

## DPX<sup>3</sup> 250 HP S1 electronic (no display) circuit breakers

### Reference(s) :

from 4 232 00 to 4 232 03; from 4 232 05 to 4 232 08;  
from 4 232 20 to 4 232 23; from 4 232 25 to 4 232 28;  
from 4 232 40 to 4 232 43; from 4 232 45 to 4 232 48;  
from 4 232 50 to 4 232 53; from 4 232 55 to 4 232 58;



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### 1. USE

DPX<sup>3</sup> HP platform has been developed to give a new solution of protection devices for a more precise approach in power installations in order to offer the correct answer for different project needs.

DPX<sup>3</sup> HP platform provide a complete project approach in premium market segment, offering a range completely suitable for high power application with high performance breakers in compact dimensions and at a competitive costs.

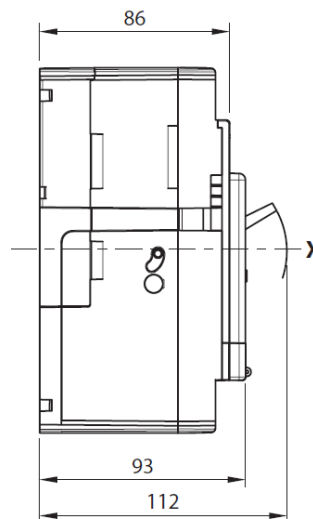
### 2. RANGE

In (A)	DPX <sup>3</sup> 250 HP electronic (no display ) version			
	36 kA		50 kA	
	3P	4P	3P	4P
40	423200	423205	423220	423225
100	423201	423206	423221	423226
160	423202	423207	423222	423227
250	423203	423208	423223	423228
	70 kA		100 kA	
	3P	4P	3P	4P
40	423240	423245	423250	423255
100	423241	423246	423251	423256
160	423242	423247	423252	423257
250	423243	423248	423253	423258

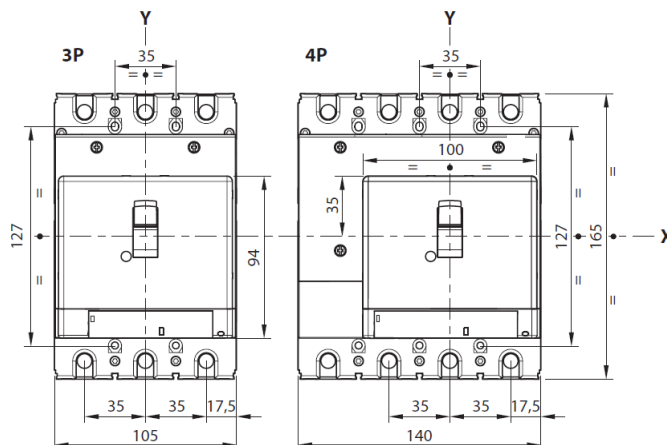
### 3. DIMENSIONS AND WEIGHTS

#### 3.1 Dimensions

##### Lateral view



##### Frontal view (3 and 4 poles)



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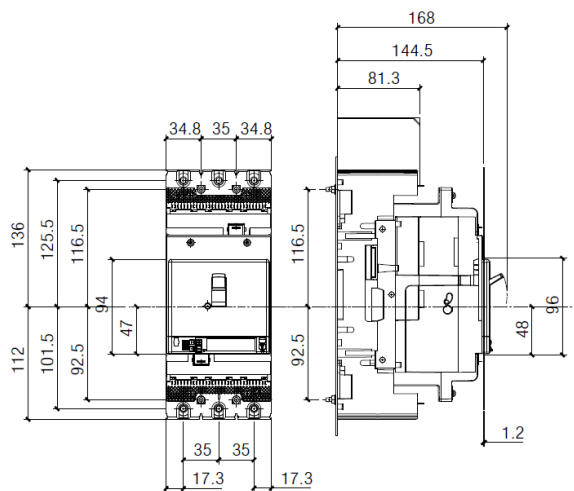
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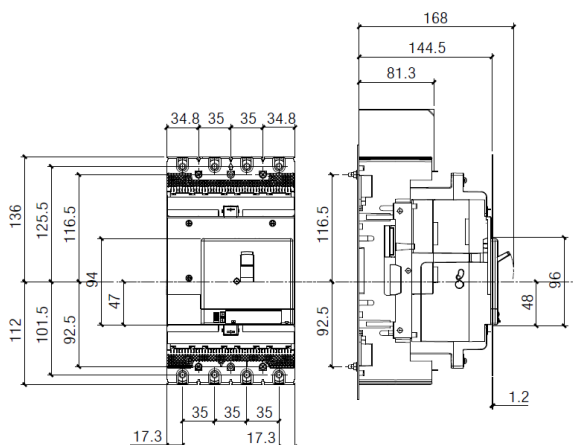
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from 4 232 50 to 4 232 53; from 4 232 55 to 4 232 58;

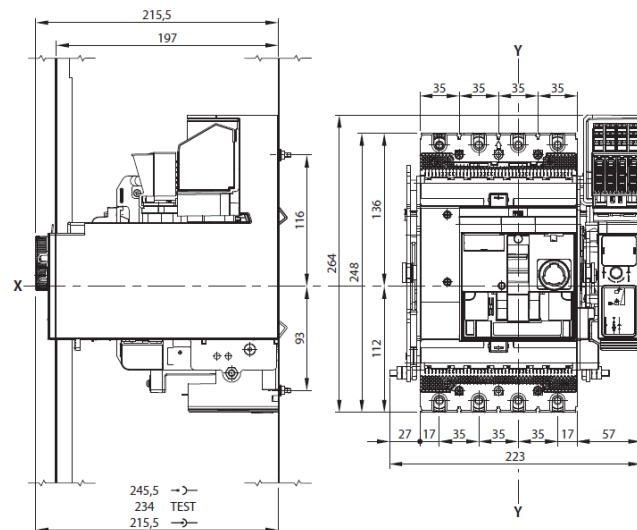
Plug-in version (3P)



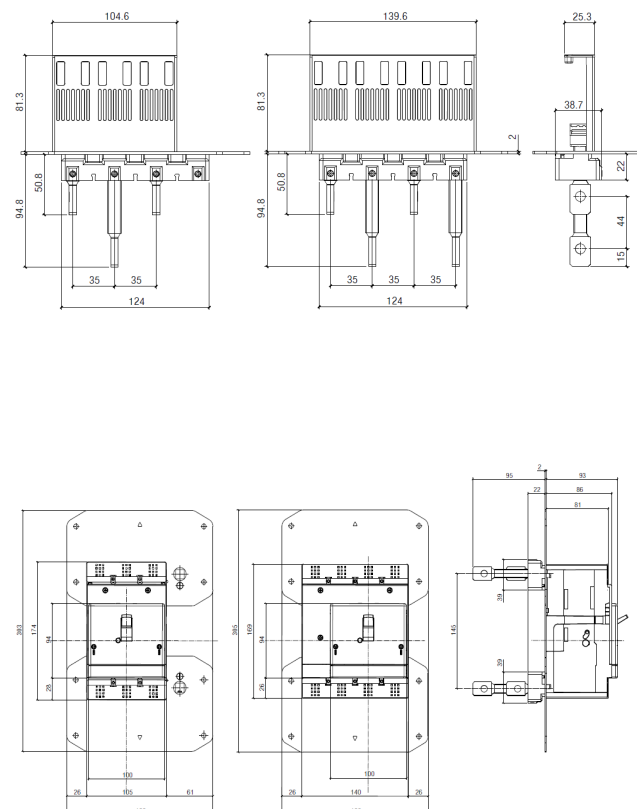
Plug-in version (4P)



Draw-out version (4P)



Rear terminals



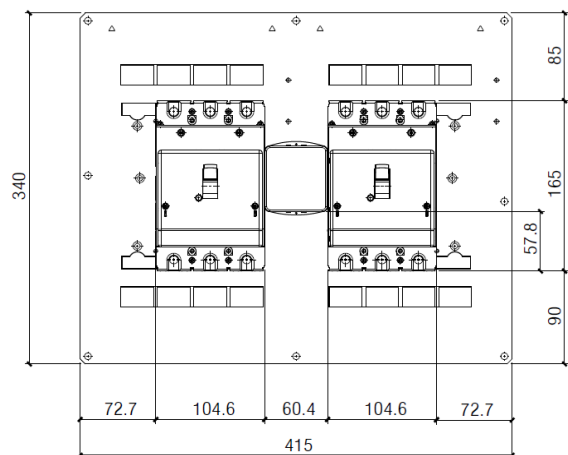
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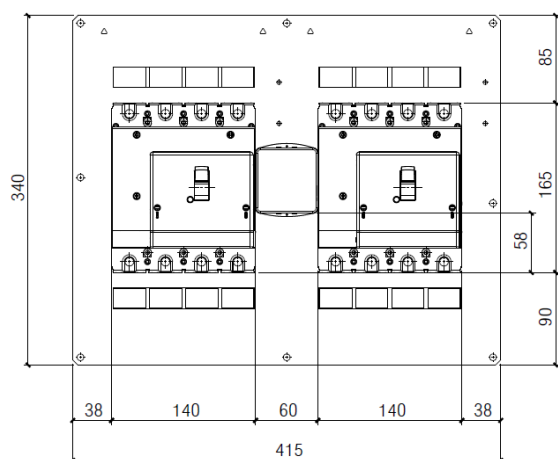
## Interlock (3P)

(for rear plate interlock dimension, see relative instruction sheet)

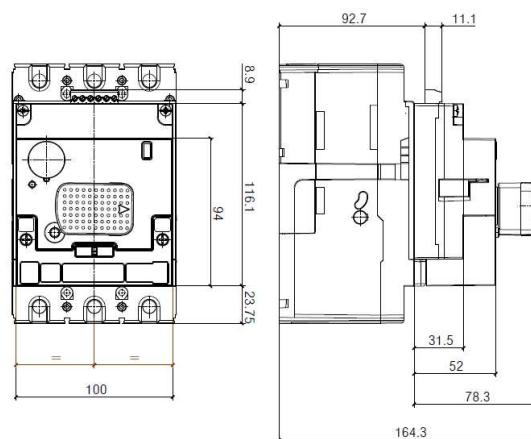
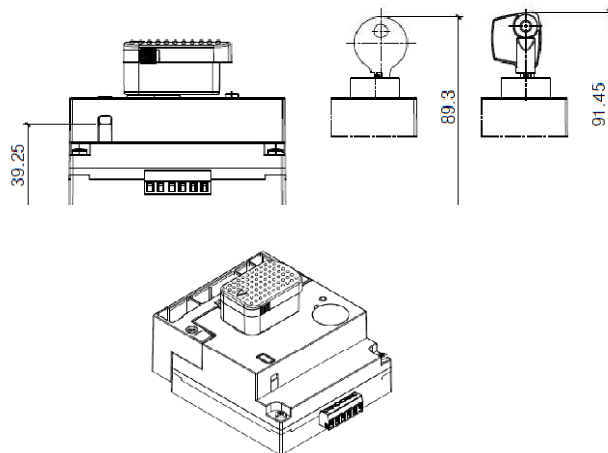
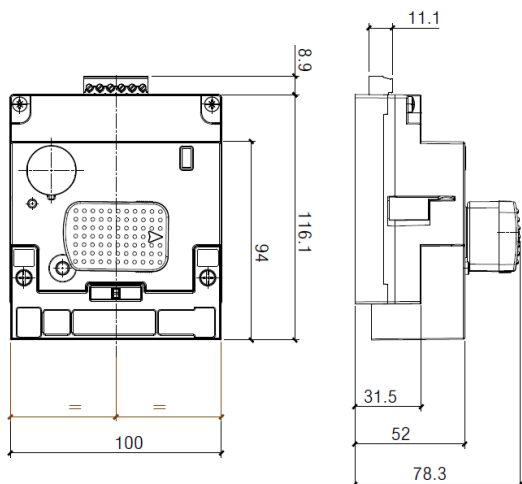


