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#### MINIATURE CIRCUIT BREAKERS UP TO 63A

- 1P, 1P+N, 2P, 3P and 4P versions
- IEC rated current  $I_n$ : 1...63A
- IEC short-circuit breaking capacity  $I_{cn}$ : 10kA (6kA for 1P+N)
- Trip characteristic curve: Type B, C, D
- UL 1077 or UL 489 certified versions.



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#### MINIATURE CIRCUIT BREAKERS 80...125A

- 1P, 2P, 3P and 4P versions
- IEC rated current  $I_n$ : 80...125A
- IEC short-circuit breaking capacity  $I_{cn}$ : 10kA
- Trip characteristic curve: Type C, D
- UL 1077 certified versions.



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#### ADD-ON BLOCKS AND ACCESSORIES

- Auxiliary and indicator contacts
- Undervoltage trip releases
- Shunt trip releases
- Connection accessories
- UL 1077 or UL 489 certified versions
- Modular 16A socket.



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#### RESIDUAL BLOCKS FOR CIRCUIT BREAKERS UP TO 63A

- 2P, 3P and 4P versions
- IEC rated current  $I_n$ : 40 and 63A
- Residual current: 30 and 300mA
- Residual current operating characteristic: Type A.



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#### RESIDUAL CURRENT OPERATED CIRCUIT BREAKERS 25...63A

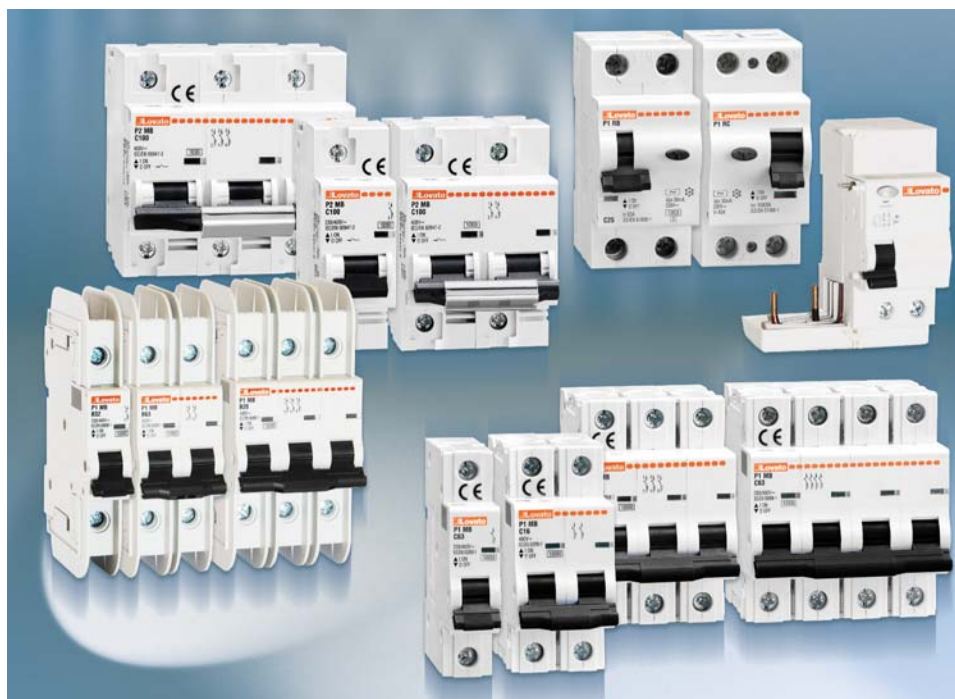
- 2P and 4P versions
- IEC rated current  $I_n$ : 25, 40 and 63A
- IEC rated residual operating current  $I_{\Delta n}$ : 30mA and 300mA
- Residual current operating characteristic: Type A, B and AC.



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#### RESIDUAL CURRENT OPERATED CIRCUIT BREAKERS WITH OVERCURRENT PROTECTION UP TO 40A

- 1P+N versions
- IEC rated current  $I_n$ : 6...40A
- IEC rated short-circuit capacity  $I_{cn}$ : 10kA
- Trip characteristic curve: Type C
- Residual current: 30 and 300mA
- Residual current operating characteristic: Type AC and A.



- UL 1077 and UL 489 certified versions
- High breaking capacity
- Various trip characteristic curves: Type B, C or D
- Wide 1...125A current range
- Residuals with trip characteristic curves type A, AC and B
- Accessories available.

## Miniature circuit breakers 1...63A, UL 1077

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## Miniature circuit breakers 1...63A, UL 489

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### 1P - 10kA 1 module



P1 MB 1P...



| Order code | Curve | IEC In | IEC Icn | N° of DIN module | Qty per pkg | Wt   |
|------------|-------|--------|---------|------------------|-------------|------|
|            | Type  | [A]    | [kA]    | n°               | n°          | [kg] |

Single pole, thermal and magnetic trip type, B-curve characteristic.

|              |   |    |    |   |    |       |
|--------------|---|----|----|---|----|-------|
| P1 MB 1P B01 | B | 1  | 10 | 1 | 12 | 0.115 |
| P1 MB 1P B02 | B | 2  | 10 | 1 | 12 | 0.115 |
| P1 MB 1P B04 | B | 4  | 10 | 1 | 12 | 0.115 |
| P1 MB 1P B06 | B | 6  | 10 | 1 | 12 | 0.115 |
| P1 MB 1P B10 | B | 10 | 10 | 1 | 12 | 0.115 |
| P1 MB 1P B13 | B | 13 | 10 | 1 | 12 | 0.115 |
| P1 MB 1P B16 | B | 16 | 10 | 1 | 12 | 0.115 |
| P1 MB 1P B20 | B | 20 | 10 | 1 | 12 | 0.115 |
| P1 MB 1P B25 | B | 25 | 10 | 1 | 12 | 0.115 |
| P1 MB 1P B32 | B | 32 | 10 | 1 | 12 | 0.115 |
| P1 MB 1P B40 | B | 40 | 10 | 1 | 12 | 0.115 |
| P1 MB 1P B50 | B | 50 | 10 | 1 | 12 | 0.115 |
| P1 MB 1P B63 | B | 63 | 10 | 1 | 12 | 0.115 |

Single pole, thermal and magnetic trip type, C-curve characteristic.

|              |   |    |    |   |    |       |
|--------------|---|----|----|---|----|-------|
| P1 MB 1P C01 | C | 1  | 10 | 1 | 12 | 0.115 |
| P1 MB 1P C02 | C | 2  | 10 | 1 | 12 | 0.115 |
| P1 MB 1P C04 | C | 4  | 10 | 1 | 12 | 0.115 |
| P1 MB 1P C06 | C | 6  | 10 | 1 | 12 | 0.115 |
| P1 MB 1P C10 | C | 10 | 10 | 1 | 12 | 0.115 |
| P1 MB 1P C13 | C | 13 | 10 | 1 | 12 | 0.115 |
| P1 MB 1P C16 | C | 16 | 10 | 1 | 12 | 0.115 |
| P1 MB 1P C20 | C | 20 | 10 | 1 | 12 | 0.115 |
| P1 MB 1P C25 | C | 25 | 10 | 1 | 12 | 0.115 |
| P1 MB 1P C32 | C | 32 | 10 | 1 | 12 | 0.115 |
| P1 MB 1P C40 | C | 40 | 10 | 1 | 12 | 0.115 |
| P1 MB 1P C50 | C | 50 | 10 | 1 | 12 | 0.115 |
| P1 MB 1P C63 | C | 63 | 10 | 1 | 12 | 0.115 |

Single pole, thermal and magnetic trip type, D-curve characteristic.

|              |   |    |    |   |    |       |
|--------------|---|----|----|---|----|-------|
| P1 MB 1P D01 | D | 1  | 10 | 1 | 12 | 0.115 |
| P1 MB 1P D02 | D | 2  | 10 | 1 | 12 | 0.115 |
| P1 MB 1P D04 | D | 4  | 10 | 1 | 12 | 0.115 |
| P1 MB 1P D06 | D | 6  | 10 | 1 | 12 | 0.115 |
| P1 MB 1P D10 | D | 10 | 10 | 1 | 12 | 0.115 |
| P1 MB 1P D13 | D | 13 | 10 | 1 | 12 | 0.115 |
| P1 MB 1P D16 | D | 16 | 10 | 1 | 12 | 0.115 |
| P1 MB 1P D20 | D | 20 | 10 | 1 | 12 | 0.115 |
| P1 MB 1P D25 | D | 25 | 10 | 1 | 12 | 0.115 |
| P1 MB 1P D32 | D | 32 | 10 | 1 | 12 | 0.115 |
| P1 MB 1P D40 | D | 40 | 10 | 1 | 12 | 0.115 |
| P1 MB 1P D50 | D | 50 | 10 | 1 | 12 | 0.115 |
| P1 MB 1P D63 | D | 63 | 10 | 1 | 12 | 0.115 |

#### General characteristics

These devices are used to protect against short circuits and overloads of wiring installations and loads in panel boards, office buildings, stores and similar applications. Their purpose is circuit protection, circuit isolation and load operation controls. They have instantaneous trip characteristics defined as follows:

- B-curve: instantaneous trip 3...5 times  $I_n$  for non-inductive or low inductive loads (heating resistors, generators, very long wire lines)
- C-curve: instantaneous trip 5...10 times  $I_n$  for inductive loads (mixed and inductive resistive loads with low inrush current)
- D-curve: instantaneous trip 10...14 times  $I_n$  for highly inductive loads (loads with high inrush and current such as motors).

Main features include:

- IEC rated current  $I_n$ : 1...63A
- Pole width: 17.5mm / 0.69"
- Contact status with flag indicator
- Trip characteristic: Curve type B, C and D
- Auxiliary contacts and trip releases mounted on MCB left side
- Fixing on 35mm DIN rail (IEC/EN 60715).

#### Operational characteristics

- Dissipation per pole: 3...13W
- IEC rated insulation voltage  $U_i$ : 440V
- IEC rated impulse voltage  $U_{imp}$ : 4kV
- IEC rated operational voltage  $U_e$ : 230/400VAC.

#### Certifications and compliance

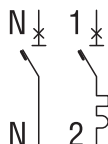
Certifications obtained: TÜV – Rheinland; UL Recognized for USA and Canada (cURus – File E359585) as "Supplementary Protectors", designated as Overcurrent type, for general industrial use, suitable for factory wiring only with 125-135% tripping current of amp rating. Products having this type of marking are intended for use as components of complete workshop- assembled equipment.

Compliant with standards: IEC/EN 60898-1, IEC/EN 60947-2, UL 1077, CSA C22.2 n°235.

