

Protection and control of circuits against overloads and short circuits. Circuit isolation.

Technical data

- breaking capacity:6kA (IEC 60 898-1),
- curves :

B curve: 3 to 5 In, C curve: 5 to 10 In

- poles: 1PP, 2PP, 3PP, 4PP (protected poles)
- voltage rating : 240/400V AC
- current rating: 6 to 63Afrequency: 50/60Hzclimate sealed: T2
- will accept accessories

Connection capacity

rigid conductors : 25mm² flexible conductors : 16mm²

Complies with IEC 60 898-1 and

EN 60898-1.



MBN116A

Description	In/A	Width in ■ 17.5mm	Pack qty.	Cat. ref. B curve	C curve
Single pole MCBs	6	1	12	MBN106A	MCN106A
11	10	1	12	MBN110A	MCN110A
∖¥	16	1	12	MBN116A	MCN116A
_	20	1	12	MBN120A	MCN120A
5	25	1	12	MBN125A	MCN125A
2	32	1	12	MBN132A	MCN132A
	40	1	12	MBN140A	MCN140A
	50	1	12	MBN150A	MCN150A
	63	1	12	MBN163A	MCN163A



MBN232A

Double pole MCBs	6	2	6	MBN206A	MCN206A
1 3	10	2	6	MBN210A	MCN210A
\ <u>\</u> \ <u>\</u>	16	2	6	MBN216A	MCN216A
<u> </u>	20	2	6	MBN220A	MCN220A
5 5	25	2	6	MBN225A	MCN225A
2 4	32	2	6	MBN232A	MCN232A
	40	2	6	MBN240A	MCN240A
	50	2	6	MBN250A	MCN250A
	63	2	6	MBN263A	MCN263A



MBN320A

Three pole MCBs	6	3	4	MBN306A	MCN306A
1 3 5	10	3	4	MBN310A	MCN310A
<u>,</u>	16	3	4	MBN316A	MCN316A
<u> </u>	20	3	4	MBN320A	MCN320A
5 5 5	25	3	4	MBN325A	MCN325A
2 4 6	32	3	4	MBN332A	MCN332A
	40	3	4	MBN340A	MCN340A
	50	3	4	MBN350A	MCN350A
	63	3	4	MBN363A	MCN363A



MBN440A

Four pole MCBs	6	4	3	MBN406A	MCN406A
1 3 5 7	10	4	3	MBN410A	MCN410A
\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	16	4	3	MBN416A	MCN416A
<u></u>	20	4	3	MBN420A	MCN420A
5555	25	4	3	MBN425A	MCN425A
2 4 6 8	32	4	3	MBN432A	MCN432A
	40	4	3	MBN440A	MCN440A
	50	4	3	MBN450A	MCN450A
	63	4	3	MBN463A	MCN463A

:hager

Description

Protection and control of circuits against overloads and short circuits. Circuit isolation.

Technical data

breaking capacity:
 6kA (IEC 60 898-1),

• curves:

B curve: 3 to 5 In,
C curve: 5 to 10 In

• poles: 1PP, 2PP, 3PP, 4PP

(protected poles)

