

DPX³ 160

Thermal magnetic and trip-free switches

DPX³-I 160

Reference(s) : 420 000/ 001/ 002/003/ 004/ 005/ 006/ 007/ 010/ 011/ 012/ 013/ 014/ 015/ 016/ 017/ 040/ 041/ 042/ 043/ 044/ 045/ 046/ 047/ 050/ 051/ 052/ 053/ 054/ 055/ 056/ 057/ 080/ 081/ 082/ 083/ 084/ 085/ 086/ 087/ 090/ 091/ 092/ 093/ 094/ 095/ 096/ 097/ 120/ 121/ 122/ 123/ 124/ 125/ 126/ 127/ 130/ 131/ 132/ 133/ 134/ 135/ 136/ 137/ 198/ 199



CONTENTS	PAGES
1. USE	1
2. RANGE	1
3. DIMENSIONS AND WEIGHTS	1
4. OVERVIEW	2
5. ELECTRICAL CONNECTIONS	2
6. ELECTRICAL AND MECHANICAL CHARACTERISTICS	4
7. CONFORMITY	6
8. EQUIPMENTS AND ACCESSORIES	7
9. CURVES	9

1. USE

DPX³ platform has been developed to give a new solution of protection devices for a more precise approach in flow installations in order to offer the correct answer for different project needs.

DPX³ platform provide a complete project approach in premium market segment, offering a range completely suitable for medium power application with high performance breakers in compact dimensions and at a competitive costs.

2. RANGE

Circuit breakers

I _n (A)	16 kA		25 kA	
	3P	4P	3P	4P
16	4 200 00	4 200 10	4 200 40	4 200 50
25	4 200 01	4 200 11	4 200 41	4 200 51
40	4 200 02	4 200 12	4 200 42	4 200 52
63	4 200 03	4 200 13	4 200 43	4 200 53
80	4 200 04	4 200 14	4 200 44	4 200 54
100	4 200 05	4 200 15	4 200 45	4 200 55
125	4 200 06	4 200 16	4 200 46	4 200 56
160	4 200 07	4 200 17	4 200 47	4 200 57

I _n (A)	36 kA		50 kA	
	3P	4P	3P	4P
16	4 200 80	4 200 90	4 201 20	4 201 30
25	4 200 81	4 200 91	4 201 21	4 201 31
40	4 200 82	4 200 92	4 201 22	4 201 32
63	4 200 83	4 200 93	4 201 23	4 201 33
80	4 200 84	4 200 94	4 201 24	4 201 34
100	4 200 85	4 200 95	4 201 25	4 201 35
125	4 200 86	4 200 96	4 201 26	4 201 36
160	4 200 87	4 200 97	4 201 27	4 201 37

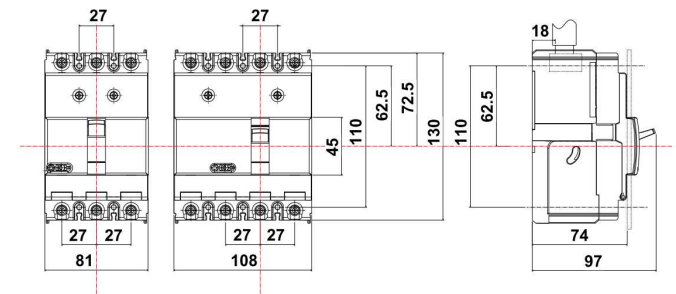
Switches

I _n (A)	3P	4P
160	4 201 98	4 201 99

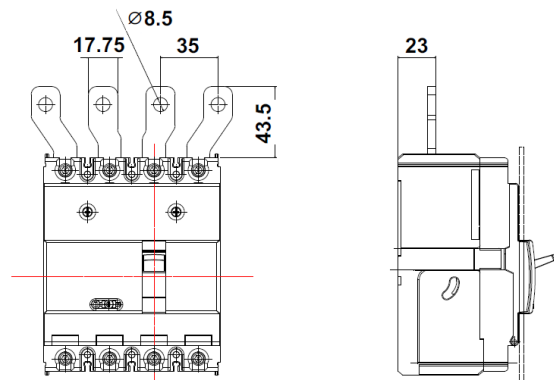
3. DIMENSIONS AND WEIGHTS

3.1 Dimensions

Fixed version



Fixed version, front terminals



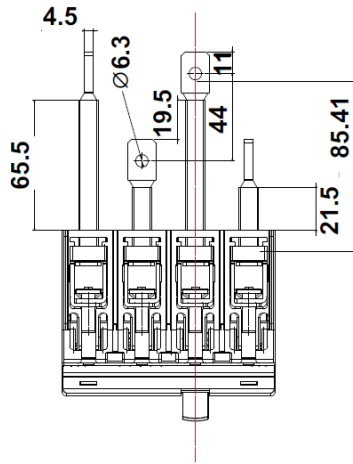
DPX³ 160

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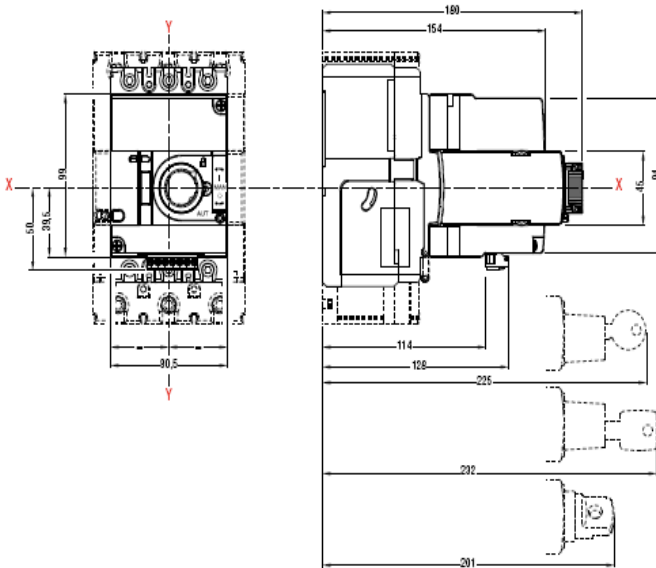
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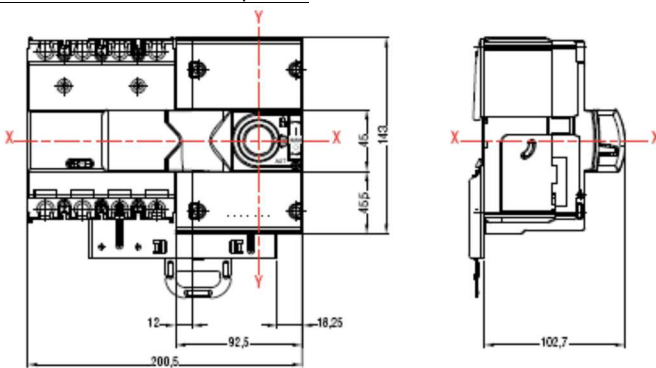
Fixed version, rear terminals



