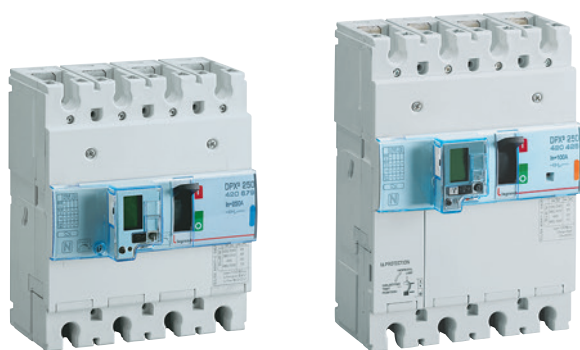


DPX³ 250 electronic release

MCCBs from 40 to 250 A (continued)



4 206 79

4 204 25

Electrical characteristics **see e-catalogue**
 Dimensions **see e-catalogue**

Can be mounted on rail or on plate in XL³ cabinets and enclosures
 MCCBs for switching, control isolation and protection of low voltage electrical lines
 Supplied with fixing screws, connection plates for bars and cable lugs and insulated shileds (phase barriers)
 Can be fitted with cage terminals 120 mm² max. (flexible cable) or 150 mm² max. rigid cable (p. 133)
 and with DPX³ 160 and 250 common auxiliaires and accessories (p. 134)
 Conform to IEC 60947-2

Pack	Cat.Nos		
			MCCBs with energy metering central unit - fixed version
			Protection against overloads: Ir adjustable from 0.4 to 1 x In tr adjustable from 3 to 15s Protection against short circuits: Isd adjustable from 1.5 to 10 x Ir tsd adjustable from 0 to 0.5s Integrated energy metering central unit with LCD screen; currents, voltage, frequency, power, energy and harmonics
			Breaking capacity Icu 25 kA (400 V\sim)
	3P	4P	In (A)
1	4 204 02	4 204 12	40
1	4 204 05	4 204 15	100
1	4 204 07	4 204 17	160
1	4 204 09	4 204 19	250
			Breaking capacity Icu 36 kA (400 V\sim)
1	4 204 32	4 204 42	40
1	4 204 35	4 204 45	100
1	4 204 37	4 204 47	160
1	4 204 39	4 204 49	250
			Breaking capacity Icu 50 kA (400 V\sim)
1	4 204 62	4 204 72	40
1	4 204 65	4 204 75	100
1	4 204 67	4 204 77	160
1	4 204 69	4 204 79	250
			Breaking capacity Icu 70 kA (400 V\sim)
1	4 206 65	4 206 75	40
1	4 206 67	4 206 77	100
1	4 206 68	4 206 78	160
1	4 206 69	4 206 79	250











Pack	Cat.Nos	
		MCCBs with energy metering central unit and electronic earth leakage module - fixed version
		Protection against overloads: Ir adjustable from 0.4 to 1 x In tr adjustable from 3 to 15s Protection against short circuits: Isd adjustable from 1.5 to 10 x Ir tsd adjustable from 0 to 0.5s Equipped with earth leakage module with LCD screen Adjustable sensitivity: 0.03 - 0.3 - 1 - 3 A Adjustable tripping: 0 - 0.3 - 1 - 3s (with 0.03 A possible only 0s) Integrated energy metering central unit with LCD screen; currents, voltage, frequency, power, energy and harmonics
		Breaking capacity Icu 25 kA (400 V\sim)
	4P	In (A)
1	4 204 22	40
1	4 204 25	100
1	4 204 27	160
1	4 204 29	250
		Breaking capacity Icu 36 kA (400 V\sim)
1	4 204 52	40
1	4 204 55	100
1	4 204 57	160
1	4 204 59	250
		Breaking capacity Icu 50 kA (400 V\sim)
1	4 204 82	40
1	4 204 85	100
1	4 204 87	160
1	4 204 89	250
		Breaking capacity Icu 70 kA (400 V\sim)
1	4 206 85	40
1	4 206 87	100
1	4 206 88	160
1	4 206 89	250

