

# 90 RCD RANGE

MODULAR DEVICES FOR RESIDUAL CURRENT PROTECTION

**GEWISS**

## TECHNICAL CHARACTERISTICS

### TECHNICAL DATA

| TYPE                                                   |                                  |                  | MDC 45                                                                            |       | MDC 60                                                                              |     |     | MDC 100                                                                             |    |
|--------------------------------------------------------|----------------------------------|------------------|-----------------------------------------------------------------------------------|-------|-------------------------------------------------------------------------------------|-----|-----|-------------------------------------------------------------------------------------|----|
|                                                        |                                  |                  |  |       |  |     |     |  |    |
| Reference Standard                                     |                                  |                  | EN 61009-1                                                                        |       | EN 61009-1                                                                          |     |     | EN 61009-1                                                                          |    |
| Nominal current in [A]                                 |                                  |                  | 6-32                                                                              |       | 6-32                                                                                |     |     | 6-32                                                                                |    |
| Usage class                                            |                                  |                  | A                                                                                 |       | A                                                                                   |     |     | A                                                                                   |    |
| Nominal operating voltage Ue [V]                       |                                  |                  | 230/400                                                                           |       | 230/400                                                                             |     |     | 230                                                                                 |    |
| Insulating voltage Ui [V]                              |                                  |                  | 500                                                                               |       | 500                                                                                 |     |     | 500                                                                                 |    |
| Nominal frequency [Hz]                                 |                                  |                  | 50                                                                                |       | 50                                                                                  |     |     | 50                                                                                  |    |
| Number of poles                                        |                                  |                  | 1+N                                                                               | 2,3,4 | 1+N                                                                                 | 2   | 3,4 | 1+N, 2                                                                              |    |
| Breaking capacity                                      | CA IEC 61009 - EN 61009 [A]      |                  |                                                                                   |       |                                                                                     |     |     |                                                                                     |    |
|                                                        |                                  | Icn              | 4500                                                                              |       | 6000                                                                                |     |     | 10000                                                                               |    |
|                                                        |                                  | Ics              | 1 Icn                                                                             |       | 1 Icn                                                                               |     |     | 0.75 Icn                                                                            |    |
|                                                        | CA IEC 60947-2 - EN 60947-2 [kA] |                  |                                                                                   |       |                                                                                     |     |     |                                                                                     |    |
|                                                        |                                  | Icu              | 230                                                                               | 6     | 6                                                                                   | 7.5 | 7.5 | 10                                                                                  | 10 |
|                                                        |                                  |                  | 400                                                                               |       | 4.5                                                                                 |     | 6   | 6                                                                                   |    |
|                                                        |                                  | Ics              | 100% Icu                                                                          |       | 75% Icu                                                                             |     |     | 75% Icu                                                                             |    |
| Nominal residual tripping current                      |                                  | Type             |                                                                                   |       |                                                                                     |     |     |                                                                                     |    |
|                                                        | IΔn [mA]                         | AC               | 30                                                                                |       | 30                                                                                  |     |     | 30                                                                                  |    |
|                                                        |                                  |                  | 300                                                                               |       | 300                                                                                 |     |     | 300                                                                                 |    |
|                                                        | A                                |                  | 30                                                                                |       | 30                                                                                  |     |     | 30                                                                                  |    |
|                                                        |                                  |                  | 300                                                                               |       | 300                                                                                 |     |     | 300                                                                                 |    |
| Nominal residual current breaking and closing capacity |                                  | IΔm              | Icn circuit breaker                                                               |       | Icn circuit breaker                                                                 |     |     | 6000                                                                                |    |
| Test button operation voltage [V]                      |                                  |                  |                                                                                   |       |                                                                                     |     |     |                                                                                     |    |
|                                                        |                                  | 1P+N, 2P, 3P, 4P | 170÷440                                                                           |       | 170÷440                                                                             |     |     | 170÷440                                                                             |    |
| Connection                                             | cross-section                    | rigid            | ≤ 35                                                                              |       | ≤ 35                                                                                |     |     | ≤ 35                                                                                |    |
|                                                        | cable [mm²]                      | flexible         | ≤ 25                                                                              |       | ≤ 25                                                                                |     |     | ≤ 25                                                                                |    |
| Electrical life (number of O-C cycles)                 |                                  |                  | 10000                                                                             |       | 10000                                                                               |     |     | 10000                                                                               |    |
| Max. no. of accessories that can be used               |                                  |                  | 3                                                                                 |       | 3                                                                                   |     |     | 3                                                                                   |    |
| Sectioning displayed                                   |                                  |                  | yes                                                                               |       | yes                                                                                 |     |     | yes                                                                                 |    |
| Protection rating for terminals                        | (with terminal covers)           |                  | IP40                                                                              |       | IP40                                                                                |     |     | IP40                                                                                |    |
|                                                        | other parts                      |                  | IP40                                                                              |       | IP40                                                                                |     |     | IP40                                                                                |    |
| Tropicalization                                        |                                  |                  | 55°C - UR 95%                                                                     |       | 55°C - UR 95%                                                                       |     |     | 55°C - UR 95%                                                                       |    |
| Reference temperature [°C]                             |                                  |                  | 30                                                                                |       | 30                                                                                  |     |     | 30                                                                                  |    |
| Curve                                                  |                                  |                  | C                                                                                 |       | C                                                                                   |     |     | C                                                                                   |    |
| Nominal currents available in [A]                      |                                  |                  | 6                                                                                 |       | 6                                                                                   |     |     | 6                                                                                   |    |
|                                                        |                                  |                  | 10                                                                                |       | 10                                                                                  |     |     | 10                                                                                  |    |
|                                                        |                                  |                  | 13                                                                                |       | 13                                                                                  |     |     | 13                                                                                  |    |
|                                                        |                                  |                  | 16                                                                                |       | 16                                                                                  |     |     | 16                                                                                  |    |
|                                                        |                                  |                  | 20                                                                                |       | 20                                                                                  |     |     | 20                                                                                  |    |
|                                                        |                                  |                  | 25                                                                                |       | 25                                                                                  |     |     | 25                                                                                  |    |
|                                                        |                                  |                  | 32                                                                                |       | 32                                                                                  |     |     | 32                                                                                  |    |