voltage rating: 240/400V AC
current rating: 6 to 63A
frequency: 50/60Hz

climate sealed : T2will not accept accessories

Connection capacity

rigid conductors: 25mm² flexible conductors: 16mm²

Complies with IEC 60 898-1



MT116A



MT216A



MT320A

Description	In/A	Width in ■ 17.5mm	Pack qty.	Cat. ref. B curve	C curve
Single pole MCBs	6 10 16 20 25 32 40 50 63	1 1 1 1 1 1 1 1	12 12 12 12 12 12 12 12 12 12	MT106A MT110A MT116A MT120A MT125A MT132A MT140A MT150A MT163A	MU106A MU110A MU116A MU120A MU125A MU132A MU140A MU150A MU163A
Double pole MCBs	6 10 16 20 25 32 40 50 63	2 2 2 2 2 2 2 2 2 2 2	6 6 6 6 6 6 6 6	MT206A MT210A MT216A MT220A MT225A MT232A MT240A MT250A MT263A	MU206A MU210A MU216A MU220A MU225A MU232A MU240A MU250A MU263A
Three pole MCBs	6 10 16 20 25 32 40 50 63	3 3 3 3 3 3 3 3 3	4 4 4 4 4 4 4 4	MT306A MT310A MT316A MT320A MT325A MT332A MT340A MT350A MT363A	MU306A MU310A MU316A MU320A MU325A MU332A MU340A MU350A MU363A
Four pole MCBs	6 10 16 20 25 32 40 50 63	4 4 4 4 4 4 4	3 3 3 3 3 3 3	-	MU406A MU410A MU416A MU420A MU425A MU440A MU450A MU463A



Protection and control of circuits against overloads and short circuits. Circuit isolation.

Technical data

- breaking capacity:
 10kA (IEC 60 898-1),
 15kA (IEC 60 947-2)
- curves :
- B curve : 3 to 5 ln, C curve : 5 to 10 ln, D curve : 10 to 20 ln
- poles: 1PP, 2PP, 3PP, 4PP (protected poles)
- voltage rating : 240/400V AC
- current rating: 0,5 to 63Afrequency: 50/60Hz
- climate sealed : T2
- will accept accessories

Connection capacity

rigid conductors : 35mm² flexible conductors : 25mm² Complies with IEC 60 898-1, IEC 60 947-2, EN 60898-1 and





NCN116A



NCN232A



NCN320A



NCN440A

Description	In/A	Width in ■	Pack	Cat. ref.		
		17.5mm	qty.	B curve	C curve	D curve
Single pole MCBs	0.5	1	12	-	NCN100A	NDN100A
1	1	1	12	-	NCN101A	NDN101A
*	2	1	12	-	NCN102A	NDN102A
\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	3	1	12	-	NCN103A	NDN103A
. آ ا	4	1	12	-	NCN104A	NDN104A
21	6	1	12	NBN106A	NCN106A	NDN106A
	10	1	12	NBN110A	NCN110A	NDN110A
	16	1	12	NBN116A	NCN116A	NDN116A
	20	1	12	NBN120A	NCN120A	NDN120A
	25	1	12	NBN125A	NCN125A	NDN125A
	32	1	12	NBN132A	NCN132A	NDN132A
	40	1	12	NBN140A	NCN140A	NDN140A
	50	1	12	NBN150A	NCN150A	NDN150A
	63	1	12	NBN163A	NCN163A	NDN163A
Daubla nala MCPa	0.5	0	6		NCNOOA	NDNOOA
Double pole MCBs	0.5	2	6	-	NCN200A	NDN200A
1 3 <u>4</u> 1 3 <u>4</u>	1	2	6	-	NCN201A	NDN201A NDN202A
/ _x -/ _x	2		6	-	NCN202A	
5 5	3	2	6	-	NCN203A	NDN203A
. 7. 7	4	2	6	-	NCN204A	NDN204A
21 41	6	2	6	NBN206A	NCN206A	NDN206A
	10	2	6	NBN210A	NCN210A	NDN210A
	16	2	6	NBN216A	NCN216A	NDN216A
	20	2	6	NBN220A	NCN220A	NDN220A
	25	2	6	NBN225A	NCN225A	NDN225A
	32	2	6	NBN232A	NCN232A	NDN232A
	40	2	6	NBN240A	NCN240A	NDN240A
	50	2	6	NBN250A	NCN250A	NDN250A
	63	2	6	NBN263A	NCN263A	NDN263A
Three pole MCBs	0.5	3	4	_	NCN300A	NDN300A
Three pole WOBS	1	3	4		NCN301A	NDN301A
11 31 51	2	3	4	_	NCN302A	NDN301A
/¥ /¥ /¥	3	3	4	_	NCN303A	NDN302A
<i>F-F-T</i>	4	3	4		NCN304A	NDN304A
5 5 5	6	3	4	NBN306A	NCN306A	NDN306A
2 4 6	10	3	4	NBN310A	NCN310A	NDN310A
	16	3	4	NBN316A	NCN316A	NDN316A
	20	3	4	NBN320A	NCN320A	NDN310A
	25	3	4	NBN325A	NCN325A	NDN325A
	32	3	4	NBN332A	NCN332A	NDN332A
		3	4	NBN340A	NCN340A	NDN340A
	40 50	3	4	NBN350A		NDN350A
	50	3	4		NCN350A	
	63	3	4	NBN363A	NCN363A	NDN363A
Four pole MCBs	0.5	4	3	_	NCN400A	NDN400A
. ca. polo meso	1	4	3	_	NCN401A	NDN401A
	2	4	3	_	NCN402A	NDN402A
1 3 5 7	3	4	3	_	NCN403A	NDN403A
F-F-F-	4	4	3	_	NCN404A	NDN404A
2 2 2 2	6	4	3	NBN406A	NCN406A	NDN406A
2 4 6 8	10	4	3	NBN410A	NCN410A	NDN410A
	16	4	3	NBN416A	NCN416A	NDN416A
	20	4	3	NBN420A	NCN420A	NDN410A NDN420A
	25	4	3	NBN425A	NCN420A NCN425A	NDN420A NDN425A
	32	4	3	NBN432A	NCN425A NCN432A	NDN423A NDN432A
	40	4	3	NBN440A	NCN432A NCN440A	NDN432A NDN440A
	50	4	3	NBN450A	NCN440A NCN450A	NDN450A
	63	4	3	NBN463A	NCN463A	NDN450A NDN463A
	00	7	0	110111007	110111007	IIDIIIIO