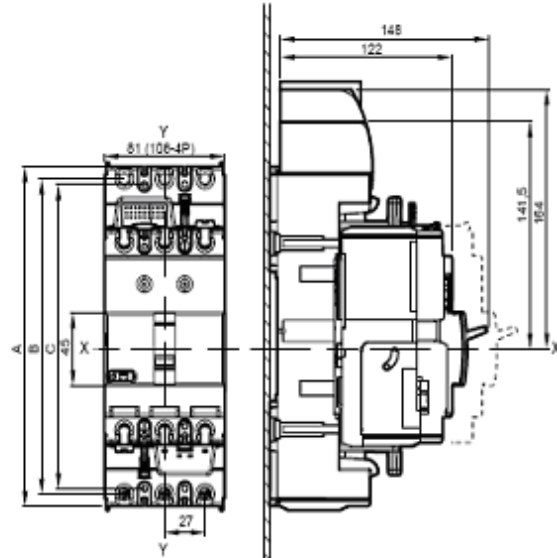
Fixed version, front motor operator



Fixed version, side motor operator



Plug-in version



	A	B	C
DPX ³ 160 - 3P	208	193	186
DPX ³ 160 - 4P	238	223	216

3.2 Weights

Configuration	Weights (Kg)	
	3P	4P
Circuit breaker/switch disconnecter	1,27	1,38
Direct rotary handle*	0.35	
Vari depth rotary handle*	0.72	
Interlock*	1.08	
Spreader*	0.13	0.17

* to add to device weight

4. OVERVIEW

4.1 Supplied

Supplied with

- fixing screws
- cage terminals (70mm² flexible cable or 95mm² rigid cable)

5. ELECTRICAL CONNECTIONS

5.1 Mounting possibilities

On DIN rail:

- Vertical
- Supply inverter type

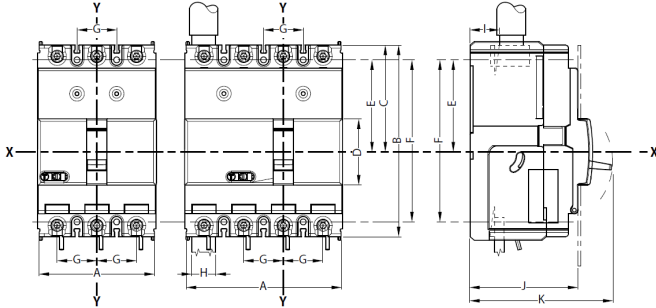
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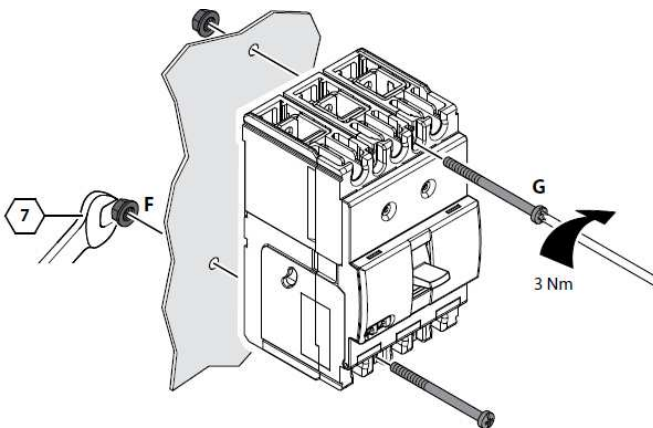
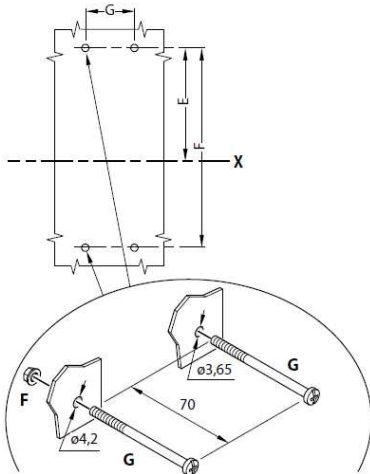
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124/ 125/ 126/ 127/ 130/ 131/ 132/ 133/ 134/ 135/ 136/ 137/ 198/ 199

5.2 Mounting

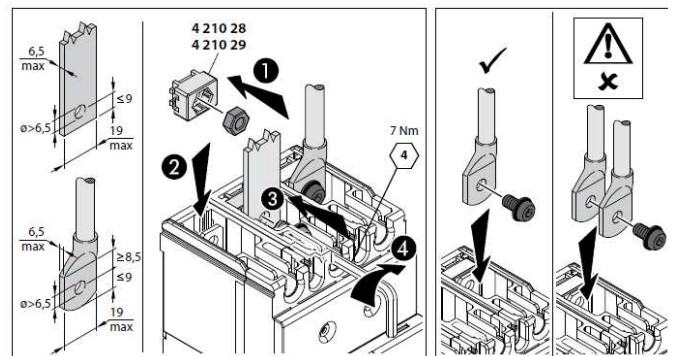
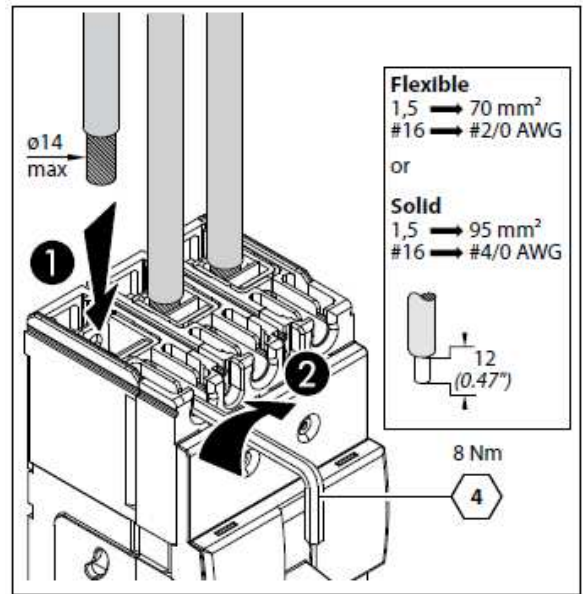
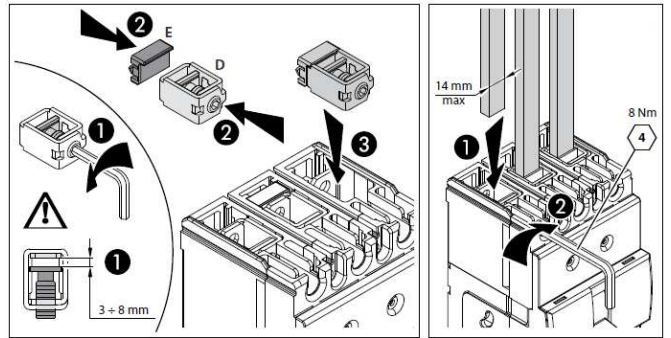
(see instruction sheet for detailed mounting procedures)