90 RCD RANGE

# 90 RCD RANGE

MODULAR DEVICES FOR RESIDUAL CURRENT PROTECTION

**GEWISS**

## TECHNICAL CHARACTERISTICS

### TECHNICAL DATA

| TYPE                                                                  |                                               | BD                                                                                  |                            |                            |
|-----------------------------------------------------------------------|-----------------------------------------------|-------------------------------------------------------------------------------------|----------------------------|----------------------------|
|                                                                       |                                               |  |                            |                            |
| Reference Standard                                                    |                                               | EN 61009-1 Appendix G                                                               |                            |                            |
| Type                                                                  |                                               | AC                                                                                  | A                          | A [S]                      |
| Nominal operating voltage $U_e$ [V]                                   |                                               | 230/400                                                                             | 230/400                    | 230/400                    |
| Insulating voltage $U_i$ [V]                                          |                                               | 500                                                                                 | 500                        | 500                        |
| Nominal frequency [Hz]                                                |                                               | 50                                                                                  | 50                         | 50                         |
| Number of poles                                                       |                                               | 2    3,4                                                                            | 2,3,4                      | 2,3,4                      |
| Nominal residual tripping current [mA]                                |                                               | $I_n$                                                                               | $I_n$                      | $I_n$                      |
| $I_{\Delta n}$                                                        | 10                                            | • $\leq 25$                                                                         |                            |                            |
|                                                                       | 30                                            | • • $\leq 25, \leq 63$                                                              | • $\leq 25, \leq 63$       |                            |
|                                                                       | 100                                           |                                                                                     |                            |                            |
|                                                                       | 300                                           | • • $\leq 25, \leq 63$                                                              | • $\leq 25, \leq 63$       | • $\leq 25, \leq 63$       |
|                                                                       | 500                                           | • • $\leq 25, \leq 63$                                                              | • $\leq 25, \leq 63$       |                            |
|                                                                       | 1000                                          |                                                                                     |                            | • $\leq 25, \leq 63$       |
|                                                                       | Adjustable                                    |                                                                                     |                            |                            |
| Available adjustments                                                 |                                               |                                                                                     |                            |                            |
| $I_{\Delta n}$ [mA]                                                   |                                               |                                                                                     |                            |                            |
| $t$ [ms]                                                              |                                               |                                                                                     |                            |                            |
| Nominal residual current breaking and closing capacity $I_{\Delta m}$ |                                               | $I_{cn}$ associated device                                                          | $I_{cn}$ associated device | $I_{cn}$ associated device |
| Test-button operation voltage [V]                                     |                                               | 170÷440                                                                             | 170÷440                    | 170÷440                    |
| Connection                                                            | cross-section                                 | $\leq 35$                                                                           | $\leq 35$                  | $\leq 35$                  |
|                                                                       | cable [mm <sup>2</sup> ]    rigid    flexible | $\leq 25$                                                                           | $\leq 25$                  | $\leq 25$                  |
| Upline/downline power supply                                          |                                               | yes                                                                                 | yes                        | yes                        |
| Protection rating for terminals                                       | (with terminal covers)                        | IP40                                                                                | IP40                       | IP40                       |
|                                                                       | other parts                                   | IP40                                                                                | IP40                       | IP40                       |
| Tropicalization                                                       |                                               | 55°C - UR 95%                                                                       | 55°C - UR 95%              | 55°C - UR 95%              |

# 90 RCD RANGE

MODULAR DEVICES FOR RESIDUAL CURRENT PROTECTION

GEWISS

## TECHNICAL CHARACTERISTICS

| BDHP                                                                              |                       |                       | ADJUSTABLE BDHP                                                                    |
|-----------------------------------------------------------------------------------|-----------------------|-----------------------|------------------------------------------------------------------------------------|
|  |                       |                       |  |
| EN 61009-1 Appendix G                                                             |                       |                       | EN 60947-2 Appendix G                                                              |
| AC                                                                                | A                     | A [S]                 | A                                                                                  |
| 230/400                                                                           | 230/400               | 230/400               | 230/400                                                                            |
| 500                                                                               | 500                   | 500                   | 500                                                                                |
| 50                                                                                | 50                    | 50                    | 50                                                                                 |
| 2,3,4                                                                             | 2,3,4                 | 2,3,4                 | 4                                                                                  |
| In                                                                                | In                    | In                    | In                                                                                 |
| • ≤63, ≤125                                                                       | • ≤63, ≤125           |                       |                                                                                    |
| • ≤63, ≤125                                                                       | • ≤63, ≤125           |                       |                                                                                    |
| • ≤63, ≤125                                                                       | • ≤63, ≤125           | • ≤63, ≤125           |                                                                                    |
|                                                                                   |                       | • ≤63, ≤125           |                                                                                    |
|                                                                                   |                       |                       | • ≤63, ≤125                                                                        |
|                                                                                   |                       |                       |                                                                                    |
|                                                                                   |                       |                       | 300, 500, 1000, 3000                                                               |
|                                                                                   |                       |                       | 0, 60, 150                                                                         |
| Icn associated device                                                             | Icn associated device | Icn associated device | Icu associated device                                                              |
| 170÷440                                                                           | 170÷440               | 170÷440               | 170÷440                                                                            |
| ≤ 50                                                                              | ≤ 50                  | ≤ 50                  | ≤ 50                                                                               |
| terminals                                                                         | terminals             | terminals             | terminals                                                                          |
| yes                                                                               | yes                   | yes                   | yes                                                                                |
| IP40                                                                              | IP40                  | IP40                  | IP40                                                                               |
| IP40                                                                              | IP40                  | IP40                  | IP40                                                                               |
| 55°C - UR 95%                                                                     | 55°C - UR 95%         | 55°C - UR 95%         | 55°C - UR 95%                                                                      |

90 RCD RANGE

# 90 RCD RANGE

MODULAR DEVICES FOR RESIDUAL CURRENT PROTECTION

**GEWISS**

## TECHNICAL CHARACTERISTICS

### TECHNICAL DATA

| TYPE                                                               |               | SD                                                                                  |         |                |         |                |       |                |       |
|--------------------------------------------------------------------|---------------|-------------------------------------------------------------------------------------|---------|----------------|---------|----------------|-------|----------------|-------|
|                                                                    |               |  |         |                |         |                |       |                |       |
| Reference Standard                                                 |               | EN 61008-1                                                                          |         |                |         |                |       |                |       |
| Type                                                               |               | AC                                                                                  |         |                |         |                |       |                |       |
| Nominal current in [A]                                             |               | 25                                                                                  |         | 40             |         | 63             |       | 80             |       |
| Nominal operating voltage Ue [V]                                   | 2P            | 230                                                                                 |         | 230            |         | 230            |       | 230            |       |
|                                                                    | 4P            | 400                                                                                 |         | 400            |         | 400            |       | 400            |       |
| Insulating voltage Ui [V]                                          |               | 500                                                                                 |         | 500            |         | 500            |       | 500            |       |
| Nominal frequency [Hz]                                             |               | 50                                                                                  |         | 50             |         | 50             |       | 50             |       |
| Number of poles                                                    |               | 2      4                                                                            |         | 2      4       |         | 2      4       |       | 2      4       |       |
| Nominal residual current (no. of modules in brackets)              |               |                                                                                     |         |                |         |                |       |                |       |
| IΔn [mA] instantaneous                                             | 10            | • (2)                                                                               |         |                |         |                |       |                |       |
|                                                                    | 30            | • (2)                                                                               | • (3.4) | • (2)          | • (3.4) | • (2)          | • (4) | • (2)          | • (4) |
|                                                                    | 300           | • (2)                                                                               | • (3.4) | • (2)          | • (3.4) | • (2)          | • (4) | • (2)          | • (4) |
|                                                                    | 500           |                                                                                     |         | • (2)          | • (3)   | • (2)          | • (4) |                |       |
| Level of immunity (8/20 μs) [A]                                    |               | 250                                                                                 |         | 250            |         | 250            |       | 250            |       |
| Nominal residual current breaking and closing capacity I Δm [A]    |               | 630                                                                                 |         | 630            |         | 630            |       | 800            |       |
| Test-button operation voltage [V]                                  | 2P            | 100÷253                                                                             |         | 100÷253        |         | 100÷253        |       | 100÷253        |       |
|                                                                    | 4P            | 170÷440                                                                             |         | 170÷440        |         | 170÷440        |       | 170÷440        |       |
| Connection                                                         | cable section | ≤ 25                                                                                |         | ≤ 25           |         | ≤25 (2P)       |       | ≤25 (2P)       |       |
|                                                                    | [mm²]         | ≤35 (4P 4m)                                                                         |         | ≤35 (4P 4m)    |         | ≤35 (4P)       |       | ≤35 (4P)       |       |
| Upline/downline power supply                                       |               | yes                                                                                 |         | yes            |         | yes            |       | yes            |       |
| IP protection class                                                |               | IP20                                                                                |         | IP20           |         | IP20           |       | IP20           |       |
| Tropicalization                                                    |               | 55°C - UR 95%                                                                       |         | 55°C - UR 95%  |         | 55°C - UR 95%  |       | 55°C - UR 95%  |       |
| Operating temperature [°C]                                         |               | -25 +40                                                                             |         | -25 +40        |         | -25 +40        |       | -25 +40        |       |
| Co-ordination between miniature and residual circuit breakers [kA] |               | 2P      4P                                                                          |         | 2P      4P     |         | 2P      4P     |       | 2P      4P     |       |
|                                                                    | MTC45         | 4.5      4.5                                                                        |         |                |         |                |       |                |       |
|                                                                    | MTC60         | 6      6                                                                            |         |                |         |                |       |                |       |
|                                                                    | MT60          | 6      6                                                                            |         | 6      6       |         | 6      6       |       |                |       |
|                                                                    | MT100         | 10      10                                                                          |         | 10      10     |         | 10      10     |       |                |       |
|                                                                    | MT250         | 10      10                                                                          |         | 10      10     |         | 10      10     |       |                |       |
|                                                                    | MTHP160       | 10      10                                                                          |         | 10      10     |         | 10      10     |       | 10      10     |       |
|                                                                    | MTHP250       | 10      10                                                                          |         | 10      10     |         | 10      10     |       |                |       |
| Co-ordination between fuses and residual circuit breakers IΔ [A]   |               | 2P                                                                                  |         | 6000 (gL 63A)  |         | 6000 (gL 63A)  |       | 6000 (gL 80A)  |       |
|                                                                    | 4P 3 mod.     | 6000 (gL 63A)                                                                       |         | 6000 (gL 63A)  |         |                |       |                |       |
|                                                                    | 4P 4 mod.     | 10000 (gL 80A)                                                                      |         | 10000 (gL 80A) |         | 10000 (gL 80A) |       | 10000 (gL 80A) |       |