When add-on block is associated with MCBs (NGN, NBN, NCN, NDN, NQN, NRN, NSN), the complete unit provides an earth fault protection and protects against electrical shocks by direct or indirect contacts. They are designed to be fitted to the right hand side of 2, 3, and 4 poles MCBs.

Technical data

• sensitivity :

(time delay)

High sensitivity: 10mA, 30mA instant tripping, Medium sensitivity: 100mA, 300mA, 500mA instant tripping / 300mA, 500mA, 1A selective

current rating : 25 to 63Avoltage rating : 240/400V AC

• poles : 2P, 3P, 4P

3 pole add-on blocks

• types : AC and A types frequency : 50/60Hz

• mounting type : side mounted

• climate sealed : T2

Connection capacity

• 25A:

rigid conductors : 10mm² flexible conductors : 6mm²

40A, 63A:
 rigid conductors: 25mm²
 flexible conductors: 16mm²

Technical information

• AC type: Ensured for residual sinusoidal alternating currents, whether suddenly applied or slowly rising. It incorporate a filtering device preventing the risk of nuisance tripping due to the transient voltages (lightening, line disturbance on other

equipment...) and transient currents (from high capacitive circuits).

• A and HI type (reinforced immunity): In addition to the characteristics of AC type, it ensured for residual pulsating direct currents, whether suddenly applied or slowly rising. They are used whenever fault currents are not sinusoidal. It reduces the unexpected tripping when they protect equipment generating disturbances like DC fault current (washing machines, speed drives, microprocessing, electronic ballast...).

Complies with EN 61008-1.



BD226

Description	l∆n	In/A	Width in ■ 17.5mm	Pack qty	Cat. ref. class AC	class A and HI
2 pole add-on blocks	10 mA	25	2	1	BC226	-
	30 mA	25	2	1	BD226	BD225
		40	2	1	BD241	BD240
		63	2	1	BD264	BD263
	100 mA	63	2	1	BE264	-
	S 100 mA	63	2	1	BN264	-
	300 mA	25	2	1	BF226	BF225
		40	2	1	BF241	BF240
		63	2	1	BF264	BF263
	300 mA	63	2	1	BP264	-
	500 mA	63	2	1	BG264	-
	S 500 mA	63	2	1	BR264	-
	S 1A	63	2	1	BS264	BS263



