

# WiNtrip 2

IEC60947-2

Protects from  
overload & short-circuit



# WiNtrip 2

## Miniature Circuit Breaker



As power distribution needs play a pivotal role in all the significant sectors namely Commercial, Industrial and Residential, improved Breaker performance through better electrical safety, higher operational endurance, continued service and reduced cost have become of paramount importance. C&S WiNtrip2 MCBs have been engineered to constantly fulfill the above requirements. With these features C&S is setting new standards for user friendly and superlative electrical circuit protection.

The C&S WiNtrip2 MCB is a high performing thermal magnetic current limiting device with the ability to disconnect short circuits up to 10kA. The range is available in tripping characteristics types B and C curve for 1P, 1P+N, 2P, 3P, 3P+N & 4P configurations in 0.5 - 63A current ratings.

All metal components for operating mechanism of WiNtrip2 circuit breaker are specially treated for high self lubrication leading to repeat accuracy during service life. The MCBs conform to Standards: IEC 60947-2 and stand guaranteed for best quality for optimum performance.

Also includes

- Auxiliary Contacts & Shunt Trip
- RCCB and
- Distribution Boards



CB Certificate No. DK 50639-UL - IEC60947-2

## Technical Data

### MCB-AC

| Specifications                        | WiNtrip2 MCB                 |           | WiNtrip2 Isolator            |
|---------------------------------------|------------------------------|-----------|------------------------------|
| Type                                  | 'B'                          | 'C'       |                              |
| Standard Conformity                   | IEC60947-2                   |           | IEC60947-3                   |
| Rated Current (In)                    | 6A-63A                       | 0.5A-63A  | 25A-100A                     |
| Rated Voltage AC (Ue)                 | 240/415V                     |           | 240/415V                     |
| Rated Voltage DC (Ue)                 | 60V                          |           | 60V                          |
| Utilization Category                  | A                            |           | AC22A                        |
| Rated Frequency Hz                    | 50/60Hz                      |           | 50/60Hz                      |
| No. of Poles (Execution)              | 1P, 1P+N, 2P, 3P, 3P+N & 4P  |           | 1P, 2P, 3P & 4P              |
| Short time with stand current (Icw)   | -                            |           | 12xIn-1 Sec.                 |
| Short time making current (Icm)       | -                            |           | 12xIn                        |
| Rated Short Circuit Breaking Capacity | 10kA                         |           | -                            |
| Rated Insulation Voltage (Ui)         | 500V                         |           | 660V                         |
| Magnetic Release Setting              | 4In ± 20%                    | 8In ± 20% | -                            |
| Type of Release                       | Thermo Magnetic              |           | -                            |
| Rated Impulse Voltage (Uimp)          | 6kV                          |           | 6kV                          |
| Electrical/Mechanical Life ≤32A       | 30,000                       |           | 30,000                       |
| >32A                                  | 10,000                       |           | 10,000                       |
| Energy Limiting Class                 | ELC 3                        |           | -                            |
| Mounting                              | Clip on Din rail (35x7.5 mm) |           | Clip on Din rail (35x7.5 mm) |
| Line Terminal Capacity                | 35 mm <sup>2</sup>           |           | 35 mm <sup>2</sup>           |
| Load Terminal Capacity                | 35 mm <sup>2</sup>           |           | 35 mm <sup>2</sup>           |
| Degree of Protection                  | IP 20                        |           | IP 20                        |
| Circuit Breaker for use in IT Systems | Yes                          |           | -                            |
| Resistance to Shock                   | 40mm free fall               |           | 40mm free fall               |
| Ambient working temperature           | -25°C to 70°C                |           | -25°C to 70°C                |
| Calibration temperature               | 30°C                         |           | 30°C                         |
| Installation Position                 | Vertical/Horizontal          |           | Vertical/Horizontal          |
| Bi-connect terminal                   | Both side                    |           | Both side                    |
| Pollution degree                      | 2                            |           | 2                            |

