

> ROTARY SWITCHES



> VERSIONS

| | |
|--|--|
| | Switching units - Front panel mounting - Box mounting |
| | Switching units with fuses carrier - Box mounting |
| | Front operators 67x67 - IP65 - Front panel mounting - Box mounting |
| | Front operators 48x48 - IP65 - Front panel mounting - Box mounting |
| | Front operators 48x48 - IP65 padlockable - Front panel mounting - Box mounting |
| | Front operators 70x87 - Front panel mounting |
| | Direct operators |
| | Controls for DIN rail slits |

> REFERENCE STANDARDS

EN 60947-3
Low voltage switchgear and controlgear
Part 3: switches disconnectors, switch-disconnectors
and fuse-combination unit

UL 508
Industrial control equipment

> QUALITY MARKS



> TECHNICAL CHARACTERISTICS

| | |
|--|---|
| Polarity: | 2P - 3P - 4P |
| Rated current: | 16A - 32A - 40A - 63A - 80A - 100A |
| Rated voltage: | 0÷690Vac - 0-400Vdc |
| Frequency: | 50-60Hz |
| Insulating voltage: | 690Vac - 400Vdc |
| Protection degree: | IP65 (front operator) |
| Operating temperature according to the reference standard: | -25°C+40°C |
| Max. operating temperature: | 60°C |
| Glow Wire test: | 850°C |
| Material: | Engineering plastic |
| Fuse: | 10,3x38 |
| DIN rail fixing: | Yes |
| Front panel fixing: | Yes |
| Connectable auxiliary contacts: | Yes (16A - 32A - 40A switches) |

> BEHAVIOUR WITH CHEMICAL AND ATMOSPHERIC AGENTS

| Saline solution | Acids | | Bases | | Solvents | | | | Mineral oil | UV rays |
|-----------------|--------------------|-----------|--------------|-----------|---------------|---------------|---------------|--------------------|-------------|-----------|
| | Concentrated | Diluted | Concentrated | Diluted | Hexane | Benzol | Acetone | Alcohol | | |
| Resistant | Limited Resistance | Resistant | Resistant | Resistant | Not Resistant | Not Resistant | Not Resistant | Limited Resistance | Resistant | Resistant |

> APPLICATION EXAMPLES

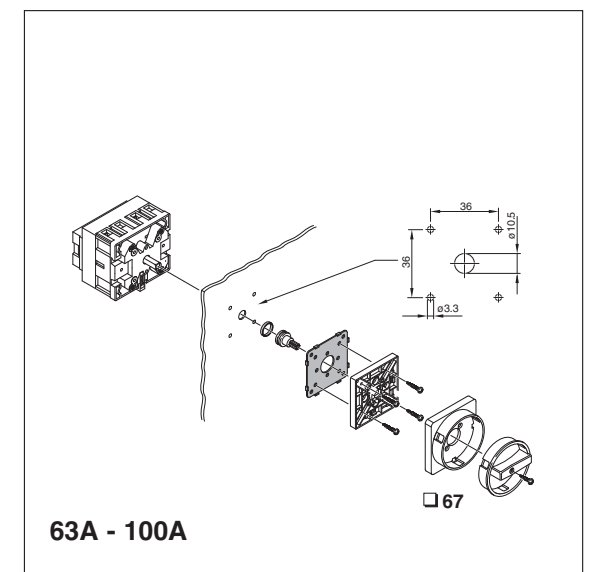
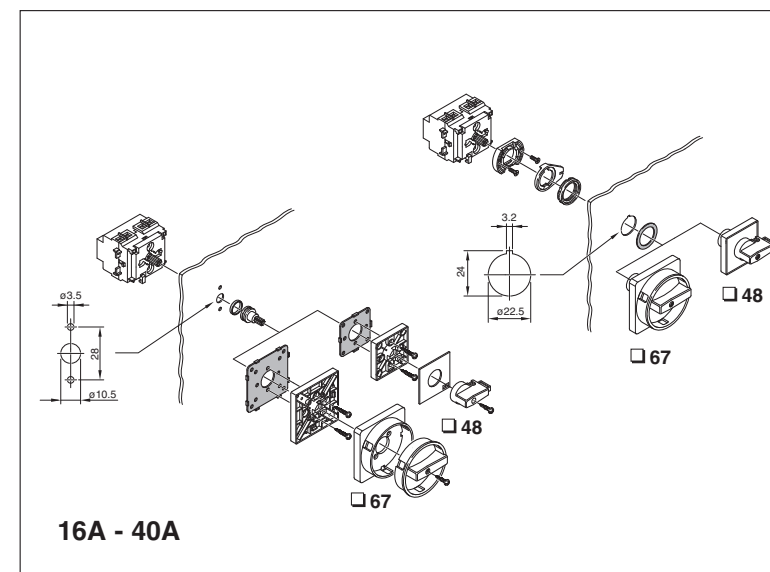


