

## Step switch - RS20-US-S0251-0404-014H-001 - 3069721

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Step switch, without 0 position, Connection method: Screw connection, Number of positions: 2, Function: Four steps, Switching zones: 4, Switching program number: S0251, Rated continuous current: 20 A, Voltage: 690 V

### Why buy this product

- ✓ The compact rotary switch is designed for use in energy technology applications with the available switching programs
- ✓ The use of high-quality materials results in a long mechanical and electrical service life
- ✓ Comprehensive approvals ensure international use
- ✓ High level of safety thanks to non-conductive plastic parts
- ✓ The terminal points are designed in such a way that shock protection according to BGV A2 is ensured
- ✓ The rotary switch is free from cadmium and compliant with the RoHS directive

### Key Commercial Data

|              |   |
|--------------|---|
| Packing unit | 1 STK   |
| GTIN         | <br>4 046356 785228 |
| GTIN         | 4046356785228   |

### Technical data

#### General

|                          |   |
|--------------------------|---|
| Number of connections    | 16  |
| Color                    | silver/black  |
| Rotary switch function   | Four steps  |
| Switching program number | S0251   |
| Switching angle          | 60 °  |
| Rated continuous current | 20 A  |
| Maximum load current     | 20 A  |
| Rated surge voltage      | 6 kV  |
| Rated insulation voltage | 690 V (Valid for networks with grounded neutral point, overvoltage category III, degree of pollution 3) |

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## Technical data

### General

|  |  |
|--|--|
| Rated operating current according to AC-15 (switching of solenoid drives, contactors, valves, pulling electromagnets)                        | 5 A (220 - 240 V)  |
|  | 4 A (380 - 440 V)  |
| Rated operating current according to AC-21A (switching of ohmic loads including small overloads)   | 20 A   |
| Rated operating current according to AC-22A (switching of mixed ohmic and inductive loads, including small overloads)                        | 20 A (220 - 500 V)   |
|  | 20 A (660 - 690 V)   |
| Switching power according to AC-3 (squirrel-cage motors: direct starting, switching off motors during operation, star-delta startup (CH16B)) | 3 kW (220 - 240 V; 3-phase, 3-pos.)                          |
|  | 5.5 kW (380 - 440 V; 3-phase, 3-pos.)                        |
|  | 5.5 kW (500 V; 3-phase, 3-pos.)                              |
|  | 5.5 kW (660 - 690 V; 3-phase, 3-pos.)                        |
|  | 0.6 kW (110 - 120 V; 1-phase, 2-pos.)                        |
|  | 2.2 kW (220 - 240 V; 1-phase, 2-pos.)                        |
|  | 3 kW (380 - 440 V; 1-phase, 2-pos.)                          |
| Switching power according to AC-4 (squirrel-cage motors: starting, reversing, plugging, inching)   | 0.55 kW (220 - 240 V; 3-phase, 3-pos.)                       |
|  | 1.5 kW (380 - 440 V; 3-phase, 3-pos.)                        |
|  | 1.5 kW (500 V; 3-phase, 3-pos.)                              |
|  | 1.5 kW (660 - 690 V; 3-phase, 3-pos.)                        |
|  | 0.3 kW (110 - 120 V; 1-phase, 2-pos.)                        |
|  | 0.75 kW (220 - 240 V; 1-phase, 2-pos.)                       |
|  | 1.5 kW (380 - 440 V; 1-phase, 2-pos.)                        |
| Switching power according to AC-23A (frequent switching of motors or other highly inductive loads)   | 3.7 kW (220 - 240 V; 3-phase, 3-pos.)                        |
|  | 7.5 kW (380 - 440 V; 3-phase, 3-pos.)                        |
|  | 7.5 kW (500 V; 3-phase, 3-pos.)                              |
|  | 7.5 kW (660 - 690 V; 3-phase, 3-pos.)                        |
|  | 0.75 kW (110 - 120 V; 1-phase, 2-pos.)                       |
|  | 2.5 kW (220 - 240 V; 1-phase, 2-pos.)                        |
|  | 3.7 kW (380 - 440 V; 1-phase, 2-pos.)                        |
| Breaking capacity  | 150 A (220 - 240 V)  |
|  | 150 A (380 - 440 V)  |
|  | 80 A (660 - 690 V)   |
| Maximum power dissipation for nominal condition  | 1.8 W  |
| Ambient temperature (operation)  | -35 °C ... 55 °C (Open, at 100% load, with peaks up to 60°C) |
| IP immunity to short-circuiting with maximum backup fuse   | 25 A (gL/gG characteristics)                                 |
| Rated short-time current resistance  | 140 A (1 s current)  |

### Dimensions

|        |       |
|--------|-------|
| Width  | 48 mm |
| Length | 91 mm |

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## Technical data

### Dimensions

|                    |       |
|--------------------|-------|
| Height             | 48 mm |
| Hole diameter      | 7 mm  |
| Height             | 29 mm |
| Installation depth | 62 mm |

### Ambient conditions

|                                 |  |
|---------------------------------|--|
| Ambient temperature (operation) | -35 °C ... 55 °C (Open, at 100% load, with peaks up to 60°C) |
|---------------------------------|--|