	A	B	C	D	E	F	G	H	I	J	K
160 3P	81	130	72,5	45	62,5	110	27	19	18	74	97
160 4P	108	130	72,5	45	62,5	110	27	19	18	74	97



Busbars/cable lugs and cables:



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6. ELECTRICAL AND MECHANICAL CHARACTERISTICS

Circuit breaker

Circuit Breaker	DPX ³ 160 E/B/F/N (16kA, 25kA, 36kA, 50kA)
Rated current (A)	16, 25, 40, 63, 80, 100, 125, 160
Poles	3 - 4
Rated insulation voltage U _i (V)	800
Rated operating voltage (50/60Hz) U _e (V)	690
Rated impulse withstand current U _{imp} (kV)	8
Rated frequency (Hz)	50 - 60
Reference ambient temperature(°C)	40 - 50
Operating temperature (°C)	-25 ÷ 70
Mechanical endurance (cycles)	25000
Mechanical endurance with motor control (cycles)	25000
Electrical endurance at I _n (cycles)	8000
Electrical endurance at 0.5 I _n (cycles)	10000
Utilization category	A
Suitable for isolation	Yes
Type of protection	Thermal-magnetic
Magnetic adjustment	400A (I _n up to 40A); 10 x I _n (I _n > 40A)
Thermal adjustment	(0.8 ÷ 1) x I _n
Neutral protection for 4P version (%I _{th})	100
Dimensions (W x H x D) (mm) 3P	80 x 130 x 97
Dimensions (W x H x D) (mm) 4P	110 x 130 x 97
Weight (kg)	1.2(3P) - 1.4(4P)

Switch disconnectors

Switch	DPX ³ -I
Uninterrupted nominal current I _n (A)	160
Short-time resistive current I _{cu} (kA) for 1s	2
Rated short-circuit making capacity I _{cm} (kA)	3
Isolated voltage U _i (V AC)	800
Maximum rated operating voltage U _e (V AC/DC)	690
Rated impulse withstand voltage U _{imp} (kV)	8
Utilisation category	AC23A
Rated frequency (Hz)	50-60
Operating temperature (°C)	-25 ÷ 70
Mechanical endurance (cycles)	25000
Mechanical endurance with motor control (cycles)	25000
Electrical endurance (cycles) at I _n	8000
Electrical endurance (cycles) at 0.5 I _n	10000
Dimensions (W x H x D) (mm) 3P	80 x 130 x 97
Dimensions (W x H x D) (mm) 4P	110 x 130 x 97
Weight (kg)	1.2(3P) - 1.4(4P)

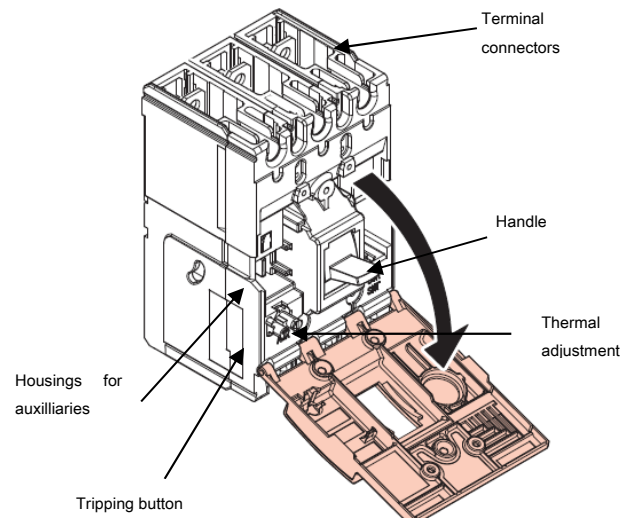
The maximum admissible (absolute) temperature is 125°C
(for detail, see IEC 60947-1 and 60947-2).

DPX³ product line has the possibility to supply both in "direct" and "reverse" feed.

If "direct", the word "LINE" needs to be marked on supply terminals (normally the top ones), as well as "LOAD" has to be written on the output terminals to be connected to the load (normally the bottom ones).

If "reverse", any indications about LINE / LOAD are NOT expected on the product.

6.1 Main parts constituting the circuit breaker



6.2 Breaking capacity (kA)

		Breaking capacity (kA) & I _{cs}				
		3P-4P	3P-4P	3P-4P	3P-4P	
IEC 60947-2	U _e /I _{cu}	E	B	F	N	
	240 V AC	25	35	50	65	
	415 V AC	16	25	36	50	
	500 V AC	8	10	12	15	
	690 V AC	5	5	8	10	
	250 V DC	10	10	10	10	
	I _{cs} (% I _{cu})	100	100	100	100	
	Rated making capacity under short circuit I _{cm}					
	I _{cm} (kA) at 415V	32	53	76	105	
	240 V AC	25	35	50	65	
NEMA AB-1	500 V AC	8	10	12	15	
	690V AC	5	5	8	10	

6.3 Rated current (I_n) at 40°C / 50°C

I _n (A)	Assigned current trip			
	thermal		magnetic	
	L1-L2-L3	N	L1-L2-L3	N
16	16	16	400	400
25	25	25	400	400
40	40	40	400	400
63	63	63	630	630
80	80	63	800	800
100	100	63	1000	1000
125	125	80	1250	1250
160	160	100	1600	1600

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6.4 Load operations

Loads operation	
Rated current (A)	$I_n = 160A$
Opening (N)	45
Closing (N)	78
Reset (N)	75

6.5 Electrodynamic forces

The table below shows an indication of suggested distances to keep between the breaker and the first fixing point of the conductor and bars in order to reduce the effects of the electrodynamic stresses that may be created during a short circuit. In the realization of anchorage system it is recommend the use of isolators suitable for the type of conductor used and the operating voltage.

I_{cc} (kA)	Maximum Distance (mm)
16	400
25	400
36	350
50	300

According to conductor type and bar system (except Legrand bar kits), the choice of the distance to keep is to be calibrated by the installer. Also installer must take into account the weight of the conductors so that this does not affect the electrical junction between the conductor itself and the connection point.

6.6 Power losses per pole under I_n

Circuit breaker

	Power losses per pole (W)							
	I_n (A)							
	16	25	40	63	80	100	125	160
Cage terminals	3.1	5.7	6.6	10.6	6.7	8.5	9.2	13.7

Note: power losses in the table above are referred and measured as described in the standard IEC 60947-2 (Annex G) for circuit-breakers. Values in the table are referred to a single phase.

