

## According to IEC 60947-3, EN 60947-3, VDE 0660 part 107



| Rated Thermal Current $I_U/I_{th}/I_{the}$               |                                                                                     |                    |                                                                   |                 |                              |
|----------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------|-------------------------------------------------------------------|-----------------|------------------------------|
|                                                          |                                                                                     |                    |                                                                   | A               | 20                           |
| Rated Insulation Voltage $U_i$ <sup>1</sup>              |                                                                                     |                    |                                                                   |                 |                              |
|                                                          |                                                                                     |                    |                                                                   | V               | 690                          |
| Rated Impulse Withstand Voltage $U_{imp}$                |                                                                                     |                    |                                                                   |                 |                              |
|                                                          |                                                                                     |                    |                                                                   | kV              | 6                            |
| Rated Operational Current $I_e$                          |                                                                                     |                    |                                                                   |                 |                              |
| AC-21A                                                   | Switching of resistive loads, including moderate overloads                          |                    |                                                                   | A               | 20                           |
| AC-22A                                                   | Switching of combined resistive or low inductive loads including moderate overloads |                    | 220 V–440 V<br>500 V<br>660 V–690 V                               | A               | 20<br>20<br>16               |
| AC-15                                                    | Switching of control devices, contactors, valves etc.                               |                    | 110 V<br>220 V–240 V<br>380 V–440 V                               | A               | 5<br>5<br>4                  |
| Rated Utilization Category                               |                                                                                     |                    |                                                                   |                 |                              |
| AC-2                                                     | Slip ring motor starting, reversing and plugging, star-delta starting               | 3 phase,<br>3 pole | 220 V–240 V<br>380 V–440 V<br>500 V<br>660 V–690 V                | kW              | 4<br>7,5<br>10<br>10         |
| AC-3                                                     | Direct-on-line starting, star-delta starting                                        | 3 phase,<br>3 pole | 220 V–240 V<br>380 V–440 V<br>500 V<br>660 V–690 V                | kW              | 3<br>5,5<br>5,5<br>5,5       |
|                                                          |                                                                                     | 1 phase,<br>2 pole | 110 V–120 V<br>220 V–240 V<br>380 V–440 V<br>500 V<br>660 V–690 V | kW              | 0,6<br>2,2<br>3<br>3<br>3    |
| AC-4                                                     | Direct-on-line starting, reversing, plugging and inching                            | 3 phase,<br>3 pole | 220 V–240 V<br>380 V–440 V<br>500 V<br>660 V–690 V                | kW              | 0,55<br>1,55<br>1,55<br>1,55 |
|                                                          |                                                                                     | 1 phase,<br>2 pole | 110 V–120 V<br>220 V–240 V<br>380 V–440 V                         | kW              | 0,3<br>0,75<br>1,5           |
| AC-23A                                                   | Frequent switching of motors or other high inductive loads                          | 3 phase,<br>3 pole | 220 V–240 V<br>380 V–440 V<br>500 V<br>660 V–690 V                | kW              | 3,7<br>7,5<br>7,5<br>7,5     |
|                                                          |                                                                                     | 1 phase,<br>2 pole | 110 V–120 V<br>220 V–240 V<br>380 V–440 V<br>500 V<br>660 V–690 V | kW              | 0,75<br>2,5<br>3,7<br>4<br>4 |
| Short Circuit Protection                                 |                                                                                     |                    |                                                                   |                 |                              |
| Max. fuse size                                           |                                                                                     | gG-characteristic  |                                                                   | A               | 25                           |
| Rated short-time withstand current                       |                                                                                     | (1 s-current)      |                                                                   | A               | 200                          |
| Max. Permissible Wire Gage - copper wires only           |                                                                                     |                    |                                                                   |                 |                              |
|                                                          |                                                                                     |                    |                                                                   |                 | 2 x                          |
| Single-core or stranded wire                             |                                                                                     |                    |                                                                   | mm <sup>2</sup> | 4                            |
| Flexible wire                                            |                                                                                     |                    |                                                                   | mm <sup>2</sup> | 2,5                          |
| Flexible wire with sleeving in accordance with DIN 46228 |                                                                                     |                    |                                                                   | mm <sup>2</sup> | 2,5                          |