### 1P+N - 6kA 1 module



P1 MB 1M...



| Order code | Curve | IEC In | IEC Icn | N° of DIN module | Qty per pkg | Wt   |
|------------|-------|--------|---------|------------------|-------------|------|
|            | Type  | [A]    | [kA]    | n°               | n°          | [kg] |

Single pole + neutral, thermal and magnetic trip type, B-curve characteristic.

|              |   |    |   |   |    |       |
|--------------|---|----|---|---|----|-------|
| P1 MB 1M B06 | B | 6  | 6 | 1 | 12 | 0.115 |
| P1 MB 1M B10 | B | 10 | 6 | 1 | 12 | 0.115 |
| P1 MB 1M B16 | B | 16 | 6 | 1 | 12 | 0.115 |
| P1 MB 1M B20 | B | 20 | 6 | 1 | 12 | 0.115 |
| P1 MB 1M B25 | B | 25 | 6 | 1 | 12 | 0.115 |
| P1 MB 1M B32 | B | 32 | 6 | 1 | 12 | 0.115 |

Single pole + neutral, thermal and magnetic trip type, C-curve characteristic.

|              |   |    |   |   |    |       |
|--------------|---|----|---|---|----|-------|
| P1 MB 1M C02 | C | 2  | 6 | 1 | 12 | 0.115 |
| P1 MB 1M C04 | C | 4  | 6 | 1 | 12 | 0.115 |
| P1 MB 1M C06 | C | 6  | 6 | 1 | 12 | 0.115 |
| P1 MB 1M C10 | C | 10 | 6 | 1 | 12 | 0.115 |
| P1 MB 1M C13 | C | 13 | 6 | 1 | 12 | 0.115 |
| P1 MB 1M C16 | C | 16 | 6 | 1 | 12 | 0.115 |
| P1 MB 1M C20 | C | 20 | 6 | 1 | 12 | 0.115 |
| P1 MB 1M C25 | C | 25 | 6 | 1 | 12 | 0.115 |
| P1 MB 1M C32 | C | 32 | 6 | 1 | 12 | 0.115 |
| P1 MB 1M C40 | C | 40 | 6 | 1 | 12 | 0.115 |

#### General characteristics

These devices are used to protect against short circuits and overloads of wiring installations and loads in panel boards, office buildings, stores and similar applications. Their purpose is circuit protection, circuit isolation and load operation controls. They have characteristics of instantaneous trip defined as follows:

- B-curve: instantaneous trip 3...5 times  $I_n$  for non-inductive or low inductive loads (heating resistors, generators, very long wire lines)
- C-curve: instantaneous trip 5...10 times  $I_n$  for inductive loads (mixed loads, resistive and inductive with low inrush current)
- D-curve: instantaneous trip 10...14 times  $I_n$  for highly inductive loads (loads with high inrush and current such as motors).

Main features include:

- IEC rated current  $I_n$ : 2...40A
- Pole width: 9mm/0.35" (0.5 module)
- Contact status with flag indicator
- Trip characteristic: Curve type B and C
- Auxiliary contacts and trip releases mounted on left side
- Fixing on 35mm DIN rail (IEC/EN 60715).

#### Operational characteristics

- Dissipation per pole: 3...7.5W
- IEC rated insulation voltage  $U_i$ : 440V
- IEC rated impulse voltage  $U_{imp}$ : 4kV
- IE rated operational voltage  $U_e$ : 230VAC.

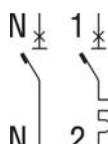
#### Certifications and compliance

Certifications obtained: TÜV Rheinland.  
Compliant with standards: IEC/EN 60898-1, IEC/EN 60947-2.

### 1P+N - 6kA 2 modules



P1 MB 1N...



| Order code | Curve | IEC In | IEC Icn | N° of DIN module | Qty per pkg | Wt   |
|------------|-------|--------|---------|------------------|-------------|------|
|            | Type  | [A]    | [kA]    | no.              | n°          | [kg] |

Single pole + neutral, thermal and magnetic trip type, C-curve characteristic.

|              |   |    |   |   |   |       |
|--------------|---|----|---|---|---|-------|
| P1 MB 1N C01 | C | 1  | 6 | 2 | 6 | 0.190 |
| P1 MB 1N C02 | C | 2  | 6 | 2 | 6 | 0.190 |
| P1 MB 1N C04 | C | 4  | 6 | 2 | 6 | 0.190 |
| P1 MB 1N C06 | C | 6  | 6 | 2 | 6 | 0.190 |
| P1 MB 1N C10 | C | 10 | 6 | 2 | 6 | 0.190 |
| P1 MB 1N C16 | C | 16 | 6 | 2 | 6 | 0.190 |
| P1 MB 1N C20 | C | 20 | 6 | 2 | 6 | 0.190 |
| P1 MB 1N C25 | C | 25 | 6 | 2 | 6 | 0.190 |
| P1 MB 1N C32 | C | 32 | 6 | 2 | 6 | 0.190 |
| P1 MB 1N C40 | C | 40 | 6 | 2 | 6 | 0.190 |
| P1 MB 1N C50 | C | 50 | 6 | 2 | 6 | 0.190 |
| P1 MB 1N C63 | C | 63 | 6 | 2 | 6 | 0.190 |

#### General characteristics

- IEC rated current  $I_n$ : 1...63A
- Pole width: 17.5mm / 0.69"
- Contact status with flag indicator
- Trip characteristic: Curve type C
- Auxiliary contacts and trip releases mounted on left side
- Fixing on 35mm DIN rail (IEC/EN 60715).

#### Operational characteristics

- Dissipation per pole: 3...13W
- IEC rated insulation voltage  $U_i$ : 440V
- IEC rated impulse voltage  $U_{imp}$ : 4kV
- IEC rated operational voltage  $U_e$ : 230/400VAC.

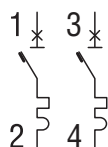
#### Certifications and compliance

Certifications obtained: TÜV Rheinland.  
Compliant with standards: IEC/EN 60898-1, IEC/EN 60947-2.

### 2P - 10kA 2 modules



P1 MB 2P...



| Order code | Curve | IEC In | IEC Icn | N° of DIN module | Qty per pkg | Wt   |
|------------|-------|--------|---------|------------------|-------------|------|
|            | Type  | [A]    | [kA]    | n°               | n°          | [kg] |

Two pole, thermal and magnetic trip type, B-curve characteristic.

|              |   |    |    |   |   |       |
|--------------|---|----|----|---|---|-------|
| P1 MB 2P B01 | B | 1  | 10 | 2 | 6 | 0.230 |
| P1 MB 2P B02 | B | 2  | 10 | 2 | 6 | 0.230 |
| P1 MB 2P B04 | B | 4  | 10 | 2 | 6 | 0.230 |
| P1 MB 2P B06 | B | 6  | 10 | 2 | 6 | 0.230 |
| P1 MB 2P B10 | B | 10 | 10 | 2 | 6 | 0.230 |
| P1 MB 2P B13 | B | 13 | 10 | 2 | 6 | 0.230 |
| P1 MB 2P B16 | B | 16 | 10 | 2 | 6 | 0.230 |
| P1 MB 2P B20 | B | 20 | 10 | 2 | 6 | 0.230 |
| P1 MB 2P B25 | B | 25 | 10 | 2 | 6 | 0.230 |
| P1 MB 2P B32 | B | 32 | 10 | 2 | 6 | 0.230 |
| P1 MB 2P B40 | B | 40 | 10 | 2 | 6 | 0.230 |
| P1 MB 2P B50 | B | 50 | 10 | 2 | 6 | 0.230 |
| P1 MB 2P B63 | B | 63 | 10 | 2 | 6 | 0.230 |

Two pole, thermal and magnetic trip type, C-curve characteristic.

|              |   |    |    |   |   |       |
|--------------|---|----|----|---|---|-------|
| P1 MB 2P C01 | C | 1  | 10 | 2 | 6 | 0.230 |
| P1 MB 2P C02 | C | 2  | 10 | 2 | 6 | 0.230 |
| P1 MB 2P C04 | C | 4  | 10 | 2 | 6 | 0.230 |
| P1 MB 2P C06 | C | 6  | 10 | 2 | 6 | 0.230 |
| P1 MB 2P C10 | C | 10 | 10 | 2 | 6 | 0.230 |
| P1 MB 2P C13 | C | 13 | 10 | 2 | 6 | 0.230 |
| P1 MB 2P C16 | C | 16 | 10 | 2 | 6 | 0.230 |
| P1 MB 2P C20 | C | 20 | 10 | 2 | 6 | 0.230 |
| P1 MB 2P C25 | C | 25 | 10 | 2 | 6 | 0.230 |
| P1 MB 2P C32 | C | 32 | 10 | 2 | 6 | 0.230 |
| P1 MB 2P C40 | C | 40 | 10 | 2 | 6 | 0.230 |
| P1 MB 2P C50 | C | 50 | 10 | 2 | 6 | 0.230 |
| P1 MB 2P C63 | C | 63 | 10 | 2 | 6 | 0.230 |

Two pole, thermal and magnetic trip type, D-curve characteristic.

|              |   |    |    |   |   |       |
|--------------|---|----|----|---|---|-------|
| P1 MB 2P D01 | D | 1  | 10 | 2 | 6 | 0.230 |
| P1 MB 2P D02 | D | 2  | 10 | 2 | 6 | 0.230 |
| P1 MB 2P D04 | D | 4  | 10 | 2 | 6 | 0.230 |
| P1 MB 2P D06 | D | 6  | 10 | 2 | 6 | 0.230 |
| P1 MB 2P D10 | D | 10 | 10 | 2 | 6 | 0.230 |
| P1 MB 2P D13 | D | 13 | 10 | 2 | 6 | 0.230 |
| P1 MB 2P D16 | D | 16 | 10 | 2 | 6 | 0.230 |
| P1 MB 2P D20 | D | 20 | 10 | 2 | 6 | 0.230 |
| P1 MB 2P D25 | D | 25 | 10 | 2 | 6 | 0.230 |
| P1 MB 2P D32 | D | 32 | 10 | 2 | 6 | 0.230 |
| P1 MB 2P D40 | D | 40 | 10 | 2 | 6 | 0.230 |
| P1 MB 2P D50 | D | 50 | 10 | 2 | 6 | 0.230 |
| P1 MB 2P D63 | D | 63 | 10 | 2 | 6 | 0.230 |

#### General characteristics

These devices are used to protect against short circuits and overloads of wiring installations and loads in panel boards, office buildings, stores and similar applications. Their purpose is circuit protection, circuit isolation and load operation controls. They have characteristics of instantaneous trip defined as follows:

- B-curve: instantaneous trip 3...5 times  $I_n$  for non-inductive or low inductive loads (heating resistors, generators, very long wire lines)
- C-curve: instantaneous trip 5...10 times  $I_n$  for inductive loads (mixed loads, resistive and inductive with low inrush current)
- D-curve: instantaneous trip 10...14 times  $I_n$  for highly inductive loads (loads with high inrush and current such as motors).

Main features include:

- IEC rated current  $I_n$ : 1...63A
- Pole width: 17.5mm / 0.69"
- Contact status with flag indicator
- Trip characteristic: Curve type B, C and D
- Auxiliary contacts and trip releases mounted on left side
- Fixing on 35mm DIN rail (IEC/EN 60715).

#### Operational characteristics

- Dissipation per pole: 3...13W
- IEC rated insulation voltage  $U_i$ : 440V
- IEC rated impulse voltage  $U_{imp}$ : 4kV
- IEC rated operational voltage  $U_e$ : 230/400VAC.

#### Certifications and compliance

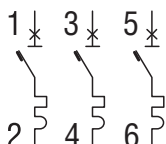
Certifications obtained: TÜV – Rheinland; UL Recognized for USA and Canada (cURus – File E359585) as "Supplementary Protectors", designated as Overcurrent type, for general industrial use, suitable for factory wiring only with 125-135% tripping current of amp rating. Products having this type of marking are intended for use as components of complete workshop- assembled equipment.

Compliant with standards: IEC/EN 60898-1, IEC/EN 60947-2, UL 1077, CSA C22.2 n°235.