## Miniature Circuit Breaker



| Rating (A)             | 'B' Curve  | 'C' Curve   |
|------------------------|------------|-------------|
|                        | Reference  | Reference   |
| <b>1 Pole</b>          |            |             |
| 0.5                    | -          | CSMBS1K0.5  |
| 01                     | -          | CSMBS1K1    |
| 02                     | -          | CSMBS1K2    |
| 03                     | -          | CSMBS1K3    |
| 04                     | -          | CSMBS1K4    |
| 05                     | -          | CSMBS1K5    |
| 06                     | CSMBS1B6   | CSMBS1K6    |
| 10                     | CSMBS1B10  | CSMBS1K10   |
| 16                     | CSMBS1B16  | CSMBS1K16   |
| 20                     | CSMBS1B20  | CSMBS1K20   |
| 25                     | CSMBS1B25  | CSMBS1K25   |
| 32                     | CSMBS1B32  | CSMBS1K32   |
| 40                     | CSMBS1B40  | CSMBS1K40   |
| 50                     | CSMBS1B50  | CSMBS1K50   |
| 63                     | CSMBS1B63  | CSMBS1K63   |
| <b>1Pole + Neutral</b> |            |             |
| 0.5                    | -          | CSMBS1K0.5N |
| 01                     | -          | CSMBS1K1N   |
| 02                     | -          | CSMBS1K2N   |
| 03                     | -          | CSMBS1K3N   |
| 04                     | -          | CSMBS1K4N   |
| 05                     | -          | CSMBS1K5N   |
| 06                     | CSMBS1B6N  | CSMBS1K6N   |
| 10                     | CSMBS1B10N | CSMBS1K10N  |
| 16                     | CSMBS1B16N | CSMBS1K16N  |
| 20                     | CSMBS1B20N | CSMBS1K20N  |
| 25                     | CSMBS1B25N | CSMBS1K25N  |
| 32                     | CSMBS1B32N | CSMBS1K32N  |
| 40                     | CSMBS1B40N | CSMBS1K40N  |
| 50                     | CSMBS1B50N | CSMBS1K50N  |
| 63                     | CSMBS1B63N | CSMBS1K63N  |
| <b>2 Pole</b>          |            |             |
| 0.5                    | -          | CSMBS2K0.5  |
| 01                     | -          | CSMBS2K1    |
| 02                     | -          | CSMBS2K2    |
| 03                     | -          | CSMBS2K3    |
| 04                     | -          | CSMBS2K4    |
| 05                     | -          | CSMBS2K5    |
| 06                     | CSMBS2B6   | CSMBS2K6    |
| 10                     | CSMBS2B10  | CSMBS2K10   |
| 16                     | CSMBS2B16  | CSMBS2K16   |
| 20                     | CSMBS2B20  | CSMBS2K20   |
| 25                     | CSMBS2B25  | CSMBS2K25   |
| 32                     | CSMBS2B32  | CSMBS2K32   |
| 40                     | CSMBS2B40  | CSMBS2K40   |
| 50                     | CSMBS2B50  | CSMBS2K50   |
| 63                     | CSMBS2B63  | CSMBS2K63   |