Dimensions **see e-catalogue**



DPX³

electrical characteristics

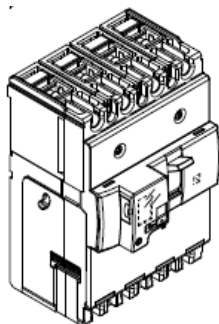
																																								
DEVICES	DPX ³ 160 thermal magnetic				DPX ³ 250 thermal magnetic				DPX ³ 250 electronic release				DPX ³ 630 thermal magnetic				DPX ³ 630 electronic release				DPX ³ 1600 thermal magnetic				DPX ³ 1600 electronic release															
Mounting	On rail  or on plate				On rail  or on plate				On rail  or on plate				On plate				On plate				On plate				On plate															
Breaking capacity (kA) (EN 60947-2 and IEC 60947-2)	16 kA	25 kA	36 kA	50 kA	25 kA	36 kA	50 kA	70 kA	25 kA	36 kA	50 kA	70 kA		36 kA	50 kA	70 kA	100 kA	36 kA	50 kA	70 kA	100 kA	36 kA	50 kA	70 kA	100 kA	36 kA	50 kA	70 kA	100 kA	36 kA	50 kA	70 kA	100 kA							
380/415 V~	16	25	36	50	25	36	50	70	25	36	50	70		36	50	70	100	36	50	70	100	36	50	70	100	36	50	70	100	36	50	70	100							
220/240 V~	25	35	50	65	40	60	100	100	40	60	100	100		70	100	120	170	70	100	120	170	70	100	120	170	70	100	120	170	70	100	120	170							
Breaking capacity (% Icu)	100	100	100	100	100	100	100	100	100	100	100	100		100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100								
Characteristic of use	50/60 Hz																50/60 Hz																							
Nominal frequency	50/60 Hz																50/60 Hz																							
Maximum rated operating voltage Ue	690 V (500 V with integrated e.l.c.bs)				690 V (500 V with integrated e.l.c.bs)				690 V (500 V with integrated e.l.c.bs)				690 V~				690 V~				690 V~				690 V~															
Category of use	A				A				A				A				A: In 630 A - B: In 200 to 400 A				A				B															
Thermal magnetic adjustment																																								
Thermal	0,8 to 1 In				0,8 to 1 In				-				0.8 to 1 In				-				0.8 to 1 In				-															
Magnetic	10 In (400 A for 16 A and 25 A sizes)				5 to 10 In				-				5 to 10 In				-				5 to 10 In				-															
Electronic protection adjustment																																								
S2																																	S2				Sg			
Sg																																	Ir = 0.4 - 1 x In				Ir = 0.4 - 1 x In			
																																	Ir = 3-30 s				Ir = 3-30 s			
																																	I _{sd} = 1.5 - 10 I _r				I _{sd} = 1.5 - 10 I _r			
																																	tsd (I=K) = 0-500 ms				tsd (I=K) = 0-500 ms			
																																	tsd (I _t =K) = 0-500 ms				tsd (I _t =K) = 0-500 ms			
																																	I _g = 0.2 - 1 x In				I _g = 0.2 - 1 x In			
																																	t _g = 0.1 - 1 s				t _g = 0.1 - 1 s			
																																	Ir : 0.4 to 1 In				I _{sd} : 1.5 to 10 I _r			
Maximum cable cross-section																																								
Rigid cable	150 mm ²				150 mm ²				150 mm ²				300 mm ² or 2 x 240 mm ²				300 mm ² or 2 x 240 mm ²				2 or 4 x 240 mm ²				2 or 4 x 240 mm ²															
Flexible cable	120 mm ²				120 mm ²				120 mm ²				240 mm ² or 2 x 185 mm ²				240 mm ² or 2 x 185 mm ²				2 or 4 x 185 mm ²				2 or 4 x 185 mm ²															
Copper bar and lug width	18 mm				28.5 mm ⁽¹⁾				28.5 mm ⁽¹⁾				32 mm				32 mm				50 mm				50 mm															
Tightening torque	8 Nm				10 Nm				10 Nm				15 Nm				15 Nm				20 Nm				20 Nm															
Nominal current (In) at 40 °C (A)																																								
In (A)	16	25	40	63	80	100	125	160	100	160	200	250	40	100	160	250	250	320	400	500	630	250	320	400	500	630	500	630	800	1000	1250	500	630	800	1000	1250	1600			
Phase	16	25	40	63	80	100	125	160	100	160	200	250	40	100	160	250	250	320	400	500	630	250	320	400	500	630	500	630	800	1000	1250	500	630	800	1000	1250	1600			
N	16	25	40	63	80	100	125	160	100	160	200	250	40	100	160	250	250	320	400	500	630	0 - 50 - 100 % of phase value				500	630	800	1000	1250	0 - 50 - 100 % of phase value									
N/2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	250	250	250	320	-				-	-	-	500	630	-									
Magnetic threshold (Im) (A) ⁽²⁾ of DPX ³ thermal magnetic																																								
	Fixed								Adjustable				Adjustable				Adjustable																							
In (A)	16	25	40	63	80	100	125	160	100	160	200	250	-	-	-	-	250	320	400	500	630	-				500	630	800	1000	1250	-									
Phase	400	400	400	630	800	1000	1250	1600	125-250	200-400	315-630	500-1000	-	-	-	-	1250-2500	1600-3200	2000-4000	2500-5000	3150-6300	-				2500-5000	3150-6300	4000-8000	5000-10000	6250-12500	-									
N	400	400	400	630	800	1000	1250	1600	125-250	200-400	315-630	500-1000	-	-	-	-	1250-2500	1600-3200	2000-4000	2500-5000	3150-6300	-				2500-5000	3150-6300	4000-8000	5000-10000	6250-12500	-									
N/2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1000-2000	1250-2500	1600-2500	2000-4000	-				-	-	-	2500-5000	3150-6000	-									
Endurance (cycles)																																								
Electrical	8000				8000				8000				5000				5000				4000				4000															
Mechanical	25000				20000				20000				10000				20000				10000				10000															
Electronic earth leakage module																																								
Type	without or integrated				without or integrated				without or integrated				downstream e.l.c.bs.				downstream e.l.c.bs.				-				-															

1: Copper bars only
2: Trip current for 50/60 Hz. For direct current, multiply by 1.5

 For DPX³ magnetic release only, Please, consult us

DPX³ 250 Electronic

Reference(s): 420 302/305/307/309/312/315/317/319/332/335/
 337/339/342/345/347/349/362/365/367/369/372/375/377/379/635/637/
 638/639/645/647/648/649/502/505/507/509/512/515/517/519/522/525/
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 697/699/702/705/707/709/402/405/407/409/412/415/417/419/432/435/
 437/437/439/442/445/447/449/462/465/467/469/472/475/477/479/665/
 667/668/669/675/677/678/679



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1. USE

DPX³ "moulded case" offers optimal solutions to answer protection requirements of tertiary and industrial installations.

2. RANGE

DPX³ ELECTRONIC

In (A)	25 kA		36 kA		50 kA		70 kA	
	3P	4P	3P	4P	3P	4P	3P	4P
40	420302	420312	420332	420342	420362	420372	420635	420645
100	420305	420315	420335	420345	420365	420375	420637	420647
160	420307	420317	420337	420347	420367	420377	420638	420648
250	420309	420319	420339	420349	420369	420379	420639	420649

DPX³ ELECTRONIC + Ig tg

In (A)	25 kA		36 kA		50 kA		70 kA	
	3P	4P	3P	4P	3P	4P	3P	4P
40	420502	420512	420522	420532	420542	420552	420692	420702
100	420505	420515	420525	420535	420545	420555	420695	420705
160	420507	420517	420527	420537	420547	420557	420697	420707
250	420509	420519	420529	420539	420549	420559	420699	420709

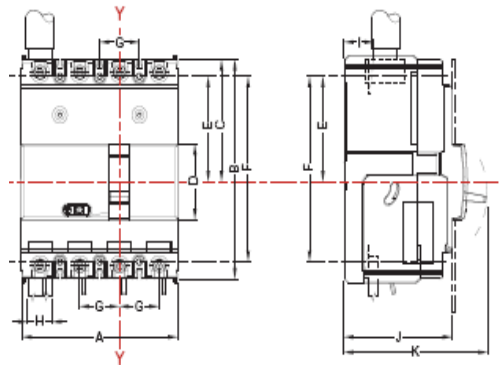
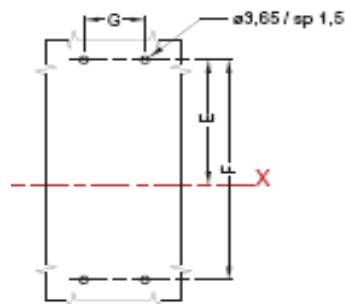
DPX³ ELECTRONIC + MEASURE