# 90 RCD RANGE

MODULAR DEVICES FOR RESIDUAL CURRENT PROTECTION

**GEWISS**

## TECHNICAL CHARACTERISTICS

SD



EN 61008-1

| AC              |                 | A              |                |                |                |                 |                 |
|-----------------|-----------------|----------------|----------------|----------------|----------------|-----------------|-----------------|
| 100             | 125             | 25             | 40             | 63             | 80             | 100             | 125             |
| 230             | 230             | 230            | 230            | 230            | 230            | 230             | 230             |
| 400             | 400             | 400            | 400            | 400            | 400            | 400             | 400             |
| 500             | 500             | 500            | 500            | 500            | 500            | 500             | 500             |
| 50              | 50              | 50             | 50             | 50             | 50             | 50              | 50              |
| 2 4             | 4               | 2 4            | 2 4            | 2 4            | 2 4            | 2 4             | 4               |
|                 |                 | • (2) • (3)    |                |                |                |                 |                 |
| • (2) • (4)     | • (4)           | • (2) • (3.4)  | • (2) • (3.4)  | • (2) • (4)    | • (2) • (4)    | • (2) • (4)     | • (4)           |
| • (2) • (4)     | • (4)           | • (2) • (3.4)  | • (2) • (3.4)  | • (2) • (4)    | • (2) • (4)    | • (2) • (4)     | • (4)           |
| • (4)           | • (4)           |                | • (2) • (3)    | • (2) • (4)    |                | • (4)           | • (4)           |
| 250             | 250             | 250            | 250            | 250            | 250            | 250             | 250             |
| 1000            | 1250            | 630            | 630            | 630            | 800            | 1000            | 1250            |
| 100÷253         |                 | 100÷253        | 100÷253        | 100÷253        | 100÷253        | 100÷253         |                 |
| 170÷440         | 220÷415         | 170÷440        | 170÷440        | 170÷440        | 170÷440        | 170÷440         | 220÷415         |
| ≤25 (2P)        |                 | ≤25            | ≤25            | ≤25 (2P)       | ≤25 (2P)       | ≤25 (2P)        |                 |
| ≤35 (4P)        | ≤50 (4P)        | ≤35 (4P 4m)    | ≤35 (4P 4m)    | ≤35 (4P)       | ≤35 (4P)       | ≤35 (4P)        | ≤50 (4P)        |
| yes             | yes             | yes            | yes            | yes            | yes            | yes             | yes             |
| IP20            | IP20            | IP20           | IP20           | IP20           | IP20           | IP20            | IP20            |
| 55°C - UR 95%   | 55°C - UR 95%   | 55°C - UR 95%  | 55°C - UR 95%  | 55°C - UR 95%  | 55°C - UR 95%  | 55°C - UR 95%   | 55°C - UR 95%   |
| -25 + 40        | -25 + 40        | -25 + 40       | -25 + 40       | -25 + 40       | -25 + 40       | -25 + 40        | -25 + 40        |
| 2P 4P           | 4P              | 2P 4P          | 2P 4P          | 2P 4P          | 2P 4P          | 2P 4P           | 4P              |
|                 |                 | 4.5 4.5        |                |                |                |                 |                 |
|                 |                 | 6 6            |                |                |                |                 |                 |
|                 |                 | 6 6            | 6 6            | 6 6            |                |                 |                 |
|                 |                 | 10 10          | 10 10          | 10 10          |                |                 |                 |
|                 |                 | 10 10          | 10 10          | 10 10          |                |                 |                 |
| 10 10           | 10              | 10 10          | 10 10          | 10 10          | 10 10          | 10 10           | 10              |
|                 |                 | 10 10          | 10 10          | 10 10          |                |                 |                 |
| 6000 (gL 100A)  |                 | 6000 (gL 63A)  | 6000 (gL 63A)  | 6000 (gL 63A)  | 6000 (gL 80A)  | 6000 (gL 100A)  |                 |
|                 |                 | 6000 (gL 63A)  | 6000 (gL 63A)  |                |                |                 |                 |
| 10000 (gL 100A) | 10000 (gL 125A) | 10000 (gL 80A) | 10000 (gL 80A) | 10000 (gL 80A) | 10000 (gL 80A) | 10000 (gL 100A) | 10000 (gL 125A) |