### Connection data

|   |                      |
|---|----------------------|
| Conductor cross section solid min.  | 0.5 mm <sup>2</sup>  |
| Conductor cross section solid max.  | 2.5 mm <sup>2</sup>  |
| Conductor cross section AWG min.  | 20                   |
| Conductor cross section AWG max.  | 14                   |
| Conductor cross section flexible min.   | 0.75 mm <sup>2</sup> |
| Conductor cross section flexible max.   | 2.5 mm <sup>2</sup>  |
| Min. AWG conductor cross section, flexible  | 18                   |
| Max. AWG conductor cross section, flexible  | 14                   |
| Conductor cross section / stranded with ferrule without plastic sleeve min.                         | 2.5 mm <sup>2</sup>  |
| Conductor cross section / stranded with ferrule without plastic sleeve max.                         | 2.5 mm <sup>2</sup>  |
| Conductor cross section / stranded with ferrule with plastic sleeve min.                            | 1.5 mm <sup>2</sup>  |
| Conductor cross section / stranded, with ferrule with plastic sleeve max.                           | 1.5 mm <sup>2</sup>  |
| 2 conductors with same cross section, solid min.  | 0.5 mm <sup>2</sup>  |
| 2 conductors with same cross section, solid max.  | 2.5 mm <sup>2</sup>  |
| Two conductors with the same cross section, AWG solid min.  | 20                   |
| Two conductors with the same cross section, AWG solid max.  | 14                   |
| 2 conductors with same cross section, stranded min.   | 0.75 mm <sup>2</sup> |
| 2 conductors with same cross section, stranded max.   | 2.5 mm <sup>2</sup>  |
| Two conductors with the same cross section, AWG stranded, min.                                      | 18                   |
| Two conductors with the same cross section, AWG stranded, max.                                      | 14                   |
| 2 conductors with the same cross section/stranded, with ferrule and without plastic sleeve, minimum | 2.5 mm <sup>2</sup>  |
| 2 conductors with the same cross section/stranded, with ferrule and without plastic sleeve, maximum | 2.5 mm <sup>2</sup>  |
| 2 conductors with the same cross section/stranded, with ferrule and plastic sleeve, minimum         | 1.5 mm <sup>2</sup>  |
| 2 conductors with the same cross section/stranded, with ferrule and plastic sleeve, maximum         | 1.5 mm <sup>2</sup>  |

### Standards and Regulations

|  |    |
|--|----|
| Flammability rating according to UL 94 | V0 |
|--|----|

### Environmental Product Compliance

|            |   |
|------------|---|
| China RoHS | Environmentally friendly use period: unlimited = EFUP-e |
|------------|---|

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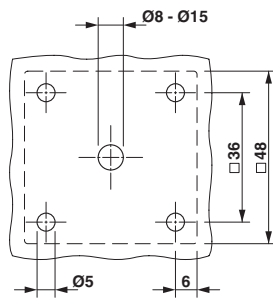
## Technical data

### Environmental Product Compliance

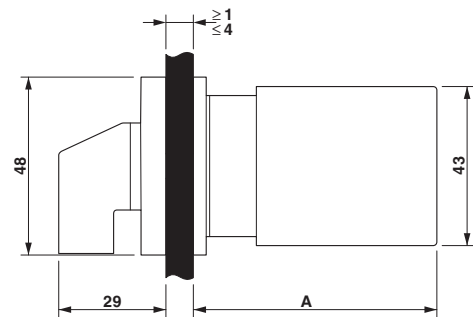
|  |  |
|--|--|
|  | No hazardous substances above threshold values |
|--|--|

## Drawings

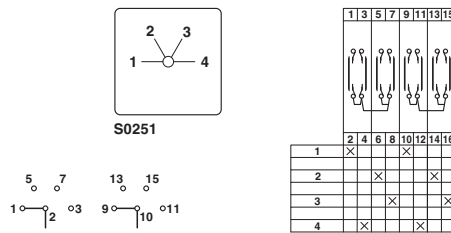
Drilling diagram



Dimensional drawing



Circuit diagram



## Approvals

### Approvals

### Approvals

UL Listed / cUL Listed / EAC / cULus Listed

### Ex Approvals


## Approval details

|                            |  |   |               |
|----------------------------|--|---|---------------|
| UL Listed                  |  | <a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a> | FILE E 357353 |
| mm <sup>2</sup> /AWG/kcmil |  | 20-12   |               |

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## Approvals

|                    |       |
|--------------------|-------|
|                    |       |
| Nominal current IN | 20 A  |
| Nominal voltage UN | 300 V |

|                            |   |   |               |
|----------------------------|---|---|---------------|
| cUL Listed                 |  | <a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a> | FILE E 357353 |
|                            |   |   |               |
| mm <sup>2</sup> /AWG/kcmil |   | 20-12   |               |
| Nominal current IN         |   | 20 A  |               |
| Nominal voltage UN         |   | 300 V   |               |

|     |   |               |
|-----|---|---------------|
| EAC |  | EAC-Zulassung |
|-----|---|---------------|

|              |   |
|--------------|---|
| cULus Listed |  |
|--------------|---|

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