In (A)	25 kA		36 kA		50 kA		70 kA	
	3P	4P	3P	4P	3P	4P	3P	4P
40	420402	420412	420432	420442	420462	420472	420665	420675
100	420405	420415	420435	420445	420465	420475	420667	420677
160	420407	420417	420437	420447	420467	420477	420668	420678
250	420409	420419	420439	420449	420469	420479	420669	420679

3. DIMENSIONS

3.1 Fixed version

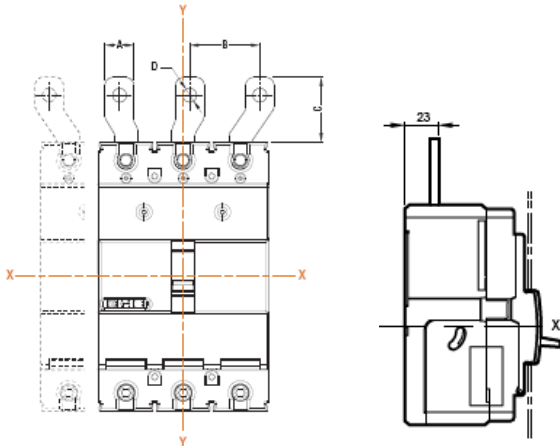
	A	B	C	D	E	F	G	H	I	J	K
250 4P	140	165	82,5	45	61,5	123	35	28,5	18	74	97



DPX³ 250 Electronic

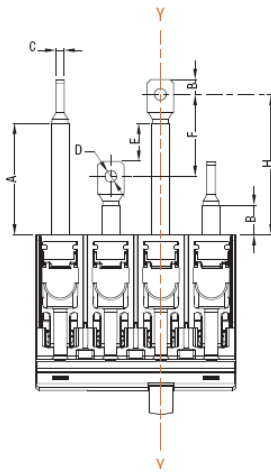
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 667/668/669/675/677/678/679

3.2 Fixed version, front terminals



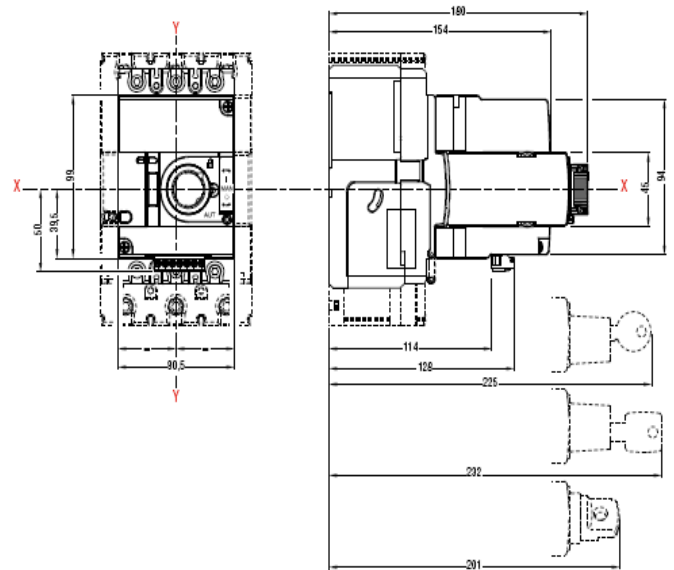
	A	B	C	D
250	33	48,5	54,75	13

3.3 Fixed version, rear terminals

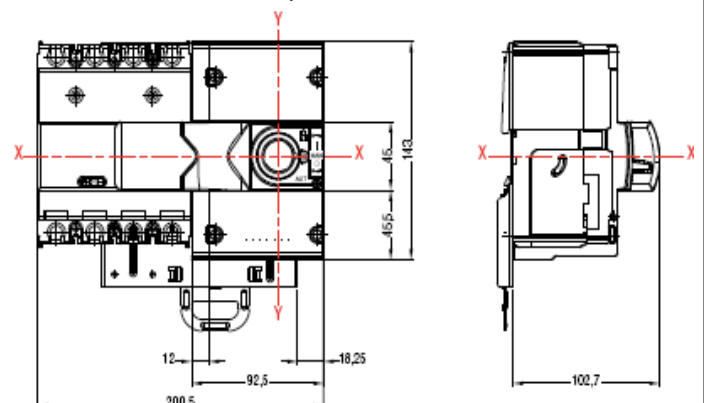


	A	B	C	D	E	F	G	H
250	66,5	22,5	6	8,4	15,5	44	15	80

3.4 Fixed version, front motor operator



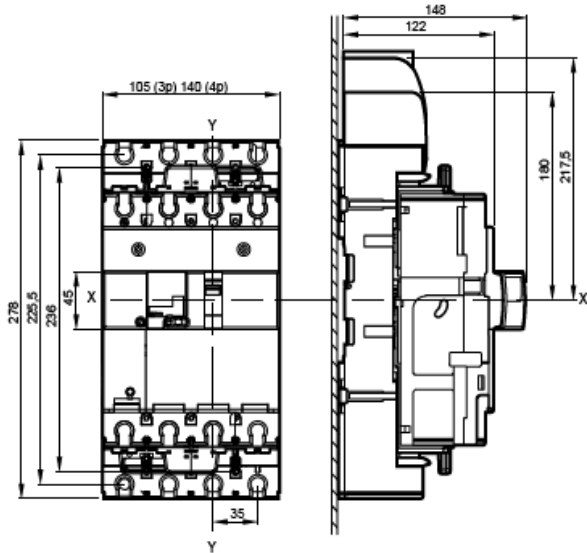
3.5 Fixed version, side motor operator



DPX³ 250 Electronic

Reference(s): 420 302/305/307/309/312/315/317/319/332/335/
337/339/342/345/347/349/362/365/367/369/372/375/377/379/635/637/
638/639/645/647/648/649/502/505/507/509/512/515/517/519/522/525/
527/529/532/535/537/539/542/545/547/549/552/555/557/559/692/695/
697/699/702/705/707/709/402/405/407/409/412/415/417/419/432/435/
437/437/439/442/445/447/449/462/465/467/469/472/475/477/479/665/
667/668/669/675/677/678/679