90 RCD RANGE

# 90 RCD RANGE

MODULAR DEVICES FOR RESIDUAL CURRENT PROTECTION

**GEWISS**

## TECHNICAL CHARACTERISTICS

### TECHNICAL DATA

| TYPE                                                                        |               | SD                                                                                  |                |                |                |       |       |       |       |
|-----------------------------------------------------------------------------|---------------|-------------------------------------------------------------------------------------|----------------|----------------|----------------|-------|-------|-------|-------|
|                                                                             |               |  |                |                |                |       |       |       |       |
| Reference Standard                                                          |               | EN 61008-1                                                                          |                |                |                |       |       |       |       |
| Type                                                                        |               | A [IR]                                                                              |                |                |                |       |       |       |       |
| Nominal current in [A]                                                      |               | 25                                                                                  | 40             | 63             | 100            |       |       |       |       |
| Nominal operating voltage Ue [V]                                            | 2P            | 230                                                                                 | 230            | 230            | 230            |       |       |       |       |
|                                                                             | 4P            | 400                                                                                 | 400            | 400            | 400            |       |       |       |       |
| Insulating voltage Ui [V]                                                   |               | 500                                                                                 | 500            | 500            | 500            |       |       |       |       |
| Nominal frequency [Hz]                                                      |               | 50                                                                                  | 50             | 50             | 50             |       |       |       |       |
| Number of poles                                                             |               | 2                                                                                   | 4              | 2              | 4              | 2     | 4     | 2     | 4     |
| Nominal residual current (no. of modules in brackets)                       |               |                                                                                     |                |                |                |       |       |       |       |
| Immunised [IR]                                                              | 30            | • (2)                                                                               | • (4)          | • (2)          | • (4)          | • (2) | • (4) | • (2) | • (4) |
|                                                                             | 300           |                                                                                     | • (4)          |                | • (4)          |       | • (4) |       | • (4) |
|                                                                             | selective [S] |                                                                                     |                |                |                |       |       |       |       |
|                                                                             | 300           |                                                                                     |                |                |                |       |       |       |       |
|                                                                             | 1000          |                                                                                     |                |                |                |       |       |       |       |
| Level of immunity (8/20 µs)                                                 |               | 3000A                                                                               | 3000A          | 3000A          | 3000A          |       |       |       |       |
| Nominal residual current breaking and closing capacity I <sub>Δn</sub> [A]  |               | 630                                                                                 | 630            | 630            | 1000           |       |       |       |       |
| Test-button operation voltage [V]                                           | 2P            | 100÷253                                                                             | 100÷253        | 100÷253        | 100÷253        |       |       |       |       |
|                                                                             | 4P            | 170÷440                                                                             | 170÷440        | 170÷440        | 170÷440        |       |       |       |       |
| Connection                                                                  | cable section | ≤25 (2P)                                                                            | ≤25 (2P)       | ≤25 (2P)       | ≤25 (2P)       |       |       |       |       |
|                                                                             | [mm²]         | ≤35 (4P)                                                                            | ≤35 (4P)       | ≤35 (4P)       | ≤35 (4P)       |       |       |       |       |
| Upline/downline power supply                                                |               | yes                                                                                 | yes            | yes            | yes            |       |       |       |       |
| IP protection class                                                         |               | IP20                                                                                | IP20           | IP20           | IP20           |       |       |       |       |
| Tropicalization                                                             |               | 55°C - UR 95%                                                                       | 55°C - UR 95%  | 55°C - UR 95%  | 55°C - UR 95%  |       |       |       |       |
| Operating temperature [°C]                                                  |               | -25 +40                                                                             | -25 +40        | -25 +40        | -25 +40        |       |       |       |       |
| Co-ordination between miniature and residual circuit breakers               |               | 2P                                                                                  | 4P             | 2P             | 4P             | 2P    | 4P    | 2P    | 4P    |
| [kA]                                                                        | MTC45         | 4.5                                                                                 | 4.5            |                |                |       |       |       |       |
|                                                                             | MTC60         | 6                                                                                   | 6              |                |                |       |       |       |       |
|                                                                             | MT60          | 6                                                                                   | 6              | 6              | 6              | 6     | 6     |       |       |
|                                                                             | MT100         | 10                                                                                  | 10             | 10             | 10             | 10    | 10    |       |       |
|                                                                             | MT250         | 10                                                                                  | 10             | 10             | 10             | 10    | 10    |       |       |
|                                                                             | MTHP160       | 10                                                                                  | 10             | 10             | 10             | 10    | 10    | 10    | 10    |
|                                                                             | MTHP250       | 10                                                                                  | 10             | 10             | 10             | 10    | 10    |       |       |
| Coordination between fuses and residual circuit breakers I <sub>Δ</sub> [A] |               | 2P                                                                                  | 4P             | 2P             | 4P             | 2P    | 4P    | 2P    | 4P    |
|                                                                             |               | 6000 (gL 63A)                                                                       | 6000 (gL 63A)  | 6000 (gL 63A)  | 6000 (gL 63A)  |       |       |       |       |
|                                                                             |               | 10000 (gL 80A)                                                                      | 10000 (gL 80A) | 10000 (gL 80A) | 10000 (gL 80A) |       |       |       |       |

# 90 RCD RANGE

MODULAR DEVICES FOR RESIDUAL CURRENT PROTECTION

GEWISS

## TECHNICAL CHARACTERISTICS

SD



### EN 61008-1

A [S]

|                |                |                      |                 |
|----------------|----------------|----------------------|-----------------|
| 40             | 63             | 80                   | 100             |
| 230            | 230            | 230                  | 230             |
| 400            | 400            | 400                  | 400             |
| 500            | 500            | 500                  | 500             |
| 50             | 50             | 50                   | 50              |
| 2      4       | 2      4       | 2      4             | 2      4        |
|                |                |                      |                 |
|                |                |                      |                 |
|                |                |                      |                 |
| • (2)    • (4) | • (2)    • (4) | • (2)    • (4)       | • (2)    • (4)  |
|                |                |                      | • (4)           |
| 3000A          | 3000A          | 3000A                | 3000A           |
| 630            | 630            | 1000 (2P) - 800 (4P) | 1000            |
| 100÷253        | 100÷253        | 100÷253              | 100÷253         |
| 170÷440        | 170÷440        | 170÷440              | 170÷440         |
| ≤25 (2P)       | ≤25 (2P)       | ≤25 (2P)             | ≤25 (2P)        |
| ≤35 (4P)       | ≤35 (4P)       | ≤35 (4P)             | ≤35 (4P)        |
| yes            | yes            | yes                  | yes             |
| IP20           | IP20           | IP20                 | IP20            |
| 55°C - UR 95%  | 55°C - UR 95%  | 55°C - UR 95%        | 55°C - UR 95%   |
| -25 +40        | -25 +40        | -25 +40              | -25 +40         |
| 2P      4P     | 2P      4P     | 2P      4P           | 2P      4P      |
|                |                |                      |                 |
|                |                |                      |                 |
| 6      6       | 6      6       |                      |                 |
| 10     10      | 10     10      |                      |                 |
| 10     10      | 10     10      |                      |                 |
| 10     10      | 10     10      | 10     10            | 10     10       |
| 10     10      | 10     10      |                      |                 |
| 6000 (gL 63A)  | 6000 (gL 80A)  | 6000 (gL 80A)        | 6000 (gL 100A)  |
| 10000 (gL 80A) | 10000 (gL 80A) | 10000 (gL 80A)       | 10000 (gL 100A) |

## DISSIPATED POWERS

## MDC - 45 - 60 - 100 AUTOMATIC RCDs

## Technical characteristics

For the overcurrent protection of the circuits and the residual current protection of devices and users, there are the compact combined MBC/RCDs MDC 45, MDC 60 e MDC 100.

The MDC one-piece miniature circuit breakers with residual current release use the thermo-magnetic part with the same characteristics as for the MTC circuit breakers. The residual current release, pre-wired in the same modular enclosure, is available in types AC and e A with nominal residual current of 30 and 300 mA.

