## SIEMENS

Product data sheet


LOAD FEEDER FUSELESS REVERSING DUTY,
AC 400V, SZ. S0, 7. . .10A,
AC 230 V SCREW CONNECTION FOR BUSBAR SYSTEMS 60MM TYPE OF COORD. 2, IQ = 150KA (ALSO ACHIEVES TYPE OF COORD.1) 1NO+1NC (CONTACTOR)

## General technical data:

| Product brand name |  | SIRIUS |
| :---: | :---: | :---: |
| product designation |  | non-fused load feeders 3RA2 |
| Design of the product |  | reversing starter |
| Size of the load feeder |  | So |
| Protection class IP / on the front |  | IP20 |
| Degree of pollution |  | 3 |
| Insulation voltage / rated value | V | 690 |
| Installation altitude / at a height over sea level / maximum | m | 2,000 |
| Ambient temperature <br> - during transport <br> - during storage <br> - during operating | ${ }^{\circ} \mathrm{C}$ ${ }^{\circ} \mathrm{C}$ ${ }^{\circ} \mathrm{C}$ | $\begin{aligned} & -55 \ldots 80 \\ & -55 \ldots . \\ & -20 \ldots \\ & -\ldots 0 \end{aligned}$ |
| Impulse voltage resistance / rated value | kV | 6 |
| Active power loss / per conductor / typical | W | 3.5 |
| Item designation <br> - according to DIN 40719 extendable after IEC 204-2 / according to IEC 750 <br> - according to DIN EN 61346-2 |  | Q Q |
| Type of assignement |  | 2 |


| Mechanical operating cycles as operating time / of the contactor <br> - typical |  | 10,000,000 |
| :---: | :---: | :---: |
| Manufacturer article number <br> - of the circuit-breakers included in the scope of supply <br> - of the contactor included in the scope of supply <br> - of the RS applied assembly kit <br> - of the link module included in the scope of supply <br> - of the busbar adapter included in the scope of supply |  | 3RV2011-1JA10 <br> 3RT2024-1AP00 <br> 8US1250-5AT10 <br> 3RA2921-1AA00 <br> 8US1251-5NT10 |
| Design of the switching contact |  | mechanical |
| Type of the motor protection |  | bimetal |
| Adjustable response current <br> - of the current-dependent overload release | A | $7 . .10$ |
| Communication: |  |  |
| Product function / bus-communication |  | No |
| Protocol / will be supported <br> - AS interface protocol <br> - PROFIBUS DP protocol <br> - PROFINET protocol |  | No <br> No <br> No |
| Product extension / function module for communication |  | No |
| Main circuit: |  |  |
| Number of poles / for main current circuit |  | 3 |
| Number of NC contacts / for main contacts |  | 0 |
| Number of NO contacts / for main contacts |  | 3 |
| Operating voltage / at AC-3 / rated value / maximum | v | 690 |
| Operating current <br> - at AC-1 / at $400 \mathrm{~V} /$ rated value <br> - at AC-2 / at $400 \mathrm{~V} /$ rated value <br> - at AC-3 / at $400 \mathrm{~V} /$ rated value <br> - at AC-4 / at $400 \mathrm{~V} /$ rated value | A A A A | 10 <br> 8.5 <br> 8.5 <br> 8.5 |
| Service power <br> - at AC-2 / at $400 \mathrm{~V} /$ rated value <br> - at AC-3 <br> - at $400 \mathrm{~V} /$ rated value <br> - at $500 \mathrm{~V} /$ rated value <br> - at $690 \mathrm{~V} /$ rated value <br> - at AC-4 / at $400 \mathrm{~V} /$ rated value | W w w w w | $\begin{aligned} & 4,000 \\ & 4,000 \\ & 5,500 \\ & 7,500 \\ & 4,000 \end{aligned}$ |
| Off-load operating frequency | 1/h | 10,000 |

- at AC-1 / according to IEC 60947-6-2 / maximum
- at AC-2 / according to IEC 60947-6-2 / maximum

| $1 / \mathrm{h}$ | 1,000 |
| :--- | :--- | :--- |
| $1 / \mathrm{h}$ | 1,000 |
| $1 / \mathrm{h}$ | 1,000 |
| $1 / \mathrm{h}$ | 300 |

- at AC-3 / according to IEC 60947-6-2 / maximum
- at AC-4 / according to IEC 60947-6-2 / maximum


## Control circuit:

| Type of voltage / of the controlled supply voltage |  | AC |
| :---: | :---: | :---: |
| Control supply voltage frequency |  |  |
| - 1 / rated value | Hz | 50 |
| Control supply voltage / 1 |  |  |
| - at 50 Hz / for AC / rated value | v | 230 |
| - at 60 Hz / for AC / rated value | V | 230 |
| Apparent holding power / of the solenoid / for AC | V.A | 8.5 |
| Inductive power factor / with the pull-in power of the coil |  | 0.25 |