3.6 Plug-in version



4. ELECTRICAL AND MECHANICAL CHARACTERISTICS

4.1 Breaker technical characteristics

Circuit breaker	DPX ³ 250
Rated current I _n (A)	40-250
Rated insulation voltage U _i (V)	800
Rated operational voltage U _e (V)	690 V (ac)
Rated impulse withstand voltage U _{imp} (kV)	8
Ambient temperature (°C)	40
Endurance electrical / mechanical	8000/20000
Utilization category	A
Releases type	electronic
Nominal frequency (Hz)	50-60
Thermal adjustment	0,4 ÷ 1 I _n
Magnetic threshold	1,5 ÷ 10 x I _r

4.2 Breaking capacity (KA)

Breaking capacity I _{cu} and I _{cs} in AC (kA)					
	U _e	25 kA	36 kA	50 kA	70 kA
I _{cu} (kA)	220/240V	40	60	80	100
	380/415V	25	36	50	70
	440V	20	30	40	60
	480/500V	10	25	30	40
	690V	8	16	18	20
I _{cs} (%I _{cu})	-	100	100	100	100

4.3 Derating temperature Ta (°C)

Influence of ambient temperature Ta(°C)				
I _n (A)	40	50	60	70
40	40	37	34	30
100	100	92	84	76
160	160	147	134	122
250	250	230	210	190

There is no derating below 40°C.

4.4 Breaker power loss (W)

Power loss DPX ³ 250 ELE(W)				
I _n (A) ---->	40	100	160	250
Cage terminals	0,3	2,0	5,1	12,5
Lugs	0,3	2,0	5,1	12,5
External terminals	0,3	2,0	5,1	12,5
Spreaders	0,3	2,0	5,1	12,5
Rear terminals	0,3	2,0	5,1	12,5
Plugin version	0,6	4,0	10,2	25,0

4.5 Altitude

Altitude (m)				
	Altitude (m)	≤2000	3000	4000
DPX ³ 250	Rated current (A)	1 x I _n	0,96 x I _n	0,93 x I _n
	Rated voltage (V)	500	500	400

4.6 Loads operation

Loads operation	
Rated current (A)	I _n =250
Opening (N)	45
Closing (N)	78
Reset (N)	75

4.7 Measure

Current	phase and neutral	I ₁ ,I ₂ ,I ₃ ,I _N	Class I according to IEC 61557-12
	phases average	I _{avg}	Class I according to IEC 61557-12
	higher phase	I _{max}	Class I according to IEC 61557-12
	current unbalance	%I _{avg}	Class I according to IEC 61557-12
Voltage	Phase/phase	U ₁₂ ,U ₂₃ , U ₃₁	0.50%
	Phase/neutral	V _{1N} ,V _{2N} ,V _{3N}	0.50%
	phase/phase avg.	U _{avg}	0.50%
	Phase/neutral avg.	V _{avg}	0.50%
	Phases rotation	123,132	0.50%
Frequency	Electrical network	F	0.10%
Power	active	P _{tot} & for phase	Class II according to IEC 61557-12
	reactive	Q _{tot} & for phase	Class II according to IEC 61557-12
	apparent	R _{tot} & for phase	Class II according to IEC 61557-12

DPX³ 250 Electronic

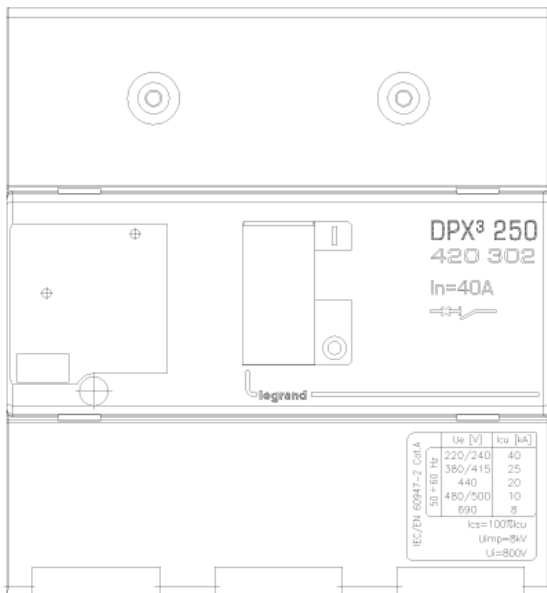
Reference(s): 420 302/305/307/309/312/315/317/319/332/335/
337/339/342/345/347/349/362/365/367/369/372/375/377/379/635/637/
638/639/645/647/648/649/502/505/507/509/512/515/517/519/522/525/
527/529/532/535/537/539/542/545/547/549/552/555/557/559/692/695/
697/699/702/705/707/709/402/405/407/409/412/415/417/419/432/435/
437/437/439/442/445/447/449/462/465/467/469/472/475/477/479/665/
667/668/669/675/677/678/679

Energy	active	Last reset	Class II according to IEC 61557-12
	reactive	Last reset	Class II according to IEC 61557-12
	apparent	Last reset	Class II according to IEC 61557-12
THD	voltage	Pha./pha. & phase/neutral	Range 1 to 15°
	current	Phase/neutral	Range 1 to 15°

5. CONFORMITY

IEC 60947-2
EN 60947-2

6. MARKING



7. NAVIGATION

I_r	0.4 x I _n ÷ 1 x I _n
t_r	3 – 5 – 10 – 15 – MEM 3 – MEM 5 – MEM 10 – MEM 15
I_{sd}	1.5I _r – 2I _r – 2.5I _r – 3I _r – 4I _r – 5I _r – 6I _r – 7I _r – 8I _r – 9I _r – 10I _r
t_{sd}	0-100-200-300-400-500- I _t =K 0 500
N	OFF – 50% - 100%
sel	Lo - Hi
I1	I L1 measured value present
I2	I L2 measured value present
I3	I L3 measured value present
IN	I N measured value present
MEM I_r	Measured value of last intervention