## Miscellaneous

|                                   |                                                                                |                                              |
|-----------------------------------|--------------------------------------------------------------------------------|----------------------------------------------|
| Minimum Voltage:                  | on request                                                                     |                                              |
| Power loss per contact at $I_U$ : | 1,4 W                                                                          |                                              |
| Resistance to vibration:          | on request                                                                     |                                              |
| Resistance to shock:              | min. 5 g, 30 ms                                                                |                                              |
| Ambient Temperature of Stages :   | open at 100 % $I_U/I_{th}$                                                     | 55 °C during 24 hours with peaks up to 60 °C |
|                                   | enclosed at 100 % $I_{the}$                                                    | 35 °C during 24 hours with peaks up to 40 °C |
| Storage temperature:              | -40 °C to 85 °C (in case of temperature below -5 °C no shock load permissible) |                                              |

## Approvals and Standards

IEC 60947  
EN 60947

## USA / Canada



| Rated Thermal Current $I_U/I_{th}/I_{the}$           |                                            |             |       |      |      |
|------------------------------------------------------|--------------------------------------------|-------------|-------|------|------|
|                                                      |                                            |             | A     | 20   |      |
| Rated Insulation Voltage $U_i$                       |                                            |             |       |      |      |
|                                                      |                                            |             | V     | 600  |      |
| Rated Operational Current $I_e$                      |                                            |             |       |      |      |
| Pilot Duty:                                          |                                            |             | Heavy | VAC  | A600 |
| Ampere Rating                                        | Resistive or low inductive loads           |             | A     | 20   |      |
| Max. Permissible Wire Gage - copper wires only       |                                            |             |       |      |      |
|                                                      |                                            |             |       | 2 x  |      |
|                                                      | Single-core or stranded wire               |             | AWG   | 10   |      |
|                                                      | Flexible wire: AWG wire (without sleeving) |             | AWG   | 12   |      |
| Ratings                                              |                                            |             |       |      |      |
| Standard motor load,<br>DOL-Rating<br>(similar AC-3) | 3 phase<br>3 pole                          | 110 V–120 V | HP    | 1,5  |      |
|                                                      |                                            | 220 V–240 V |       | 3    |      |
|                                                      |                                            | 440 V–480 V |       | 5    |      |
|                                                      |                                            | 550 V–600 V |       | 5    |      |
|                                                      | 1 phase<br>2 pole                          | 110 V–120 V | HP    | 0,5  |      |
|                                                      |                                            | 220 V–240 V |       | 1    |      |
|                                                      |                                            | 277 V       |       | 2    |      |
|                                                      |                                            | 440 V–480 V |       | 2    |      |
|                                                      | 3 phase<br>3 pole                          | 110 V–120 V | HP    | 0,5  |      |
|                                                      |                                            | 220 V–240 V |       | 1    |      |
|                                                      |                                            | 440 V–600 V |       | 3    |      |
|                                                      |                                            |             |       |      |      |
|                                                      | 1 phase<br>2 pole                          | 110 V–120 V | HP    | 0,17 |      |
|                                                      |                                            | 220 V–240 V |       | 0,5  |      |
|                                                      |                                            | 277 V       |       | 0,6  |      |
|                                                      |                                            | 440 V–600 V |       | 1,5  |      |

## Miscellaneous

|                                   |                                                                                |                                              |
|-----------------------------------|--------------------------------------------------------------------------------|----------------------------------------------|
| Minimum Voltage:                  | on request                                                                     |                                              |
| Power loss per contact at $I_U$ : | 1,4 W                                                                          |                                              |
| Resistance to vibration:          | on request                                                                     |                                              |
| Resistance to shock:              | min. 5 g, 30 ms                                                                |                                              |
| Ambient Temperature of Stages :   | open at 100 % $I_U/I_{th}$                                                     | 55 °C during 24 hours with peaks up to 60 °C |
|                                   | enclosed at 100 % $I_{the}$                                                    | 35 °C during 24 hours with peaks up to 40 °C |
| Storage temperature:              | -40 °C to 85 °C (in case of temperature below -5 °C no shock load permissible) |                                              |

## Approvals and Standards

IEC 60947  
EN 60947