## Interlock (4P)

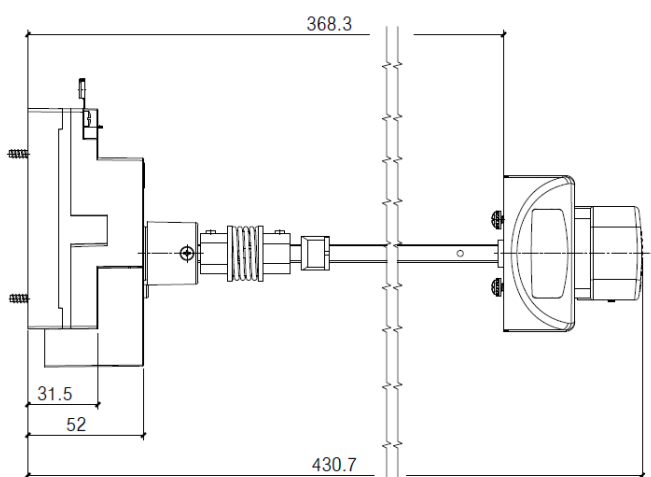
(for rear plate interlock dimension, see relative instruction sheet)



## Direct rotary handle



## Vari-depth rotary handle



**DPX<sup>3</sup> 250 HP S1 electronic (no display)  
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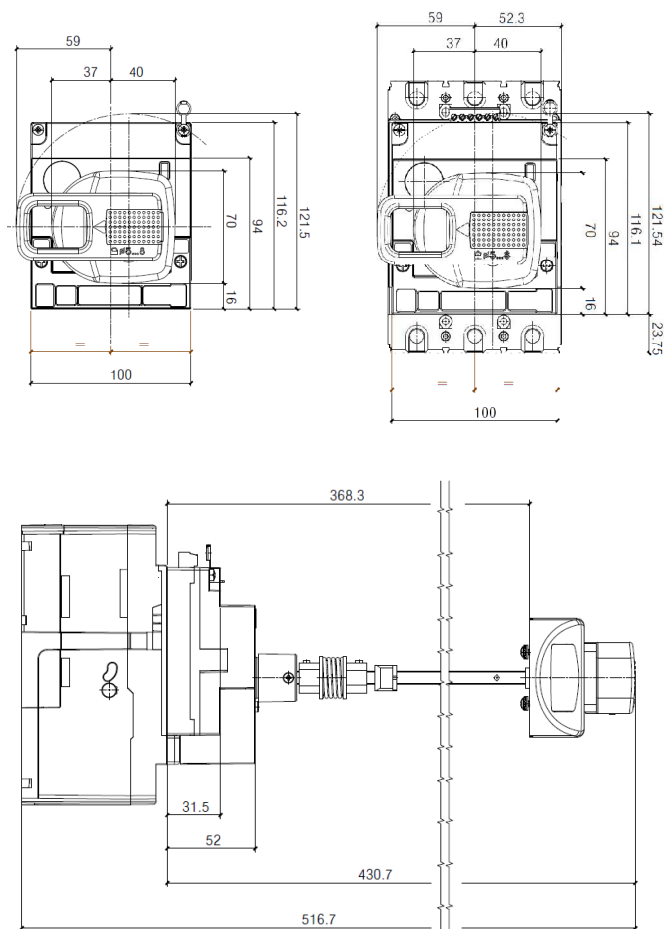
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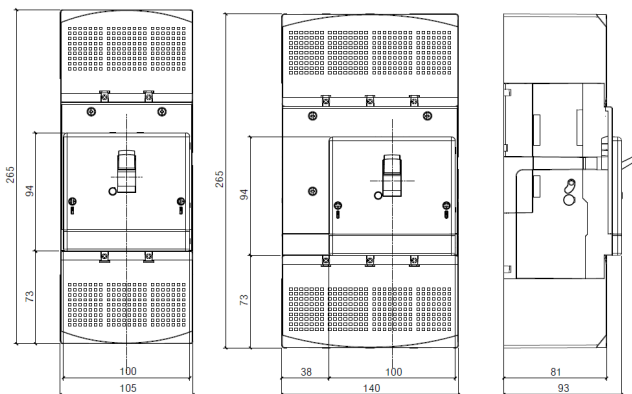
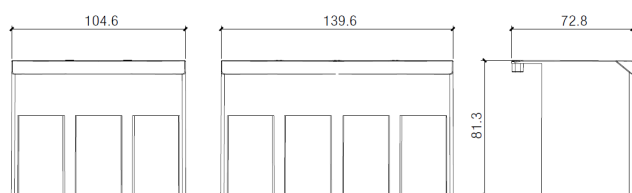
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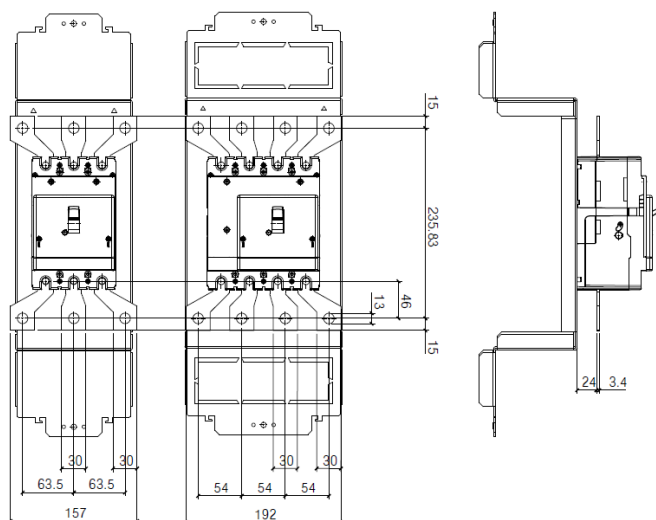
from 4 232 50 to 4 232 53; from 4 232 55 to 4 232 58;



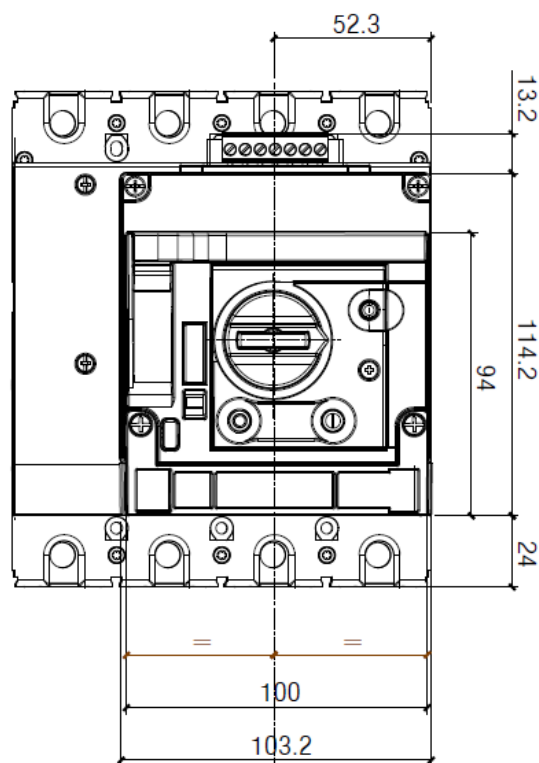
## Sealable terminal shields



## Spreaders

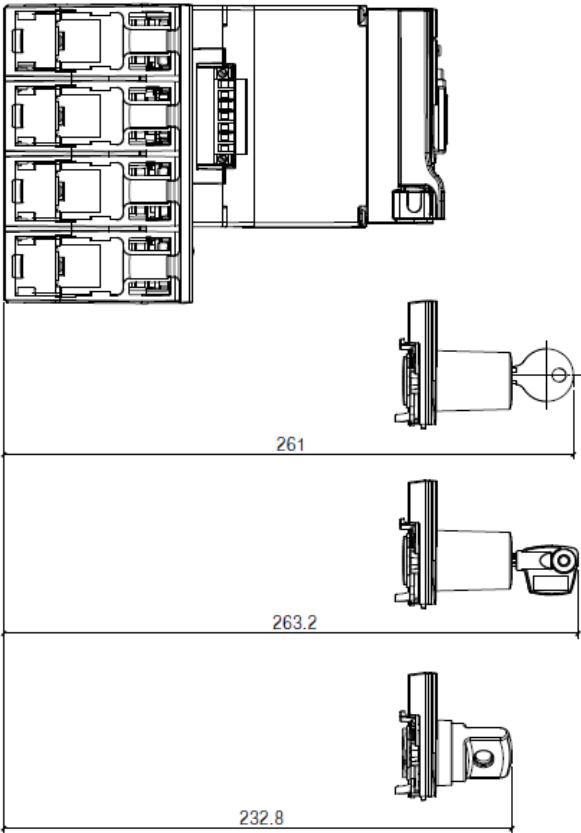
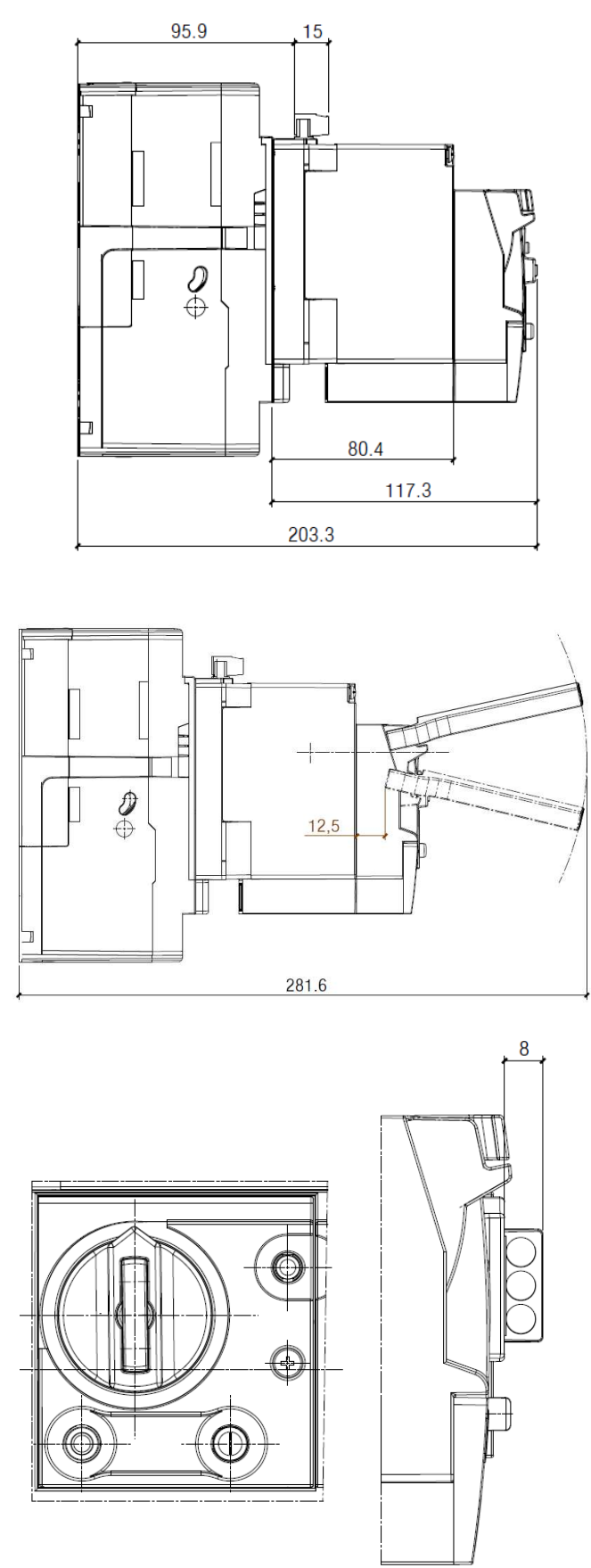