BD364

30 mA	25 40 63	2 3 3	1 1 1	BD326 BD341 BD364	BD325 BD340 BD363
300 mA	25 40 63	2 3 3	1 1 1	BF326 BF341 BF364	BF325 BF340 BF363
S 300 mA	63	3	1	BP364	-
500 mA	63		1	BG364	-
S 1A	63	3	1	BS364	BS363





Description	lΔn	In/A	Width in I	Pack qty	Cat. ref. class AC	class A and HI
4 pole add-on blocks	30 mA	25	2	1	BD426	BD425
		40		1	BD441	BD440
		63		1	BD464	BD463
	100 mA	63		1	BE464	-
	S 100 mA	63		1	BN464	-
	300 mA	25	2	1	BF426	BF425
		40		1	BF441	BF440
		63		1	BF464	BF463
	300 mA	63		1	BP464	-
	500 mA	63		1	BG464	-
	S 1A	63		1	BS464	-
4 pole add-on blocks	30 mA	25	3	1	BDC825	BDH825
double output	30 IIIA	40	3	1	BDC825	BDH840
double output		63	3	1	BDC863	BDH863
	300 mA	25	3	1	BFC825	BFH825
		40	3	1	BFC840	BFH840
		63	3	1	BFC863	BFH863
	300 mA	63	3	1	BPC863	-
	<u>S</u> 1A	63	3	1	BSC863	-



BFC840



Protection and control of circuits against overloads and short circuits. Circuit isolation. They can be used for installation in commercial building and industrial premises for high interrupt capacities.

Technical data

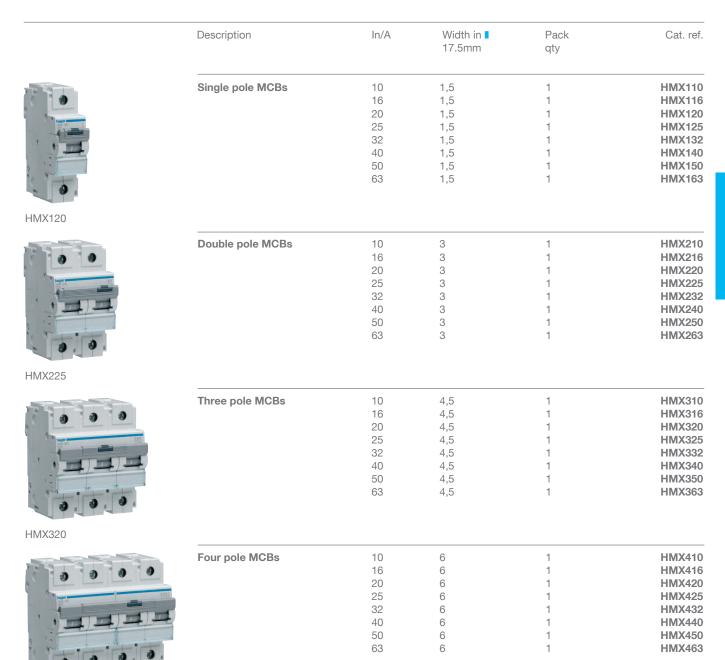
breaking capacity: 50kA (IEC 60 947-2)

- curves :
- C curve : 5 to 10 ln
 poles : 1PP, 2PP, 3PP, 4PP
- (protected poles)
- voltage rating: 230/400V AC
- current rating : 10-63 50kA 80-125 10-30kA
- frequency : 50/60Hz
- will accept accessories

• climate sealed: T2

Connection capacity rigid conductors: 70 mm² flexible conductors: 35 mm²

Complies with IEC 60 947-2.







Protection and control of circuits against overloads and short circuits. Circuit isolation. They can be used for installation in commercial building and industrial premises.

Technical data

• breaking capacity: 10kA (IEC 60 898-1), 10kA (IEC 60947-2)

• curves :

B curve: 3 to 5 In, C curve: 5 to 10 In

• poles: 1PP, 2PP, 3PP, 4PP

(protected poles)

voltage rating: 230/400V ACcurrent rating: 80 to 125A • frequency : 50/60Hz

• will accept accessories

• climate sealed : T2

Connection capacity

rigid conductors: 70 mm² flexible conductors: 35 mm²

Complies with IEC 60 898-1 and

IEC 60 947-2.