## Selection and installation tips

One of the most common problems when installing residual circuit breakers is untimely tripping caused by dispersion towards earth which is not due to faults.

The most frequent causes are:

- users with electronic devices such as computers, Hi-Fi systems, household appliances in general, which are fitted with anti-interference capacity filters.
- capacity effects of the electrical lines of the installation, which, especially if widely extended, have a high capacity towards earth.

In these cases, due to capacity, a differential current towards earth is generated such as to trip the circuit breaker. The intensity of this current increases above all when there are surges of voltage in the mains due to atmospheric phenomena or transitory interference caused by the users. Fluorescent lamps equipped with control gear, when switching off, are typical generators of such interference which can be suppressed by introducing small capacities in parallel. All circuit breakers are equipped with anti-interference devices.

With electronic equipment which can generate unidirectional fault currents, it is essential to install type A residual current devices.

## MDC temperature derating

| In (A) | Temperature |      |      |      |      |      |
|--------|-------------|------|------|------|------|------|
|        | 10°C        | 20°C | 30°C | 40°C | 50°C | 60°C |
| 6      | 7.2         | 6.6  | 6    | 5.7  | 5.3  | 5    |
| 10     | 11.8        | 10.8 | 10   | 9.6  | 9.1  | 8.6  |
| 13     | 14.8        | 14   | 13   | 12.2 | 11.2 | 10.3 |
| 16     | 18.2        | 17.2 | 16   | 15.2 | 14.3 | 13.4 |
| 20     | 22.8        | 21.4 | 20   | 19.5 | 18.9 | 18.4 |
| 25     | 28.5        | 26.8 | 25   | 24   | 23   | 22   |
| 32     | 36.5        | 34.2 | 32   | 30.8 | 29.5 | 28.8 |

## MDC dissipated power per pole

| In (A)  | 6    |      | 10   |      | 13   |      | 16   |      | 20   |      | 25   |      | 32   |      |
|---------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
|         | Pole | N    | Pole | N    | Pole | N    | Pole | N    | Pole | N    | Pole | N    | Pole | N    |
| R (m Ω) | 29.4 | 2.6  | 20.6 | 2.6  | 14.5 | 2.6  | 8.9  | 2.6  | 6.8  | 2.6  | 4.6  | 2.6  | 3.6  | 2.6  |
| P (W)   | 1.06 | 0.09 | 2.06 | 0.26 | 2.45 | 0.44 | 2.28 | 0.67 | 2.72 | 1.04 | 2.88 | 1.63 | 3.67 | 2.66 |

## MODULAR BD - BDHP CIRCUIT BREAKERS

Residual current release for MT (BD) and MTHP (BDHP) miniature circuit breakers that the installer can connect only once (in compliance with the CEI EN 61009 Standard, Appendix G). Type AC, type A, type A selective and adjustable modules are available.

## Dissipated power per pole (W) BD BDHP

|                                      |       | Nominal current of the associated MT/MTHP [A] |       |      |      |      |      |      |      |      |      |      |      |      |      |     |     |     |
|--------------------------------------|-------|-----------------------------------------------|-------|------|------|------|------|------|------|------|------|------|------|------|------|-----|-----|-----|
|                                      |       | 1                                             | 2     | 3    | 4    | 6    | 10   | 13   | 16   | 20   | 25   | 32   | 40   | 50   | 63   | 80  | 100 | 125 |
| BD modular residual current device   | 2P    | 0.01                                          | 0.04  | 0.01 | 0.02 | 0.04 | 0.11 | 0.2  | 0.29 | 0.45 | 0.70 | 0.45 | 0.70 | 1.10 | 1.75 | -   | -   | -   |
|                                      | 3P-4P | 0.002                                         | 0.008 | 0.02 | 0.03 | 0.07 | 0.21 | 0.37 | 0.53 | 0.83 | 1.30 | 0.65 | 1.00 | 1.60 | 2.50 | -   | -   | -   |
| BDHP modular residual current device | 3P    | -                                             | -     | -    | -    | -    | -    | -    | -    | 0.2  | 0.3  | 0.5  | 0.8  | 1.25 | 2    | 1.4 | 2.2 | 3.4 |

## SD - RESIDUAL CURRENT CIRCUIT BREAKERS

### SD residual current circuit breakers

Two-pole and four-pole one-piece, freely detachable residual current devices without current surge release.

AC class instantaneous residual class circuit breakers are available (for sine-wave alternating differential current only), whereas class A differential circuit breakers, suitable for direct residual differential current, are available both in an instantaneous and a selective version.

|       |             | DISSIPATED POWER PER DEVICE [W] - SD |     |     |      |     |     |
|-------|-------------|--------------------------------------|-----|-----|------|-----|-----|
|       |             | NOMINAL CURRENT IN [A]               |     |     |      |     |     |
| Poles | No. modules | 25                                   | 40  | 63  | 80   | 100 | 125 |
| 2     | 2           | 2.2                                  | 5.4 | 6.2 | 10.4 | 11  | -   |
| 4     | 3           | 6                                    | 6   | -   | -    | -   | -   |
|       | 4           | 3.5                                  | 6   | 12  | 16   | 18  | 25  |