8. EQUIPMENTS AND ACCESSORIES

8.1 Releases

- Shunt releases with voltage:
 - 12 Vac/dc ref. 421 012
 - 24 Vac/dc ref. 421 013
 - 48 Vac/dc ref. 421 014
 - 110-130 Vac ref. 421 015
 - 200-277 Vac ref. 421 016
 - 380-480 Vac ref. 421 017

- undervoltage releases with voltage:
 - 12 Vac/dc ref. 421 018
 - 24 Vac/dc ref. 421 019
 - 48 Vac/dc ref. 421 020
 - 110 Vac ref. 421 021
 - 200-240 Vac ref. 421 022
 - 277 Vac ref. 421 023
 - 380-415 Vac ref. 421 024
 - 440-480 Vac ref. 421 025

- auxiliary contact:
 - set of connectors for aux contacts ref. 421 044
 - aux contacts and fault signal ref. 421 011
 - aux contacts (1NC and 1 NO) for all rotary handles ref. 421 010
 - inserted device signal ref. 421 048

8.2 Rotary handles :

- Direct:
- DPX³ direct rotary handle ele / earth leakage ref. 421 001
 - DPX³ emergency direct rotary handle ele / earth leakage ref. 421 003

- Vari-depht:
- DPX³ vari depth rotary handle ref. 421 004
 - DPX³ emergency vari depth rotary handle ref. 421 005

- Locking accessories
- locking acc. for direct rotary handle - ronis ref. 421 006
 - locking acc. for direct rotary handle - profalux ref. 421 007
 - locking acc. for vari depth rotary handle - ronis ref. 421 008
 - locking acc. for vari depth rotary handle – profalux ref. 421 009

8.3 Mechanical accessories :

- Insulated shields
- Set of 3 ref. 421 070

- Sealable terminal shields
- sealable terminal shield for rear terminals 250 3P ref. 421 052
 - sealable terminal shield for rear terminals 250 4P ref. 421 053
 - sealable terminal shield for front spreaders 250 3P ref. 421 056
 - sealable terminal shield for front spreaders 250 4P ref. 421 057

- Padlocks
- DPX³ padlock accessory for handle (off) ref. 421 049

- Interlock:
- DPX³ interlock mounting plate ref. 421 058
 - DPX³ interlock for plug-in / draw-out version ref. 421 059

8.4 Connection's accessories :

- Cage terminals
- cage terminals for al or cu cables kit (3) - flex 1x120mm², rigid 1x150mm², bar/cable lug 18mm ref. 421 030
 - cage terminals for al or cu cables kit (4) - flex 1x120mm², rigid 1x150mm², bar/cable lug 18mm ref. 421 031

DPX³ 250 Electronic

Reference(s): 420 302/305/307/309/312/315/317/319/332/335/
337/339/342/345/347/349/362/365/367/369/372/375/377/379/635/637/
638/639/645/647/648/649/502/505/507/509/512/515/517/519/522/525/
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437/437/439/442/445/447/449/462/465/467/469/472/475/477/479/665/
667/668/669/675/677/678/679

Front spreaders

- DPX³ front spreaders for 3P DPX³ 250 (3) ref. 421 034
- DPX³ front spreaders for 4P DPX³ 250 (4) ref. 421 035

Rear terminals

- DPX³ flat rear terminals for 3P DPX³ 250 (3) ref. 421 038
- DPX³ flat rear terminals for 4P DPX³ 250 (4) ref. 421 039

8.5 Plug-in version

Bases

- front/rear terminals plug-in base 3P DPX³250 ref. 421 042
- front/rear terminals plug-in base 4P DPX³ 250 ref. 421 043

Locking accessories

- locking accessory for plug-in base – ronis ref. 421 045
- locking accessory for plug-in base – profalux ref. 421 046
- padlock accessory for plug-in base ref. 421 047

8.6 Motor operator

- side motor operator 24-230 Vac - 24-230 Vdc ref. 421 060
- front motor operator 24-230 Vac - 24-230 Vdc ref. 421 061

Locking accessories for front motor operator:

- locking acc. for front motor operator - ronis ref. 421 062
- locking acc. for front motor operator – profalux ref. 421 063
- padlock selector for front motor operator ref. 421 064

Locking accessories for side motor operator:

- locking acc. for side motor operator - ronis ref. 421 065
- locking acc. for side motor operator – profalux ref. 421 066
- padlock selector for side motor operator ref. 421 067

Din plate:

- DPX³ din plate for motor operator DPX³ 250 ref. 421 069

8.7 Mounting on rail fixing plate

- DPX³ din rail fixing plate DPX³ 250 3P/4P ref. 421 072

8.8 Communication interface

- DPX³ communication interface (Modbus) ref. 421 075

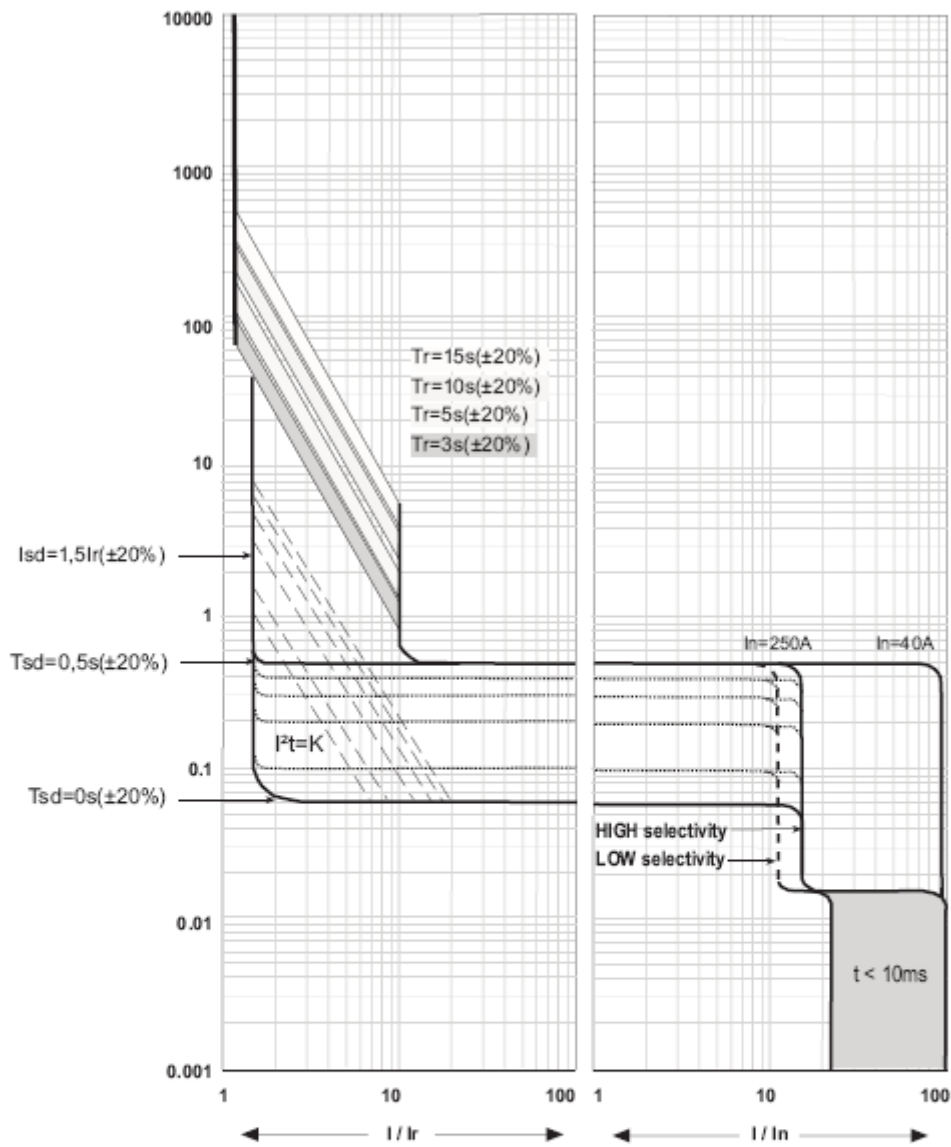
8.9 Supply

- Lithium battery CR1616 3V x 2 ref. 421 082
- External power supply 12V ref. 288 06

- Minimum current for electronic card supply : $0.2 \times I_n$
- Auxiliary supply by 421 075 (24 V ac/dc);