### 3P - 10kA 3 modules



P1 MB 3P...



| Order code | Curve | IEC In | IEC Icn | N° of DIN module | Qty per pkg | Wt   |
|------------|-------|--------|---------|------------------|-------------|------|
|            | Type  | [A]    | [kA]    | n°               | n°          | [kg] |

Three pole, thermal and magnetic trip type, B-curve characteristic.

|              |   |    |    |   |   |       |
|--------------|---|----|----|---|---|-------|
| P1 MB 3P B01 | B | 1  | 10 | 3 | 4 | 0.345 |
| P1 MB 3P B02 | B | 2  | 10 | 3 | 4 | 0.345 |
| P1 MB 3P B04 | B | 4  | 10 | 3 | 4 | 0.345 |
| P1 MB 3P B06 | B | 6  | 10 | 3 | 4 | 0.345 |
| P1 MB 3P B10 | B | 10 | 10 | 3 | 4 | 0.345 |
| P1 MB 3P B13 | B | 13 | 10 | 3 | 4 | 0.345 |
| P1 MB 3P B16 | B | 16 | 10 | 3 | 4 | 0.345 |
| P1 MB 3P B20 | B | 20 | 10 | 3 | 4 | 0.345 |
| P1 MB 3P B25 | B | 25 | 10 | 3 | 4 | 0.345 |
| P1 MB 3P B32 | B | 32 | 10 | 3 | 4 | 0.345 |
| P1 MB 3P B40 | B | 40 | 10 | 3 | 4 | 0.345 |
| P1 MB 3P B50 | B | 50 | 10 | 3 | 4 | 0.345 |
| P1 MB 3P B63 | B | 63 | 10 | 3 | 4 | 0.345 |

Three pole, thermal and magnetic trip type, C-curve characteristic.

|              |   |    |    |   |   |       |
|--------------|---|----|----|---|---|-------|
| P1 MB 3P C01 | C | 1  | 10 | 3 | 4 | 0.345 |
| P1 MB 3P C02 | C | 2  | 10 | 3 | 4 | 0.345 |
| P1 MB 3P C04 | C | 4  | 10 | 3 | 4 | 0.345 |
| P1 MB 3P C06 | C | 6  | 10 | 3 | 4 | 0.345 |
| P1 MB 3P C10 | C | 10 | 10 | 3 | 4 | 0.345 |
| P1 MB 3P C13 | C | 13 | 10 | 3 | 4 | 0.345 |
| P1 MB 3P C16 | C | 16 | 10 | 3 | 4 | 0.345 |
| P1 MB 3P C20 | C | 20 | 10 | 3 | 4 | 0.345 |
| P1 MB 3P C25 | C | 25 | 10 | 3 | 4 | 0.345 |
| P1 MB 3P C32 | C | 32 | 10 | 3 | 4 | 0.345 |
| P1 MB 3P C40 | C | 40 | 10 | 3 | 4 | 0.345 |
| P1 MB 3P C50 | C | 50 | 10 | 3 | 4 | 0.345 |
| P1 MB 3P C63 | C | 63 | 10 | 3 | 4 | 0.345 |

Three pole, thermal and magnetic trip type, D-curve characteristic.

|              |   |    |    |   |   |       |
|--------------|---|----|----|---|---|-------|
| P1 MB 3P D01 | D | 1  | 10 | 3 | 4 | 0.345 |
| P1 MB 3P D02 | D | 2  | 10 | 3 | 4 | 0.345 |
| P1 MB 3P D04 | D | 4  | 10 | 3 | 4 | 0.345 |
| P1 MB 3P D06 | D | 6  | 10 | 3 | 4 | 0.345 |
| P1 MB 3P D10 | D | 10 | 10 | 3 | 4 | 0.345 |
| P1 MB 3P D13 | D | 13 | 10 | 3 | 4 | 0.345 |
| P1 MB 3P D16 | D | 16 | 10 | 3 | 4 | 0.345 |
| P1 MB 3P D20 | D | 20 | 10 | 3 | 4 | 0.345 |
| P1 MB 3P D25 | D | 25 | 10 | 3 | 4 | 0.345 |
| P1 MB 3P D32 | D | 32 | 10 | 3 | 4 | 0.345 |
| P1 MB 3P D40 | D | 40 | 10 | 3 | 4 | 0.345 |
| P1 MB 3P D50 | D | 50 | 10 | 3 | 4 | 0.345 |
| P1 MB 3P D63 | D | 63 | 10 | 3 | 4 | 0.345 |

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- D-curve: instantaneous trip 10...14 times  $I_n$  for highly inductive loads (loads with high inrush and current such as motors).

Main features include:

- IEC rated current  $I_n$ : 1...63A
- Pole width: 17.5mm / 0.69"
- Contact status with flag indicator
- Trip characteristic: Curve type B, C and D
- Auxiliary contacts and trip releases mounted on left side
- Fixing on 35mm DIN rail (IEC/EN 60715).

#### Operational characteristics

- Dissipation per pole: 3...13W
- IEC rated insulation voltage  $U_i$ : 440V
- IEC rated impulse voltage  $U_{imp}$ : 4kV
- IEC rated operational voltage  $U_e$ : 230/400VAC.

#### Certifications and compliance

Certifications obtained: TÜV – Rheinland; UL Recognized for USA and Canada (cURus – File E359585) as "Supplementary Protectors", designated as Overcurrent type, for general industrial use, suitable for factory wiring only with 125-135% tripping current of amp rating. Products having this type of marking are intended for use as components of complete workshop- assembled equipment.

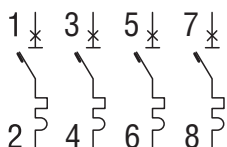
Compliant with standards: IEC/EN 60898-1, IEC/EN 60947-2, UL 1077, CSA C22.2 n°235.



### 4P - 10kA 4 modules



P1 MB 4P...



| Order code | Curve | IEC In | IEC Icn | N° of DIN module | Qty per pkg | Wt   |
|------------|-------|--------|---------|------------------|-------------|------|
|            | Type  | [A]    | [kA]    | n°               | n°          | [kg] |

Four pole, thermal and magnetic trip type, B-curve characteristic.

|              |   |    |    |   |   |       |
|--------------|---|----|----|---|---|-------|
| P1 MB 4P B01 | B | 1  | 10 | 4 | 3 | 0.460 |
| P1 MB 4P B02 | B | 2  | 10 | 4 | 3 | 0.460 |
| P1 MB 4P B04 | B | 4  | 10 | 4 | 3 | 0.460 |
| P1 MB 4P B06 | B | 6  | 10 | 4 | 3 | 0.460 |
| P1 MB 4P B10 | B | 10 | 10 | 4 | 3 | 0.460 |
| P1 MB 4P B13 | B | 13 | 10 | 4 | 3 | 0.460 |
| P1 MB 4P B16 | B | 16 | 10 | 4 | 3 | 0.460 |
| P1 MB 4P B20 | B | 20 | 10 | 4 | 3 | 0.460 |
| P1 MB 4P B25 | B | 25 | 10 | 4 | 3 | 0.460 |
| P1 MB 4P B32 | B | 32 | 10 | 4 | 3 | 0.460 |
| P1 MB 4P B40 | B | 40 | 10 | 4 | 3 | 0.460 |
| P1 MB 4P B50 | B | 50 | 10 | 4 | 3 | 0.460 |
| P1 MB 4P B63 | B | 63 | 10 | 4 | 3 | 0.460 |

Four pole, thermal and magnetic trip type, C-curve characteristic.

|              |   |    |    |   |   |       |
|--------------|---|----|----|---|---|-------|
| P1 MB 4P C01 | C | 1  | 10 | 4 | 3 | 0.460 |
| P1 MB 4P C02 | C | 2  | 10 | 4 | 3 | 0.460 |
| P1 MB 4P C04 | C | 4  | 10 | 4 | 3 | 0.460 |
| P1 MB 4P C06 | C | 6  | 10 | 4 | 3 | 0.460 |
| P1 MB 4P C10 | C | 10 | 10 | 4 | 3 | 0.460 |
| P1 MB 4P C13 | C | 13 | 10 | 4 | 3 | 0.460 |
| P1 MB 4P C16 | C | 16 | 10 | 4 | 3 | 0.460 |
| P1 MB 4P C20 | C | 20 | 10 | 4 | 3 | 0.460 |
| P1 MB 4P C25 | C | 25 | 10 | 4 | 3 | 0.460 |
| P1 MB 4P C32 | C | 32 | 10 | 4 | 3 | 0.460 |
| P1 MB 4P C40 | C | 40 | 10 | 4 | 3 | 0.460 |
| P1 MB 4P C50 | C | 50 | 10 | 4 | 3 | 0.460 |
| P1 MB 4P C63 | C | 63 | 10 | 4 | 3 | 0.460 |

Four pole, thermal and magnetic trip type, D-curve characteristic.

|              |   |    |    |   |   |       |
|--------------|---|----|----|---|---|-------|
| P1 MB 4P D01 | D | 1  | 10 | 4 | 3 | 0.460 |
| P1 MB 4P D02 | D | 2  | 10 | 4 | 3 | 0.460 |
| P1 MB 4P D04 | D | 4  | 10 | 4 | 3 | 0.460 |
| P1 MB 4P D06 | D | 6  | 10 | 4 | 3 | 0.460 |
| P1 MB 4P D10 | D | 10 | 10 | 4 | 3 | 0.460 |
| P1 MB 4P D13 | D | 13 | 10 | 4 | 3 | 0.460 |
| P1 MB 4P D16 | D | 16 | 10 | 4 | 3 | 0.460 |
| P1 MB 4P D20 | D | 20 | 10 | 4 | 3 | 0.460 |
| P1 MB 4P D25 | D | 25 | 10 | 4 | 3 | 0.460 |
| P1 MB 4P D32 | D | 32 | 10 | 4 | 3 | 0.460 |
| P1 MB 4P D40 | D | 40 | 10 | 4 | 3 | 0.460 |
| P1 MB 4P D50 | D | 50 | 10 | 4 | 3 | 0.460 |
| P1 MB 4P D63 | D | 63 | 10 | 4 | 3 | 0.460 |

#### General characteristics

These devices are used to protect against short circuits and overloads of wiring installations and loads in panel boards, office buildings, stores and similar applications. Their purpose is circuit protection, circuit isolation and load operation controls. They have characteristics of instantaneous trip defined as follows:

- B-curve: instantaneous trip 3...5 times  $I_n$  for non-inductive or low inductive loads (heating resistors, generators, very long wire lines)
- C-curve: instantaneous trip 5...10 times  $I_n$  for inductive loads (mixed loads, resistive and inductive with low inrush current)
- D-curve: instantaneous trip 10...14 times  $I_n$  for highly inductive loads (loads with high inrush and current such as motors).

Main features include:

- IEC rated current  $I_n$ : 1...63A
- Pole width: 17.5mm / 0.69"
- Contact status with flag indicator
- Trip characteristic: Curve type B, C and D
- Auxiliary contacts and trip releases mounted on left side
- Fixing on 35mm DIN rail (IEC/EN 60715).

#### Operational characteristics

- Dissipation per pole: 3...13W
- IEC rated insulation voltage  $U_i$ : 440V
- IEC rated impulse voltage  $U_{imp}$ : 4kV
- IEC rated operational voltage  $U_e$ : 230/400VAC.

#### Certifications and compliance

Certifications obtained: TÜV – Rheinland; UL Recognized for USA and Canada (cURus – File E359585) as "Supplementary Protectors", designated as Overcurrent type, for general industrial use, suitable for factory wiring only with 125-135% tripping current of amp rating.

Products having this type of marking are intended for use as components of complete workshop- assembled equipment.

Compliant with standards: IEC/EN 60898-1, IEC/EN 60947-2, UL 1077, CSA C22.2 n°235.

### 1P - 10kA 1 module



P1 MB... 1P...