Switch disconnectors

	Power losses per pole (W)
	I_n (A)
	160
Cage terminals	10

Note: power loss in the table above are referred and measured as described in the standard IEC 60947-3 for switches. Values in the table are referred to a single phase.

6.7 DERATINGS

according to IEC/EN 60947-1

6.7.1 Temperature

Rated current and his adjustment has to be considered relating to a rise or fall of ambient temperature and to a different version or installation conditions. The table below indicates the maximum long-time (LT) protection setting depending on the ambient temperature.

I_n (A)	Temperature T_a (°C)											
	-25	-20	-10	-5	0	10	20	30	40	50	60	70
16	23	22	21	21	20	19	18	17	16	16	15	14
25	37	35	34	33	32	30	28	27	25	25	23	22
40	55	54	52	51	50	47	43	43	40	40	36	35
63	90	88	85	84	82	81	71	67	63	63	58	55
80	115	113	111	109	107	97	87	83	80	80	74	71
100	129	126	123	122	117	111	109	105	100	100	94	93
125	159	157	154	152	149	138	134	131	125	125	112	110
160	218	215	207	200	198	190	176	168	160	160	146	138

6.7.2 Specific condition use

Climatic conditions

according to IEC/EN 60947-1 Annex Q, Cat. F subject to temperature, humidity, vibration, shock and salt mist.

Pollution degree

for DPX³ 160 circuit breakers, degree 3, according to IEC/EN 60947-2

6.7.3 Altitude

Altitude derating for DPX³ and DPX³-I

Altitude (m)	2000	3000	4000	5000
U_e (V)	690	590	520	460
I_n (A) ($T_a = 40^\circ C/50^\circ C$)	I_n	$0.98 \times I_n$	$0.93 \times I_n$	$0.9 \times I_n$

5.6.3 Use in DC

See table B.

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7. CONFORMITY

DPX³ range of product concerning circuit-breakers and switch-disconnectors exceed compliance with the IEC/EN standard 60947-2 and 60947-3 respectively. Certification available by IECEE CB-scheme or LOVAG Compliance scheme.

DPX³ respect the European Directives REACH, RoHS, RAEE.

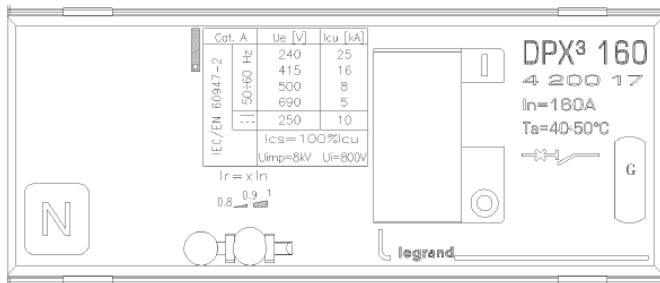
For specific information, please contact Legrand support.

7.1 Marking

Product (both circuit breakers and switch disconnectors) are provided with labelling in full conformity to the referred standard and directives requirements by laser or sticker labels (for illustrative purposes only) as:

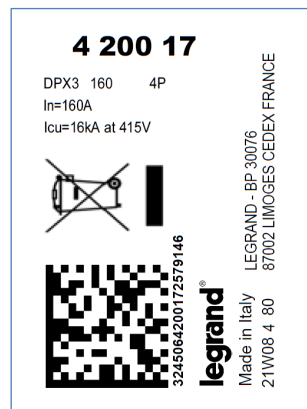
Product laser label on front

- Manufacturer responsible
- Denomination, type product, code
- Standard conformity
- Standard characteristics declared
- Coloured identification of I_{cu} at 415V



Product sticker label on side

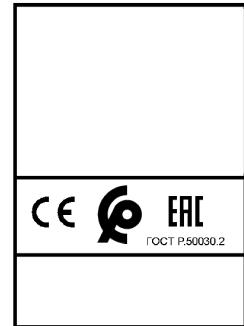
- Manufacturer responsible
- Denomination and type product
- Standard conformity
- Mark/Licence (if any)
- Directive requirements
- Bar code identification product
- Manufacturing Country



Mark sticker label on side

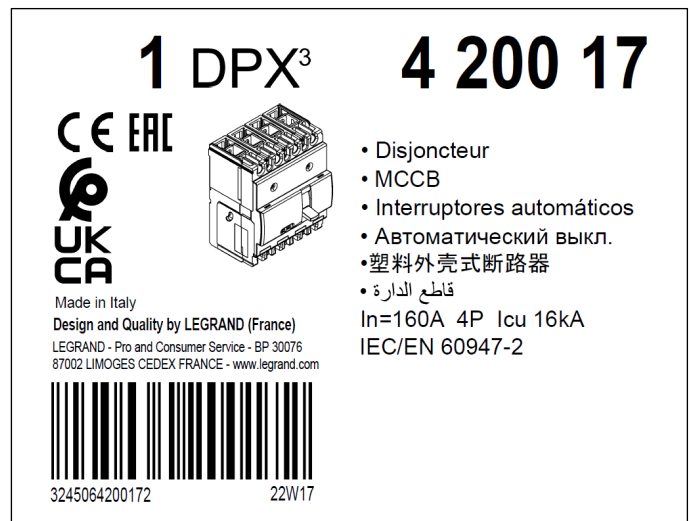
- Product code
- Mark/Licence (if any)
- Country deviation, if any

4 200 17



Packaging sticker label

- Manufacturer responsible
- Denomination and type product
- Mark/Licence (if any)
- Directive requirements
- Bar code identification product



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124/ 125/ 126/ 127/ 130/ 131/ 132/ 133/ 134/ 135/ 136/ 137/ 198/ 199

7. EQUIPMENTS AND ACCESSORIES

7.1 Releases (for DPX³ 125/250 HP and DPX³ 160/250)

- shunt releases with voltage:

12 Vac and dc	ref. 4 210 12
24 Vac and dc	ref. 4 210 13
48 Vac and dc	ref. 4 210 14
110÷130 Vac	ref. 4 210 15
220÷277 Vac	ref. 4 210 16
380÷480 Vac	ref. 4 210 17

Maximum power = 400 VA / W

- undervoltage releases with voltage:

12 Vac and dc	ref. 4 210 18
24 Vac and dc	ref. 4 210 19
48 Vac and dc	ref. 4 210 20
110÷130 Vac and dc	ref. 4 210 21
220÷240 Vac	ref. 4 210 22
277 Vac	ref. 4 210 23
380÷415 Vac	ref. 4 210 24
440÷480 Vac	ref. 4 210 25