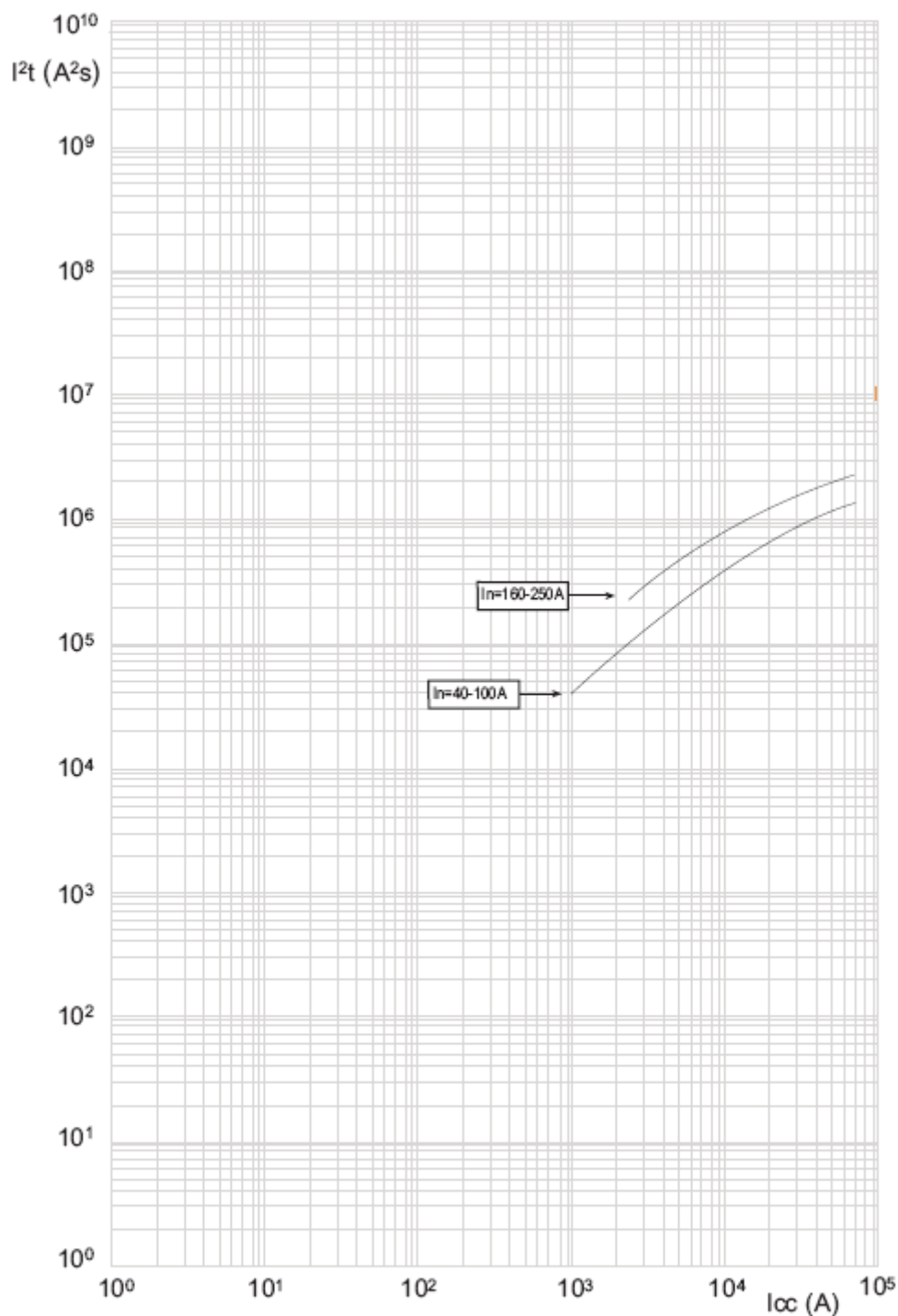
9. CURVES

9.1 TRIPPING CURVE



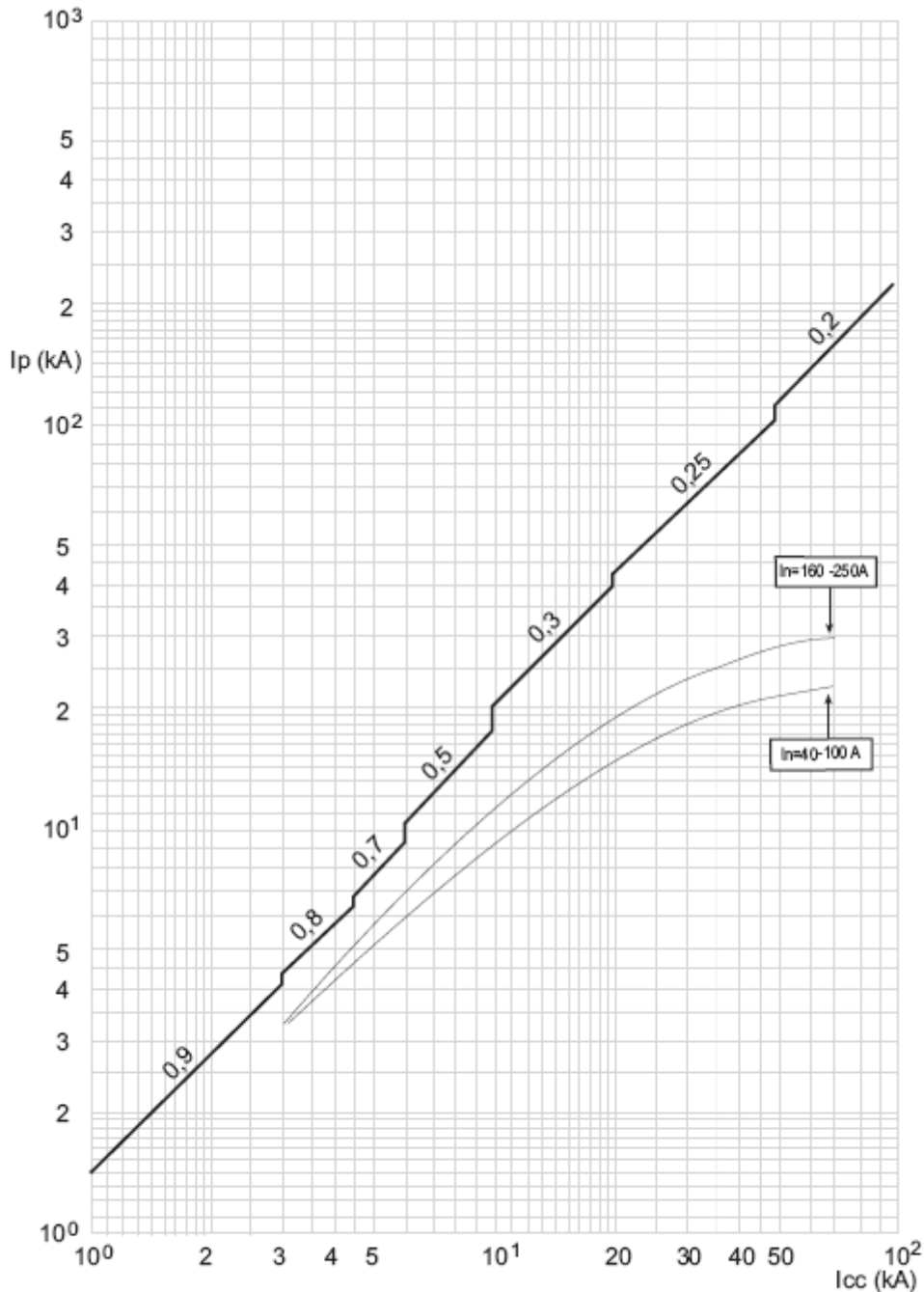
t = time
 I = rated current □
 Ir = setting current
 curve number 1 = characteristic with cold start
 curve number 2 = characteristic with hot start

9.2 Energy curve



I_{cc} = estimated short circuit symmetrical current (RMS value)
 I^2t (A²s) = pass-through specific energy

9.3 Restricted current curve

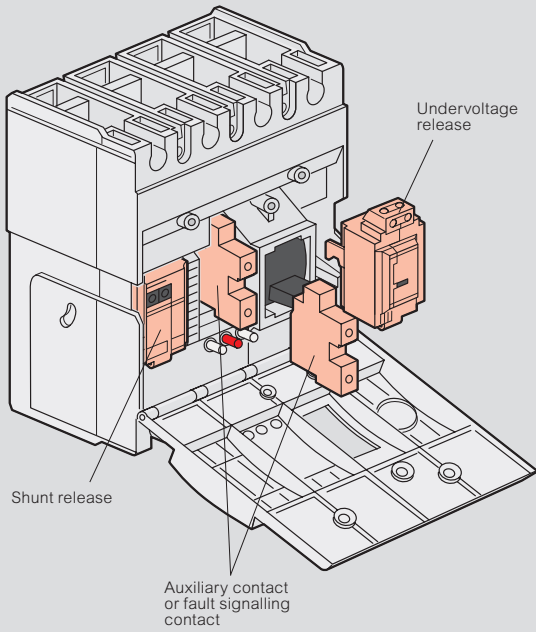


I_{cc} = estimated short circuit symmetrical current (RMS value)
 I_p = maximum short circuit peak current
 - - - - - maximum prospective short circuit peak current
 corresponding at the power factor
 ——— maximum real peak short circuit current