**new**

**new**

| Order code | Curve | IEC In | Rat. volt. | N° of DIN mod. | Qty per pkg | Wt   |
|------------|-------|--------|------------|----------------|-------------|------|
|            | Type  | [A]    | [V]        | n°             | n°          | [kg] |

One pole, thermal and magnetic trip type, C-curve characteristic.

|                   |   |     |     |   |    |       |
|-------------------|---|-----|-----|---|----|-------|
| P1 MB UH 1P C01   | C | 1   | 277 | 1 | 12 | 0.133 |
| P1 MB UH 1P C01V6 | C | 1.6 | 277 | 1 | 12 | 0.133 |
| P1 MB UH 1P C02   | C | 2   | 277 | 1 | 12 | 0.133 |
| P1 MB UH 1P C03   | C | 3   | 277 | 1 | 12 | 0.133 |
| P1 MB UH 1P C04   | C | 4   | 277 | 1 | 12 | 0.133 |
| P1 MB UH 1P C05   | C | 5   | 277 | 1 | 12 | 0.133 |
| P1 MB UH 1P C06   | C | 6   | 277 | 1 | 12 | 0.133 |
| P1 MB UH 1P C07   | C | 7   | 277 | 1 | 12 | 0.133 |
| P1 MB UH 1P C08   | C | 8   | 277 | 1 | 12 | 0.133 |
| P1 MB UH 1P C10   | C | 10  | 277 | 1 | 12 | 0.133 |
| P1 MB UH 1P C12   | C | 12  | 277 | 1 | 12 | 0.133 |
| P1 MB UH 1P C13   | C | 13  | 277 | 1 | 12 | 0.133 |
| P1 MB UH 1P C15   | C | 15  | 277 | 1 | 12 | 0.133 |
| P1 MB UH 1P C16   | C | 16  | 277 | 1 | 12 | 0.133 |
| P1 MB UH 1P C20   | C | 20  | 277 | 1 | 12 | 0.133 |
| P1 MB UH 1P C25   | C | 25  | 277 | 1 | 12 | 0.133 |
| P1 MB UH 1P C30   | C | 30  | 277 | 1 | 12 | 0.133 |
| P1 MB UH 1P C32   | C | 32  | 277 | 1 | 12 | 0.133 |
| P1 MB UL 1P C35   | C | 35  | 120 | 1 | 12 | 0.133 |
| P1 MB UL 1P C40   | C | 40  | 120 | 1 | 12 | 0.133 |
| P1 MB UL 1P C50   | C | 50  | 120 | 1 | 12 | 0.133 |
| P1 MB UL 1P C60   | C | 60  | 120 | 1 | 12 | 0.133 |
| P1 MB UL 1P C63   | C | 63  | 120 | 1 | 12 | 0.133 |

One pole, thermal and magnetic trip type, D-curve characteristic.

|                   |   |     |     |   |    |       |
|-------------------|---|-----|-----|---|----|-------|
| P1 MB UH 1P D01   | D | 1   | 277 | 1 | 12 | 0.133 |
| P1 MB UH 1P D01V6 | D | 1.6 | 277 | 1 | 12 | 0.133 |
| P1 MB UH 1P D02   | D | 2   | 277 | 1 | 12 | 0.133 |
| P1 MB UH 1P D03   | D | 3   | 277 | 1 | 12 | 0.133 |
| P1 MB UH 1P D04   | D | 4   | 277 | 1 | 12 | 0.133 |
| P1 MB UH 1P D05   | D | 5   | 277 | 1 | 12 | 0.133 |
| P1 MB UH 1P D06   | D | 6   | 277 | 1 | 12 | 0.133 |
| P1 MB UH 1P D07   | D | 7   | 277 | 1 | 12 | 0.133 |
| P1 MB UH 1P D08   | D | 8   | 277 | 1 | 12 | 0.133 |
| P1 MB UH 1P D10   | D | 10  | 277 | 1 | 12 | 0.133 |
| P1 MB UH 1P D12   | D | 12  | 277 | 1 | 12 | 0.133 |
| P1 MB UH 1P D13   | D | 13  | 277 | 1 | 12 | 0.133 |
| P1 MB UH 1P D15   | D | 15  | 277 | 1 | 12 | 0.133 |
| P1 MB UH 1P D16   | D | 16  | 277 | 1 | 12 | 0.133 |
| P1 MB UH 1P D20   | D | 20  | 277 | 1 | 12 | 0.133 |
| P1 MB UH 1P D25   | D | 25  | 277 | 1 | 12 | 0.133 |
| P1 MB UH 1P D30   | D | 30  | 277 | 1 | 12 | 0.133 |
| P1 MB UH 1P D32   | D | 32  | 277 | 1 | 12 | 0.133 |
| P1 MB UL 1P D35   | D | 35  | 120 | 1 | 12 | 0.133 |
| P1 MB UL 1P D40   | D | 40  | 120 | 1 | 12 | 0.133 |
| P1 MB UL 1P D50   | D | 50  | 120 | 1 | 12 | 0.133 |
| P1 MB UL 1P D60   | D | 60  | 120 | 1 | 12 | 0.133 |
| P1 MB UL 1P D63   | D | 63  | 120 | 1 | 12 | 0.133 |

#### General characteristics

These devices comply with the UL 489 standard, mostly used in the North American markets, are designed to protect feeder circuits, the part of the system from the network supply point to the protection device for a branch circuit. They can in any case be used on the international market thanks to compliance with the IEC/EN60947-2 standard as well.

They have characteristics of tripping instantaneously defined as follows:

- C-curve: instantaneous trip 5...10 times  $I_n$  for inductive loads (mixed loads, resistive and inductive with low inrush current)
- D-curve: instantaneous trip 10...14 times  $I_n$  for highly inductive loads (loads with high inrush and current such as motors).

#### Operational characteristics

- Dissipation per pole: 3...13W
- Rated voltage 1...32A: 277V (UL489)
- Rated voltage 35...63A: 120V (UL489)
- Rated insulation voltage  $U_i$ : 440V (IEC/EN60947-2)
- Rated impulse voltage  $U_{imp}$ : 4kV (IEC/EN60947-2)
- Rated operational voltage  $U_e$ : 230/400VAC (IEC/EN60947-2)
- DC operational voltage: 60V

#### Certifications and compliance

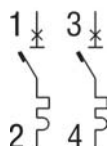
Certifications obtained: cULus.  
Compliant with standards: UL 489, IEC/EN 60947-2.



### 2P - 10kA 2 modules



P1 MB... 2P...



| Order code | Cur-<br>ve | IEC<br>In | Rated<br>voltage | N° of<br>DIN<br>mod. | Qty<br>per<br>pkg | Wt   |
|------------|------------|-----------|------------------|----------------------|-------------------|------|
|            | Type       | [A]       | [V]              | n°                   | n°                | [kg] |

Two pole, thermal and magnetic trip type, C-curve characteristic.

|                   |   |     |          |   |   |       |
|-------------------|---|-----|----------|---|---|-------|
| P1 MB UH 2P C01   | C | 1   | 480Y/277 | 2 | 6 | 0.255 |
| P1 MB UH 2P C01V6 | C | 1.6 | 480Y/277 | 2 | 6 | 0.255 |
| P1 MB UH 2P C02   | C | 2   | 480Y/277 | 2 | 6 | 0.255 |
| P1 MB UH 2P C03   | C | 3   | 480Y/277 | 2 | 6 | 0.255 |
| P1 MB UH 2P C04   | C | 4   | 480Y/277 | 2 | 6 | 0.255 |
| P1 MB UH 2P C05   | C | 5   | 480Y/277 | 2 | 6 | 0.255 |
| P1 MB UH 2P C06   | C | 6   | 480Y/277 | 2 | 6 | 0.255 |
| P1 MB UH 2P C07   | C | 7   | 480Y/277 | 2 | 6 | 0.255 |
| P1 MB UH 2P C08   | C | 8   | 480Y/277 | 2 | 6 | 0.255 |
| P1 MB UH 2P C10   | C | 10  | 480Y/277 | 2 | 6 | 0.255 |
| P1 MB UH 2P C12   | C | 12  | 480Y/277 | 2 | 6 | 0.255 |
| P1 MB UH 2P C13   | C | 13  | 480Y/277 | 2 | 6 | 0.255 |
| P1 MB UH 2P C15   | C | 15  | 480Y/277 | 2 | 6 | 0.255 |
| P1 MB UH 2P C16   | C | 16  | 480Y/277 | 2 | 6 | 0.255 |
| P1 MB UH 2P C20   | C | 20  | 480Y/277 | 2 | 6 | 0.255 |
| P1 MB UH 2P C25   | C | 25  | 480Y/277 | 2 | 6 | 0.255 |
| P1 MB UH 2P C30   | C | 30  | 480Y/277 | 2 | 6 | 0.255 |
| P1 MB UH 2P C32   | C | 32  | 480Y/277 | 2 | 6 | 0.255 |
| P1 MB UL 2P C35   | C | 35  | 240      | 2 | 6 | 0.255 |
| P1 MB UL 2P C40   | C | 40  | 240      | 2 | 6 | 0.255 |
| P1 MB UL 2P C50   | C | 50  | 240      | 2 | 6 | 0.255 |
| P1 MB UL 2P C60   | C | 60  | 240      | 2 | 6 | 0.255 |
| P1 MB UL 2P C63   | C | 63  | 240      | 2 | 6 | 0.255 |

Two pole, thermal and magnetic trip type, D-curve characteristic.

|                   |   |     |          |   |   |       |
|-------------------|---|-----|----------|---|---|-------|
| P1 MB UH 2P D01   | D | 1   | 480Y/277 | 2 | 6 | 0.255 |
| P1 MB UH 2P D01V6 | D | 1.6 | 480Y/277 | 2 | 6 | 0.255 |
| P1 MB UH 2P D02   | D | 2   | 480Y/277 | 2 | 6 | 0.255 |
| P1 MB UH 2P D03   | D | 3   | 480Y/277 | 2 | 6 | 0.255 |
| P1 MB UH 2P D04   | D | 4   | 480Y/277 | 2 | 6 | 0.255 |
| P1 MB UH 2P D05   | D | 5   | 480Y/277 | 2 | 6 | 0.255 |
| P1 MB UH 2P D06   | D | 6   | 480Y/277 | 2 | 6 | 0.255 |
| P1 MB UH 2P D07   | D | 7   | 480Y/277 | 2 | 6 | 0.255 |
| P1 MB UH 2P D08   | D | 8   | 480Y/277 | 2 | 6 | 0.255 |
| P1 MB UH 2P D10   | D | 10  | 480Y/277 | 2 | 6 | 0.255 |
| P1 MB UH 2P D12   | D | 12  | 480Y/277 | 2 | 6 | 0.255 |
| P1 MB UH 2P D13   | D | 13  | 480Y/277 | 2 | 6 | 0.255 |
| P1 MB UH 2P D15   | D | 15  | 480Y/277 | 2 | 6 | 0.255 |
| P1 MB UH 2P D16   | D | 16  | 480Y/277 | 2 | 6 | 0.255 |
| P1 MB UH 2P D20   | D | 20  | 480Y/277 | 2 | 6 | 0.255 |
| P1 MB UH 2P D25   | D | 25  | 480Y/277 | 2 | 6 | 0.255 |
| P1 MB UH 2P D30   | D | 30  | 480Y/277 | 2 | 6 | 0.255 |
| P1 MB UH 2P D32   | D | 32  | 480Y/277 | 2 | 6 | 0.255 |
| P1 MB UL 2P D35   | D | 35  | 240      | 2 | 6 | 0.255 |
| P1 MB UL 2P D40   | D | 40  | 240      | 2 | 6 | 0.255 |
| P1 MB UL 2P D50   | D | 50  | 240      | 2 | 6 | 0.255 |
| P1 MB UL 2P D60   | D | 60  | 240      | 2 | 6 | 0.255 |
| P1 MB UL 2P D63   | D | 63  | 240      | 2 | 6 | 0.255 |



#### General characteristics

These devices comply with the UL 489 standard, mostly used in the North American markets, are designed to protect feeder circuits, the part of the system from the network supply point to the protection device for a branch circuit. They can in any case be used on the international market thanks to compliance with the IEC/EN60947-2 standard as well.

They have characteristics of tripping instantaneously defined as follows:

- C-curve: instantaneous trip 5...10 times  $I_n$  for inductive loads (mixed loads, resistive and inductive with low inrush current)
- D-curve: instantaneous trip 10...14 times  $I_n$  for highly inductive loads (loads with high inrush and current such as motors).

#### Operational characteristics

- Rated voltage 1...32A: 480Y/277V (UL489)
- Rated voltage 40...63A: 240V (UL489)
- Rated insulation voltage  $U_i$ : 440V (IEC/EN60947-2)
- Rated impulse voltage  $U_{imp}$ : 4kV (IEC/EN60947-2)
- Rated operational voltage  $U_e$ : 230/400VAC (IEC/EN60947-2)
- DC operational voltage: 125V

#### Certifications and compliance

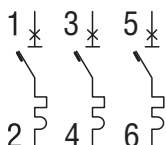
Certifications obtained: cULus.