Maximum power = 4 VA
Circuit breaker opening time < 50 ms

- time-lag undervoltage releases (800 ms)
Time-lag modules with voltage:

230 V ac	ref. 0 261 90
400 V ac	ref. 0 261 91

Release (to be equipped with a time-lag module 0 261 90/91) ref. 4 210 98

7.2 Auxiliary contact (for DPX³ 125/250 HP and DPX³ 160/250)

set of connectors for aux contacts ref. 4 210 44
aux contacts (1NC and 1 NO) for all rotary handles ref. 4 210 10
signalling contact plugged-in version ref. 4 210 48

Changeover switch 3A – 250 VAC ref. 4 210 11

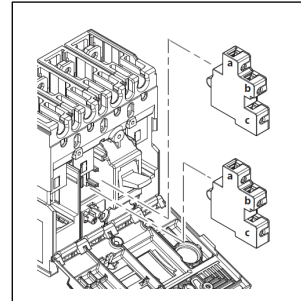
To show the state of the contacts or opening of the DPX³ on a fault:

Auxiliary contact (standard) **OC**
Fault signal **CTR**

Auxiliary contact		
Nominal voltage (V _n)	V (AC or DC)	24 to 250
Intensity (A)	24 V DC	5
	48 V DC	1.7
	110 V DC	0.5
	230 V DC	0.25
	110 V AC	4
	230/250 V AC	3

Configurations:

DPX³ 160 → 1 auxiliary contact + 1 fault signal



To get more information on auxiliary mounting procedures, please refer to product instruction sheet.

7.3 Rotary handles

Direct

- DPX³ direct rotary handle ref. 4 210 01
- DPX³ emergency direct rotary handle ref. 4 210 02

Vari-depth handle IP55

- DPX³ vari depth rotary handle ref. 4 210 04
- DPX³ emergency vari depth rotary handle ref. 4 210 05

Locking accessories

- Ronis type flat key (cod. ABA90GEL6149) for direct rotary handle ref. 4 210 06
- Profalux type star key (cod. HBA90GPS6149) for direct rotary handle ref. 4 210 07
- Ronis type flat key (cod. ABA90GEL6149) for vari-depth handle ref. 4 210 08
- Profalux type flat key (cod. HBA90GPS6149) for vari-depth handle ref. 4 210 09

7.4 Mechanical accessories

Insulated shields (phase barriers)

- Set of 36 ref. 4 210 70

Sealable terminal shields

- sealable terminal shield for rear terminals 3P ref. 4 210 50
- sealable terminal shield for rear terminals 4P ref. 4 210 51
- sealable terminal shield for front spreaders 3P ref. 4 210 54
- sealable terminal shield for front spreaders 4P ref. 4 210 55

Padlocks

- DPX³ padlock accessory for handle ("open" position) ref. 4 210 49

Interlock

- DPX³ interlock for fixed version ref. 4 210 58

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 124/ 125/ 126/ 127/ 130/ 131/ 132/ 133/ 134/ 135/ 136/ 137/ 198/ 199

7.5 Connection accessories

Cage terminals

- terminals for Cu cables kit (3) - flex 1x70mm², rigid 1x95mm², bar/cable lug 14mm ref. 4 210 93
- terminals for Cu cables kit (4) - flex 1x70mm², rigid 1x95mm², bar/cable lug 14mm ref. 4 210 94
- high capacity terminals for Al or Cu cables kit (3) - flex 1x120mm², rigid 1x150mm², bar/cable lug 18mm ref. 4 210 26
- high capacity terminals for Al or Cu cables kit (4) - flex 1x120mm², rigid 1x150mm², bar/cable lug 18mm ref. 4 210 27
- rack screw and nut for cable lug kit (3) ref. 4 210 28
- rack screw and nut for cable lug kit (4) ref. 4 210 29

Front spreaders

- DPX³ front spreaders for 3P DPX³ 160 (set of 3) ref. 4 210 32
- DPX³ front spreaders for 4P DPX³ 160 (set of 4) ref. 4 210 33

Cage terminal use specifications

DPX ³ 160							
Type of cage terminal	Cable standard suggested cross section (mm ²)*			Dimensions limits of cable for cage terminals			
	In (A)	Cu	Al	MIN cross section (mm ²)		MAX cross section (mm ²)	
				Flexible	Rigid	Flexible	Rigid
Standard	16	2,5	4	2,5	4	70	95
	20	2,5	4				
	25	4	6				
	32	6	10				
	40	10	16				
	50	10	16				
	63	16	25				
	80	25	35				
	100	35	\				
High capacity	125	50	\	35	35	95	120
	160	70	\				
	80	25	35				
	100	35	50				
	125	50	70				
	160	70	\				

7.8 Mounting on rail fixing plate

- DPX³ 160 3P/4P without earth leakage module ref. 4 210 71
- DPX³ 160 4P with earth leakage module ref. 4 210 73