HLF199S



HLF299S



HLF399S



HLF499S

Description	In/A	Width in ■ 17.5mm	Pack qty	Cat. ref. B curve	C curve
Single pole MCBs	80	1,5	1	HLE180S	HMF180
	100	1,5	1	HLE190S	HMF190
	125	1,5	1	HLE199S	HMF199
Double pole MCBs	80	3	1	HLE280S	HMF280
	100	3	1	HLE290S	HMF290
	125	3	1	HLE299S	HMF299
Three pole MCBs	80	4,5	1	HLE380S	HMF380
	100	4,5	1	HLE390S	HMF390
	125	4,5	1	HLE399S	HMF399
Four pole MCBs	80	6	1	HLE480S	HMF480
	100	6	1	HLE490S	HMF490
	125	6	1	HLE499S	HMF499

Miniature Circuit Breakers 15kA Type B, C and D - HMB, HMC, HMD



Description

Protection and control of circuits against overloads and short circuits. Circuit isolation. They can be used for installation in commercial building and industrial premises.

Technical data

breaking capacity:
 15kA (IEC 60 898-1),
 15kA (IEC 60 947-2)

• curves :

B curve: 3 to 5 ln, C curve: 5 to 10 ln, D curve: 10 to 20 ln • poles: 1PP, 2PP, 3PP, 4PP

(protected poles)voltage rating: 230/400V ACcurrent rating: 80 to 125A

frequency: 50/60Hzwill accept accessoriesclimate sealed: T2

Connection capacity

rigid conductors : 70mm² flexible conductors : 35mm²

Complies with IEC 60 898-1 and

IEC 60 947-2.



HMC399

Description	In/A	Width in ■ 17.5mm	Pack qty	Cat. ref. B curve	C curve	D curve
Single pole MCBs	80	1,5	1	HMB180	HMC180	HMD180
	100	1,5	1	HMB190	HMC190	HMD190
	125	1,5	1	HMB199	HMC199	HMD199
Double pole MCBs	80	3	1	HMB280	HMC280	HMD280
	100	3	1	HMB290	HMC290	HMD290
	125	3	1	HMB299	HMC299	HMD299
Three pole MCBs	80	4,5	1	HMB380	HMC380	HMD380
	100	4,5	1	HMB390	HMC390	HMD390
	125	4,5	1	HMB299	HMC399	HMD399
Four pole MCBs	80	6	1	HMB480	HMC480	HMD480
	100	6	1	HMB490	HMC490	HMD490
	125	6	1	HMB499	HMC499	HMD499



HMC499



Protection and control of circuits against overloads and short circuits. Circuit isolation. They can be used for installation in commercial building and industrial premises for high interrupt capacities.

Technical data

breaking capacity: 30kA (IEC 60 947-2) curves :

B curve: 3 to 5 ln, C curve: 5 to 10 ln • poles: 1PP, 2PP, 3PP, 4PP

(protected poles)

voltage rating: 230/400V ACcurrent rating: 80 to 125A

frequency: 50/60Hzwill accept accessories

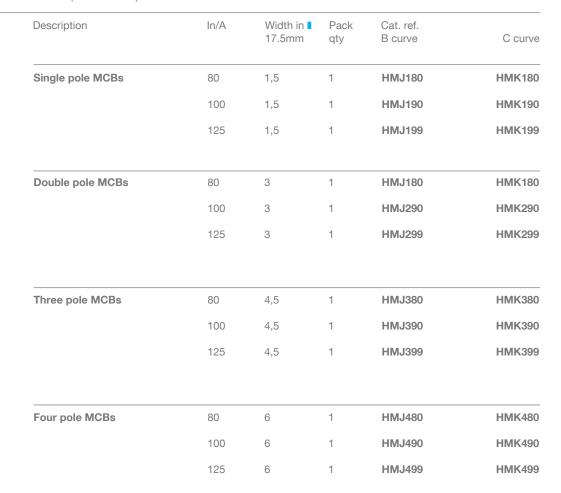
• climate sealed : T2 Connection capacity

rigid conductors: 70mm² flexible conductors: 35mm²

Complies with IEC 60 947-2.