Compliant with standards: UL 489, IEC/EN 60947-2.

### 3P - 10kA 3 modules



P1 MB... 3P...



**new**

**new**

| Order code | Cur-<br>ve | IEC<br>In | Rated<br>voltage | N° of<br>DIN<br>mod. | Qty<br>per<br>pkg | Wt   |
|------------|------------|-----------|------------------|----------------------|-------------------|------|
|            | Type       | [A]       | [V]              | n°                   | n°                | [kg] |

Three pole, thermal and magnetic trip type, C-curve characteristic.

|                   |   |     |          |   |   |       |
|-------------------|---|-----|----------|---|---|-------|
| P1 MB UH 3P C01   | C | 1   | 480V/277 | 3 | 4 | 0.388 |
| P1 MB UH 3P C01V6 | C | 1.6 | 480V/277 | 3 | 4 | 0.388 |
| P1 MB UH 3P C02   | C | 2   | 480V/277 | 3 | 4 | 0.388 |
| P1 MB UH 3P C03   | C | 3   | 480V/277 | 3 | 4 | 0.388 |
| P1 MB UH 3P C04   | C | 4   | 480V/277 | 3 | 4 | 0.388 |
| P1 MB UH 3P C05   | C | 5   | 480V/277 | 3 | 4 | 0.388 |
| P1 MB UH 3P C06   | C | 6   | 480V/277 | 3 | 4 | 0.388 |
| P1 MB UH 3P C07   | C | 7   | 480V/277 | 3 | 4 | 0.388 |
| P1 MB UH 3P C08   | C | 8   | 480V/277 | 3 | 4 | 0.388 |
| P1 MB UH 3P C10   | C | 10  | 480V/277 | 3 | 4 | 0.388 |
| P1 MB UH 3P C12   | C | 12  | 480V/277 | 3 | 4 | 0.388 |
| P1 MB UH 3P C13   | C | 13  | 480V/277 | 3 | 4 | 0.388 |
| P1 MB UH 3P C15   | C | 15  | 480V/277 | 3 | 4 | 0.388 |
| P1 MB UH 3P C16   | C | 16  | 480V/277 | 3 | 4 | 0.388 |
| P1 MB UH 3P C20   | C | 20  | 480V/277 | 3 | 4 | 0.388 |
| P1 MB UH 3P C25   | C | 25  | 480V/277 | 3 | 4 | 0.388 |
| P1 MB UH 3P C30   | C | 30  | 480V/277 | 3 | 4 | 0.388 |
| P1 MB UH 3P C32   | C | 32  | 480V/277 | 3 | 4 | 0.388 |
| P1 MB UL 3P C35   | C | 35  | 240      | 3 | 4 | 0.388 |
| P1 MB UL 3P C40   | C | 40  | 240      | 3 | 4 | 0.388 |
| P1 MB UL 3P C50   | C | 50  | 240      | 3 | 4 | 0.388 |
| P1 MB UL 3P C60   | C | 60  | 240      | 3 | 4 | 0.388 |
| P1 MB UL 3P C63   | C | 63  | 240      | 3 | 4 | 0.388 |

Three pole, thermal and magnetic trip type, D-curve characteristic.

|                   |   |     |          |   |   |       |
|-------------------|---|-----|----------|---|---|-------|
| P1 MB UH 3P D01   | D | 1   | 480V/277 | 3 | 4 | 0.388 |
| P1 MB UH 3P D01V6 | D | 1.6 | 480V/277 | 3 | 4 | 0.388 |
| P1 MB UH 3P D02   | D | 2   | 480V/277 | 3 | 4 | 0.388 |
| P1 MB UH 3P D03   | D | 3   | 480V/277 | 3 | 4 | 0.388 |
| P1 MB UH 3P D04   | D | 4   | 480V/277 | 3 | 4 | 0.388 |
| P1 MB UH 3P D05   | D | 5   | 480V/277 | 3 | 4 | 0.388 |
| P1 MB UH 3P D06   | D | 6   | 480V/277 | 3 | 4 | 0.388 |
| P1 MB UH 3P D07   | D | 7   | 480V/277 | 3 | 4 | 0.388 |
| P1 MB UH 3P D08   | D | 8   | 480V/277 | 3 | 4 | 0.388 |
| P1 MB UH 3P D10   | D | 10  | 480V/277 | 3 | 4 | 0.388 |
| P1 MB UH 3P D12   | D | 12  | 480V/277 | 3 | 4 | 0.388 |
| P1 MB UH 3P D13   | D | 13  | 480V/277 | 3 | 4 | 0.388 |
| P1 MB UH 3P D15   | D | 15  | 480V/277 | 3 | 4 | 0.388 |
| P1 MB UH 3P D16   | D | 16  | 480V/277 | 3 | 4 | 0.388 |
| P1 MB UH 3P D20   | D | 20  | 480V/277 | 3 | 4 | 0.388 |
| P1 MB UH 3P D25   | D | 25  | 480V/277 | 3 | 4 | 0.388 |
| P1 MB UH 3P D30   | D | 30  | 480V/277 | 3 | 4 | 0.388 |
| P1 MB UH 3P D32   | D | 32  | 480V/277 | 3 | 4 | 0.388 |
| P1 MB UL 3P D35   | D | 35  | 240      | 3 | 4 | 0.388 |
| P1 MB UL 3P D40   | D | 40  | 240      | 3 | 4 | 0.388 |
| P1 MB UL 3P D50   | D | 50  | 240      | 3 | 4 | 0.388 |
| P1 MB UL 3P D60   | D | 60  | 240      | 3 | 4 | 0.388 |
| P1 MB UL 3P D63   | D | 63  | 240      | 3 | 4 | 0.388 |

#### General characteristics

These devices comply with the UL 489 standard, mostly used in the North American markets, are designed to protect feeder circuits, the part of the system from the network supply point to the protection device for a branch circuit. They can in any case be used on the international market thanks to compliance with the IEC/EN60947-2 standard as well.

They have characteristics of tripping instantaneously defined as follows:

- C-curve: instantaneous trip 5...10 times  $I_n$  for inductive loads (mixed loads, resistive and inductive with low inrush current)
- D-curve: instantaneous trip 10...14 times  $I_n$  for highly inductive loads (loads with high inrush and current such as motors).

#### Operational characteristics

- Rated voltage 1...32A: 480Y/277V (UL 489)
- Rated voltage 40...63A: 240V (UL 489)
- Rated insulation voltage  $U_i$ : 440V (IEC/EN60947-2)
- Rated impulse voltage  $U_{imp}$ : 4kV (IEC/EN60947-2)
- Rated operational voltage  $U_e$ : 230/400VAC (IEC/EN60947-2)
- DC operational voltage: 125V

#### Certifications and compliance

Certifications obtained: cULus.

Compliant with standards: UL 489, IEC/EN 60947-2.

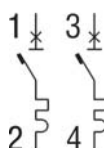
### 1P, 2P, 3P and 4P - 10kA



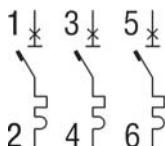
P2 MB 1P...



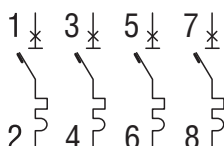
P2 MB 2P...



P2 MB 3P...



P2 MB 4P...



| Order code | Curve | IEC In | IEC Icn | N° of DIN module | Qty per pkg | Wt   |
|------------|-------|--------|---------|------------------|-------------|------|
|            | Type  | [A]    | [kA]    | no.              | no.         | [kg] |

One pole, thermal and magnetic trip type, C-curve characteristic.

|               |   |     |    |     |   |       |
|---------------|---|-----|----|-----|---|-------|
| P2 MB 1P C080 | C | 80  | 10 | 1.5 | 9 | 0.166 |
| P2 MB 1P C100 | C | 100 | 10 | 1.5 | 9 | 0.166 |
| P2 MB 1P C125 | C | 125 | 10 | 1.5 | 9 | 0.166 |

Two pole, thermal and magnetic trip type, C-curve characteristic.

|               |   |     |    |   |   |       |
|---------------|---|-----|----|---|---|-------|
| P2 MB 2P C080 | C | 80  | 10 | 3 | 4 | 0.340 |
| P2 MB 2P C100 | C | 100 | 10 | 3 | 4 | 0.340 |
| P2 MB 2P C125 | C | 125 | 10 | 3 | 4 | 0.340 |

Three pole, thermal and magnetic trip type, C-curve characteristic.

|               |   |     |    |     |   |       |
|---------------|---|-----|----|-----|---|-------|
| P2 MB 3P C080 | C | 80  | 10 | 4.5 | 3 | 0.510 |
| P2 MB 3P C100 | C | 100 | 10 | 4.5 | 3 | 0.510 |
| P2 MB 3P C125 | C | 125 | 10 | 4.5 | 3 | 0.510 |

Four pole, thermal and magnetic trip type, C-curve characteristic.

|               |   |     |    |   |   |       |
|---------------|---|-----|----|---|---|-------|
| P2 MB 4P C080 | C | 80  | 10 | 6 | 2 | 0.680 |
| P2 MB 4P C100 | C | 100 | 10 | 6 | 2 | 0.680 |
| P2 MB 4P C125 | C | 125 | 10 | 6 | 2 | 0.680 |

Three pole, thermal and magnetic trip type, D-curve characteristic.

|               |   |     |    |     |   |       |
|---------------|---|-----|----|-----|---|-------|
| P2 MB 3P D080 | D | 80  | 10 | 4.5 | 3 | 0.510 |
| P2 MB 3P D100 | D | 100 | 10 | 4.5 | 3 | 0.510 |
| P2 MB 3P D125 | D | 125 | 10 | 4.5 | 3 | 0.510 |

Four pole, thermal and magnetic trip type, D-curve characteristic.

|               |   |     |    |   |   |       |
|---------------|---|-----|----|---|---|-------|
| P2 MB 4P D080 | D | 80  | 10 | 6 | 2 | 0.510 |
| P2 MB 4P D100 | D | 100 | 10 | 6 | 2 | 0.510 |
| P2 MB 4P D125 | D | 125 | 10 | 6 | 2 | 0.510 |

① Icn at 230V.

#### General characteristics

These devices are used to protect against short circuits and overloads of wiring installations and loads in panel boards, office buildings, stores and similar applications. Their purpose is circuit protection, circuit isolation and load operation controls. They have characteristics of instantaneous trip defined as follows:

- C-curve: instantaneous trip 5...10 times In for inductive loads (mixed loads, resistive and inductive with low inrush current)
- D-curve: instantaneous trip 10...14 times In for highly inductive loads (loads with high inrush and current such as motors).

Main features include:

- IEC rated current In: 80...125A
- Pole width: 27mm / 1.06"
- Contact status with flag indicator
- Trip characteristic: Curve type C and D
- Fixing on 35mm DIN rail (IEC/EN 60715).

#### Operational characteristics

- Dissipation per pole: 15...20W
- IEC rated insulation voltage Ui: 400V
- IEC rated impulse voltage Uimp: 6kV
- IEC rated operational voltage Ue: 230/400VAC.

#### Certifications and compliance

Certifications obtained: TÜV – Rheinland; UL Recognized for USA and Canada (cURus – File E359585) as "Supplementary Protectors", designated as Overcurrent type, for general industrial use, suitable for factory wiring only with more than 135% tripping current of amp rating. Products having this type of marking are intended for use as components of complete workshop- assembled equipment.

Compliant with standards: IEC/EN 60898-1, IEC/EN 60947-2, UL 1077, CSA C22.2 n°235.