Motor operator



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3.2 Weights

Configuration	Weights (Kg)	
	3P	4P
Circuit breaker	1.6	2.5
Plug-in*	3.5	4.5
Draw-out**	2.5	
Interlock*	0.35	
Rear interlock (for plug-in/draw-out version)*	5	
Motor operator*	1	
* to add to device weight		
* to add to device and plug-in weights		

4. OVERVIEW

4.1 Supplied with:

- fixing screws (2 for 3P and 4 for 4P)
- screws for connections (6 for 3P and 8 for 4P)
- phase insulators (2 for 3P and 3 for 4P)

5. ELECTRICAL CONNECTIONS

5.1 Mounting possibilities

On plate:

- Vertical
- Horizontal
- Supply inverter type

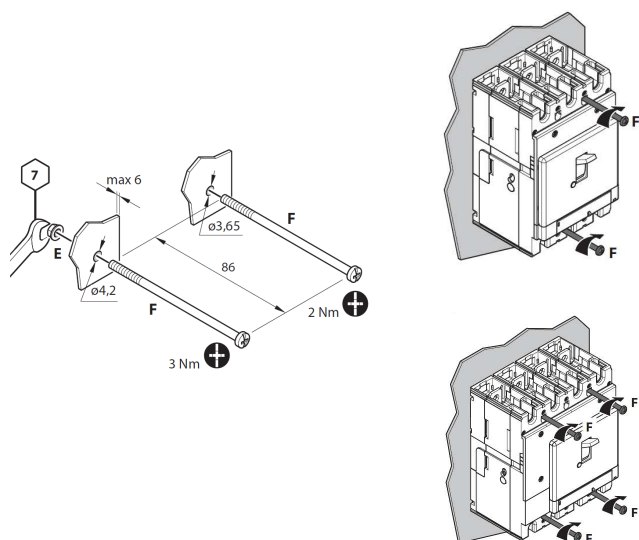
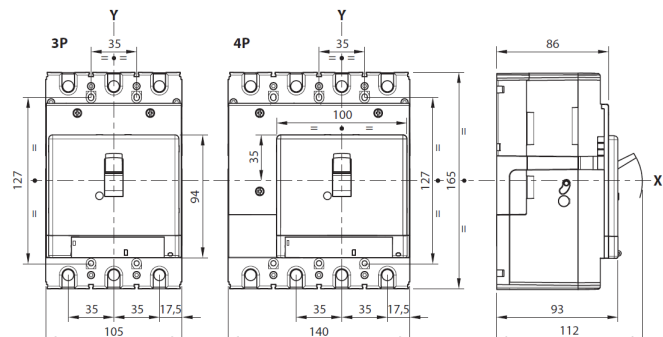
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Reference(s) :

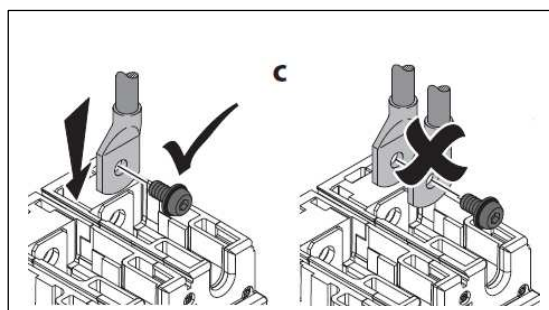
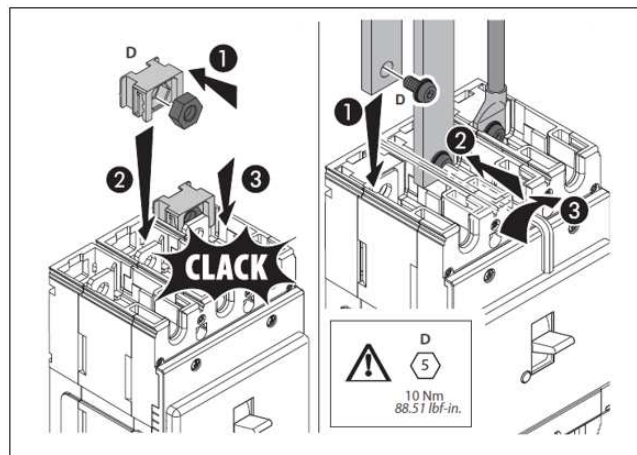
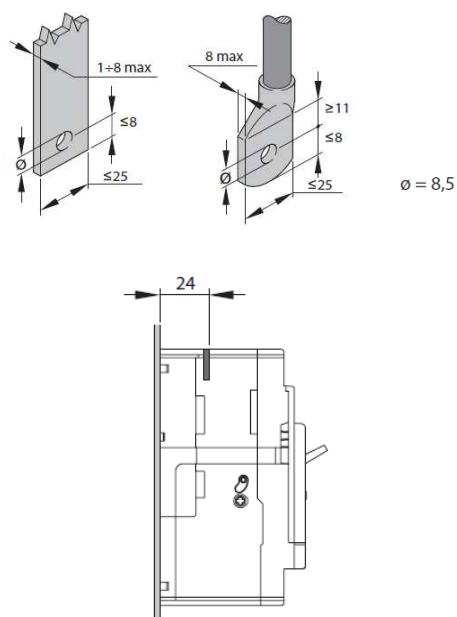
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## 5.2 Mounting

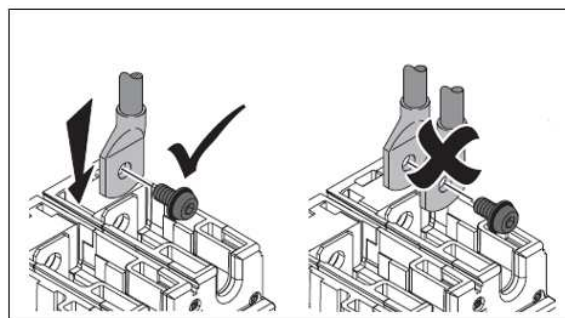
(see instruction sheet for detailed mounting procedures)



**Busbars/cable lugs:**



**Cables:**





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## 6. ELECTRICAL AND MECHANICAL CHARACTERISTICS

Circuit Breaker	DPX <sup>3</sup> 250 HP F/N/H/L (36kA, 50kA, 70kA, 100kA)
Rated current (A)	40-100-160-250
Poles	3 - 4
Pole pitch (mm)	35
Rated insulation voltage (50/60Hz) U <sub>i</sub> (V)	800
Rated operating voltage (50/60Hz) U <sub>o</sub> (V)	690
Rated impulse withstand current U <sub>imp</sub> (kV)	8
Rated frequency (Hz)	50 - 60
Operating temperature (°C)	-25 + 70
Mechanical endurance (cycles)	12000
Mechanical endurance with motor control (cycles)	12000
Electrical endurance at I <sub>n</sub> (cycles)	6000
Electrical endurance at 0.5 I <sub>n</sub> (cycles)	6000
Utilization category	A
Suitable for isolation	Yes
Type of protection	Electronic (with knobs)
Thermal adjustment I <sub>r</sub>	(0.4÷1) x I <sub>n</sub>
Magnetic adjustment I <sub>sd</sub> (**)	(1.5÷10) x I <sub>t</sub>
Neutral protection for 4P (%I <sub>n</sub> of phase pole)	OFF-50 <sup>(1)</sup> -100
Dimensions (W x H x D) (mm)	105 x 165 x 86 (3P) 140 x 165 x 86 (4P)

(\*) if I<sub>n</sub>=40A, then 50% regulation is allowed only if I<sub>r</sub> ≥ 0,8

(\*\*) Regulations not adjustable:

- $t_r=5s$
- $t_{sd}=0.1s$
- $I_i=3250A$

When  $I_r < 0.8$ , knob setting marked with 50% equals to a 100% value.

Protection against overloads:

- I<sub>r</sub> adjustable from 0.4 to 1 x I<sub>n</sub>
- t<sub>r</sub> adjustable from 3 to 15s

Protection against short circuits:

- I<sub>sd</sub> adjustable from 1.5 to 10 x I<sub>r</sub>
- t<sub>sd</sub> adjustable from 0 to 0.5s

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

DPX<sup>3</sup> 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.

General remarks on protection unit

The protection units S1 are normally supplied by the internal current transformers (CTs).

When the current flowing through the circuit breaker is greater than 12% of the maximum power (20% of I<sub>n</sub> for single phase load), the internal current supply ensures all operation of the protection unit, included: LED status and diagnostic functions (e.g. trip test).

