

Merlin Gerin **Multi 9** System Protection Miniature Circuit Breakers



Protection

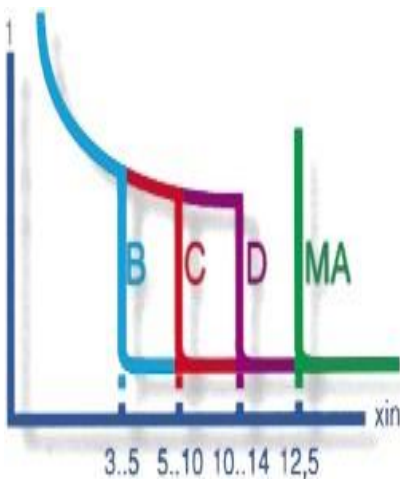
Merlin Gerin Multi 9 System
Miniature circuit breakers
Tripping curves
Markings & limitation capability

Trip Unit Variations

Circuit Breaker Marking

Circuit Protection

A choice of several curves
Whatever circuit has to be protected, a C60 or C120 circuit breaker provides the perfect solution with a suitable curve.



Curve B
tripping:
3 to 5 times the rated
current (I_n);
protection of generators,
persons, very long

cables.



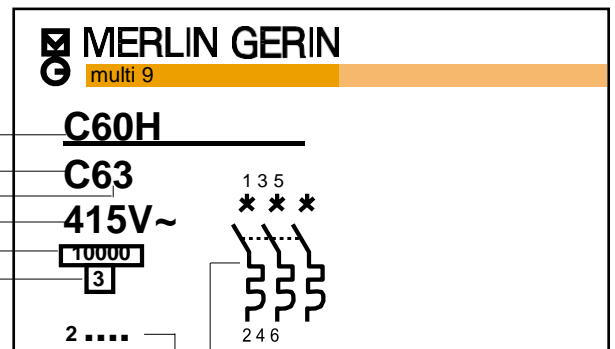
Curve C
tripping:
5 to 10 I_n ;
protection of circuits,
general applications.



Curve D
tripping:
10 to 14 I_n ;
protection of high surge
circuits, welders, trans-
formers, motors.



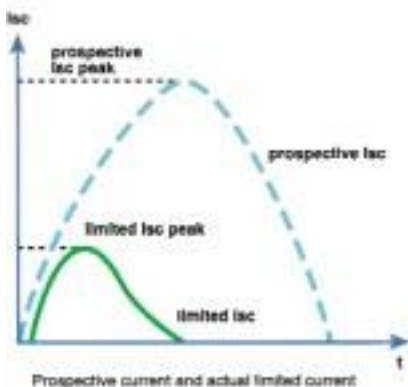
Curve MA
(magnetic only)
tripping: 12 I_n ;
protection of motor
starters (+ thermal pro-
tection when combined
with contactor).



1. Circuit Breaker Model Number
2. Tripping Curve
3. Circuit Breaker Current Rating
4. Operating Voltage
5. Rated Breaking Capacity
6. Circuit Breaker Part Number
7. Electrical Diagram - No. of Poles
8. I't classification

Circuit Breaker Limitation Capability

The limitation capability of a circuit breaker is that characteristic whereby only a current less than the prospective fault current is allowed to flow under short-circuit conditions.



This is illustrated by limitation curves which give:

- The limited peak current in relation to the RMS value of the prospective short-circuit current (the short-circuit current being that current which would flow continuously in the absence of protection equipment).
- The limited current stress in relation to the RMS value of the prospective short-circuit current.
- Current limiting capability. The advanced design of the Multi-9 range provides current limitation with far better protection than conventional circuit breakers. For example, on a 6A rating with a prospective short circuit of 5000A, the current will be limited at 350A or 7%.

Installation of current limiting circuit breakers offers several advantages:

- **Better network protection**
Current limiting circuit breakers considerably reduce the undesirable effects of short-circuit currents in an installation.
- **Reduced thermal effects**
Cable heating is reduced, hence longer cable life.
- **Reduced mechanical effects**
Electrodynamic forces reduced, thus electrical contacts are less likely to be deformed or broken.
- **Reduced electromagnetic effects**
Measuring equipment situated near an electrical circuit less affected.

C60N circuit-breakers
6kA, C curve
AS/NZS 4898



Approval No: N13634

functions

The circuit-breakers combine the following functions:
- protection of circuits against short-circuit currents,
- protection of circuits against overload currents,
- control,

- isolation,
- protection of persons against indirect contact.

description

technical data common to C60N circuit breakers

c power circuit
v voltage rating: 240/415 V AC
- for 2P single phase 240/480V
v I²t classification: 3
v number of cycles (O-C): 20 000
v foolproof terminal design
- moving barrier prevents incorrect cable insertion
- cable strand centering guides ensure correct cable positions and strand grouping
v isolation with positive contact indication v bistable din clip, simplifies disassembly

c environment
v tropicalisation: treatment 2 (relative humidity: 95 % at 55 °C)
v connection: tunnel terminals for the following cables:
- up to 25A : 16mm² flexible with cable end : 25mm² stranded
- 32 to 63A : 25mm² flexible with cable end : 35mm² stranded

C curve

utilisation
cables feeding conventional loads.

technical data

c power circuit
v tripping curves: the magnetic trip units operate between 5 and 10 I_n
v breaking capacity according to AS/NZS 4898, I_{cu} ultimate breaking capacity (O-CO cycle):

rating (A)	type	voltage (V)	breaking capacity I _{cu} (A)
1...63	1P	240/415	6 000
	2P	415...480	6 000
	3P	415	6 000

catalogue numbers

type	rating (A)	catalogue number
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C curve C60N



1P



Width in mod
of 9mm - 2

1	25797
2	25798
4	25800
6	25801
10	25802
16	25803
20	25804
25	25805
32	25806
40	25807
50	25808
63	25809



2P

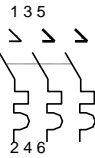


Width in mod
of 9mm - 4

1	25811
2	25812
4	25814
6	25815
10	25816
16	25817
20	25818
25	25819
32	25820
40	25821
50	25822
63	25823



3P



Width in mod
of 9mm - 6

1	25825
2	25826
4	25828
6	25829
10	25830
16	25831
20	25832
25	25833
32	25834
40	25835
50	25836
63	25837