### Add-on blocks for miniature circuit breakers 1...63A



P1X 1011

P1X 16230

**new**

| Order code                                   | Description                      | Qty per MCB | Qty per pkg | Wt    |
|----------------------------------------------|----------------------------------|-------------|-------------|-------|
|                                              |                                  | n°          | n°          | [kg]  |
| Auxiliary contact.                           |                                  |             |             |       |
| <b>P1X 1011</b>                              | 1 changeover contact             | 1           | 10          | 0.040 |
| <b>P1X 1011UH</b>                            | 1 changeover contact for P1 MB U | 1           | 10          | 0.040 |
| Indicator contact for thermal-magnetic trip. |                                  |             |             |       |
| <b>P1X 1311</b>                              | 1 changeover contact             | 1           | 10          | 0.040 |
| Undervoltage trip release.                   |                                  |             |             |       |
| <b>P1X 14230</b>                             | 230V 50/60Hz                     | 1           | 8           | 0.070 |
| Shunt trip release.                          |                                  |             |             |       |
| <b>P1X 16230</b>                             | 110...415V 50/60Hz               | 1           | 8           | 0.070 |

❶ Not suitable for P1 MB U...

#### General characteristics

- Auxiliary and indicator contact width: 9mm/0.35" (0.5 module)
- Undervoltage and shunt trip release width: 18mm/0.71" (1 module)
- Maximum combination: 3 add-on blocks on MCB left side only of which 1 undervoltage or shunt release directly on MCB side and then 2 contacts of which 1 auxiliary and 1 indicator.

#### Operational characteristics

- IEC rated impulse voltage Uimp: 4kV
- IEC rated operational current in AC: 6A 230V; 3A 400V (auxiliary contacts).

#### Certifications and compliance

Certifications obtained: cURus (excluding P1X 14230), UL (only P1X 14230)  
Compliant with standards: IEC/EN 60947-5-1, CSA C22.2 n° 5.

### Add-on blocks for miniature circuit breakers 80...125A



P2X 1311

P2X 16230

**new**

| Order code                                   | Description          | Qty per MCB | Qty per pkg | Wt    |
|----------------------------------------------|----------------------|-------------|-------------|-------|
|                                              |                      | n°          | n°          | [kg]  |
| Auxiliary contact.                           |                      |             |             |       |
| <b>P2X 1011</b>                              | 1 changeover contact | 1           | 10          | 0.040 |
| Indicator contact for thermal-magnetic trip. |                      |             |             |       |
| <b>P2X 1311</b>                              | 1 changeover contact | 1           | 10          | 0.040 |
| Shunt trip release.                          |                      |             |             |       |
| <b>P2X 16230</b>                             | 110...415V 50/60Hz   | 1           | 8           | 0.070 |

#### General characteristics

- Auxiliary and indicator contact width: 9mm/0.35" (0.5 module)
- Shunt trip release width: 17.5mm/0.69" (1 module)
- Maximum combination: 3 add-on blocks on MCB sides of which 1 undervoltage or shunt release on MCB right side and 2 contacts on the left of which 1 auxiliary and 1 indicator.

#### Operational characteristics

- Rated impulse voltage Uimp: 4kV
- Rated operational current in AC: 6A 230V; 3A 400V (auxiliary contacts).

#### Compliance

Compliant with standards: IEC/EN 60947-5-1.

### Accessories for miniature circuit breakers



P1X 90 33



P1X 91 33



P1X 92 01



P1X 92 10

**new**

**new**

**new**



P1X 18 10



P2X 18 10

❶ Suitable for P1 MB...  
Not suitable for P1 MB U...

| Order code       | Description                                                                          | Qty per pkg | Wt    |
|------------------|--------------------------------------------------------------------------------------|-------------|-------|
|                  |                                                                                      | n°          | [kg]  |
| <b>P1X 90 31</b> | Single-pole supply busbar                                                            | 10          | 0.160 |
| <b>P1X 90 32</b> | Two-pole supply busbar                                                               | 10          | 0.320 |
| <b>P1X 90 33</b> | Three-pole supply busbar                                                             | 10          | 0.474 |
| <b>P1X 90 34</b> | Four-pole supply busbar                                                              | 10          | 0.600 |
| <b>P1X 91 30</b> | Kit of 5 isolating covers for unused busbar terminals                                | 10          | 0.030 |
| <b>P1X 91 31</b> | End cap for P1X9031                                                                  | 50          | 0.001 |
| <b>P1X 91 32</b> | End cap for P1X9032                                                                  | 50          | 0.001 |
| <b>P1X 91 33</b> | End cap for P1X9033                                                                  | 50          | 0.001 |
| <b>P1X 91 34</b> | End cap for P1X9034                                                                  | 50          | 0.001 |
| <b>P1X 92 01</b> | Single-pole terminal for busbar supply; conductor cross section 25mm² max.           | 25          | 0.010 |
| <b>P1X 92 10</b> | 1-pole terminal for supplying busbar; conductor cross section 25mm² max.; left entry | 25          | 0.010 |
| <b>P1X 92 02</b> | Single-pole terminal for busbar supply; conductor cross section 50mm² max.           | 25          | 0.022 |
| <b>P1X 18 10</b> | Padlockable attachment for breaker control lever P1MB...                             | 10          | 0.001 |
| <b>P2X 18 10</b> | Padlockable attachment for breaker control lever P2MB...                             | 10          | 0.002 |

#### General and operational characteristics

##### SINGLE-POLE SUPPLY BUSBAR

- Rated operational voltage Ue: 1000V
- Central point of power supply: 100A max.
- Side point of power supply: 63A max.
- Spacing: 17.5mm/0.69"
- Busbar section: 10mm²
- For paralleling connection
- For 57 modules, 1000mm/39.37" long (57 1P breakers).

##### TWO-POLE, THREE-POLE AND FOUR-POLE SUPPLY BUSBARS

- Rated operational voltage Ue: 690V
- Central point of power supply: 100A max.
- Side point of power supply: 63A max.
- Pitch: 18mm/0.71"
- Busbar section: 10mm²
- For paralleling connection
- Two-pole: for 56 modules, 1000mm/39.37" long (28 2P breakers)
- Three-pole: for 57 modules, 1012mm/39.84" long (19 3P breakers)
- Four-pole: for 56 modules, 1000mm/39.37" long (14 4P breakers).

##### PADLOCKABLE ATTACHMENT

- Max. padlock diameter 5mm/0.20"
- Padlockable in ON and OFF
- One can be fitted for each pole of the breaker.

### Modular socket



P1X7

**new**

| Order code  | Description                                         | Qty per pkg | Wt    |
|-------------|-----------------------------------------------------|-------------|-------|
|             |                                                     | n°          | [kg]  |
| <b>P1X7</b> | Modular socket for Italy and Germany (Schuko); 16A. | 5           | 0.123 |

#### General and operational characteristics

- Max. current: 16A
- Connectable section 1.5...10mm²
- Tightening torque: 1.8Nm
- Fixing on 35mm DIN rail (IEC/EN 60715)
- DIN modules: 2.5.

#### Compliance

Compliant with standards: IEC 60884-1.



### Residual blocks



P1 RA 2P...



P1 RA 3P...

new

| Order code                     | Type | IEC In | IEC IΔn | N° of DIN module | Qty per pkg | Wt    |
|--------------------------------|------|--------|---------|------------------|-------------|-------|
|                                |      | [A]    | [mA]    | n°               | n°          | [kg]  |
| Residual blocks – 2P – type A. |      |        |         |                  |             |       |
| P1 RA 2P 40 A030               | A    | 40     | 30      | 2                | 1           | 0.160 |
| P1 RA 2P 40 A300               | A    | 40     | 300     | 2                | 1           | 0.160 |
| P1 RA 2P 63 A030               | A    | 63     | 30      | 2                | 1           | 0.160 |
| P1 RA 2P 63 A300               | A    | 63     | 300     | 2                | 1           | 0.160 |
| Residual blocks – 3P – type A. |      |        |         |                  |             |       |
| P1 RA 3P 40 A030               | A    | 40     | 30      | 3.5              | 1           | 0.205 |
| P1 RA 3P 40 A300               | A    | 40     | 300     | 3.5              | 1           | 0.205 |
| P1 RA 3P 63 A030               | A    | 63     | 30      | 3.5              | 1           | 0.205 |
| P1 RA 3P 63 A300               | A    | 63     | 300     | 3.5              | 1           | 0.205 |
| Residual blocks – 4P – type A. |      |        |         |                  |             |       |
| P1 RA 4P 40 A030               | A    | 40     | 30      | 3.5              | 1           | 0.230 |
| P1 RA 4P 40 A300               | A    | 40     | 300     | 3.5              | 1           | 0.230 |
| P1 RA 4P 63 A030               | A    | 63     | 30      | 3.5              | 1           | 0.230 |
| P1 RA 4P 63 A300               | A    | 63     | 300     | 3.5              | 1           | 0.230 |

### Residual current operated circuit breakers



P1 RC 2P...



P1 RC 4P...



P1 RC 4P B...

new

new

| Order code              | Type | IEC In | IEC IΔn | N° of DIN module | Qty per pkg | Wt    |
|-------------------------|------|--------|---------|------------------|-------------|-------|
|                         |      | [A]    | [mA]    | n°               | n°          | [kg]  |
| Two pole RCCB type AC.  |      |        |         |                  |             |       |
| P1 RC 2P 25 AC030       | AC   | 25     | 30      | 2                | 6           | 0.185 |
| P1 RC 2P 25 AC300       | AC   | 25     | 300     | 2                | 6           | 0.185 |
| P1 RC 2P 40 AC030       | AC   | 40     | 30      | 2                | 6           | 0.185 |
| P1 RC 2P 40 AC300       | AC   | 40     | 300     | 2                | 6           | 0.185 |
| P1 RC 2P 63 AC030       | AC   | 63     | 30      | 2                | 6           | 0.185 |
| P1 RC 2P 63 AC300       | AC   | 63     | 300     | 2                | 6           | 0.185 |
| Two pole RCCB type A.   |      |        |         |                  |             |       |
| P1 RC 2P 25 A030        | A    | 25     | 30      | 2                | 6           | 0.185 |
| P1 RC 2P 25 A300        | A    | 25     | 300     | 2                | 6           | 0.185 |
| P1 RC 2P 40 A030        | A    | 40     | 30      | 2                | 6           | 0.185 |
| P1 RC 2P 40 A300        | A    | 40     | 300     | 2                | 6           | 0.185 |
| P1 RC 2P 63 A030        | A    | 63     | 30      | 2                | 6           | 0.185 |
| P1 RC 2P 63 A300        | A    | 63     | 300     | 2                | 6           | 0.185 |
| Four pole RCCB type AC. |      |        |         |                  |             |       |
| P1 RC 4P 25 AC030       | AC   | 25     | 30      | 4                | 3           | 0.326 |
| P1 RC 4P 25 AC300       | AC   | 25     | 300     | 4                | 3           | 0.326 |
| P1 RC 4P 40 AC030       | AC   | 40     | 30      | 4                | 3           | 0.326 |
| P1 RC 4P 40 AC300       | AC   | 40     | 300     | 4                | 3           | 0.326 |
| P1 RC 4P 63 AC030       | AC   | 63     | 30      | 4                | 3           | 0.326 |
| P1 RC 4P 63 AC300       | AC   | 63     | 300     | 4                | 3           | 0.326 |
| Four pole RCCB type A.  |      |        |         |                  |             |       |
| P1 RC 4P 25 A030        | A    | 25     | 30      | 4                | 3           | 0.326 |
| P1 RC 4P 25 A300        | A    | 25     | 300     | 4                | 3           | 0.326 |
| P1 RC 4P 40 A030        | A    | 40     | 30      | 4                | 3           | 0.326 |
| P1 RC 4P 40 A300        | A    | 40     | 300     | 4                | 3           | 0.326 |
| P1 RC 4P 63 A030        | A    | 63     | 30      | 4                | 3           | 0.326 |
| P1 RC 4P 63 A300        | A    | 63     | 300     | 4                | 3           | 0.326 |
| Two pole RCCB type B.   |      |        |         |                  |             |       |
| P1 RC 2P 40 B030        | B    | 40     | 30      | 4                | 3           | 0.280 |
| P1 RC 2P 40 B300        | B    | 40     | 300     | 4                | 3           | 0.280 |
| P1 RC 2P 63 B030        | B    | 63     | 30      | 4                | 3           | 0.280 |
| P1 RC 2P 63 B300        | B    | 63     | 300     | 4                | 3           | 0.280 |
| Four pole RCCB type B.  |      |        |         |                  |             |       |
| P1 RC 4P 40 B030        | B    | 40     | 30      | 4                | 3           | 0.335 |
| P1 RC 4P 40 B300        | B    | 40     | 300     | 4                | 3           | 0.335 |
| P1 RC 4P 63 B030        | B    | 63     | 30      | 4                | 3           | 0.335 |
| P1 RC 4P 63 B300        | B    | 63     | 300     | 4                | 3           | 0.335 |
| P1 RC 4P 80 B030        | B    | 80     | 30      | 4                | 3           | 0.335 |
| P1 RC 4P 80 B300        | B    | 80     | 300     | 4                | 3           | 0.335 |

#### General characteristics

These devices are intended for the protection of people against indirect contact (electric shock) and of installations against fire hazards due to a persistent earth/ground fault current.