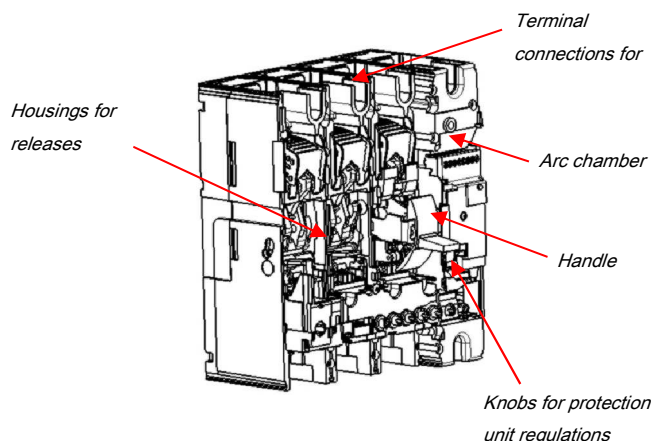
To ensure the same performance when the load is less than 12% of the maximum power (20% of I<sub>n</sub> for single phase load) to grant complete functions, the following optional power supply can be used:

- power supply temporarily connected to frontal Service port, connected to specific adapter for PC (Legrand use only)

Together with above protections, activated in case of electric faults, the trip unit also integrates self-protection for:

- Over temperature : in case the internal temperature of protection unit exceed 95°C;
- Auto diagnostics: in case embedded watchdog circuit detects internal malfunctions, which could compromise the correct working of microcontroller.

### 6.1 Main parts constituting the circuit breaker



### 6.2 Breaking capacity (kA)

		Breaking capacity (kA) & I <sub>cs</sub>			
		3P-4P			
IEC 60947-2	U <sub>e</sub> /I <sub>cu</sub> (I <sub>cu</sub> letter)	36kA (F)	50kA (N)	70kA (H)	100kA (L)
	220/240 V AC	70	90	100	150
	380/415 V AC	36	50	70	100
	440/460 V AC	25	30	40	50
	480/500 V AC	16	18	30	35
	550 V AC	10	12	22	25
	690V AC	7	8	20	22
	I <sub>cs</sub> (% I <sub>cu</sub> )	100	100	100	100
	Rated making capacity under short circuit I <sub>cm</sub>				
	I <sub>cm</sub> (kA) at 415V	76.5	105	154	220
NEMA AB-1	220/240 V AC	70	90	100	150
	480/500 V AC	16	18	30	35
	690 V AC	7	8	20	22

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## 6.3 Rated current ( $I_n$ )

$I_n$ (A)	Phases limit trip current			
	thermal ( $I_t$ )		magnetic ( $I_{sd}$ )	
	$0.4 \times I_n$	$1 \times I_n$	min	max
40	16	40	60	400
100	40	100	150	1000
160	64	160	240	1600
250	100	250	375	2500

## 6.4 Load operations

Force on handle	N
Opening operation	63,5
Closing operation	66
Restore operation	86,5

## 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)
36	350
50	300
70	250
100	200

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

$I_n$ (A)	Power losses per pole (W)			
	40	100	160	250
Cage terminals	0.49	3.07	7.85	19.20
Lugs	0.45	2.80	7.17	17.50
Spreaders	0.38	2.36	6.04	14.70
Rear terminals	0.46	2.89	7.39	18.10

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.

## 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)			
	40	50	60	70
40	40	40	40	40
100	100	100	100	95
160	160	160	160	155
250	250	250	210	190

For derating temperature with other configurations, see table A.

### 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 DPX<sup>3</sup> 250 HP circuit breakers, degree 3, according to IEC/EN 60947-2

### 6.7.3 Altitude

Altitude derating for DPX<sup>3</sup>

Altitude (m)	2000	3000	4000	5000
$U_e$ (V)	690	590	520	460
$I_n$ (A)	$1 \times I_n$	$0.98 \times I_n$	$0.93 \times I_n$	$0.9 \times I_n$



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## 7. CONFORMITY

DPX<sup>3</sup> HP 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.  
DPX<sup>3</sup> HP respect the European Directives REACH, RoHS, RAEE.

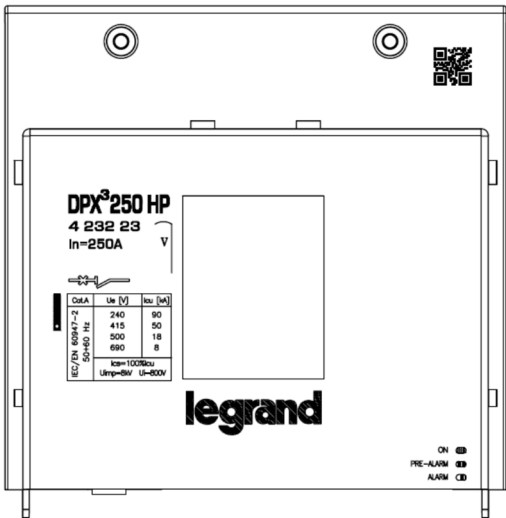
For specific information, please contact Legrand support.

### 7.1 Marking

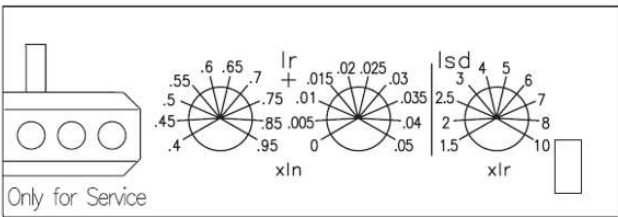
Product (circuit breakers) are provided with labelling in full conformity to the referred standard and directives requirements by laser or sticker labels (for illustrative purposes only) as:

#### Product laser label on front

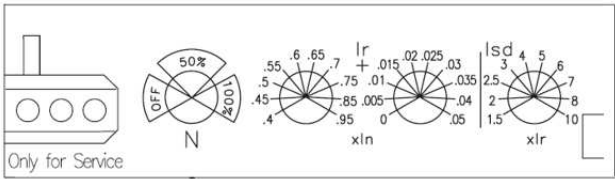
- Manufacturer responsible
- Denomination, type product, code
- Standard conformity
- Standard characteristics declared
- Coloured identification of I<sub>cu</sub> at 415V



#### Electronic release label (3P version)



#### Electronic release label (4P version)



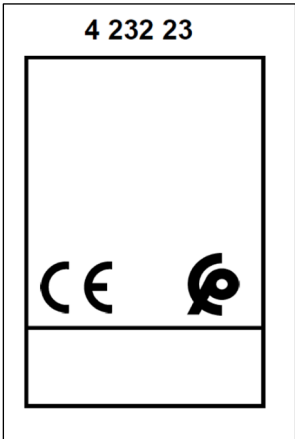
#### Product sticker label on side

- Manufacturer responsible
- Denomination and type product
- 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



#### Packaging sticker label

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



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## 8. EQUIPMENTS AND ACCESSORIES

### 8.1 Releases (for DPX<sup>3</sup> 125/250 HP and DPX<sup>3</sup> 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

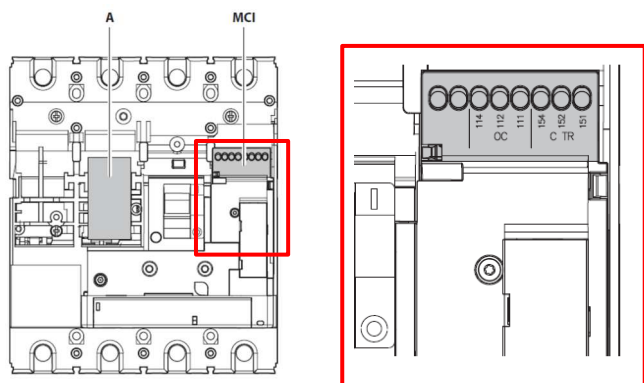
UVR releases can be used on DPX<sup>3</sup> 125/250 HP starting from batch 19W15

- 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*

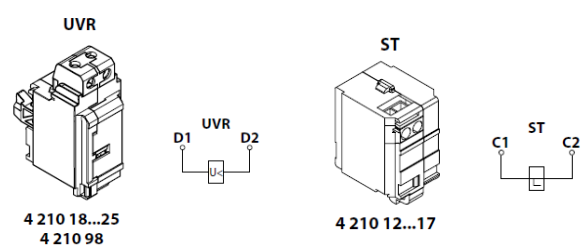
Release *ref. 4 210 98*  
(to be equipped with a time-lag module 0 261 90/91)

### 8.2 Auxiliary contacts

For version of DPX<sup>3</sup> 250 HP electronic version, auxiliary contacts are integrated inside module M.C.I (see instruction sheet for details).  
Here a connection scheme to get auxiliary functionality:



TRIP STATUS	151 Common contact	154	
	152 Normal close contact	152	
	154 Normal open contact	151	
OPEN/CLOSE STATUS	111 Common contact	114	
	112 Normal close contact	112	
	114 Normal open contact	111	



	A
UVR	✓
ST	✓

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

### 8.3 Universal keylocks

These keylocks must be used for all the accessories that can be locked:

- rotary handle
- motor operator
- plug-in mechanism
- draw-out mechanism

For each of these, a specific accessory (indicated in the specific section of this datasheet) must be added in order to get the complete locking kits for the specific application.