DPX³ 160

Thermal magnetic and trip-free switches

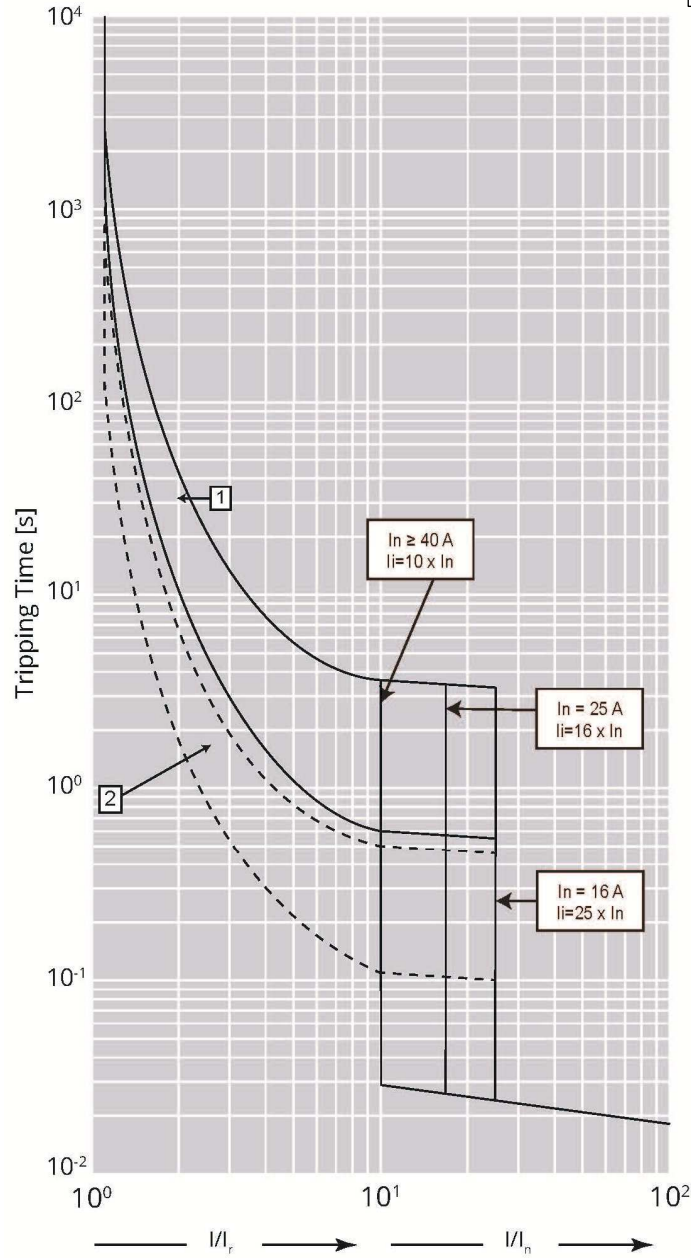
DPX³-I 160

Reference(s) : 420 000/ 001/ 002/003/ 004/ 005/ 006/ 007/ 010/ 011/
 012/ 013/ 014/ 015/ 016/ 017/ 040/ 041/ 042/ 043/ 044/ 045/ 046/ 047/
 050/ 051/ 052/ 053/ 054/ 055/ 056/ 057/ 080/ 081/ 082/ 083/ 084/ 085/
 086/ 087/ 090/ 091/ 092/ 093/ 094/ 095/ 096/ 097/ 120/ 121/ 122/ 123/
 124/ 125/ 126/ 127/ 130/ 131/ 132/ 133/ 134/ 135/ 136/ 137/ 198/ 199

8. CURVES

8.1 Thermal magnetic tripping curve

Update: 19/04/2018



$I_{cu} = 16-25-36-50 \text{ kA}$ $I_{max} = 160 \text{ A}$ 3-4 P $U_e = 415 \text{ Vac}$

Value	Description
t	time
I	current
I_n	rated current
I_r	long time setting current
curve 1	characteristic with cold start
curve 2	characteristic with hot start

DPX³ 160

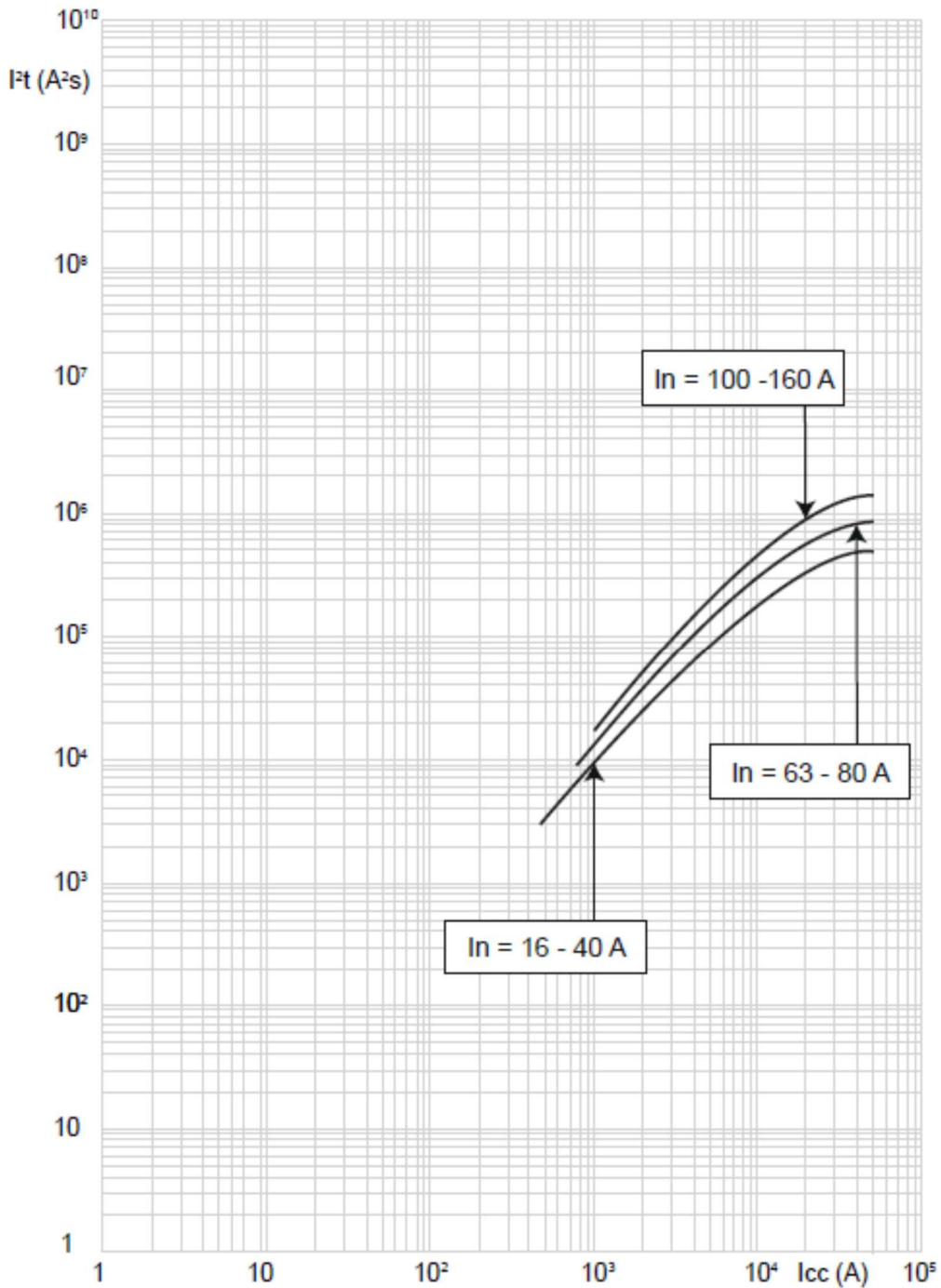
Thermal magnetic and trip-free switches

DPX³-I 160

Reference(s) : 420 000/ 001/ 002/003/ 004/ 005/ 006/ 007/ 010/ 011/
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 086/ 087/ 090/ 091/ 092/ 093/ 094/ 095/ 096/ 097/ 120/ 121/ 122/ 123/
 124/ 125/ 126/ 127/ 130/ 131/ 132/ 133/ 134/ 135/ 136/ 137/ 198/ 199

8.2 Pass-through specific energy characteristic curve

Update: 21/07/2020



$I_{cu} = 16-25-36-50$ kA $I_{max} = 160$ A 3-4 P $U_o = 415$ Vac

Value	Description
I_{cc}	short circuit current
I^2t (A ² s)	pass-through specific energy