## Auxiliary circuit:

| Product extension / auxiliary switch |  | Yes |
| :--- | :--- | :--- |
| Number of NC contacts / for auxiliary contacts |  | 1 |
| Number of NO contacts / for auxiliary contacts |  | 1 |
| Number of change-over switches / for auxiliary contacts | 0 |  |

## Inputs/ Outputs:

Number of digital inputs
0

| Short-circuit: |  |  |
| :---: | :---: | :---: |
| Product function / short circuit protection |  | Yes |
| Design of the short-circuit protection |  | circuit-breakers |
| Breaking capacity limit short-circuit current (Icu) |  |  |
| - at $400 \mathrm{~V} /$ rated value | A | 100,000 |
| - at $500 \mathrm{~V} /$ rated value | A | 42,000 |
| - at $690 \mathrm{~V} /$ rated value | A | 4,000 |

Installation/mounting/dimensions:

| Built in orientation |  | vertical |
| :---: | :---: | :---: |
| Type of mounting |  | for snapping onto 60 mm busbar systems |
| Width | mm | 90 |
| Height | mm | 260 |
| Depth | mm | 155.1 |
| Center line spacing | mm | 60 |
| Distance, to be maintained, to the ranks assembly |  |  |
| - forwards | mm | 10 |
| - backwards | mm | 0 |

- upwards
- downwards
- sidewards

Distance, to be maintained, to earthed part

- forwards
- backwards
- upwards
- downwards
- sidewards

Distance, to be maintained, conductive elements

- forwards
- backwards
- upwards
- downwards
- sidewards
$\mathrm{mm} \quad 30$
$\mathrm{mm} \quad 30$
$\mathrm{mm} \quad 0$
$\mathrm{mm} \quad 10$
$\mathrm{mm} \quad 0$
$\mathrm{mm} \quad 30$
$\mathrm{mm} \quad 10$
$\mathrm{mm} \quad 9$
$\mathrm{mm} \quad 10$
$\mathrm{mm} \quad 0$
$\mathrm{mm} \quad 30$
$\mathrm{mm} \quad 10$
mm $\quad 9$


## Connections:

Design of the electrical connection

- for main current circuit
- for auxiliary and control current circuit


## Type of the connectable conductor cross-section

- for main contacts
- solid
- stranded
- finely stranded
- with conductor end processing
- for AWG conductors / for main contacts
- for auxiliary contacts
- solid
- finely stranded
- with conductor end processing
- for AWG conductors / for auxiliary contacts


## Certificates/approvals:

## Verification of suitability

Varification of suitability / ATEX
screw-type terminals
screw-type terminals
$2 x(1 \ldots 2.5 \mathrm{~mm} 2), 2 \mathrm{x}(2.5 \ldots 10 \mathrm{~mm} 2)$
$2 x(1.0 \ldots 2.5 \mathrm{~mm} 2), 2 x(2.5 \ldots 10 \mathrm{~mm} 2)$
$2 \times(1 \ldots 2.5 \mathrm{~mm} 2), 2 \times(2.5 \ldots 6 \mathrm{~mm} 2), 1 \times 10 \mathrm{~mm} 2$
$2 \times(16 \ldots 14), 2 \times(14 \ldots 8)$
$2 x(0.5 \ldots 1.5 \mathrm{~mm} 2), 2 \times(0.75 \ldots 2.5 \mathrm{~mm} 2)$
$2 x(0.5 \ldots 1.5 \mathrm{~mm} 2), 2 x(0.75 \ldots 2.5 \mathrm{~mm} 2)$
$2 x(20 \ldots 14)$

CE / UL / CSA / CCC
No


## UL/CSA ratings

yielded mechanical performance (hp)

- for single-phase squirrel cage motors
- at $110 / 120 \mathrm{~V} /$ rated value
$\begin{array}{ll}\text { hp } & 0.5\end{array}$
- for three-phase squirrel cage motors
- at $220 / 230 \mathrm{~V} /$ rated value
hp 3
- at $460 / 480 \mathrm{~V} /$ rated value
- at $575 / 600 \mathrm{~V} /$ rated value
hp 5
hp $\quad 7.5$
Operating current (FLA) / for three-phase squirrel cage motors
- at $480 \mathrm{~V} /$ rated value

A 10

- at $600 \mathrm{~V} /$ rated value

Contact rating designation / for auxiliary contacts / according to UL

| Safety: |  |  |
| :---: | :---: | :---: |
| B10 value / with high demand rate |  |  |
| - according to SN 31920 |  | 1,000,000 |
| Failure rate (FIT value) / with low demand rate |  |  |
| - according to SN 31920 | FIT | 250 |
| Proportion of dangerous failures |  |  |
| - with low demand rate / according to SN 31920 | \% | 40 |
| - with high demand rate / according to SN 31920 | \% | 75 |
| T1 value / for proof test interval or service life |  |  |
| - according to IEC 61508 | a | 13 |
| Protection against electrical shock |  | finger-safe |

## 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,...)
http://support.automation.siemens.com/WW/view/en/3RA2220-1JD24-0AP0/all
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, ...)
http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3RA2220-1JD24-0AP0