- 1 lock + 1 flat key with random mapping *ref. 4 238 80*
- 1 lock + 1 flat key with fixed mapping (EL43525) *ref. 4 238 81*
- 1 lock + 1 flat key with fixed mapping (EL43363) *ref. 4 238 82*
- 1 lock + 1 star key with random mapping *ref. 4 238 83*

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## 8.4 Rotary handles

*Direct on DPX<sup>3</sup> (with auxiliary option)*

- Standard (black) ref. 4 238 00
- For emergency use (red / yellow) ref. 4 238 01

*Vari-depth handle IP55 (with auxiliary option)*

- Standard (black) ref. 4 238 02
- For emergency use (red / yellow) ref. 4 238 03

*Locking accessories (for rotary handle with auxiliary option)*

- Key lock accessory for direct rotary handle ref. 4 238 04
- Key lock accessory for vari-depth rotary handle ref. 4 238 05  
(ref. 4 238 05 is compatible with DPX<sup>3</sup> 125 HP also)

Ref. 4 238 04 and 4 238 05 must be used with universal keylocks to get the complete locking kit for rotary handle

## 8.5 Motor operators

*For synchronized operations (energy storage type):*

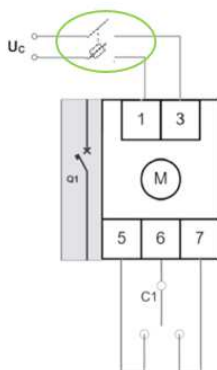
- 24 Vac and dc ref. 4 238 40
- 48 Vac and dc ref. 4 238 41
- 110 Vac ref. 4 238 42
- 230 Vac ref. 4 238 43

*Technical parameters:*

Voltage	Property	AC		DC	
		Opening	Closing	Opening	Closing
24V ac/dc	Maximum inrush power (VA)	75	430	55	320
	Rated power (VA)	45	-	20	-
	Absorption time (s)	2.8	0.01	3.3	0.01
	Operating current time (s)	1.1	0.03	1.2	0.03
48V ac/dc	Maximum inrush power (VA)	85	1000	70	690
	Rated power (VA)	65	-	15	-
	Absorption time (s)	3.3	0.006	3.8	0.006
	Operating current time (s)	1.1	0.02	1.3	0.02
110V ac	Maximum inrush power (VA)	95	600	-	-
	Rated power (VA)	60	-	-	-
	Absorption time (s)	3	0.02	-	-
	Operating current time (s)	1.0	0.03	-	-
230V ac	Maximum inrush power (VA)	125	460	-	-
	Rated power (VA)	70	-	-	-
	Absorption time (s)	2.5	0.08	-	-
	Operating current time (s)	0.9	0.03	-	-

*It is necessary to foresee a protection device (e.g. fuse) along the motor operator power line. The correct size of the fuse depends on the motor version and on the number of users.*

*Here a schematic example:*



*Locking accessory (for motor operator)*

- Padlock (for motor operator locking) ref. 4 238 46
- Key lock accessory for motor operator ref. 4 238 45

Ref. 4 238 45 must be used with universal keylocks to get the complete locking kit for motor operator

## 8.6 Mechanical accessories

- Padlock (for locking in "OPEN" position) ref. 4 210 49  
(ref. 4 210 49 is compatible with DPX<sup>3</sup> 125 HP and DPX<sup>3</sup> 160/250)

- Sealable terminal shields:
  - Set of 2 (for 3P) ref. 4 238 23
  - Set of 3 (for 4P) ref. 4 238 24
- Insulated shields:
  - Set of 2 (for 3P) ref. 4 238 34
  - Set of 3 (for 4P) ref. 4 238 35  
(ref. 4 238 34/35 are compatible with DPX<sup>3</sup> 125 HP also)

## 8.7 Connection accessories

**Cage terminals**

- Set of 3 terminals for cables 150 mm<sup>2</sup> max (solid) ref. 4 238 30  
or 120 mm<sup>2</sup> max (flexible) Cu/Al
- Set of 4 terminals for cables 150 mm<sup>2</sup> max (rigid) ref. 4 238 31  
or 120 mm<sup>2</sup> max (flexible) Cu/Al

**Spreaders (incoming or outgoing):**

- Set of 3 (for 3P) ref. 6 250 14
- Set of 4 (for 4P) ref. 6 250 18

**Rear terminals (incoming or outgoing):**

- Set of 3 (for 3P) ref. 4 238 21
- Set of 4 (for 4P) ref. 4 238 22

## Cage terminal use specifications

DPX <sup>3</sup> 250HP							
Type of cage terminal	Cable standard suggested cross section (mm <sup>2</sup> )*			Dimensions limits of cable for cage terminals			
	In (A)	Cu	Al	MIN cross section (mm <sup>2</sup> )		MAX cross section (mm <sup>2</sup> )	
				Flexible	Rigid	Flexible	Rigid
Standard	16	2,5	4	2,5	2,5	120	150
	20	2,5	4				
	25	4	6				
	32	6	10				
	40	10	16				
	50	10	16				
	63	16	25				
	80	25	35				
	100	35	50				
	125	50	70				
	160	70	\				
	200	95	\				
	250	120	\				

\* The suggested cross section are in compliance with standard IEC60947-1 (ed.6 2020/04) and IEC60947-2 (ed.5.1 2019/07)

<h1>DPX<sup>3</sup> 250 HP S1 electronic (no display) circuit breakers</h1>	<p>Reference(s) :</p> <p>from 4 232 00 to 4 232 03; from 4 232 05 to 4 232 08;  from 4 232 20 to 4 232 23; from 4 232 25 to 4 232 28;  from 4 232 40 to 4 232 43; from 4 232 45 to 4 232 48;  from 4 232 50 to 4 232 53; from 4 232 55 to 4 232 58;</p>
<div> <h2>8.8 Plug-in version</h2> <p>(A plug-in is a DPX<sup>3</sup> 250 HP fitted with special terminals and mounted on a plug-in base)</p> <p><b>Bases</b>  (for plug-in and draw-out versions for DPX<sup>3</sup> 250 HP and DPX<sup>3</sup>-I 250 HP)</p> <ul style="list-style-type: none"> <li>Plug-in/draw-out base for 3P <span>ref. 4 238 50</span></li> <li>Plug-in/draw-out base for 4P <span>ref. 4 238 51</span></li> <li>Plug-in/draw-out mobile part kit for 3P <span>ref. 4 238 52</span></li> <li>Plug-in/draw-out mobile part kit for 4P <span>ref. 4 238 53</span></li> </ul> <p><b>Plug-in accessories</b></p> <p><i>Locking accessory (for plug-in)</i></p> <ul style="list-style-type: none"> <li>Key lock accessory for plug-in <span>ref. 4 238 63</span></li> </ul> <p><u>Ref. 4 238 63 must be used with universal keylocks to get the complete locking kit for plug-in version</u></p> </div>	<div> <h2>8.9 Draw-out version</h2> <p>(A DPX<sup>3</sup> 250 HP draw-out version is a plug-in DPX<sup>3</sup> 250 HP fitted with a "Debro-lift" mechanism which can be used to withdraw the breaker while keeping it on its base)</p> <p><b>"Debro-lift" mechanism</b>  (supplied with a rigid slide and handle for drawing-out)</p> <ul style="list-style-type: none"> <li>transformation kit for 3P <span>ref. 4 238 60</span></li> <li>transformation kit for 4P <span>ref. 4 238 61</span></li> </ul> <p><b>Frontal masks for draw-out version</b>  (to provide in addition to debro-lift mechanism according to accessory mounted)</p> <ul style="list-style-type: none"> <li>Frontal module, with frontal mask (3P and 4P) <span>ref. 4 238 55</span>  (if neither motor operator nor rotary handle are mounted)</li> <li>Frontal mask for motor operator (3P and 4P) <span>ref. 4 238 56</span></li> </ul> <p><b>Locking accessory (for draw-out)</b></p> <ul style="list-style-type: none"> <li>Padlock for draw-out position <span>ref. 4 238 64</span></li> <li>Key lock accessory for draw-out <span>ref. 4 238 62</span></li> </ul> <p><u>Ref. 4 238 62 must be used with universal keylocks to get the complete locking kit for draw-out version</u></p> <p><b>Auxiliary contacts</b></p> <ul style="list-style-type: none"> <li>Automatic auxiliary contacts for draw-out version <span>ref. 4 222 30</span></li> <li>6 contact connector (under sliding contacts) <span>ref. 0 098 19</span></li> </ul> <p>(Ref. 0 098 19 can be used with both plug-in and draw-out version)</p> <h2>8.10 Interlock mechanism</h2> <p>(for interlocking 2 DPX<sup>3</sup> 125 HP or 2 DPX<sup>3</sup> 250 HP breakers)</p> <p>No frame mixing in interlock mechanism</p> <ul style="list-style-type: none"> <li>Interlock mechanism – standard version <span>ref. 4 238 27</span>  (for fixed version DPX<sup>3</sup> 125 HP and DPX<sup>3</sup> 250 HP)</li> <li>Interlock mechanism – for electronic module <span>ref. 4 238 28</span>  (for fixed version DPX<sup>3</sup> 125 HP and DPX<sup>3</sup> 250 HP)</li> <li>Interlock plate for DPX<sup>3</sup> 250 HP <span>ref. 4 238 26</span></li> <li>Rear interlock mechanism <span>ref. 4 238 29</span>  (for DPX<sup>3</sup> 250 HP plug-in and/or draw-out version)</li> </ul> <p>If used ref. 0 098 19, maximum 1 set</p> </div>
<p>Technical sheet: F03044EN/03</p>	<div> <p>Update: 04/07/2024</p> <p>Creation: 21/10/2019</p> </div>

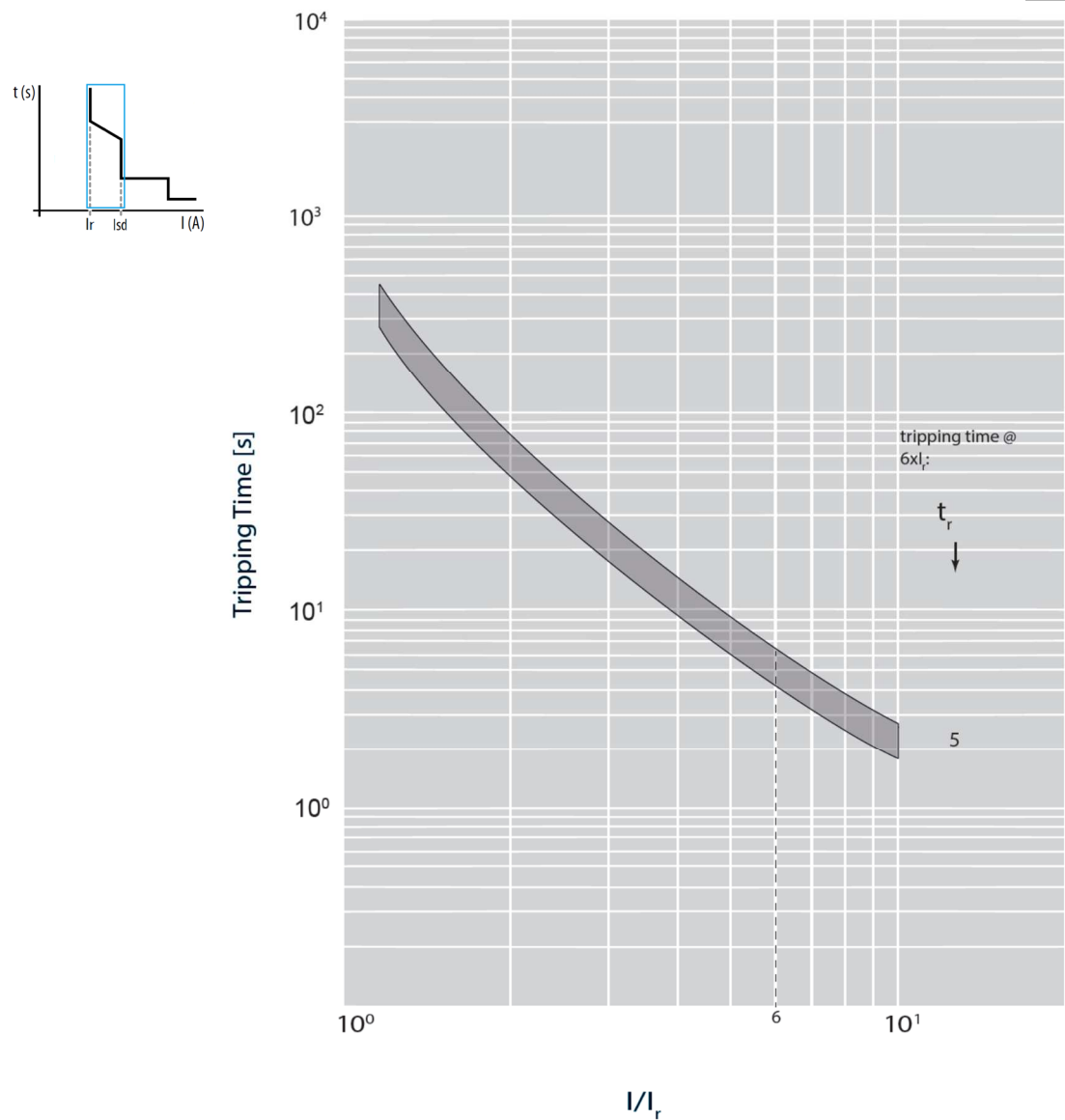
DPX<sup>3</sup> 250 HP S1 electronic (no display)  
circuit breakers