**Miniature Circuit Breaker**

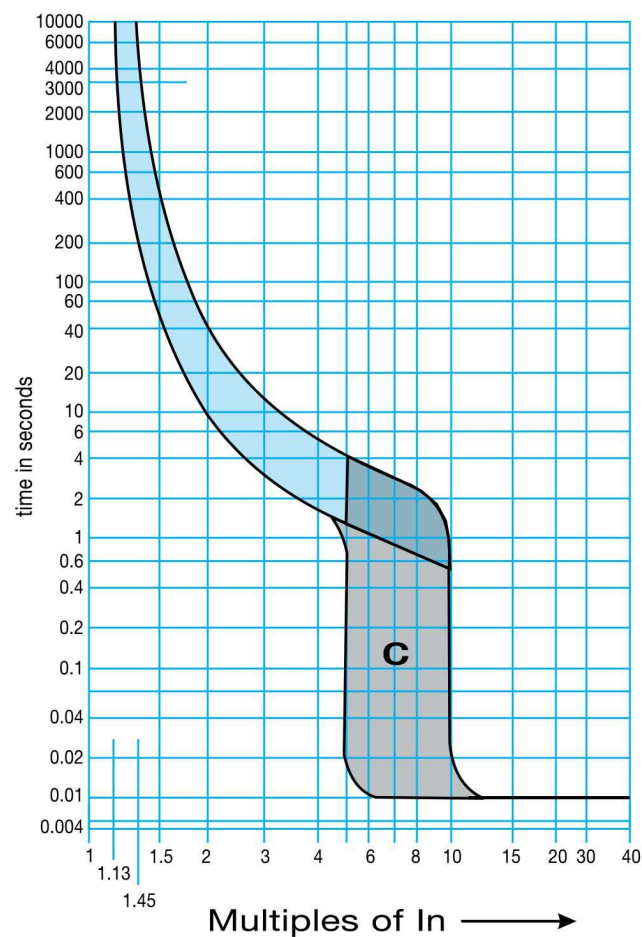
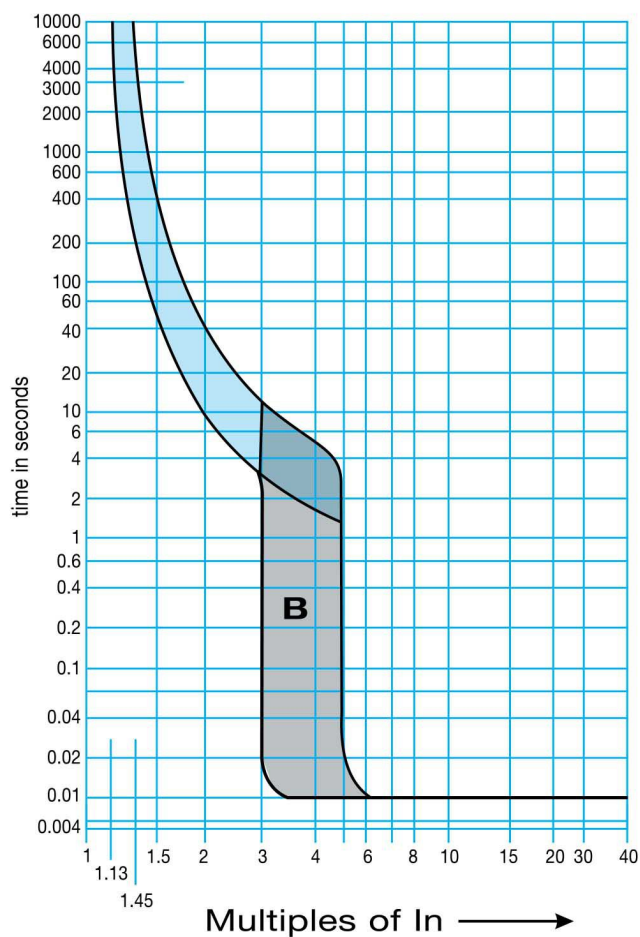