They snap onto the P1MB series thermal-magnetic circuit breakers; this combination forms a single device to protect people, protect against fire and protect lines.

#### Operational characteristics

- IEC rated insulation voltage  $U_i$ : 400V
- IEC rated impulse voltage  $U_{imp}$ : 4kV
- IEC rated frequency: 50/60Hz
- IEC rated operational voltage  $U_e$ : 230/400V
- IEC rated residual current for tripping  $I_{\Delta n}$ : 30mA; 300mA.

#### Certifications and compliance

Compliance with standards: IEC/EN 61009-1.

#### General characteristics

These RCCBs are intended for the protection of people against indirect contact (electric shock) and of installations against fire hazards due to a persistent earth/ground fault current. Specifically to prevent electric shock, RCCBs must be rated with a rated residual current ( $I_{\Delta n}$ ) not exceeding 30mA so that these devices trip in the case of earth/ground fault only. They usually are connected in series with thermal-magnetic breakers which assure short circuit and overcurrent protection too. P1RC types have a  $I_{\Delta n}$  of either 30mA or 300mA and are available with three different versions of residual current tripping, as follows:

Type AC – Tripping for earth/ground fault is ensured “for residual sinusoidal alternating currents, suddenly applied or slowly rising”. It is identified by the symbol:

Type A – Tripping for earth/ground fault is ensured “for residual sinusoidal alternating currents and pulsating direct currents, suddenly applied or slowly rising”. In addition to the protection given by Type AC, this version protects against residual current with pulsating waveform. This can be caused by circuits connected with electronic equipment. The symbol identifying Type A is the following:

Type B – tripping is ensured for all conditions already covered by types AC and A. They also ensure tripping for high-frequency leakage currents up to 1000Hz and direct currents. They are particularly suitable for applications with inverters, UPSs and electric vehicle charging stations.

The symbol identifying Type B is the following:

Main features include:

- IEC rated current In: 25A, 40A and 63A
- Versions: 2P and 4P
- Type of operation: AC, A and B
- Pole width: 17.5mm / 0.69"
- Contact status with flag indicator
- Fixing on 35mm DIN rail (IEC/EN 60715).

#### Operational characteristics

- Dissipation per pole:
  - 1.1W for P1RC2/4 P25... type AC or A
  - 2.9W for P1RC2/4 P40... type AC, A or B
  - 7.2W for P1RC2/4P63... type AC, A or B
  - 9.7W for P1RC2/4P80... type B
- IEC rated insulation voltage  $U_i$ : 400V
- IEC rated impulse voltage  $U_{imp}$ : 4kV
- IEC rated frequency: 50/60Hz
- IEC rated operational voltage  $U_c$ : 230VAC for 2P; 230/400VAC for 4P
- IEC rated residual operating voltage  $U_e$ :  $I_{\Delta n}$ : 30mA; 300mA
- IEC short-circuit breaking capacity  $I_{cn}$ : 10kA

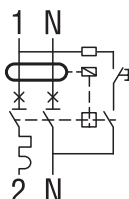
#### Certifications and compliance

Certifications obtained: TÜV SÜD (types AC and A); VDE (type B).  
Compliant with standards: IEC/EN 61008-1 (all types); IEC/EN 62423 (type B).

### 1P+N - 10kA 2 modules



P1 RB 1N...



| Order code                          | Curve | IEC<br>In | IEC<br>Icn | IEC<br>IΔn | DIN<br>n° | Qty<br>per<br>pkg | Wt<br>[kg] |
|-------------------------------------|-------|-----------|------------|------------|-----------|-------------------|------------|
|                                     | Type  | [A]       | [kA]       | [mA]       | n°        | n°                | [kg]       |
| Single pole + neutral RCBO type AC. |       |           |            |            |           |                   |            |
| P1 RB 1N C06 AC030                  | C     | 6         | 10         | 30         | 2         | 6                 | 0.205      |
| P1 RB 1N C06 AC300                  | C     | 6         | 10         | 300        | 2         | 6                 | 0.205      |
| P1 RB 1N C10 AC030                  | C     | 10        | 10         | 30         | 2         | 6                 | 0.205      |
| P1 RB 1N C10 AC300                  | C     | 10        | 10         | 300        | 2         | 6                 | 0.205      |
| P1 RB 1N C16 AC030                  | C     | 16        | 10         | 30         | 2         | 6                 | 0.205      |
| P1 RB 1N C16 AC300                  | C     | 16        | 10         | 300        | 2         | 6                 | 0.205      |
| P1 RB 1N C20 AC030                  | C     | 20        | 10         | 30         | 2         | 6                 | 0.205      |
| P1 RB 1N C20 AC300                  | C     | 20        | 10         | 300        | 2         | 6                 | 0.205      |
| P1 RB 1N C25 AC030                  | C     | 25        | 10         | 30         | 2         | 6                 | 0.205      |
| P1 RB 1N C25 AC300                  | C     | 25        | 10         | 300        | 2         | 6                 | 0.205      |
| P1 RB 1N C32 AC030                  | C     | 32        | 10         | 30         | 2         | 6                 | 0.205      |
| P1 RB 1N C32 AC300                  | C     | 32        | 10         | 300        | 2         | 6                 | 0.205      |
| P1 RB 1N C40 AC030                  | C     | 40        | 10         | 30         | 2         | 6                 | 0.205      |
| P1 RB 1N C40 AC300                  | C     | 40        | 10         | 300        | 2         | 6                 | 0.205      |
| Single pole + neutral RCBO type A.  |       |           |            |            |           |                   |            |
| P1 RB 1N C06 A030                   | C     | 6         | 10         | 30         | 2         | 6                 | 0.205      |
| P1 RB 1N C06 A300                   | C     | 6         | 10         | 300        | 2         | 6                 | 0.205      |
| P1 RB 1N C10 A030                   | C     | 10        | 10         | 30         | 2         | 6                 | 0.205      |
| P1 RB 1N C10 A300                   | C     | 10        | 10         | 300        | 2         | 6                 | 0.205      |
| P1 RB 1N C13 A030                   | C     | 13        | 10         | 30         | 2         | 6                 | 0.205      |
| P1 RB 1N C16 A030                   | C     | 16        | 10         | 30         | 2         | 6                 | 0.205      |
| P1 RB 1N C16 A300                   | C     | 16        | 10         | 300        | 2         | 6                 | 0.205      |
| P1 RB 1N C20 A030                   | C     | 20        | 10         | 30         | 2         | 6                 | 0.205      |
| P1 RB 1N C20 A300                   | C     | 20        | 10         | 300        | 2         | 6                 | 0.205      |
| P1 RB 1N C25 A030                   | C     | 25        | 10         | 30         | 2         | 6                 | 0.205      |
| P1 RB 1N C25 A300                   | C     | 25        | 10         | 300        | 2         | 6                 | 0.205      |
| P1 RB 1N C32 A030                   | C     | 32        | 10         | 30         | 2         | 6                 | 0.205      |
| P1 RB 1N C32 A300                   | C     | 32        | 10         | 300        | 2         | 6                 | 0.205      |
| P1 RB 1N C40 A030                   | C     | 40        | 10         | 30         | 2         | 6                 | 0.205      |
| P1 RB 1N C40 A300                   | C     | 40        | 10         | 300        | 2         | 6                 | 0.205      |

#### General characteristics

These devices both detect and trip in the event of residual current and protect circuits in the case of short circuits and overcurrent. From a practical point of view, they integrate both functions of MCB and of RCCB.

They have a C-type trip characteristic (instantaneous trip 5-10 times  $I_n$ ) and are used for inductive loads (mixed loads, resistive and inductive with low inrush current).

In addition, they have a rated residual current ( $I_{\Delta n}$ ) of either 30mA or 300mA and are available with two different versions of residual current tripping type AC or A as described on page 13-12.

Its main features are:

- IEC rated current  $I_n$ : 6...40A
- Version: 1P+N
- Contact status with flag indicator
- Trip characteristic: Curve type C
- Fixing on 35mm DIN rail (IEC/EN 60715).

#### Operational characteristics

- Dissipation per pole: 3...13W
- Rated insulation voltage  $U_i$ : 400V
- Rated impulse voltage  $U_{imp}$ : 4kV
- Operating frequency: 50/60Hz
- Rated operational voltage  $U_e$ : 230VAC
- Rated residual operating voltage  $I_{\Delta n}$ : 30mA; 300mA
- IEC short-circuit breaking capacity  $I_{cn}$ : 10kA

#### Certifications and compliance

Certifications obtained: TÜV Rheinland.

Compliant with standards: IEC/EN 61009-1.

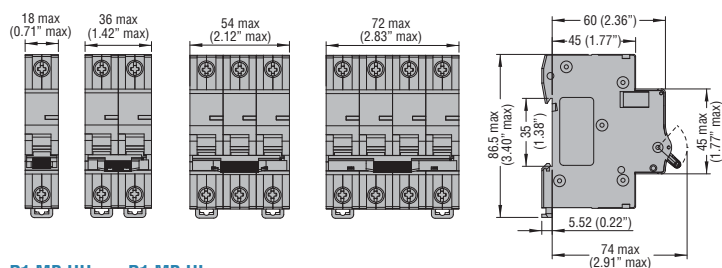


# Miniature and residual circuit breakers

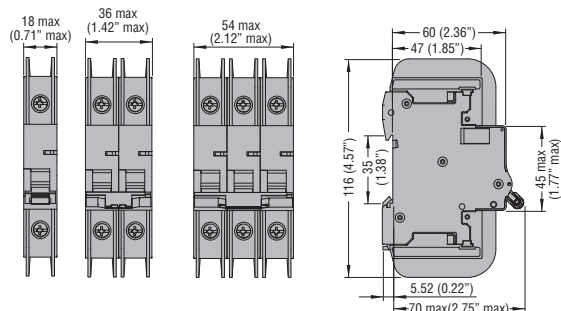
## Dimensions [mm (in)]

### MINIATURE CIRCUIT BREAKERS

#### P1 MB...



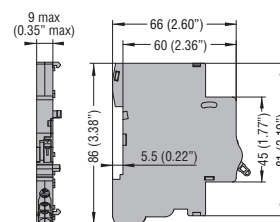
#### P1 MB UH... - P1 MB UL...