Reference(s) :  
from 4 232 00 to 4 232 03; from 4 232 05 to 4 232 08;  
from 4 232 20 to 4 232 23; from 4 232 25 to 4 232 28;  
from 4 232 40 to 4 232 43; from 4 232 45 to 4 232 48;  
from 4 232 50 to 4 232 53; from 4 232 55 to 4 232 58;

9. CURVES

9.1.1 Tripping curve [ 1/3 ]

Update: 11/06/2019



$I_{cu} = 36-50-70-100 \text{ kA}$   $I_{max} = 250 \text{ A}$  3-4 P  $U_o = 415 \text{ Vac}$  (IEC/EN 60947-2)

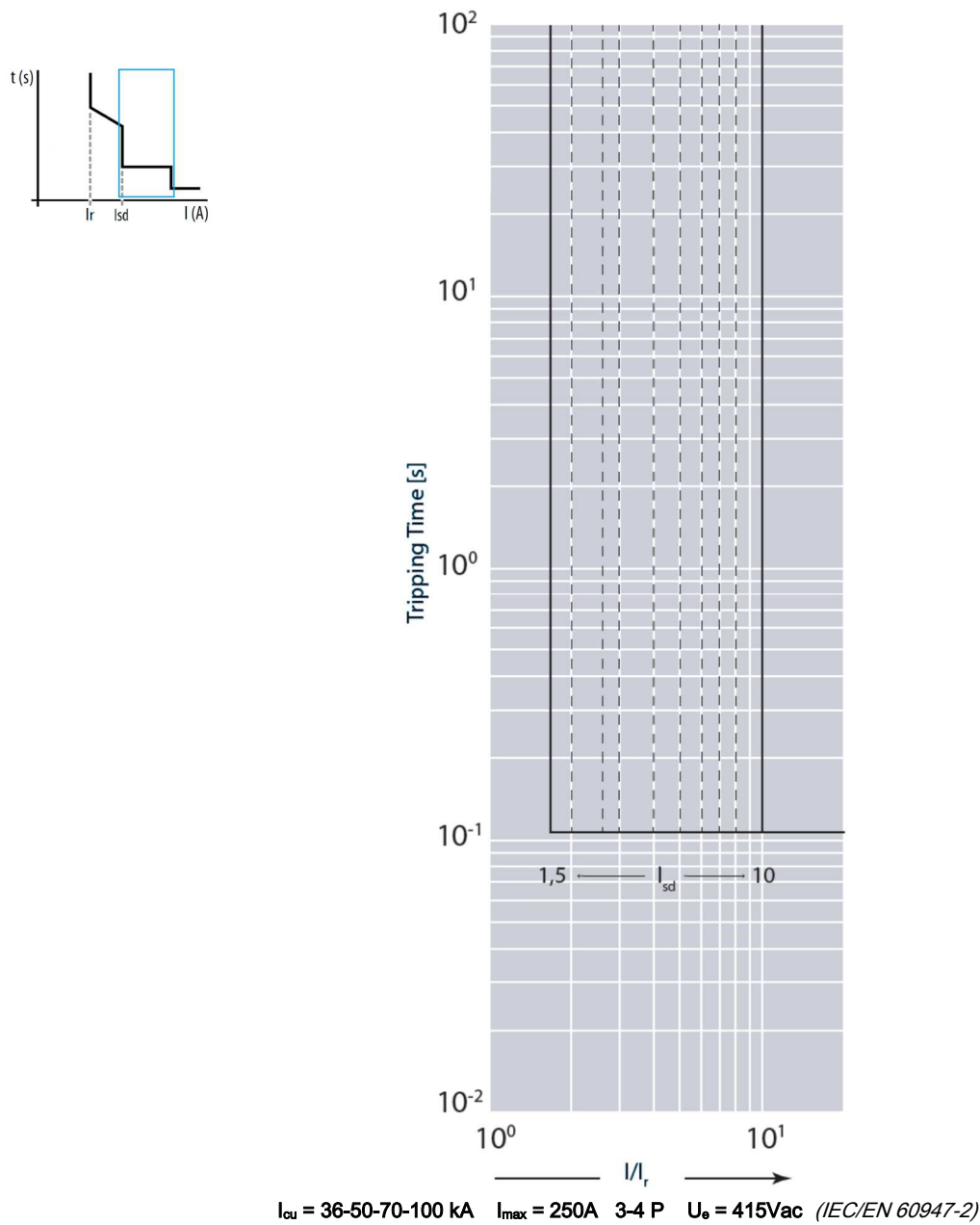
Value	Description
t	time
I	current
$I_r$	long time setting current
$t_r$	long time delay
$I_{sd}$	short time setting current
tsd	short time delay
$I_i$	instantaneous release
$I_{cu}$	rated ultimate short-circuit breaking capacity
$I^2t = K$	constant pass-through energy setting
$t = K$	constant tripping time setting
————	long time trip curve
-----	short time trip curve
Current tolerance	10% up to $I_{sd}$ ; 20% up to $I_i$

DPX<sup>3</sup> 250 HP S1 electronic (no display)  
circuit breakers

Reference(s) :  
from 4 232 00 to 4 232 03; from 4 232 05 to 4 232 08;  
from 4 232 20 to 4 232 23; from 4 232 25 to 4 232 28;  
from 4 232 40 to 4 232 43; from 4 232 45 to 4 232 48;  
from 4 232 50 to 4 232 53; from 4 232 55 to 4 232 58;

9.1.2 Tripping curve [ 2/3 ]

Update: 11/06/2019



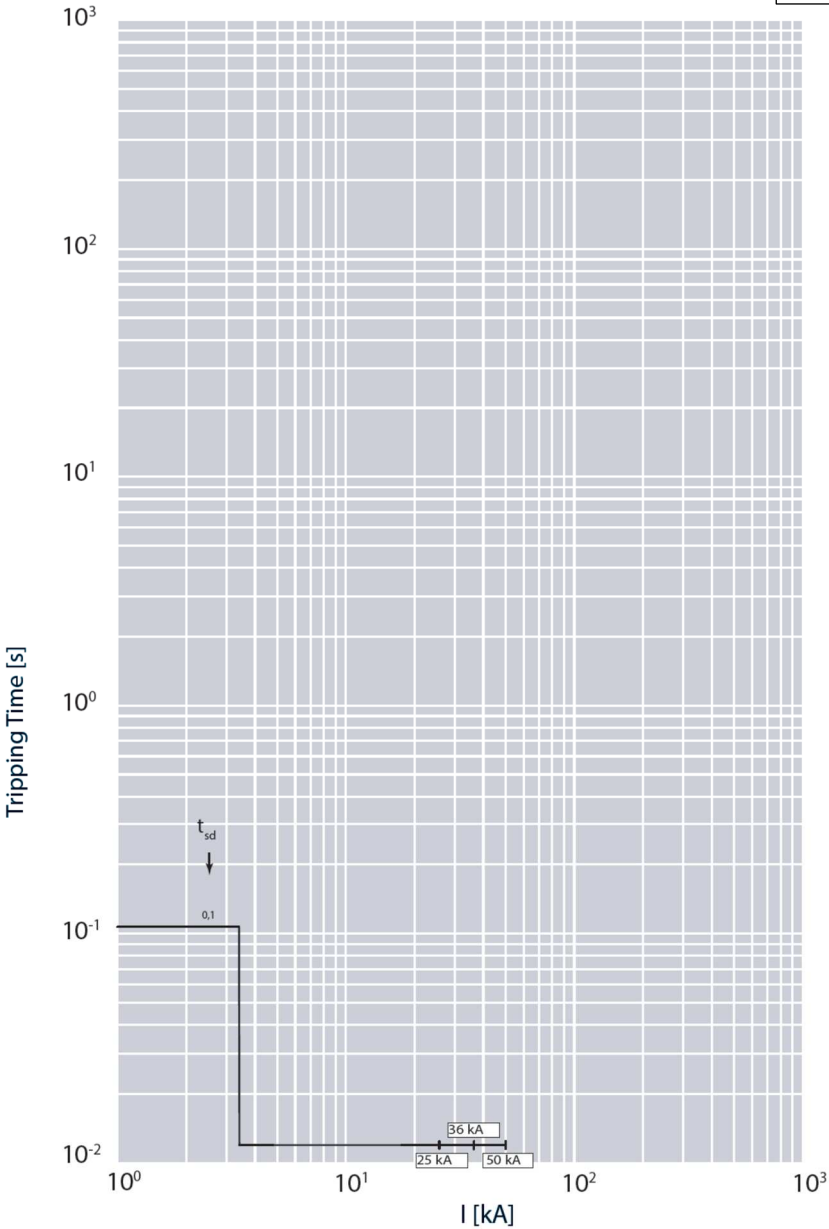
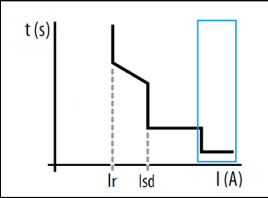
Value	Description
t	time
I	current
$I_r$	long time setting current
$t_r$	long time delay
$I_{sd}$	short time setting current
$t_{sd}$	short time delay
$I_i$	instantaneous release
$I_{cu}$	rated ultimate short-circuit breaking capacity
$I^2t = K$	constant pass-through energy setting
$t = K$	constant tripping time setting
-----	long time trip curve
-----	short time trip curve
Current tolerance	10% up to $I_{sd}$ ; 20% up to $I_i$