> TECHNICAL DATA SWITCH DISCONNECTORS

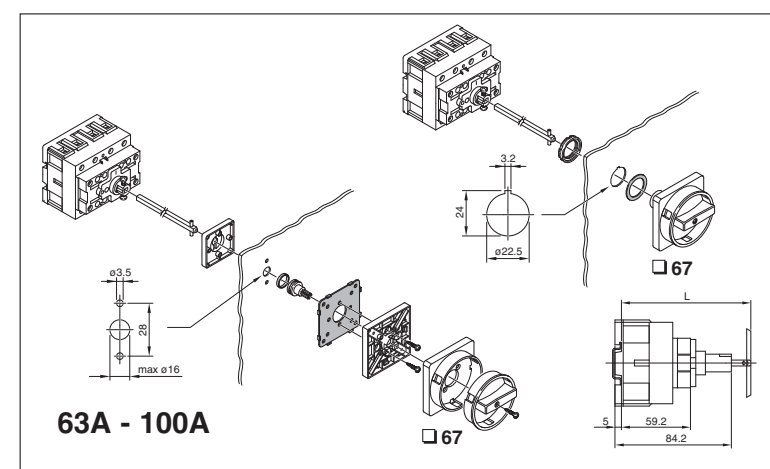
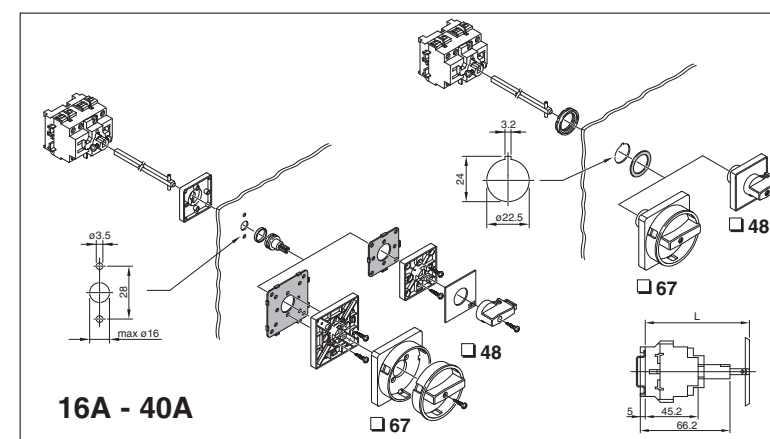
| | | with fuse | | without fuse | | | | | | | | |
|---|--|-------------------|--------|--------------|----------|----------|----------|-------|-------|-----------|------------|------------|
| | | 16A | 32A | 16A | 32A | 40A | 63A | 80A | 100A | 125A | 160A | |
| | | YF16 | YF32 | | | | | | | | | |
| Rated insulation voltage U_i | V_{AC} | 690 | 690 | 690 | 690 | 690 | 690 | 690 | 690 | 750 | 750 | |
| | V_{DC} | 400 | 400 | 400 | 400 | 400 | - | - | - | 750 | 750 | |
| Rated impulse withstand voltage U_{imp} | kV | 4 | 4 | 4 | 4 | 4 | 8 | 8 | 8 | 8 | 12 | |
| Thermal current I_{th} | A | 25 | 32 | 30 | 40 | 40 | 63 | 86 | 100 | 125 | 200 | |
| Thermal current I_{the} | A | 25 | 32 | 30 | 40 | 40 | 63 | 86 | 86 | 125 | 160 | |
| iec rating | AC21A Resistive loads, including moderate overloads | 400V | - | - | - | 40 | - | - | - | - | - | - |
| | | 500V | - | - | - | - | - | - | - | - | - | - |
| | | 690V | 25 | 32 | 30 | 32 | - | 63 | 80 | 100 | 125 | 160 |
| | AC22A Mixed resistive and inductive loads, including moderate overloads | 400V | - | - | - | 40 | - | - | - | - | - | - |
| | | 500V | - | - | - | - | - | - | - | - | - | - |
| | | 690V | 30 | 32 | 20 | 32 | - | 63 | 80 | 86 | 125 | 160 |
| | AC23A Switching off motor loads or other highly inductive loads (3 phase / 3 pole) | 400V | - | - | 20 | 32 | 35 | 63 | 67 | 67 | 90 | 135 |
| | | 500V | - | - | - | - | - | 40 | 67 | 67 | 70 | 125 |
| | | 690V | 16 | 25 | 16 | 25 | 25 | 30 | 38 | 38 | 50 | 80 |
| | AC3 Squirrel-cage motor: starting, switching off motor during running (3 phase / 3 pole) | 400V | A | - | 28,5 | - | 28,5 | 28,5 | 40 | 55 | 55 | - |
| | | 690V | A | 12 | 20 | 12 | 20 | 20 | 25 | 32 | 32 | - |
| | DC21A Resistive loads, including moderate overloads | 300V | A | 25 | 32 | 20 | 32 | 32 | - | - | 125 (220V) | 160 (220V) |
| 250V | | A | 20 | 32 | 25 | 32 | 32 | - | - | 80 (220V) | 160 (220V) | |