HMK199





HMK399

Accessories for MCBs HLE, HLF, HMB, HMC, HMD, HMK, HMJ, HMX

Terminal cover / screw cap sealable screw cap

MZN130



Phase separator

1 set of 3 pieces

MZN131

Cat. ref.

MZN130



When add-on block is associated with MCBs (HLE, HLF, HMB, HMC, HMD, HMJ, HMK, HMX), the complete unit provides an earth fault protection and protects against electrical shocks by direct or indirect contacts. They are designed to be fitted to the right hand side of 2, 3 and 4 poles MCBs.

Technical data

- sensitivity:
 High sensitivity: 30mA instant tripping (fixed)
 Medium sensitivity:
 300mA instant tripping (fixed) /
 300mA, 500mA, 1A adjustable (selective or time delay)
- time delay : 0ms, 60ms or 150ms
- current rating : 125Avoltage rating : 240/400V AC
- poles: 2P, 3P, 4Ptypes: AC and A/HI typesfrequency: 50/60Hz
- mounting type : side mounted
- climate sealed : T2

Connection capacity

rigid conductors: 70mm² flexible conductors: 35mm²

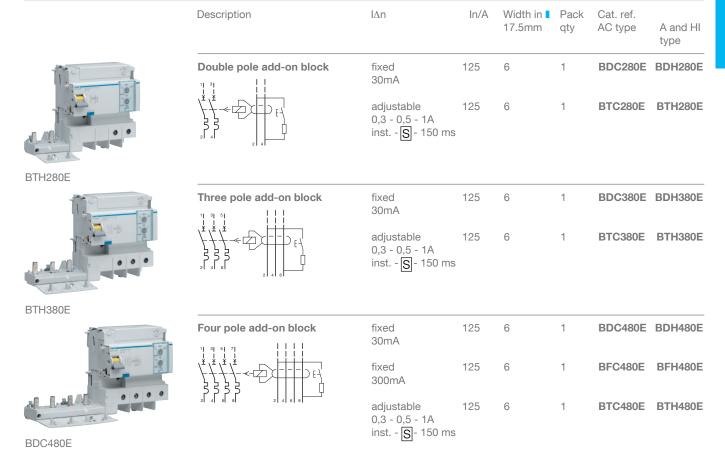
Technical information

- AC type: Ensured for residual sinusoidal alternating currents, whether suddenly applied or slowly rising. It incorporates a filtering device preventing the risk of nuisance tripping due to the transient voltages (lightening, line disturbance on other equipment...) and transient currents (from high capacitive circuits).
- A and HI type (reinforced immunity): In addition to the characteristics of AC type, it ensured for residual pulsating direct currents, whether suddenly applied or slowly rising. They are used whenever fault currents are not sinusoidal. It reduces the unexpected tripping when they protect equipment generating

disturbances like DC fault current (washing machines, speed drives, microprocessing, electronic ballast...).

- Adjustable block: The setting is done by actuating the thumb wheel on the front face. The setting thumb wheels are protected by a transparent sealable cover.
- Tightening compensation terminals: The circuit breakers block are equipped with screw terminals with tightening compensation, reinforced arch and cable holding jaws. These contributes to an effective tightening over time.

Complies with IEC 61 009-1.



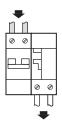


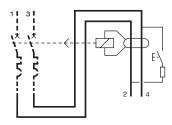
RCCB add-ons

3 sensitivities 30mA, 100mA and 300mA instantaneous. 2 sensitivities 100mA and 300mA time delayed.

RCCB add-ons can be associated with devices rated from 0,5 to 63A in 2 and 4 poles.

Wiring diagram





Connection capacity



 $63A = 16mm^2$



 $63A = 25mm^2$

Characteristics

Easy coupling (drawer system)
Easy disassembly (without damage)
Conforms to EN61009 appendix G

Mounting

