  |

| Main circuit:  |     |      |
|--|-----|------|
| Number of NC contacts / for main contacts                        |     | 0    |
| Number of NO contacts / for main contacts                        |     | 3    |
| Connectable conductor cross-section / in main circuit            |     |      |
| • at AC-1  |     |      |
| • at 40 °C / minimum permissible                                 | mm² | 35   |
| • at 60 °C / minimum permissible                                 | mm² | 35   |
| Operating current  |     |      |
| • at AC-1 / up to 690 V  |     |      |
| • at ambient temperature 40 °C / Rated value                     | А   | 90   |
| • at ambient temperature 60 °C / Rated value                     | А   | 80   |
| • at AC-2 / at 400 V / Rated value                               | А   | 80   |
| • at AC-3  |     |      |
| • at 400 V / Rated value   | А   | 80   |
| • at 500 V / Rated value   | А   | 80   |
| • at 690 V / Rated value   | А   | 58   |
| • at AC-4 / at 400 V / Rated value                               | А   | 55   |
| Operating current / for $\geq$ 200000 operating cycles / at AC-4 |     |      |
| • at 400 V / Rated value   | А   | 30   |
| • at 690 V / Rated value   | А   | 24   |
| Operating current  |     |      |
| • with 1 current path / at DC-1                                  |     |      |
| • at 24 V / Rated value  | А   | 75   |
| • at 110 V / Rated value   | А   | 4.5  |
| • at 220 V / Rated value   | А   | 2    |
| • at 440 V / Rated value   | А   | 0.4  |
| • at 600 V / Rated value   | А   | 0.25 |
| • with 2 current paths in series / at DC-1                       |     |      |
| • at 24 V / Rated value  | А   | 75   |
| • at 110 V / Rated value   | А   | 45   |
| • at 220 V / Rated value   | А   | 5    |
| • at 440 V / Rated value   | А   | 1    |
| • at 600 V / Rated value   | А   | 0.8  |
| • with 3 current paths in series / at DC-1                       |     |      |
| • at 24 V / Rated value  | А   | 55   |
| • at 110 V / Rated value   | А   | 45   |
| • at 220 V / Rated value   | А   | 45   |
| • at 440 V / Rated value   | А   | 2.9  |
| • at 600 V / Rated value   | А   | 1.4  |

| Operating current   |     |       |
|---|-----|-------|
| • with 1 current path / at DC-3 / at DC-5   |     |       |
| • at 24 V / Rated value   | А   | 35    |
| • at 110 V / Rated value  | А   | 2.5   |
| • at 220 V / Rated value  | А   | 2     |
| • at 440 V / Rated value  | А   | 0.1   |
| • at 600 V / Rated value  | А   | 0.06  |
| • with 2 current paths in series / at DC-3 / at DC-5  |     |       |
| • at 24 V / Rated value   | А   | 55    |
| • at 110 V / Rated value  | А   | 25    |
| • at 220 V / Rated value  | А   | 5     |
| • at 440 V / Rated value  | А   | 0.27  |
| • at 600 V / Rated value  | А   | 0.16  |
| • with 3 current paths in series / at DC-3 / at DC-5  |     |       |
| • at 24 V / Rated value   | А   | 55    |
| • at 110 V / Rated value  | А   | 45    |
| • at 220 V / Rated value  | А   | 25    |
| • at 440 V / Rated value  | А   | 0.6   |
| • at 600 V / Rated value  | А   | 0.6   |
| Operating power   |     |       |
| • at AC-1 / at 230 V / Rated value  | kW  | 34    |
| • at AC-1 / at 400 V / Rated value  | kW  | 59    |
| • at AC-1 / at 690 V / Rated value  | kW  | 102   |
| • at AC-2   |     |       |
| • at 400 V / Rated value  | kW  | 37    |
| • at AC-3   |     |       |
| • at 230 V / Rated value  | kW  | 22    |
| • at 400 V / Rated value  | kW  | 37    |
| • at 500 V / Rated value  | kW  | 37    |
| • at 690 V / Rated value  | kW  | 45    |
| • at AC-4   |     |       |
| • at 400 V / Rated value  | kW  | 30    |
| Dperating power / for $\geq$ 200000 operating cycles / at AC-4                                    |     |       |
| • at 400 V / Rated value  | kW  | 15.8  |
| • at 690 V / Rated value  | kW  | 21.8  |
| Thermal short-time current / restricted to 10 s   | А   | 640   |
| Active power loss / at AC-3 / at 400 V / for rated value of the operating current / per conductor | W   | 5.7   |
| No-load switching frequency   |     |       |
| • with AC   | 1/h | 5,000 |