| Rating (A)              | 'B' Curve  | 'C' Curve   |
|-------------------------|------------|-------------|
|                         | Reference  | Reference   |
| <b>3 Pole</b>           |            |             |
| 0.5                     | -          | CSMBS3K0.5  |
| 01                      | -          | CSMBS3K1    |
| 02                      | -          | CSMBS3K2    |
| 03                      | -          | CSMBS3K3    |
| 04                      | -          | CSMBS3K4    |
| 05                      | -          | CSMBS3K5    |
| 06                      | CSMBS3B6   | CSMBS3K6    |
| 10                      | CSMBS3B10  | CSMBS3K10   |
| 16                      | CSMBS3B16  | CSMBS3K16   |
| 20                      | CSMBS3B20  | CSMBS3K20   |
| 25                      | CSMBS3B25  | CSMBS3K25   |
| 32                      | CSMBS3B32  | CSMBS3K32   |
| 40                      | CSMBS3B40  | CSMBS3K40   |
| 50                      | CSMBS3B50  | CSMBS3K50   |
| 63                      | CSMBS3B63  | CSMBS3K63   |
| <b>3 Pole + Neutral</b> |            |             |
| 0.5                     | -          | CSMBS3K0.5N |
| 01                      | -          | CSMBS3K1N   |
| 02                      | -          | CSMBS3K2N   |
| 03                      | -          | CSMBS3K3N   |
| 04                      | -          | CSMBS3K4N   |
| 05                      | -          | CSMBS3K5N   |
| 06                      | CSMBS3B6N  | CSMBS3K6N   |
| 10                      | CSMBS3B10N | CSMBS3K10N  |
| 16                      | CSMBS3B16N | CSMBS3K16N  |
| 20                      | CSMBS3B20N | CSMBS3K20N  |
| 25                      | CSMBS3B25N | CSMBS3K25N  |
| 32                      | CSMBS3B32N | CSMBS3K32N  |
| 40                      | CSMBS3B40N | CSMBS3K40N  |
| 50                      | CSMBS3B50N | CSMBS3K50N  |
| 63                      | CSMBS3B63N | CSMBS3K63N  |
| <b>4 Pole</b>           |            |             |
| 0.5                     | -          | CSMBS4K0.5  |
| 01                      | -          | CSMBS4K1    |
| 02                      | -          | CSMBS4K2    |
| 03                      | -          | CSMBS4K3    |
| 04                      | -          | CSMBS4K4    |
| 05                      | -          | CSMBS4K5    |
| 06                      | CSMBS4B6   | CSMBS4K6    |
| 10                      | CSMBS4B10  | CSMBS4K10   |
| 16                      | CSMBS4B16  | CSMBS4K16   |
| 20                      | CSMBS4B20  | CSMBS4K20   |
| 25                      | CSMBS4B25  | CSMBS4K25   |
| 32                      | CSMBS4B32  | CSMBS4K32   |
| 40                      | CSMBS4B40  | CSMBS4K40   |
| 50                      | CSMBS4B50  | CSMBS4K50   |
| 63                      | CSMBS4B63  | CSMBS4K63   |



## Isolator

| Rating (A) | 1 Pole       | 2 Pole       | 3 Pole       | 4 Pole       |
|------------|--------------|--------------|--------------|--------------|
|            | Reference    | Reference    | Reference    | Reference    |
| 25         | CSMBS1ISO25  | CSMBS2ISO25  | CSMBS3ISO25  | CSMBS4ISO25  |
| 32         | CSMBS1ISO32  | CSMBS2ISO32  | CSMBS3ISO32  | CSMBS4ISO32  |
| 40         | CSMBS1ISO40  | CSMBS2ISO40  | CSMBS3ISO40  | CSMBS4ISO40  |
| 63         | CSMBS1ISO63  | CSMBS2ISO63  | CSMBS3ISO63  | CSMBS4ISO63  |
| 80         | CSMBS1ISO80  | CSMBS2ISO80  | CSMBS3ISO80  | CSMBS4ISO80  |
| 100        | CSMBS1ISO100 | CSMBS2ISO100 | CSMBS3ISO100 | CSMBS4ISO100 |
| 125        | CSMBS1ISO125 | CSMBS2ISO100 | CSMBS3ISO125 | CSMBS4ISO125 |