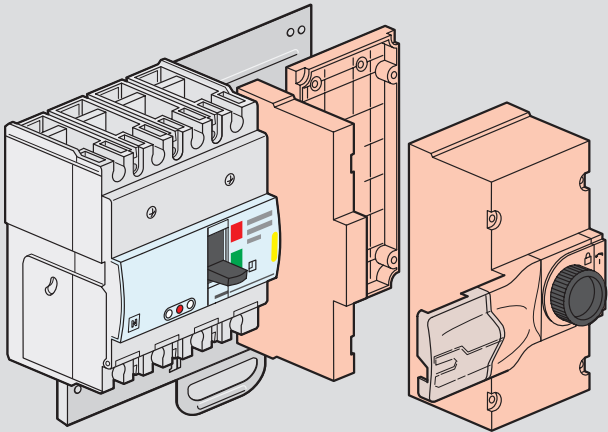
DPX³ 160/250

installation principle

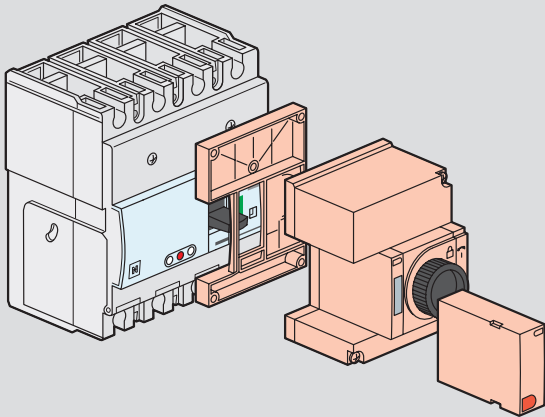
Auxiliaries mounting



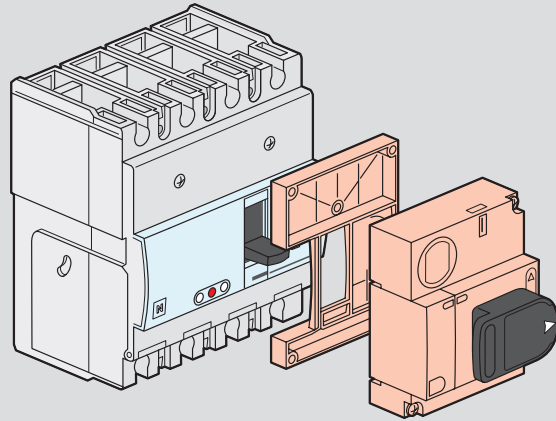
Side mounting motor-driven handle



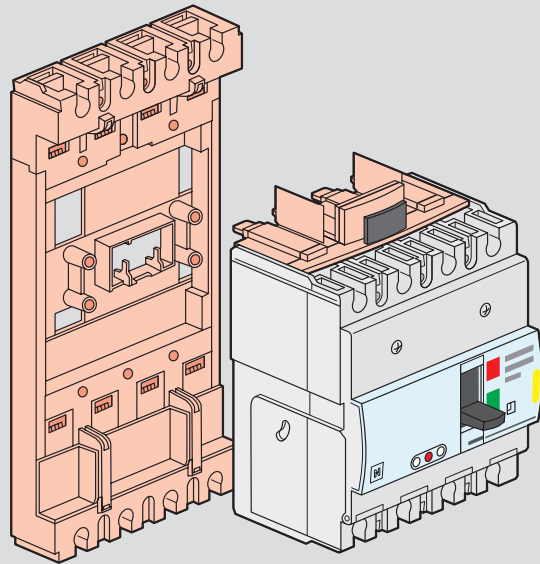
Front mounting motor-driven handle



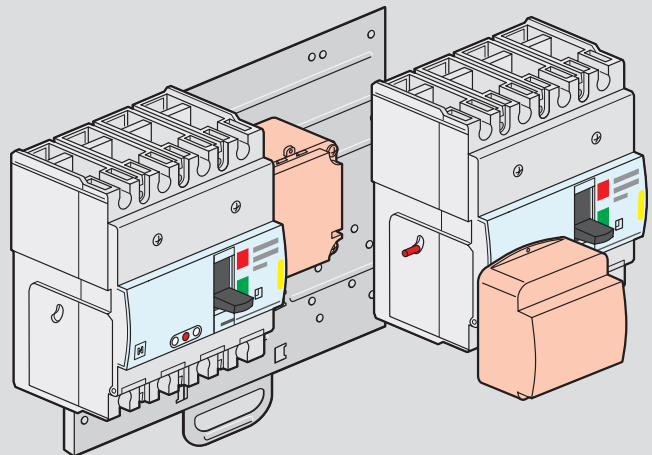
Direct rotary handle

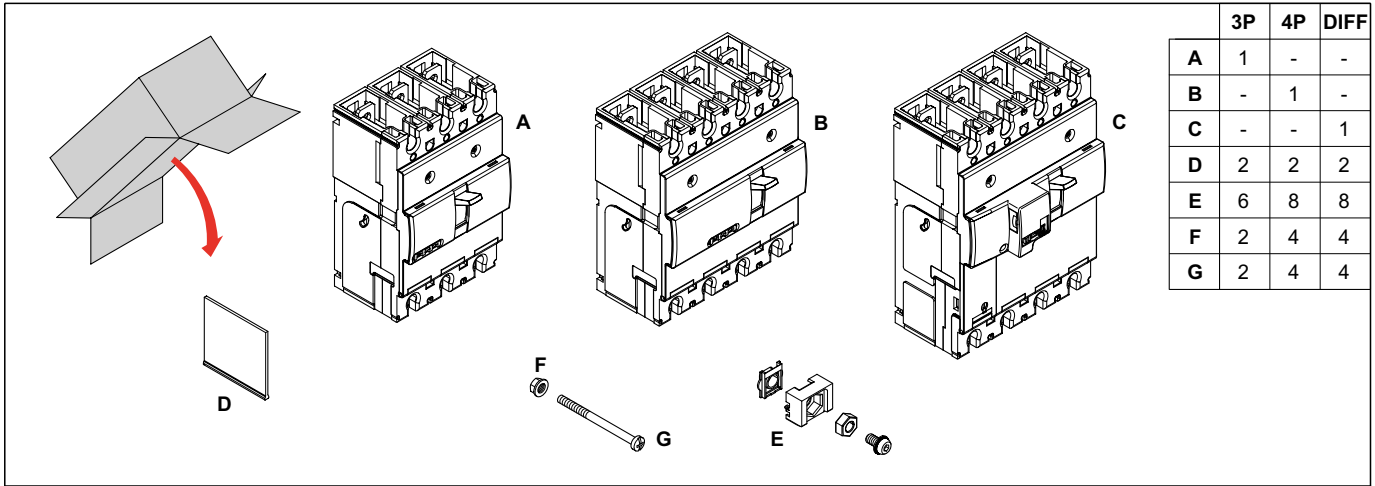


Plug-in version



Supply inverter type





	3P	4P	DIFF
A	1	-	-
B	-	1	-
C	-	-	1
D	2	2	2
E	6	8	8
F	2	4	4
G	2	4	4