### ACCESSORIES

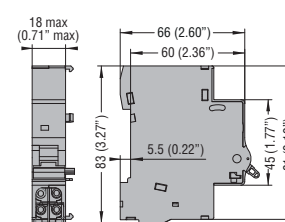
#### Add-on contacts

#### P1X 1011 - P1X 1011 UH - P1X 1311



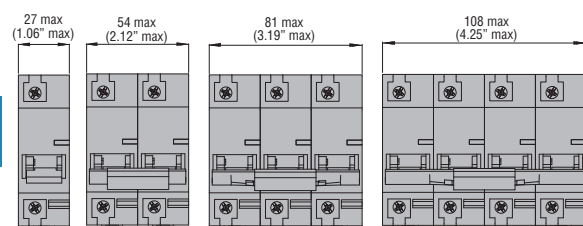
#### Undervoltage and shunt releases

#### P1X 14230 - P1X 16230



### MINIATURE CIRCUIT BREAKERS

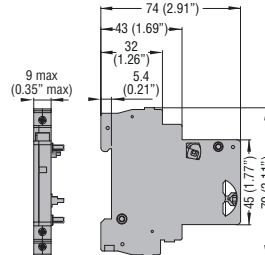
#### P2 MB...



### ACCESSORIES

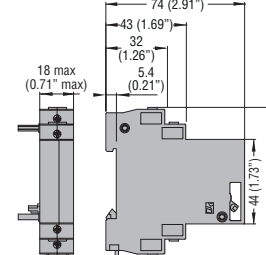
#### Add-on contacts

#### P2X 1011 - P2X 1311



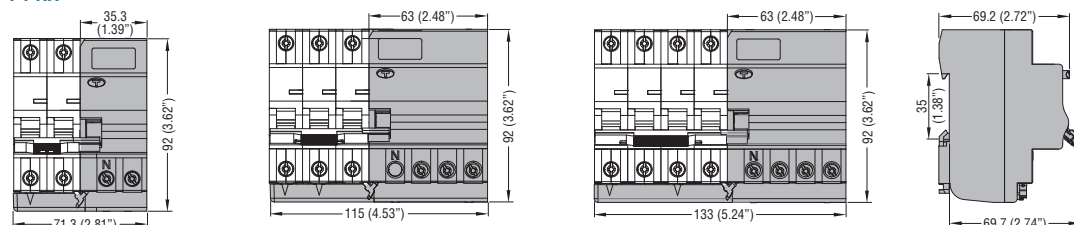
#### Shunt release

#### P2X 16230



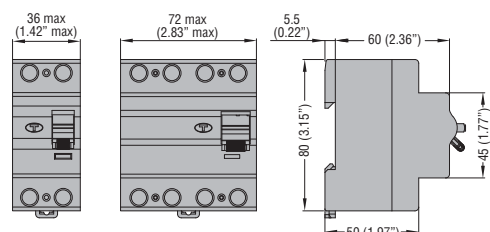
### RESIDUAL BLOCKS

#### P1 RA



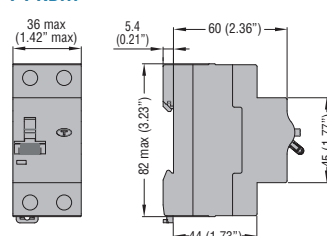
### RESIDUAL CURRENT OPERATED CIRCUIT BREAKERS

#### P1 RC...



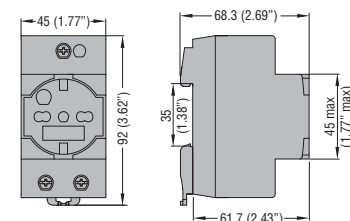
### RESIDUAL CURRENT OPERATED CIRCUIT BREAKERS WITH OVERCURRENT PROTECTION

#### P1 RB...



### MODULAR SOCKET

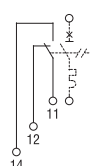
#### P1X7



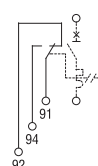
① 72mm for type-B residual current breakers.

## Wiring diagrams

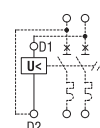
#### P1X 1011 - P1X 1011UH - P2X 1011



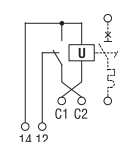
#### P1X 1311 - P2X 1311



#### P1X 14230



#### P1X 16230 - P2X 16230



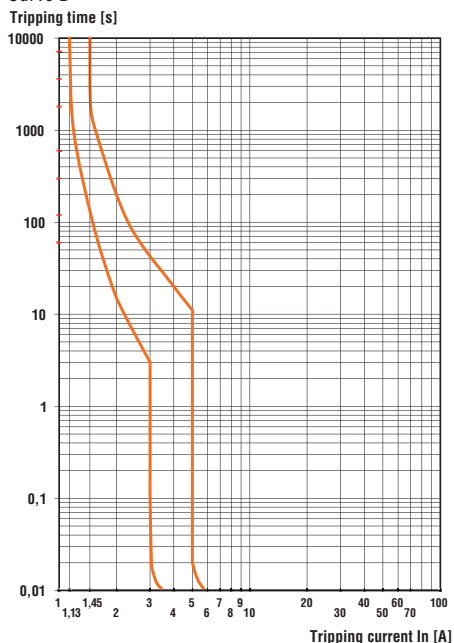
| TYPE                                          |                 | P1 MB                                                             | P2 MB                                   | P1 RA           | P1 RC                                      | P1 RB                                                           |
|-----------------------------------------------|-----------------|-------------------------------------------------------------------|-----------------------------------------|-----------------|--------------------------------------------|-----------------------------------------------------------------|
| Description                                   |                 | Circuit breaker                                                   | Circuit breaker                         | Residual blocks | Residual current operated circuit breakers | Residual current operated circuit breakers w/ overcurrent prot. |
| Standards                                     |                 | IEC/EN 60898,<br>IEC/EN 60947-2<br>UL 1077<br>UL 489 <sup>①</sup> | IEC/EN 60947-2                          | IEC/EN 61008-1  | IEC/EN 61008-1                             | IEC/EN 61009-1                                                  |
| IEC rated insulation voltage $U_i$            | V               | 440                                                               | 400                                     | 400             | 400                                        | 400                                                             |
| IEC rated impulse withstand voltage $U_{imp}$ | kV              | 4                                                                 | 6                                       | 4               | 4                                          | 4                                                               |
| IEC rated operational voltage $U_e$           | in AC           | 230 (1P, 1P+N) /<br>230/400 (2P, 3P, 4P)                          | 230 (1P) /<br>230/400 (2P, 3P, 4P)      | 230/400V        | 230 (2P) /<br>230/400(4P)                  | 230                                                             |
|                                               | in DC           | 60 (1P) / 80 (2P)                                                 | 60                                      | —               | —                                          | —                                                               |
| Rated frequency                               | Hz              | 50/60                                                             | 50/60                                   | 50/60           | 50/60                                      | 50/60                                                           |
| Maximum rated current                         | A               | 63                                                                | 125                                     | 63              | 40                                         | 40                                                              |
| Available rated current for types             | A               | 1, 2, 4, 6, 10, 13, 16,<br>20, 25, 32, 40, 50, 63 <sup>②</sup>    | 80, 100, 125                            | 40, 63          | 25, 40, 63<br>(80A only type B)            | 6, 10, 16, 20, 25, 32, 40                                       |
| Versions                                      |                 | 1P, 1P+N, 2P, 3P, 4P                                              | 1P, 2P, 3P, 4P                          | 2P, 3P, 4P      | 2P, 4P                                     | 1P+N                                                            |
| Tripping characteristic                       | curve           | B-C-D                                                             | C-D                                     | —               | —                                          | C                                                               |
| Instantaneous tripping                        |                 | Curve B: 3...5In<br>Curve C: 5...10In<br>Curve D: 10...14In       | Curve C: 5...10In<br>Curve D: 10...14In | —               | —                                          | Curve C: 5...10In                                               |
| Residual operation characteristic             | type            | —                                                                 | —                                       | A               | AC, A, B                                   | AC, A                                                           |
| Rated residual current $I_{\Delta n}$         | mA              | —                                                                 | —                                       | 30, 300         | 30, 300                                    | 30, 300                                                         |
| Short circuit capacity                        | kA              | 10 (6kA 1P+N)                                                     | 10                                      | —               | 10 (Inc)                                   | 10                                                              |
| Mechanical life                               | cycle           | 20,000                                                            | 10,000                                  | 20,000          | 20,000                                     | 20,000                                                          |
| Maximum tightening torque of terminals        | Nm              | 2                                                                 | 3                                       | 2               | 2                                          | 2                                                               |
|                                               | lbin            | 15                                                                | 26                                      | 15              | 15                                         | 15                                                              |
|                                               | Tool            | Pz2                                                               | Pz2                                     | Pz2             | Pz2                                        | Pz2                                                             |
| Conductor section min...max.                  | mm <sup>2</sup> | 1...16                                                            | 2.5...50                                | 1...16          | 2.5...35                                   | 1...25                                                          |
|                                               | AWG             | 14...6                                                            | 14...1/0                                | 14...6          | 14...2                                     | 16...3                                                          |

### AMBIENT CONDITIONS

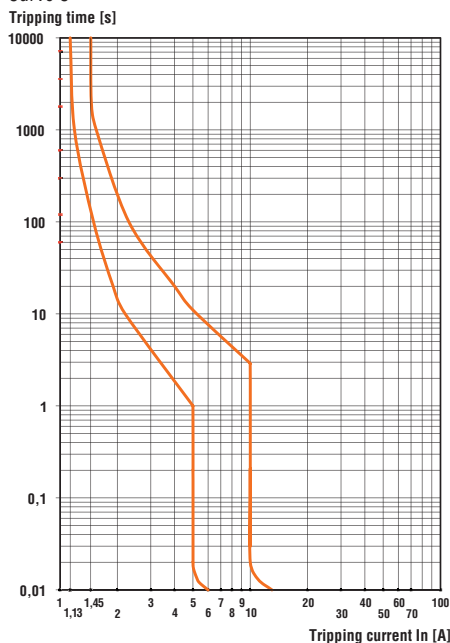
|                  |           |    |                              |           |           |           |           |
|------------------|-----------|----|------------------------------|-----------|-----------|-----------|-----------|
| Temperature      | Operating | °C | -35...+70                    | -35...+75 | -25...+55 | -25...+55 | -25...+40 |
|                  | Storage   | °C | -40...+80                    | -40...+80 | -35...+60 | -35...+60 | -35...+60 |
| Max. altitude    | m         |    | 2,000                        | 2,000     | 2,000     | 2,000     | 2,000     |
| Pollution degree |           |    | 2                            | 3         | 2         | 2         | 2         |
| Mounting         |           |    | 35mm DIN rail (IEC/EN 60715) |           |           |           |           |

### TRIP CHARACTERISTICS

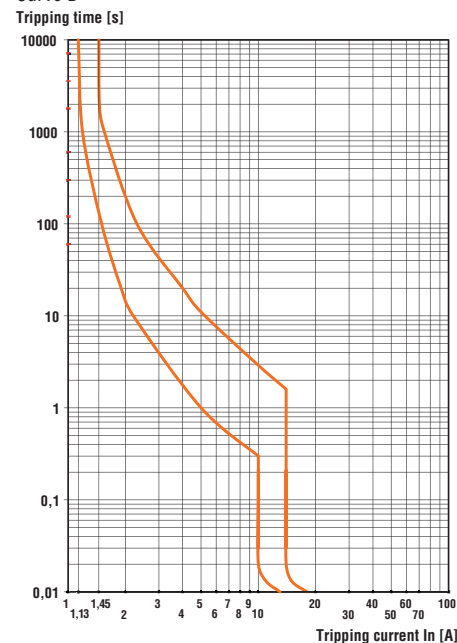
#### Curve B



#### Curve C



#### Curve D



① UL489 only P1MBU... version for the operational voltages for these devices refer to the pages for the chosen product.

② For the UL489, P1MBU... versions, the following rated current currents are also available: 1.6, 3, 5, 7, 8, 12, 15, 30, 35, 60 A