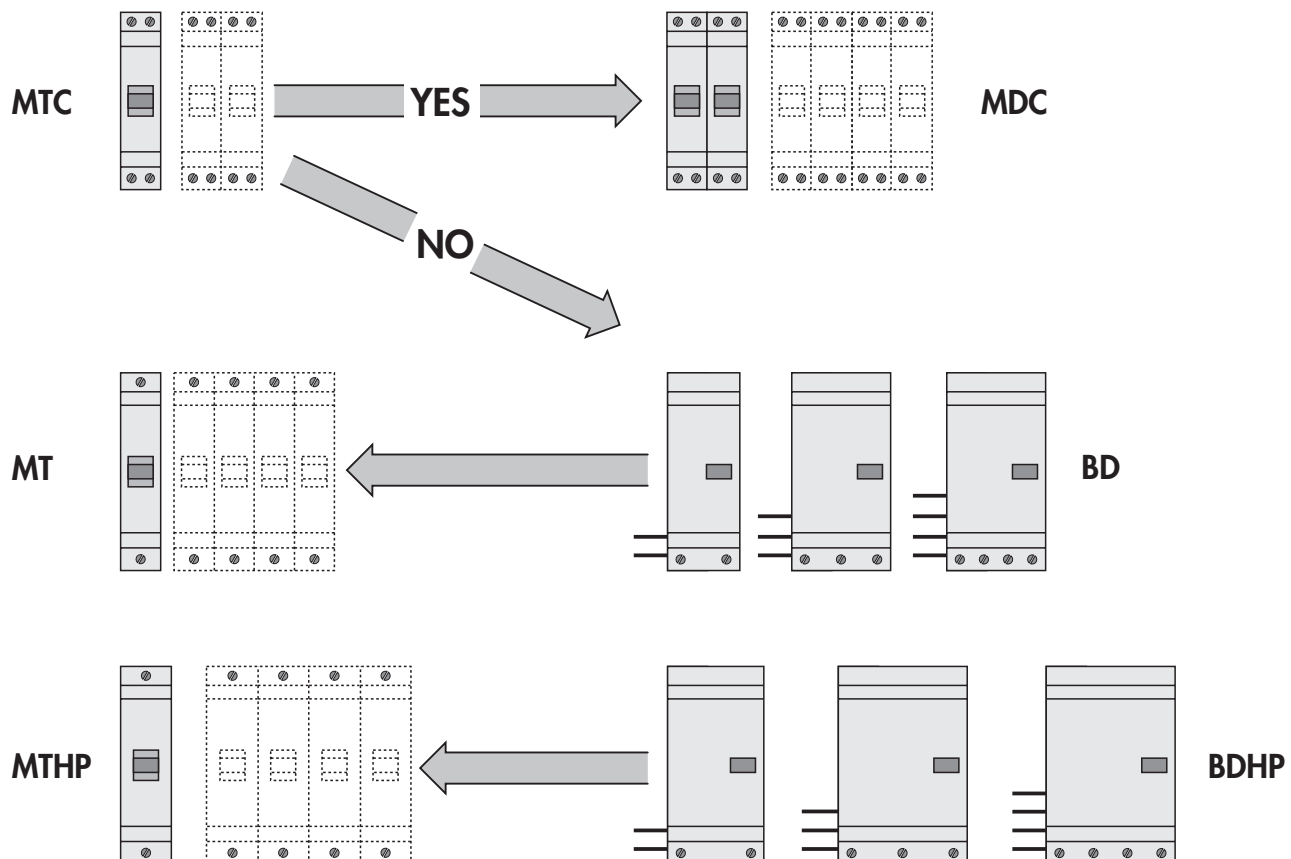
### MODULAR RESIDUAL CURRENT DEVICE COMPOSITION RULES

In order to get a residual current circuit breaker from a miniature circuit breaker, you have to bear in mind a few rules:

- 1 - an associable residual current device for MTC circuit breaker does not exist. There is the MDc compact one-piece residual current circuit breaker.
- 2 - the BD modular residual current devices are only associated with the MT circuit breakers.
- 3 - the BDHP modular residual current devices are only associated with the MTHP circuit breakers.

#### MCBs

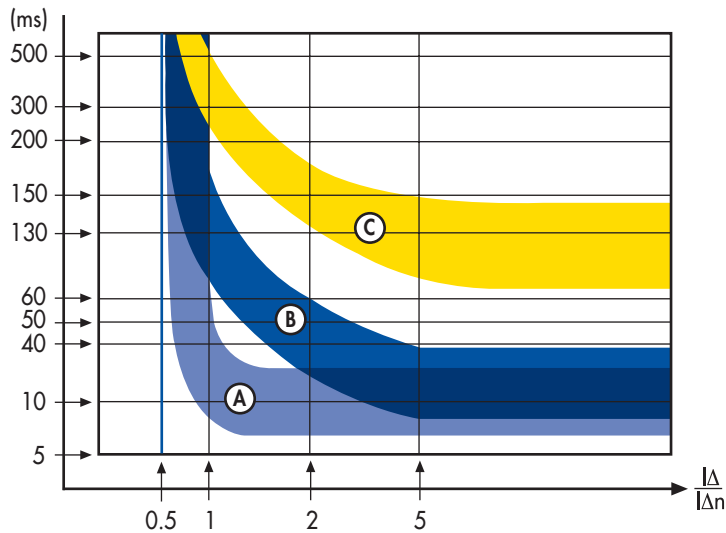
#### RESIDUAL CURRENT DEVICES



## CHARACTERISTIC CURVES

### RESIDUAL CURRENT TRIPPING CHARACTERISTICS

MDC - BD - BDHP - SD



- A** = instantaneous residual current circuit breakers
- B** = immunised residual current circuit breakers
- C** = selective residual current circuit breakers