## Tripping Characteristics



## Tripping Characteristics - IEC 60947-2

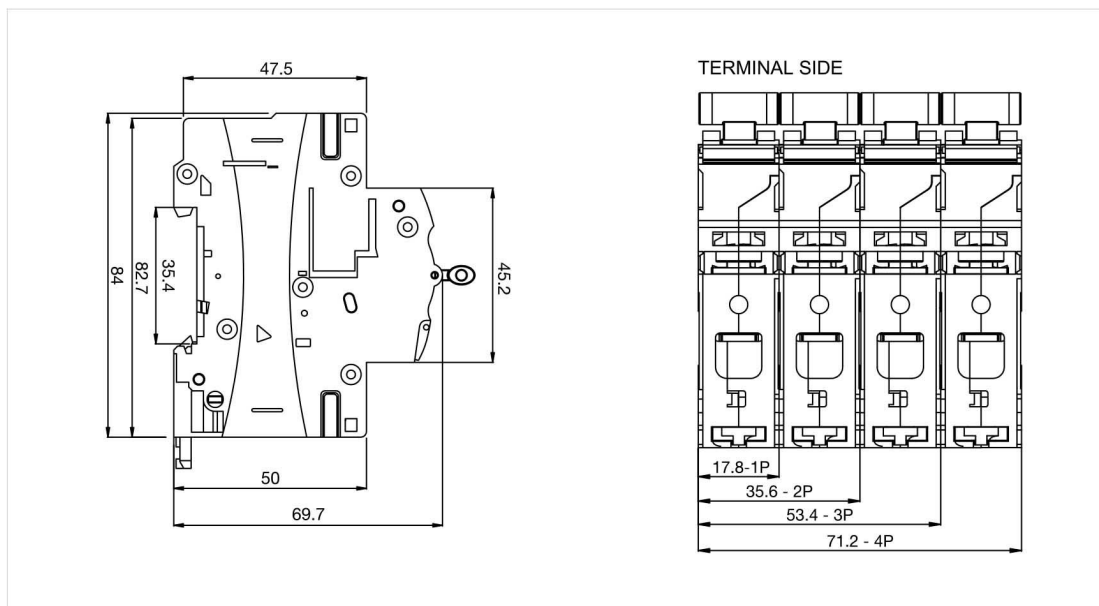
| Type | Application                                      | Thermal Test Current |         | Tripping Time<br>In 63A | Electro Magnetic<br>Test Current |       | Tripping<br>Time (t) |
|------|--------------------------------------------------|----------------------|---------|-------------------------|----------------------------------|-------|----------------------|
|      |                                                  | Low                  | High    |                         |                                  |       |                      |
| 'B'  | Lighting & Distribution<br>with no surge Current | 1.13xIn              |         | >1hour                  | 3xIn                             |       | 0.1s                 |
|      |                                                  |                      | 1.45xIn | <1hour                  |                                  | 5xIn  | <0.1s                |
| 'C'  | High Inductive Load &<br>High Inrush Current     | 1.05xIn              |         | ≥1hour                  | 5xIn                             |       | 0.1s                 |
|      |                                                  |                      | 1.30xIn | ≤2hour                  |                                  | 10xIn | <0.1s                |

## Temperature derating

The reference temperature is 30°C

| In  | -25°C | -10°C | 0°C  | 10°C | 20°C | 30°C | 40°C | 50°C | 60°C | 70°C |
|-----|-------|-------|------|------|------|------|------|------|------|------|
| 6A  | 7.5   | 7     | 6.6  | 6.4  | 6.18 | 6    | 5.8  | 5.6  | 5.4  | 5.2  |
| 10A | 12.5  | 11.5  | 11.1 | 10.7 | 10.3 | 10   | 9.7  | 9.3  | 9.0  | 8.7  |
| 13A | 16.3  | 15.2  | 14.6 | 14.1 | 13.5 | 13   | 12.5 | 11.9 | 11.5 | 11.0 |
| 16A | 20    | 18.7  | 18   | 17.3 | 16.6 | 16   | 15.4 | 14.7 | 14.1 | 13.5 |
| 20A | 25    | 23.2  | 22.4 | 21.6 | 20.8 | 20   | 19.2 | 18.4 | 17.6 | 16.8 |
| 25A | 31.5  | 29.3  | 28.3 | 27.2 | 26   | 25   | 24   | 22.7 | 21.7 | 20.7 |
| 32A | 41    | 37.8  | 36.5 | 34.9 | 33.3 | 32   | 30.7 | 29.1 | 27.8 | 26.5 |
| 40A | 51    | 48    | 46   | 44   | 42   | 40   | 38   | 36   | 34   | 32   |
| 50A | 64    | 60    | 57.7 | 55   | 52.5 | 50   | 47.5 | 45   | 42.5 | 40   |
| 63A | 80.6  | 75.6  | 72.5 | 69.9 | 66.1 | 63   | 59.6 | 56.2 | 52.5 | 50.4 |

## Installation Dimensions



All Dimensions are in mm