DPX³ 160

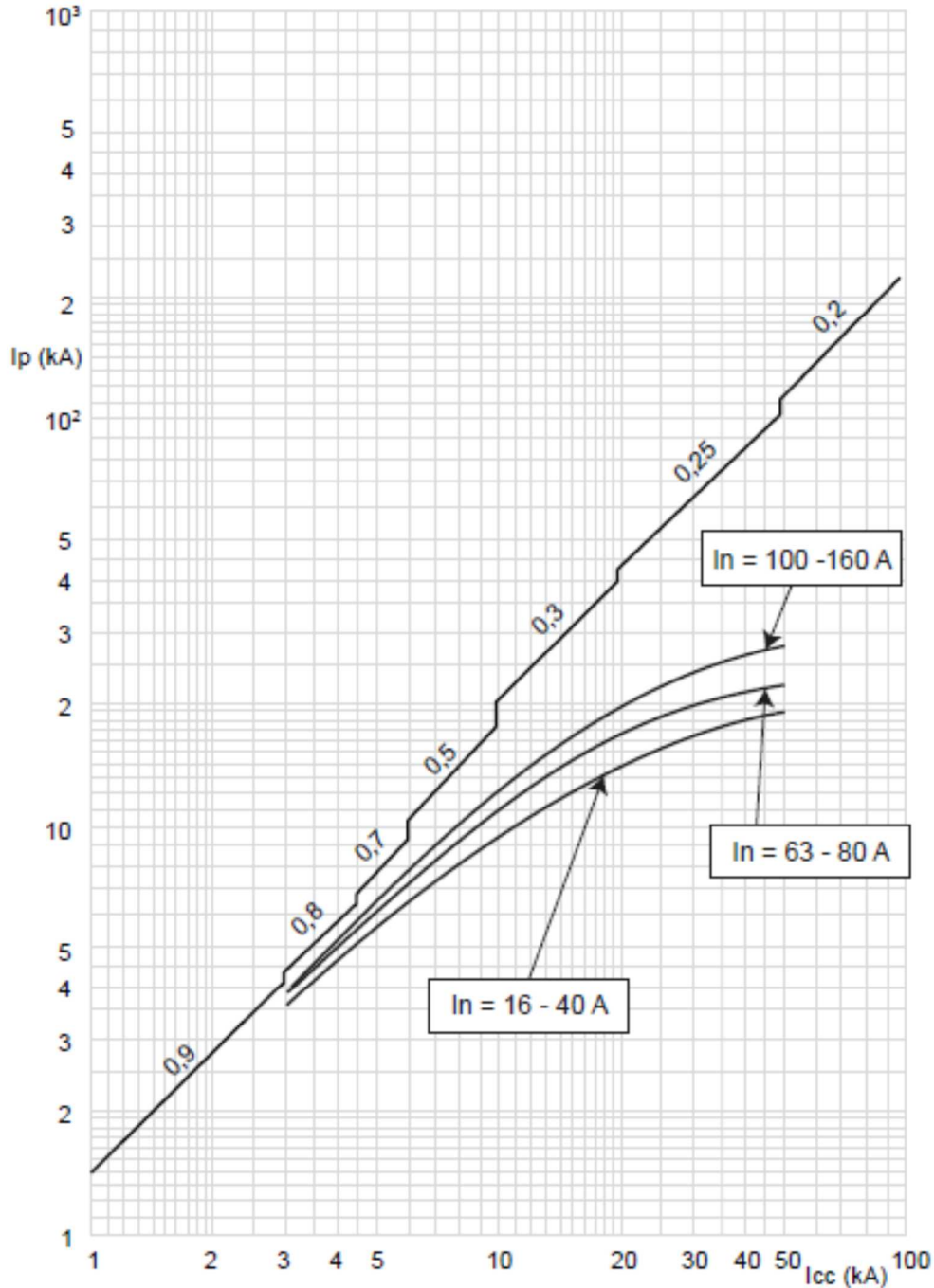
Thermal magnetic and trip-free switches

DPX³-I 160

Reference(s) : 420 000/ 001/ 002/003/ 004/ 005/ 006/ 007/ 010/ 011/
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 086/ 087/ 090/ 091/ 092/ 093/ 094/ 095/ 096/ 097/ 120/ 121/ 122/ 123/
 124/ 125/ 126/ 127/ 130/ 131/ 132/ 133/ 134/ 135/ 136/ 137/ 198/ 199

8.3 Cut-off peak current characteristic curve (kA)

Update: 10/02/2017



$I_{cu} = 16-25-36-50$ kA $I_{max} = 160$ A 3-4 P $U_e = 415$ Vac

Value	Description
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

Thermal magnetic and trip-free switches

DPX³-I 160

Reference(s) : 420 000/ 001/ 002/003/ 004/ 005/ 006/ 007/ 010/ 011/
 012/ 013/ 014/ 015/ 016/ 017/ 040/ 041/ 042/ 043/ 044/ 045/ 046/ 047/
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 086/ 087/ 090/ 091/ 092/ 093/ 094/ 095/ 096/ 097/ 120/ 121/ 122/ 123/
 124/ 125/ 126/ 127/ 130/ 131/ 132/ 133/ 134/ 135/ 136/ 137/ 198/ 199