DPX<sup>3</sup> 250 HP S1 electronic (no display)  
circuit breakers

Reference(s) :  
from 4 232 00 to 4 232 03; from 4 232 05 to 4 232 08;  
from 4 232 20 to 4 232 23; from 4 232 25 to 4 232 28;  
from 4 232 40 to 4 232 43; from 4 232 45 to 4 232 48;  
from 4 232 50 to 4 232 53; from 4 232 55 to 4 232 58;

9.1.3 Tripping curve [ 3/3 ]

Update: 11/06/2019



$I_{cu} = 36-50-70-100 \text{ kA}$   $I_{max} = 250A$  3-4 P  $U_o = 415Vac$  (IEC/EN 60947-2)

Fixed Instantaneous override  $I_{sf} = 3.25kA$

Value	Description
t	time
I	current
$I_r$	long time setting current
$t_r$	long time delay
$I_{sd}$	short time setting current
$t_{sd}$	short time delay
$I_i$	instantaneous release
$I_{cu}$	rated ultimate short-circuit breaking capacity
$I^2t = K$	constant pass-through energy setting
$t = K$	constant tripping time setting
-----	long time trip curve
-----	short time trip curve
Current tolerance	10% up to $I_{sd}$ ; 20% up to $I_i$



**DPX<sup>3</sup> 250 HP S1 electronic (no display)  
circuit breakers**

Reference(s) :

from 4 232 00 to 4 232 03; from 4 232 05 to 4 232 08;

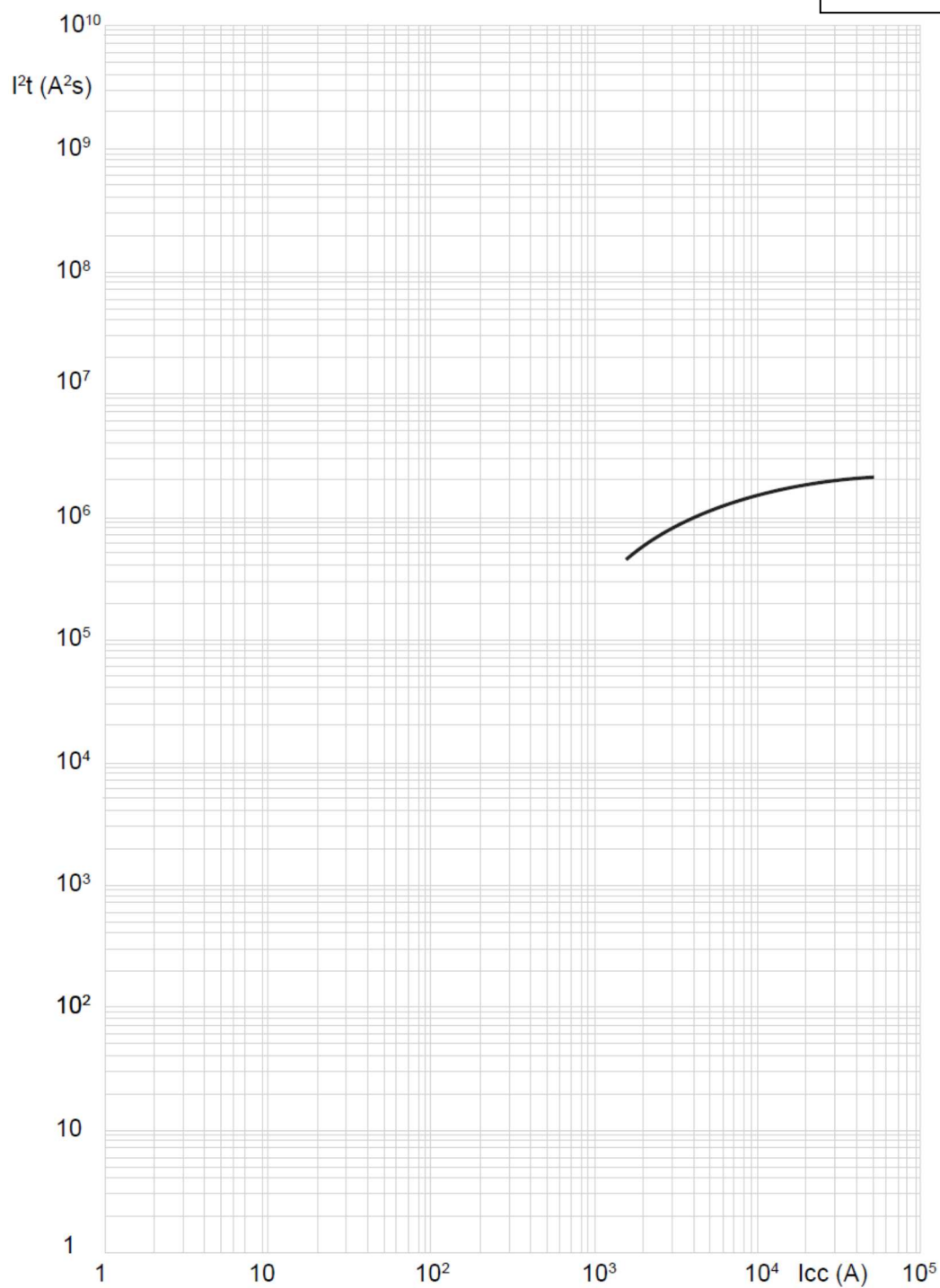
from 4 232 20 to 4 232 23; from 4 232 25 to 4 232 28;

from 4 232 40 to 4 232 43; from 4 232 45 to 4 232 48;

from 4 232 50 to 4 232 53; from 4 232 55 to 4 232 58;

### 9.2.1 Pass-through specific energy characteristic curve (breaking capacity $I_{cu} \leq 50\text{kA}$ )

*Update: 30/08/2019*



$I_{cu} = 36-50 \text{ kA}$     $I_{max} = 250A$    3-4 P    $U_e = 415Vac$  (IEC/EN 60947-2)

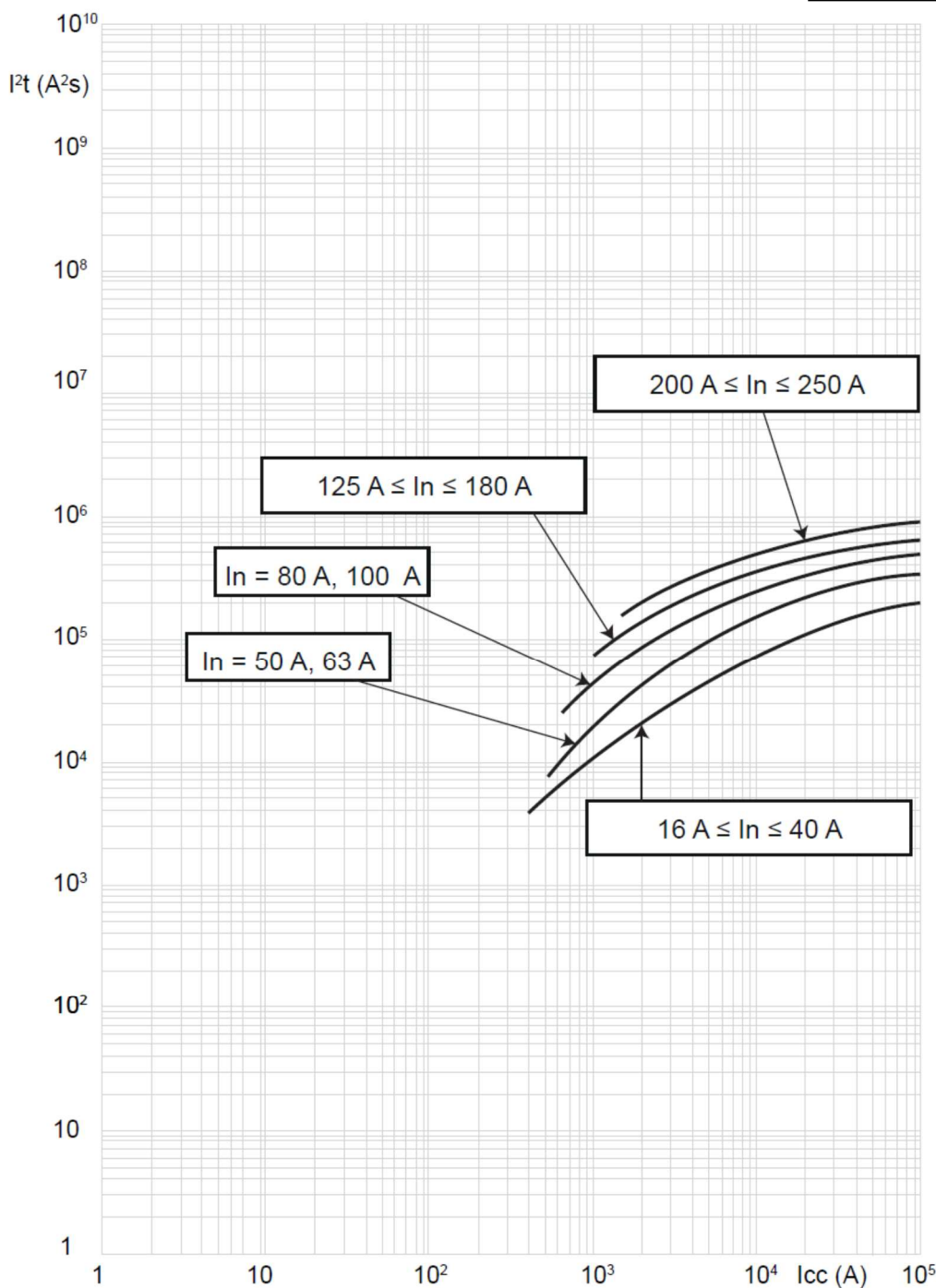
Value	Description
$I_{cc}$	short circuit current
$I^{2t} (A^2s)$	pass-through specific energy

DPX<sup>3</sup> 250 HP S1 electronic (no display)  
circuit breakers

Reference(s) :  
from 4 232 00 to 4 232 03; from 4 232 05 to 4 232 08;  
from 4 232 20 to 4 232 23; from 4 232 25 to 4 232 28;  
from 4 232 40 to 4 232 43; from 4 232 45 to 4 232 48;  
from 4 232 50 to 4 232 53; from 4 232 55 to 4 232 58;

9.2.2 Pass-through specific energy characteristic curve (breaking capacity  $I_{cu} > 50\text{kA}$ )

Update: 20/11/2020



$I_{cu} = 70\text{--}100\text{ kA}$   $I_{max} = 250\text{ A}$  3-4 P  $U_e = 415\text{Vac}$  (IEC/EN 60947-2)