## NEW SD RESIDUAL CURRENT CIRCUIT BREAKERS WITH NO THERMO-MAGNETIC RELEASES

| CANCELLED CODES AND RELEVANT SUBSTITUTION CODES |                 |                    |                                              |                               |
|-------------------------------------------------|-----------------|--------------------|----------------------------------------------|-------------------------------|
| TYPE                                            | CANCELLED CODES | SUBSTITUTION CODES | DESCRIPTION                                  | Note                          |
| AC                                              | GW 94 601       | GW 94 616          | RES. CURR. C.B.2P. 25A INSTANT. AC/0.01 2M.  | Alternative code is 25A       |
|                                                 | GW 94 611       | GW 94 616          | RES. CURR. C.B.2P. 25A INSTANT. AC/0.01 2M.  |                               |
|                                                 | GW 94 612       | GW 94 617          | RES. CURR. C.B.2P. 25A INSTANT. AC/0.03 2M.  |                               |
|                                                 | GW 94 613       | GW 94 619          | RES. CURR. C.B.2P. 25A INSTANT. AC/0.3 2M.   | Cancelled code was 3 modules  |
|                                                 | GW 94 622       | GW 94 627          | RES. CURR. C.B.2P. 40A INSTANT. AC/0.03 2M.  |                               |
|                                                 | GW 94 623       | GW 94 629          | RES. CURR. C.B.2P. 40A INSTANT. AC/0.3 2M.   |                               |
|                                                 | GW 94 624       | GW 94 630          | RES. CURR. C.B.2P. 40A INSTANT. AC/0.5 2M.   |                               |
|                                                 | GW 94 632       | GW 94 790          | RES. CURR. C.B.2P. 63A INSTANT. AC/0.03 2M.  |                               |
|                                                 | GW 94 633       | GW 94 792          | RES. CURR. C.B.2P. 63A INSTANT. AC/0.3 2M.   |                               |
|                                                 | GW 94 642       | GW 94 793          | RES. CURR. C.B.2P. 80A INSTANT. AC/0.03 2M.  |                               |
|                                                 | GW 94 643       | GW 94 795          | RES. CURR. C.B.2P. 80A INSTANT. AC/0.3 2M.   |                               |
|                                                 | GW 94 652       | GW 94 656          | RES. CURR. C.B.2P. 100A INSTANT. AC/0.03 2M. |                               |
|                                                 | GW 94 653       | GW 94 658          | RES. CURR. C.B.2P. 100A INSTANT. AC/0.3 2M.  |                               |
|                                                 | GW 94 672       | GW 94 662          | RES. CURR. C.B.4P. 25A INSTANT. AC/0.03 3M.  | Alternative code is 40A       |
|                                                 | GW 94 673       | GW 94 664          | RES. CURR. C.B.4P. 25A INSTANT. AC/0.3 3M.   |                               |
|                                                 | GW 94 694       | GW 94 670          | RES. CURR. C.B.4P. 40A INSTANT. AC/0.5 4M.   |                               |
|                                                 | GW 94 682       | GW 94 667          | RES. CURR. C.B.4P. 40A INSTANT. AC/0.03 3M.  | Alternative code is 3 modules |
|                                                 | GW 94 683       | GW 94 669          | RES. CURR. C.B.4P. 40A INSTANT. AC/0.3 3M.   |                               |
|                                                 | GW 94 684       | GW 94 670          | RES. CURR. C.B.4P. 40A INSTANT. AC/0.5 3M.   |                               |
|                                                 | GW 94 692       | GW 94 697          | RES. CURR. C.B.4P. 25A INSTANT. AC/0.03 4M.  | Alternative code is 100A      |
|                                                 | GW 94 693       | GW 94 699          | RES. CURR. C.B.4P. 25A INSTANT. AC/0.3 4M.   |                               |
|                                                 | GW 94 702       | GW 94 707          | RES. CURR. C.B.4P. 40A INSTANT. AC/0.03 4M.  |                               |
|                                                 | GW 94 703       | GW 94 709          | RES. CURR. C.B.4P. 40A INSTANT. AC/0.3 4M.   | Alternative code is 100A      |
|                                                 | GW 94 704       | GW 94 670          | RES. CURR. C.B.4P. 40A INSTANT. AC/0.5 3M.   |                               |
|                                                 | GW 94 712       | GW 94 757          | RES. CURR. C.B.4P. 63A INSTANT. AC/0.03 4M.  |                               |
|                                                 | GW 94 713       | GW 94 759          | RES. CURR. C.B.4P. 63A INSTANT. AC/0.3 4M.   | Alternative code is 100A      |
|                                                 | GW 94 714       | GW 94 760          | RES. CURR. C.B.4P. 63A INSTANT. AC/0.5 4M.   |                               |
|                                                 | GW 94 722       | GW 94 761          | RES. CURR. C.B.4P. 80A INSTANT. AC/0.03 4M.  |                               |
|                                                 | GW 94 723       | GW 94 766          | RES. CURR. C.B.4P. 80A INSTANT. AC/0.3 4M.   | Alternative code is 100A      |
|                                                 | GW 94 724       | GW 94 780          | RES. CURR. C.B.4P. 100A INSTANT. AC/0.5 4M.  |                               |
|                                                 | GW 94 732       | GW 94 777          | RES. CURR. C.B.4P. 100A INSTANT. AC/0.03 4M. |                               |
|                                                 | GW 94 733       | GW 94 779          | RES. CURR. C.B.4P. 100A INSTANT. AC/0.3 4M.  | Alternative code is 100A      |
|                                                 | GW 94 734       | GW 94 780          | RES. CURR. C.B.4P. 100A INSTANT. AC/0.5 4M.  |                               |
|                                                 | GW 94 801       | GW 94 816          | RES. CURR. C.B.2P. 25A INSTANT. A/0.01 2M.   | Alternative code is 25A       |
| A                                               | GW 94 811       | GW 94 816          | RES. CURR. C.B.2P. 25A INSTANT. A/0.01 2M.   |                               |
|                                                 | GW 94 812       | GW 94 817          | RES. CURR. C.B.2P. 25A INSTANT. A/0.03 2M.   |                               |
|                                                 | GW 94 813       | GW 94 819          | RES. CURR. C.B.2P. 25A INSTANT. A/0.3 2M.    | Cancelled code was 3 modules  |
|                                                 | GW 94 822       | GW 94 827          | RES. CURR. C.B.2P. 40A INSTANT. A/0.03 2M.   |                               |
|                                                 | GW 94 823       | GW 94 829          | RES. CURR. C.B.2P. 40A INSTANT. A/0.3 2M.    |                               |
|                                                 | GW 94 832       | GW 94 837          | RES. CURR. C.B.2P. 63A INSTANT. A/0.03 2M.   |                               |
|                                                 | GW 94 833       | GW 94 839          | RES. CURR. C.B.2P. 63A INSTANT. A/0.3 2M.    |                               |
|                                                 | GW 94 842       | GW 94 847          | RES. CURR. C.B.2P. 80A INSTANT. A/0.03 2M.   |                               |
|                                                 | GW 94 843       | GW 94 849          | RES. CURR. C.B.2P. 80A INSTANT. A/0.3 2M.    |                               |
|                                                 | GW 94 852       | GW 94 856          | RES. CURR. C.B.2P. 100A INSTANT. A/0.03 2M.  |                               |
|                                                 | GW 94 853       | GW 94 858          | RES. CURR. C.B.2P. 100A INSTANT. A/0.3 2M.   |                               |
|                                                 | GW 94 861       | GW 94 866          | RES. CURR. C.B.4P. 25A INSTANT. A/0.01 3M.   | Alternative code is 25A       |
|                                                 | GW 94 872       | GW 94 867          | RES. CURR. C.B.4P. 25A INSTANT. A/0.03 3M.   |                               |
|                                                 | GW 94 873       | GW 94 869          | RES. CURR. C.B.4P. 25A INSTANT. A/0.3 3M.    |                               |
|                                                 | GW 94 882       | GW 94 897          | RES. CURR. C.B.4P. 40A INSTANT. A/0.03 3M.   | Alternative code is 25A       |
|                                                 | GW 94 883       | GW 94 899          | RES. CURR. C.B.4P. 40A INSTANT. A/0.3 3M.    |                               |
|                                                 | GW 94 892       | GW 94 927          | RES. CURR. C.B.4P. 40A INSTANT. A/0.03 4M.   |                               |
|                                                 | GW 94 893       | GW 94 929          | RES. CURR. C.B.4P. 40A INSTANT. A/0.3 4M.    | Alternative code is 25A       |
|                                                 | GW 94 902       | GW 94 937          | RES. CURR. C.B.4P. 63A INSTANT. A/0.03 4M.   |                               |
|                                                 | GW 94 903       | GW 94 939          | RES. CURR. C.B.4P. 63A INSTANT. A/0.3 4M.    |                               |
|                                                 | GW 94 912       | GW 94 947          | RES. CURR. C.B.4P. 80A INSTANT. A/0.03 4M.   | Alternative code is 25A       |
|                                                 | GW 94 913       | GW 94 949          | RES. CURR. C.B.4P. 80A INSTANT. A/0.3 4M.    |                               |
|                                                 | GW 94 916       | GW 94 957          | RES. CURR. C.B.4P. 100A INSTANT. A/0.03 4M.  |                               |
|                                                 | GW 94 917       | GW 94 959          | RES. CURR. C.B.4P. 100A INSTANT. A/0.3 4M.   | Cancelled code was 3 modules  |
| A [S]                                           | GW 94 923       | GW 94 924          | RES. CURR. C.B.2P. 40A SELEC. A/0.3 2M.      |                               |
|                                                 | GW 94 933       | GW 94 934          | RES. CURR. C.B.2P. 63A SELEC. A/0.3 2M.      |                               |
|                                                 | GW 94 943       | GW 94 944          | RES. CURR. C.B.2P. 80A SELEC. A/0.3 2M.      |                               |
|                                                 | GW 94 953       | GW 94 954          | RES. CURR. C.B.2P. 100A SELEC. A/0.3 2M.     |                               |
|                                                 | GW 94 963       | GW 94 966          | RES. CURR. C.B.4P. 40A SELEC. A/0.3 4M.      |                               |
|                                                 | GW 94 973       | GW 94 976          | RES. CURR. C.B.4P. 63A SELEC. A/0.3 4M.      |                               |
|                                                 | GW 94 983       | GW 94 986          | RES. CURR. C.B.4P. 80A SELEC. A/0.3 4M.      |                               |
|                                                 | GW 94 993       | GW 94 996          | RES. CURR. C.B.4P. 100A SELEC. A/0.3 4M.     |                               |