A) Derating Temperature and configurations

		Ambient temperature									
		30 °C		40 °C		50 °C		60 °C		70 °C	
Fixed version		I_{max} (A)	I_r / I_n	I_{max} (A)	I_r / I_n	I_{max} (A)	I_r / I_n	I_{max} (A)	I_r / I_n	I_{max} (A)	I_r / I_n
DPX ³ 160 fixed - vertical installation	Flexible cable	160	1	152	0.95	152	0.95	146	0.91	138	0.86
	Flexible cable + sealable terminal shields	152	0.95	144	0.9	144	0.9	144	0.9	138	0.86
	Semirigid cable	160	1	152	0.95	152	0.95	146	0.91	138	0.86
	Semirigid cable + sealable terminal shields	152	0.95	144	0.9	144	0.9	144	0.9	138	0.86
	Clamps, flexible cable	160	1	152	0.95	152	0.95	146	0.91	138	0.86
	Clamps, flexible cable + sealable terminal shields	152	0.95	152	0.95	144	0.9	144	0.9	138	0.86
	Clamps, semirigid cable	160	1	152	0.95	152	0.95	146	0.91	138	0.86
	Clamps, semirigid cable + sealable terminal shields	152	0.95	152	0.95	144	0.9	144	0.9	138	0.86
	Cage terminals, flexible cable	160	1	160	1	160	1	146	0.91	138	0.86
	Cage terminals, semirigid cable	160	1	160	1	160	1	146	0.91	138	0.86
	Spreaders, flexible cable	160	1	160	1	160	1	146	0.91	138	0.86
	Spreaders, semirigid cable	160	1	160	1	160	1	146	0.91	138	0.86
	Rear terminals, flexible cable	160	1	160	1	160	1	146	0.91	138	0.86
	Rear terminals, flexible cable + sealable terminal shields	160	1	160	1	160	1	146	0.91	138	0.86
	Rear terminals, semirigid cable	160	1	160	1	160	1	146	0.91	138	0.86
	Rear terminals, semirigid cable + sealable terminal shields	160	1	160	1	160	1	146	0.91	138	0.86
DPX ³ 160 fixed - horizontal installation	Flexible cable	160	1	152	0.95	152	0.95	146	0.91	138	0.86
	Flexible cable + sealable terminal shields	152	0.95	144	0.9	144	0.9	144	0.9	138	0.86
	Semirigid cable	160	1	152	0.95	152	0.95	146	0.91	138	0.86
	Semirigid cable + sealable terminal shields	152	0.95	144	0.9	144	0.9	144	0.9	138	0.86
	Clamps, flexible cable	152	0.95	152	0.95	152	0.95	146	0.91	138	0.86
	Clamps, flexible cable + sealable terminal shields	144	0.9	144	0.9	144	0.9	144	0.9	138	0.86
	Clamps, semirigid cable	152	0.95	152	0.95	152	0.95	146	0.91	138	0.86
	Clamps, semirigid cable + sealable terminal shields	144	0.9	144	0.9	144	0.9	144	0.9	138	0.86
	Cage terminals, flexible cable	160	1	152	0.95	152	0.95	146	0.91	138	0.86
	Cage terminals, semirigid cable	160	1	152	0.95	152	0.95	146	0.91	138	0.86
	Spreaders, flexible cable	160	1	160	1	160	1	146	0.91	138	0.86
	Spreaders, semirigid cable	160	1	160	1	160	1	146	0.91	138	0.86
	Rear terminals, flexible cable	160	1	160	1	160	1	146	0.91	138	0.86
	Rear terminals, flexible cable + sealable terminal shields	160	1	160	1	160	1	146	0.91	138	0.86
	Rear terminals, semirigid cable	160	1	160	1	160	1	146	0.91	138	0.86
	Rear terminals, semirigid cable + sealable terminal shields	160	1	160	1	160	1	146	0.91	138	0.86

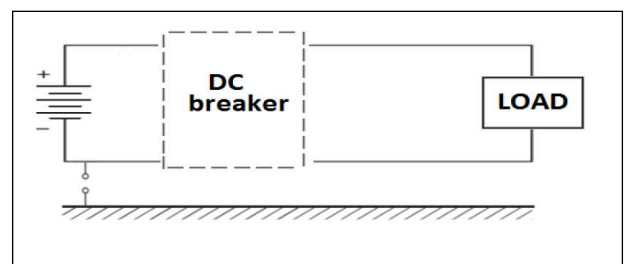
B) Use in DC

B.1 Circuit breakers: breaking capacity in DC (kA) (values estimates only)

I_{cu} (kA)	I_n (A)	1 pole *				2 poles in series *				3 poles in series *		
		60 V	60 V	110 V	250 V	110 V	250 V	110 V	250 V	500 V		
16	16 ÷ 160	16	16	16	10	16	12	10				
25	16 ÷ 160	25	25	25	10	25	16	10				
36	16 ÷ 160	35	36	35	10	36	20	10				
50	16 ÷ 160	35	50	35	10	50	20	10				

Applied to DC networks insulated from the ground

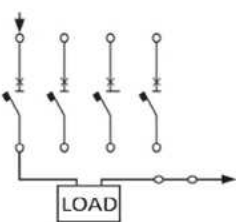
(this diagram applies to both 3P and 4P circuit breakers):



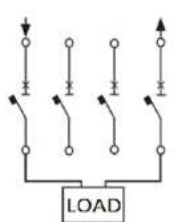
DC breaking capacity in the table respect the standards.

The positive tolerance is between 0% to 5% of voltage status

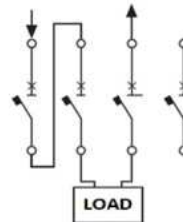
* Connection modality of the DC breaker:



1 pole



2 poles in series



3 poles in series

DPX³ 160

Thermal magnetic and trip-free switches

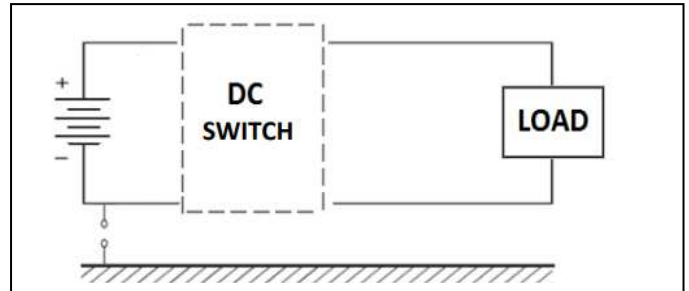
DPX³-I 160

Reference(s) : 420 000/ 001/ 002/003/ 004/ 005/ 006/ 007/ 010/ 011/
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 050/ 051/ 052/ 053/ 054/ 055/ 056/ 057/ 080/ 081/ 082/ 083/ 084/ 085/
 086/ 087/ 090/ 091/ 092/ 093/ 094/ 095/ 096/ 097/ 120/ 121/ 122/ 123/
 124/ 125/ 126/ 127/ 130/ 131/ 132/ 133/ 134/ 135/ 136/ 137/ 198/ 199

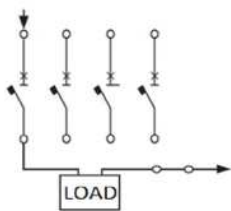
B.2 Switch disconnectors: category of use

	1 pole *	2 poles in series *		3 poles in series *	4 poles in series *
I _n (A)	60 V	110 V	250	500 V	750 V
160	DC23	DC23	DC23	DC23	DC23

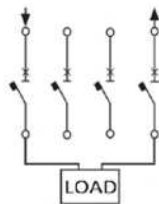
Applied to DC networks insulated from the ground



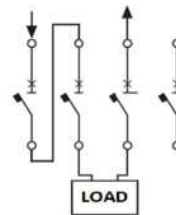
* Connection modality for DC switch disconnectors (polarity can be inverted):



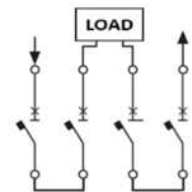
1 pole



2 poles in series



3 poles in series



4 poles in series

Data indicated in this document refers exclusively to test conditions according to product standards, unless otherwise indicated in the documentation.

For the different conditions of use of the product, inside electrical equipment or in any case inserted in the installation context, refer to the regulatory requirements of the equipment, local regulations and design specifications of the system