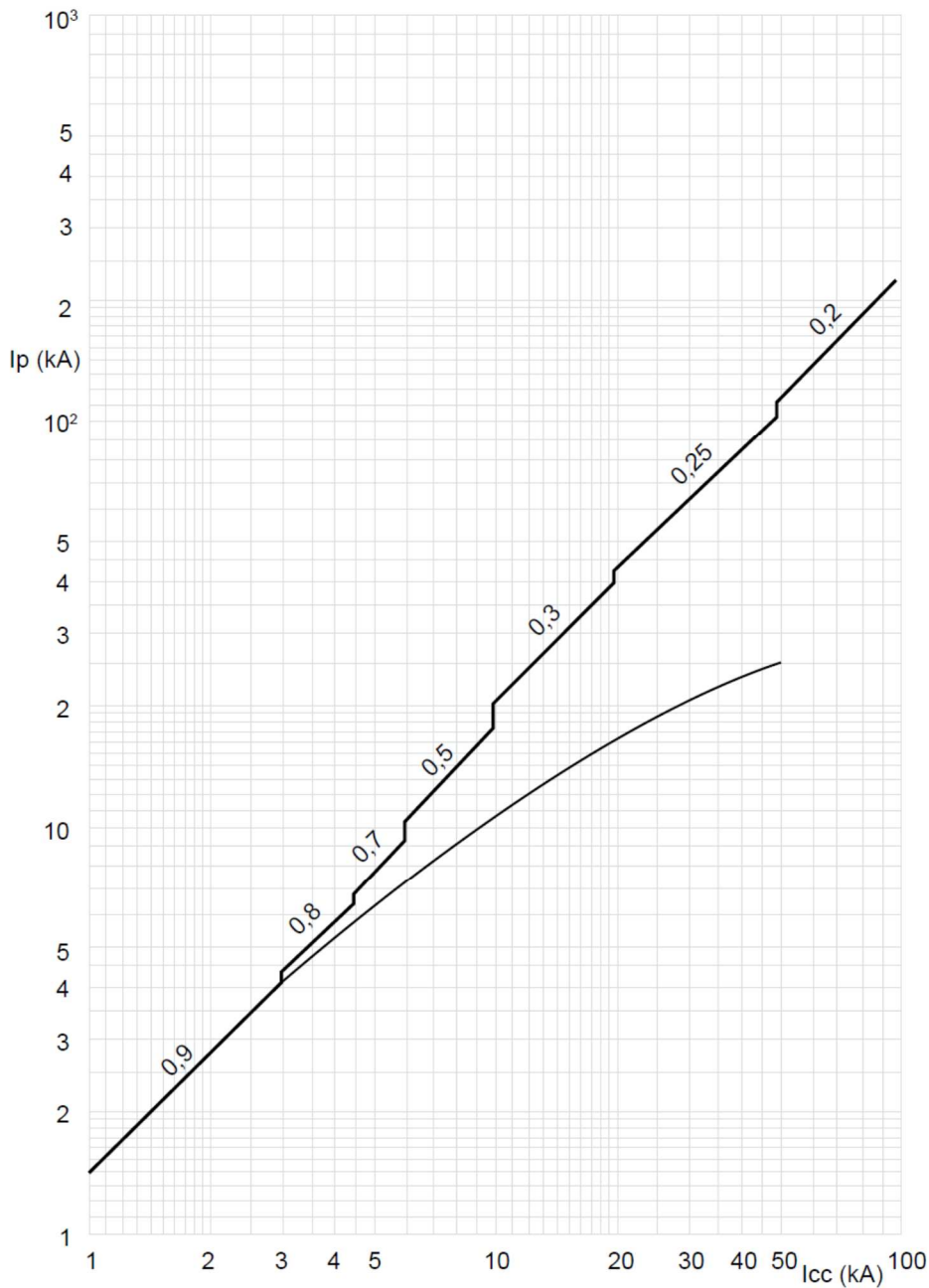
Value	Description
$I_{cc}$	short circuit current
$I^2t$ ( $\text{A}^2\text{s}$ )	pass-through specific energy

DPX<sup>3</sup> 250 HP S1 electronic (no display)  
circuit breakers

Reference(s) :  
from 4 232 00 to 4 232 03; from 4 232 05 to 4 232 08;  
from 4 232 20 to 4 232 23; from 4 232 25 to 4 232 28;  
from 4 232 40 to 4 232 43; from 4 232 45 to 4 232 48;  
from 4 232 50 to 4 232 53; from 4 232 55 to 4 232 58;

9.3.1 Cut-off peak current characteristic curve (breaking capacity  $I_{cu} \leq 50\text{kA}$ )

Update: 30/08/2019



$I_{cu} = 36\text{-}50\text{ kA}$   $I_{max} = 250\text{A}$  3-4 P  $U_o = 415\text{Vac}$  (IEC/EN 60947-2)

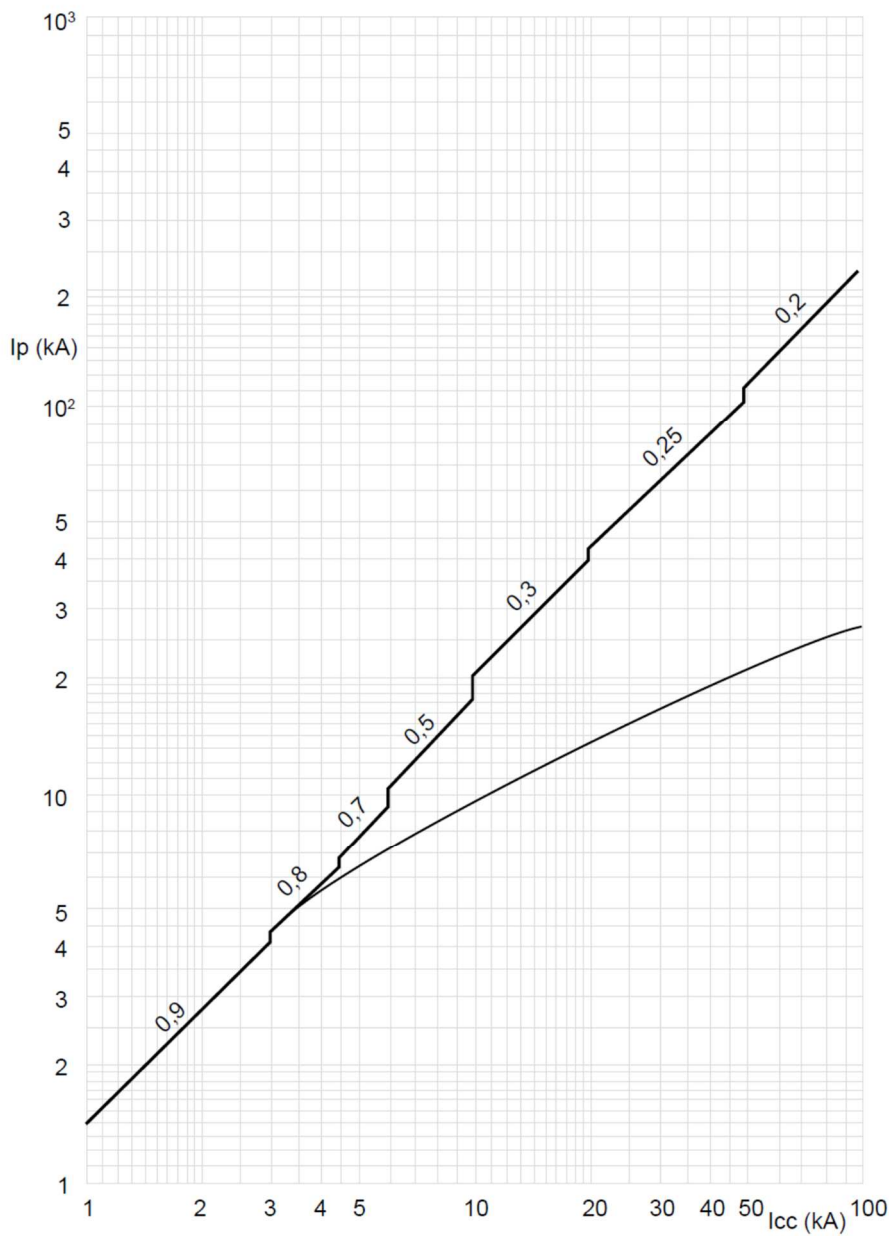
Value	Description
$I_{cc}$	estimated short circuit symmetrical current (RMS value)
$I_p$	maximum short circuit peak current
	maximum prospective short circuit peak current corresponding at the power factor
	maximum real peak short circuit current

DPX<sup>3</sup> 250 HP S1 electronic (no display)  
circuit breakers

Reference(s) :  
from 4 232 00 to 4 232 03; from 4 232 05 to 4 232 08;  
from 4 232 20 to 4 232 23; from 4 232 25 to 4 232 28;  
from 4 232 40 to 4 232 43; from 4 232 45 to 4 232 48;  
from 4 232 50 to 4 232 53; from 4 232 55 to 4 232 58;

9.3.2 Cut-off peak current characteristic curve (breaking capacity  $I_{cu} > 50\text{kA}$ )

Update: 20/11/2020



$I_{cu} = 70\text{--}100\text{ kA}$   $I_{max} = 250\text{ A}$  3-4 P  $U_n = 415\text{ Vac}$  (IEC/EN 60947-2)

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

A) Derating Temperature and configurations

	Ambient temperature									
	30 °C		40 °C		50 °C		60 °C		70 °C	
Fixed version	I <sub>max</sub> (A)	I <sub>r</sub> / I <sub>n</sub>	I <sub>max</sub> (A)	I <sub>r</sub> / I <sub>n</sub>	I <sub>max</sub> (A)	I <sub>r</sub> / I <sub>n</sub>	I <sub>max</sub> (A)	I <sub>r</sub> / I <sub>n</sub>	I <sub>max</sub> (A)	I <sub>r</sub> / I <sub>n</sub>
Cage terminals, flexible cable	250	1	250	1	230	0.92	210	0.84	190	0.76
Cage terminals, flexible cable + sealable terminal shields	250	1	238	0.95	200	0.80	175	0.70	175	0.70
Lugs, flexible cable	250	1	213	0.85	200	0.80	200	0.80	150	0.60
Spreaders, flexible cable	250	1	250	1	200	0.80	175	0.70	163	0.65
Rear terminals, flexible cable	250	1	213	0.85	188	0.75	163	0.65	163	0.65
Plug-in/draw-out version	I <sub>max</sub> (A)	I <sub>r</sub> / I <sub>n</sub>	I <sub>max</sub> (A)	I <sub>r</sub> / I <sub>n</sub>	I <sub>max</sub> (A)	I <sub>r</sub> / I <sub>n</sub>	I <sub>max</sub> (A)	I <sub>r</sub> / I <sub>n</sub>	I <sub>max</sub> (A)	I <sub>r</sub> / I <sub>n</sub>
Cage terminals, flexible cable	250	1	238	0.95	238	0.95	233	0.93	225	0.90

For further technical information, please contact Legrand technical support.

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