



# MOTOR PROTECTION CIRCUIT BREAKER



BCH ELECTRIC LIMITED



# Motor Protection Cuircuit Breaker

## Features

- Sensitive to phase failure in compliance with EN 60947-4-1, IEC 947-4-1
- Reliable protection at overloads and short circuits
- Simple and fast mounting by snap fitting on 35mm wide mounting rail in compliance with EN 50022; fixing with two screws in also possible
- It is convenient also for mounting in an installation distribution box
- Main application field : control (start-up, protection and switch-off) of A.C. electric motors with power up to 11 kW (380/400 V) or other consumers up to 25 A; it can also be used as the main switch according to EN 60204 standards
- Numerous accessories make the application field wider and enable the fulfillment of the majority of user's demands

## Specifications

| TYPE WITH THERMAL MAGNETIC RELEASE | SETTING RANGE (A) | MOTOR RATING IN kW at 415V | OPERATING CURRENT OF SHORT-CIRCUIT RELEASE (A) | BREAKING CAPACITY IN kA at 400V | MAX. BACK-UP FUSES (gL, aM) at 400V |
|------------------------------------|-------------------|----------------------------|------------------------------------------------|---------------------------------|-------------------------------------|
| MPE - 01                           | 0, 1...0, 16      |                            | 1, 9                                           | 100 KA                          | No back-up fuses required           |
| MPE - 02                           | 0, 16...0, 25     | 0, 06                      | 2, 6                                           |                                 |                                     |
| MPE - 03                           | 0, 25...0, 4      | 0, 12                      | 4, 4                                           |                                 |                                     |
| MPE - 04                           | 0, 4...0, 63      | 0, 18                      | 8                                              |                                 |                                     |
| MPE - 05                           | 0, 63...1         | 0, 25                      | 11                                             |                                 |                                     |
| MPE - 06                           | 1...1, 6          | 0, 37...0, 55              | 19                                             |                                 |                                     |
| MPE - 07                           | 1, 6...2, 5       | 0, 75...1, 1               | 30                                             |                                 |                                     |
| MPE - 08                           | 2, 5...4          | 1, 5                       | 42                                             |                                 |                                     |
| MPE - 10                           | 4...6, 3          | 2, 2...3                   | 69                                             | 6                               | 80A                                 |
| MPE - 14                           | 6, 3...10         | 4...5                      | 110                                            |                                 |                                     |
| MPE - 16                           | 10...16           | 5, 5...9                   | 210                                            | 4                               |                                     |
| MPE - 20                           | 16...20           | 11                         | 220                                            | 4                               |                                     |
| MPE - 22                           | 20...25           | 12, 5                      | 330                                            | 4                               |                                     |

## Version

MPE

Motor protection unit with thermal and magnetic short-circuit release

MPET

Motor protection unit with thermal overload release

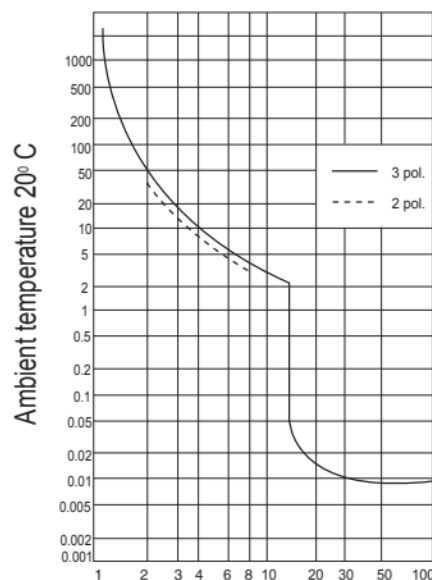
Special versions for single -phase consumers; (on request)