# 90 RCD RANGE

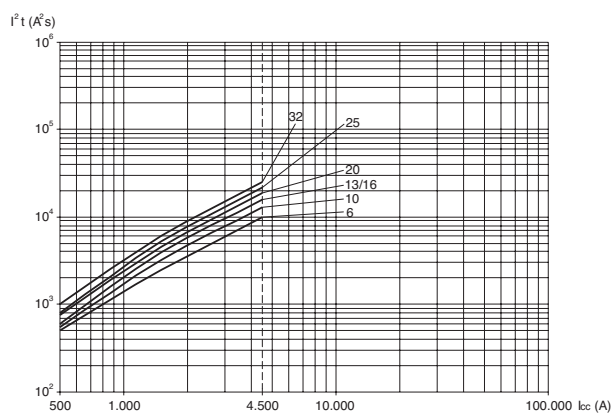
MODULAR DEVICES FOR RESIDUAL CURRENT PROTECTION

**GEWISS**

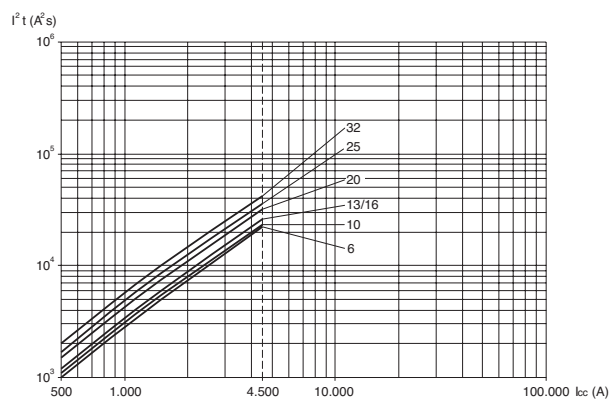
## TECHNICAL CHARACTERISTICS

### MDC SPECIFIC FEEDTHROUGH ENERGY CURVES

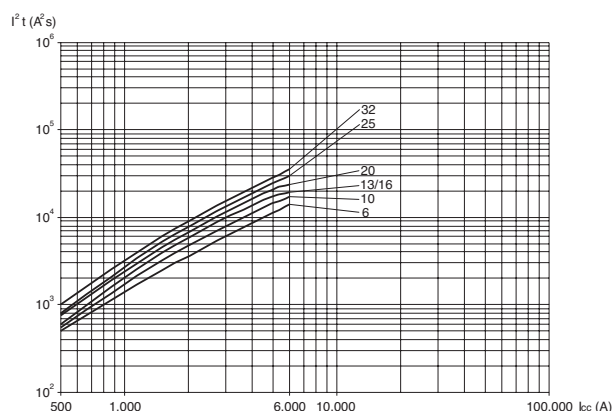
#### MDC 45 - 1P+N, 2P - 230V VERSIONS



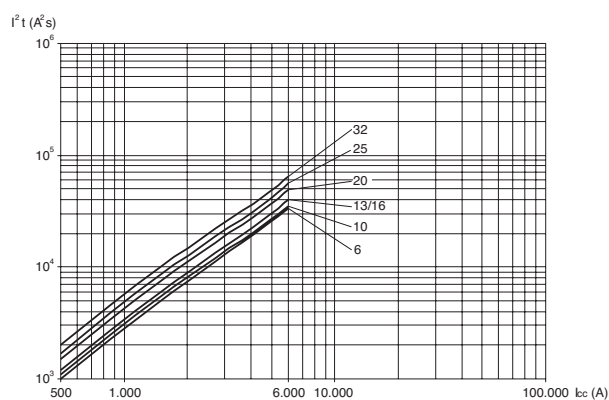
#### MDC 45 - 1P, 3P, 4P - 230/400V and 2P - 400V VERSIONS



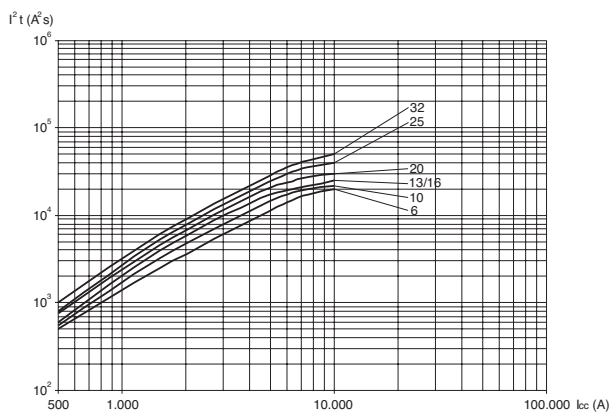
#### MDC 60 1P+N, 2P - 230V VERSIONS



#### MDC 60 1P, 3P, 4P - 230/400V and 2P - 400V VERSIONS

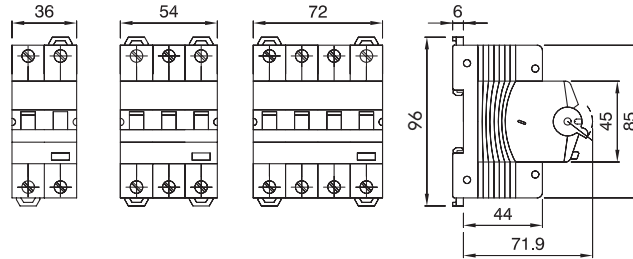


#### MDC 100 - 1P+N, 2P - 230V VERSIONS

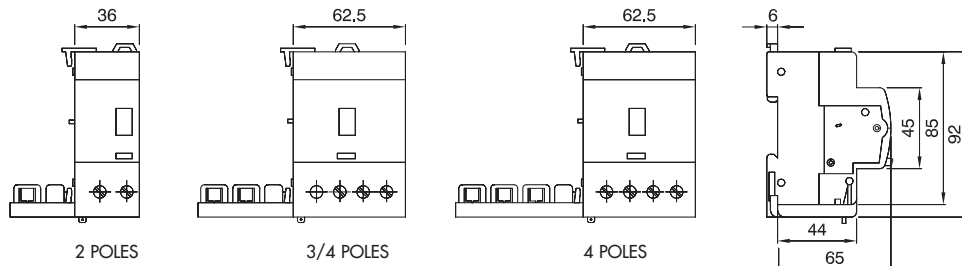


## DIMENSION TABLES

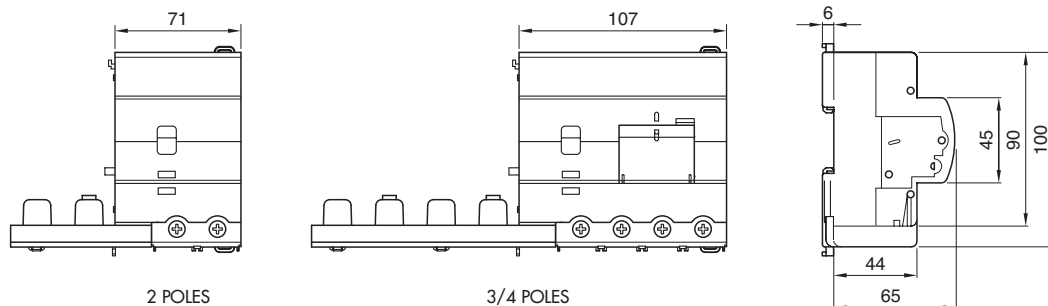
### MDC 45 - MDC 60 - MDC 100 RESIDUAL CURRENT CIRCUIT BREAKERS



### BD MODULAR RESIDUAL CURRENT DEVICES



### BDHP MODULAR RESIDUAL CURRENT DEVICES



### SD - RESIDUAL CURRENT CIRCUIT BREAKERS