| Operating frequency  |     |         |
|--|-----|---------|
| • at AC-1 / maximum  | 1/h | 700     |
| • at AC-2 / maximum  | 1/h | 350     |
| • at AC-3 / maximum  | 1/h | 500     |
| • at AC-4 / maximum  | 1/h | 150     |
| Control circuit/ Control:  |     |         |
| Type of voltage / of the control supply voltage                                |     | AC      |
| Control supply voltage   | _   |         |
| • with AC / at 50 Hz / Rated value   | V   | 220     |
| • with AC / at 60 Hz / Rated value   | V   | 240     |
| Operating range factor control supply voltage rated value / of the magnet coil | _   |         |
| • with AC / at 50 Hz   |     | 0.8 1.1 |
| • with AC / at 60 Hz   |     | 0.8 1.1 |
| Apparent pick-up power / of the magnet coil / with AC                          |     |         |
| • at 50 Hz   | V·A | 212     |
| • at 60 Hz   | V·A | 188     |
| Apparent holding power / of the magnet coil / with AC                          |     |         |
| • at 50 Hz   | V·A | 18.5    |
| • at 60 Hz   | V·A | 16.5    |
| Closing delay  | _   |         |
| • with AC  | ms  | 10 80   |
| Opening delay  |     |         |
| • with AC  | ms  | 10 18   |
| Arcing time  | ms  | 10 20   |
| Auxiliary circuit:   |     |         |
| Number of NC contacts / for auxiliary contacts / instantaneous contact         |     | 2       |
| Number of NO contacts / for auxiliary contacts / instantaneous contact         |     | 2       |
| Operating current  |     |         |
| • at AC-12 / maximum   | А   | 10      |
| • at AC-15   |     |         |
| • at 230 V / Rated value   | А   | 6       |
| • at 400 V / Rated value   | А   | 3       |
| • at 500 V / Rated value   | А   | 2       |
| • at 690 V / Rated value   | А   | 1       |
| Operating current / at DC-12   |     |         |
| • at 24 V / Rated value  | А   | 10      |
|  |     |         |

| • at 48 V / Rated value   | А  | 6  |
|---|----|--|
| • at 60 V / Rated value   | А  | 6  |
| • at 110 V / Rated value  | А  | 3  |
| • at 125 V / Rated value  | А  | 2  |
| • at 220 V / Rated value  | А  | 1  |
| • at 440 V / Rated value  | А  | 0.3  |
| • at 600 V / Rated value  | А  | 0.15   |
| Operating current / at DC-13  | _  |  |
| • at 24 V / Rated value   | А  | 6  |
| • at 48 V / Rated value   | А  | 2  |
| • at 60 V / Rated value   | А  | 2  |
| • at 110 V / Rated value  | А  | 1  |
| • at 125 V / Rated value  | А  | 0.9  |
| • at 220 V / Rated value  | А  | 0.3  |
| • at 440 V / Rated value  | А  | 0.14   |
| • at 600 V / Rated value  | А  | 0.1  |
| UL/CSA ratings:   |    |  |
| yielded mechanical performance [hp]   |    |  |
| for single-phase AC motor   |    |  |
| • at 110/120 V / Rated value  | hp | 5  |
| • at 230 V / Rated value  | hp | 15   |
| for three-phase AC motor  |    |  |
| • at 200/208 V / Rated value  | hp | 20   |
| • at 220/230 V / Rated value  | hp | 25   |
| • at 460/480 V / Rated value  | hp | 50   |
| • at 575/600 V / Rated value  | hp | 60   |
| Full-load current (FLA) / for three-phase AC motor                                  | _  |  |
| • at 480 V / Rated value  | А  | 65   |
| • at 600 V / Rated value  | А  | 62   |
| Contact rating / of the auxiliary contacts / acc. to UL                             |    | A600 / Q600  |
| Short-circuit:  |    |  |
| Design of the fuse link   |    |  |
| <ul> <li>for short-circuit protection of the auxiliary switch / required</li> </ul> |    | fuse gL/gG: 10 A   |
| Installation/ mounting/ dimensions:   |    |  |
| mounting position   |    | +/-180° rotation possible on vertical mounting surface;<br>can be tilted forward and backward by +/- 22.5° on<br>vertical mounting surface |
|   |    | screw and snap-on mounting onto 35 mm standard   |