MPES with overload and short-circuit release

MPEST 20 with overload release



Time Current Characteristic  
Mean values of operating times  
for MPE



Current as a multiplier of the set current



## Technical Data

| GENERAL                                              |          |                            |
|------------------------------------------------------|----------|----------------------------|
| Standards                                            |          | IEC 947                    |
| Mechanical endurance op. cy                          |          | 100000                     |
| Impact resistance at impact duration of 20 ms        |          | 20g                        |
| Ambient temperature                                  | Open     | -25...+50°C                |
|                                                      | Enclosed | 25...+40°C                 |
| Temperature compensation                             |          | -20...+50°C                |
| Weight approx.                                       |          | 250g                       |
| Protection degree                                    |          | IP 20                      |
| MAIN CIRCUITS                                        |          |                            |
| Rated insulation voltage $U_i$                       |          | 690V                       |
| Rated impulse insulation withstand voltage $U_{imp}$ |          | 6kV                        |
| Thermal current $I_{th} \max = I_e \max$             |          | 25A                        |
| Electrical endurance at AC 3 and $I_e$               |          | op. cy. 100000             |
| Utilization category : AC 3 upto                     |          | 690V                       |
| Terminal capacity (1 or 2 conductors)                |          | 0.75...4 mm <sup>2</sup>   |
| AUXILIARY SWITCH PS                                  |          |                            |
| Rated insulation voltage $U_i$                       |          | 500V                       |
| Thermal current $I_{th}$                             |          | 6A                         |
| Rated operational current $I_e$                      | 230 V    | 3, 5                       |
| at utilization category AC 15                        | 400 V    | 2                          |
|                                                      | 500 V    | 1, 5                       |
| Short circuit protection - max fuses                 |          | 6 A (gL, gG)               |
| Terminal capacity (1 or 2 conductors)                |          | 0,75...2,5 mm <sup>2</sup> |

## Accessories

### Auxiliary Switch

| REFERENCE  | CONTACTS          |
|------------|-------------------|
| MPA - 0010 | 1NO               |
| MPA - 0001 | 1NC               |
| MPA - 0011 | 1NO + 1NC         |
| MPA - 0020 | 2NO               |
| MPA - 11 V | 1NO + 1NC (Flush) |

### Enclosure (IP55)

| REFERENCE  | TYPE            |
|------------|-----------------|
| MPA - EF ■ | Flush Mounted   |
| MPA - ES ■ | Surface Mounted |

### Alarm Switch

| REFERENCE  | CONTACTS |
|------------|----------|
| MPA - RS01 | 1NC      |
| MPA - RS10 | 1NO      |

### Bus Bar

| REFERENCE   | CONTACTS       |
|-------------|----------------|
| MPA - BB245 | 2 Tap-off 45mm |
| MPA - BB345 | 3 Tap-off 45mm |
| MPA - BB445 | 4 Tap-off 45mm |
| MPA - BB545 | 5 Tap-off 45mm |
| MPA - BB263 | 2 Tap-off 63mm |
| MPA - BB463 | 4 Tap-off 63mm |
| MPA - BBI   | Incoming Block |

### Voltage Releases

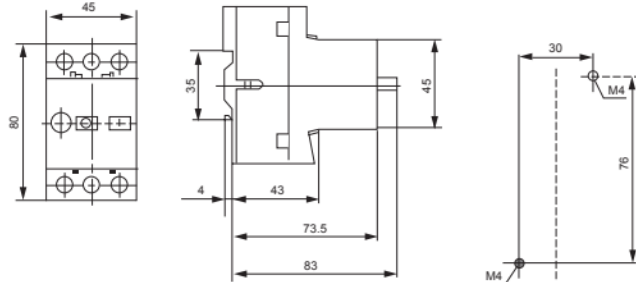
| REFERENCE | TYPE                               |
|-----------|------------------------------------|
| MPA - U ■ | Under Voltage Release (24-600V AC) |
| MPA - S ■ | Short Release (24-600V AC)         |

■ A : 110V AC, K : 230V AC, M : 415V AC, U : 24V AC, R : 42V AC

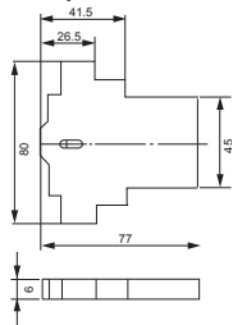


Dimensions (mm)

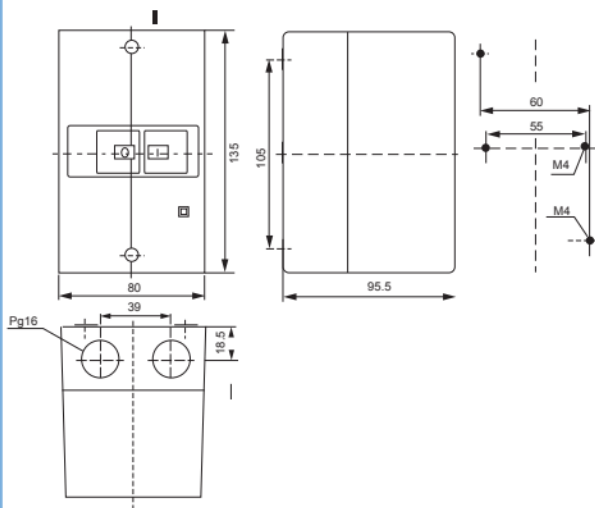
MPE Motor Protection Circuit Breaker



Auxiliary Switch



IP 41/55 Enclosure



IP 41/55 Front Plate