| DC22A Mixed resistive and inductive loads, including moderate overloads | 600V | A | | | 10(1) | 10(1) | 10(1) | - | - | | | |
| | | | | | | | | | | | | |
| Rated short-time withstand current I_{cw} (1s) | A | 400 | 400 | 400 | 400 | 400 | 1500 | 1500 | 1500 | 2500 | 4000 | |
| Short-circuit protection: | Conditional short-circuit current | kA _{eff} | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 12 | 25 | |
| | Associate fuse size for conditional short-circuit current - Type gG | A | 16 | 32 | 16 | 32 | 40 | 63 | 80 | 100 | 200 | |
| | Rated short-circuit making capacity: I_{cm} | A | 1500 | 1500 | 1500 | 1500 | 1500 | 2850 | 2850 | 2100 | 3600 | |
| UL rating | General use single phase and three phase | 600V | A | 20 | 30 | 32 | 40 | - | 63 | 80 | 100 | |
| | AC motor starting break all line single phase | 120V | Hp | 1.5 | 2 | 1.5 | 2 | - | 3 | 3 | 3 | |
| | | 240V | Hp | 3 | 5 | 3 | 5 | - | 7.5 | 7.5 | 10 | |
| | AC motor B, C, D, starting break all lines three phase | 240V | Hp | 7.5 | 10 | 7.5 | 10 | - | 10 | 10 | 10 | |
| | | 480V | Hp | 10 | 15 | 10 | 15 | - | 20 | 25 | 25 | |
| 600V | Hp | 15 | 20 | 15 | 20 | - | 25 | 30 | 30 | - | | |
| Permissible wire gauge: | Flexible wire | mm ² | 1,5-10 | 1,5-10 | 1,5 - 10 | 1,5 - 10 | 1,5 - 10 | 10-35 | 10-35 | 10-35 | 10-70 | |
| | | AWG | 16-8 | 16-8 | 16 - 8 | 16 - 8 | 16 - 8 | 10-2 | 10-2 | 10-2 | - | |
| | Flexible wire | mm ² | 1,5-16 | 1,5-16 | 1,5 - 16 | 1,5 - 16 | 1,5 - 16 | 10-35 | 10-35 | 10-35 | - | |
| | | AWG | 16-8 | 16-8 | 16-8 | 16-8 | 16-8 | 10-2 | 10-2 | 10-2 | - | |

(1) 2+2 poles in series. UL approve values. IMQ approved values.

> CONNECTION CAPACITY



> BOX MOUNTING - B TYPE



| | 590.YMA085 | 590.YMA185 | 590.YMA300 | | 590.YMB085 | 590.YMB185 | 590.YMB300 |
|--------------|------------|------------|------------|--------------|------------|------------|------------|
| L max | 120mm | 220mm | 335mm | L max | 128mm | 228mm | 343mm |

Note: L min 80mm

Note: L min 98mm