| Width   |   | mm | 55                                  |
|---|---|----|-------------------------------------|
| Height  |   | mm | 113.4                               |
| Depth   |   | mm | 173.5                               |
| Spacing required / with side-by-side mounting                   |   | mm | 0                                   |
| Connections/ terminals:   |   |    |                                     |
| Design of the electrical connection                             |   |    |                                     |
| <ul> <li>for main current circuit</li> </ul>                    |   |    | screw-type terminals                |
| <ul> <li>for auxiliary and control current circul</li> </ul>    | <ul> <li>for auxiliary and control current circuit</li> </ul> |    | screw-type terminals                |
| Type of connectable conductor cross-se                          | ction   |    |                                     |
| for main contacts   |   |    |                                     |
| single or multi-stranded  |   |    | 2x (1 35 mm²), 1x (1 50 mm²)        |
| <ul> <li>finely stranded / with core end pro</li> </ul>         | ocessing  |    | 2x (1 25 mm²), 1x (1 35 mm²)        |
| <ul> <li>for AWG conductors / for main contacts</li> </ul>      |   |    | 2x (18 2), 1x (18 1)                |
| Type of connectable conductor cross-see                         | ction   |    |                                     |
| <ul> <li>for auxiliary contacts</li> </ul>                      |   |    |                                     |
| <ul> <li>single or multi-stranded</li> </ul>                    |   |    | 2x (0,5 1,5 mm²), 2x (0,75 2,5 mm²) |
| <ul> <li>finely stranded / with core end pro</li> </ul>         | ocessing  |    | 2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²) |
| <ul> <li>for AWG conductors / for auxiliary contacts</li> </ul> |   |    | 2x (20 16), 2x (18 14)              |
| Safety related data:  |   |    |                                     |
| Proportion of dangerous failures                                |   |    |                                     |
| • with low demand rate / acc. to SN 31920                       |   | %  | 40                                  |
| • with high demand rate / acc. to SN 3                          | 1920  | %  | 73                                  |
| Product function  |   |    |                                     |
| Mirror contact acc. to IEC 60947-4-1                            |   |    | Yes                                 |
| positively driven operation acc. to IEC 60947-5-1               |   |    | No                                  |
| Certificates/ approvals:  |   |    |                                     |
| General Product Approval  | other   |    |                                     |
|   | <u>Confirmation</u>   |    |                                     |
| Further information:  |   |    |                                     |
| Information and Downloadoontor (Catal                           |   |    |                                     |

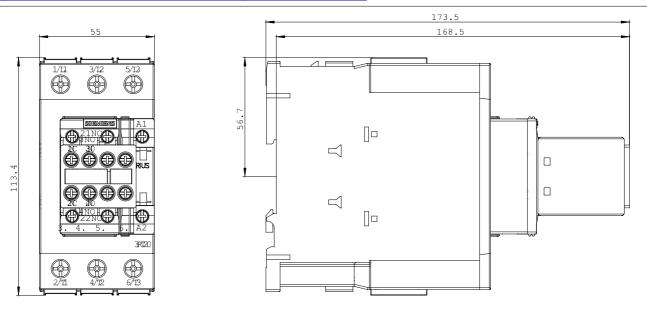
Information- and Downloadcenter (Catalogs, Brochures,...) http://www.siemens.com/industrial-controls/catalogs

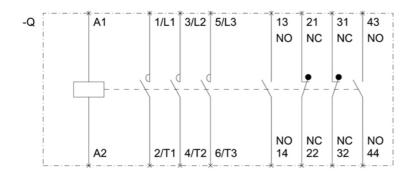
Industry Mall (Online ordering system) http://www.siemens.com/industrymall

Cax online generator

http://www.siemens.com/cax

Service&Support (Manuals, Certificates, Characteristics, FAQs,...) http://support.automation.siemens.com/WW/view/en/3RT2038-1AP64/all Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, ...) http://www.automation.siemens.com/bilddb/cax\_en.aspx?mlfb=3RT2038-1AP64





last change:

Dec 17, 2014