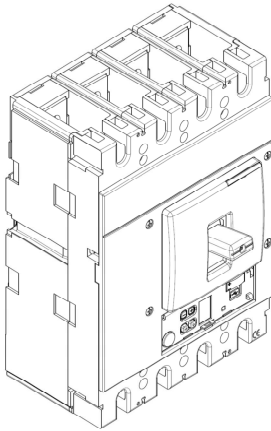


# DPX<sup>3</sup> 630 AB

## Electronic release

Reference(s) : **422 596/597**



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### 1. USE

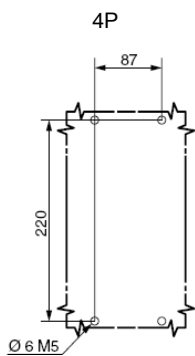
DPX<sup>3</sup> "moulded case" circuit breaker offers optimal solutions to answer to protection requirements of tertiary and industrial installations.

### 2. RANGE

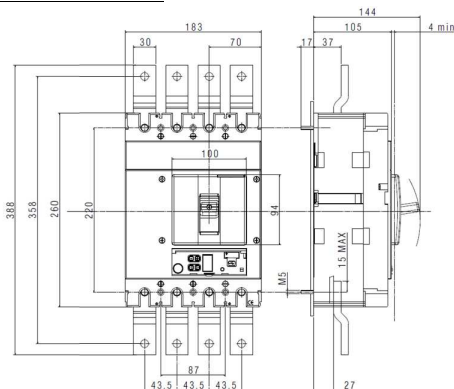
I <sub>n</sub> (A)	36 kA	
	ELE	ELE +MEAS
400	4P	4P
	422596	422597

### 3. DIMENSIONS

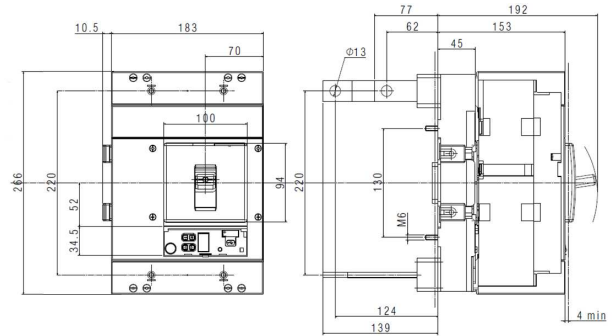
Implantation



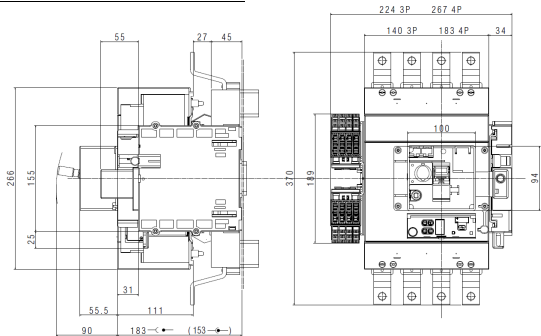
Front terminals, fixed version



Plug-in version, front terminals



Rear terminals with threaded rod



### 4. OVERVIEW

#### 4.1 Supplied

Connection plates for bars:

- Width 32mm max

Seals for adjustment (supplied)

#### 4.2 Mounting possibility

On plate:

- Vertical
- Horizontal
- Supply inverter type

# DPX<sup>3</sup> 630 AB

## Electronic release

Reference(s) : 422 596/597

### 5. ELECTRICAL AND MECHANICAL CHARACTERISTICS

Circuit breaker	DPX <sup>3</sup> 630									
Uninterrupted nominal current $I_n$ (A)	400									
Short time admissible current $I_{sc}$ (kA) (for 0.5s)	5									
Isolated voltage $U_i$ (V AC)	800									
Maximum rated operating voltage $U_e$ (V AC)	690									
Rated impulse withstand voltage $U_{imp}$ (kV)	8									
Nominal frequency (Hz)	50-60									
Operating temperature (°C)	-25 ÷ 70									
Mechanical endurance (cycles)	20000									
Electrical endurance (cycles)	5000									
Mechanical endurance with motor control (cycles)	10000									
Category of use	B									
Type of trip	electronic									
Electronic trip S2	yes									
Thermal adjustment ( $I_t$ )	$I_t$ (A)	260	280	300	320	340	360	380	400	
	% $I_n$	0.65	0.7	0.75	0.8	0.85	0.9	0.95	1	
Magnetic adjustment ( $I_{sd}$ )	$(1.5 \div 10) \times I_t$									
Neutral adjustment	$(0, 0.5, 1) \times I_t$									
Dimensions (W x H x D) (mm)	183 x 260 x 105									
Weight (kg)	6.4									

### 5.1 Breaking capacity (kA)

Breaking capacity (kA) and $I_{cs}$	
$U_e/I_{cu}$	F
220/240 V AC	70
380/415 V AC	36
440/460 V AC	30
480/550 V AC	25
600 V AC	20
690 V AC	14
$I_{cs}$ (% $I_{cu}$ )	100
Rated making capacity under short circuit $I_{cm}$	
$I_{cm}$ (kA) at 415V	75.6

### 5.2 Nominal current ( $I_n$ ) at 40°C / 50°C

$I_n$ (A)	Assigned current trip thermal	
	L1-L2-L3	N
400	400	0 – 200 – 400

### 5.3 Power losses per pole under $I_n$

$I_n$ (A)	Power losses (W)	
	400	
Pole	Phase	Neutral
Cage terminals	19.2	19.2
Lugs	19.2	19.2
External lugs	21.1	21.1
Spreaders	22.9	22.9
Rear terminals	22.3	22.3
Plugin version	38.5	38.5
Circuit breaker + RCD	27.2	27.2

Total power losses has calculated as the sum of losses of every accessory installed

### 5.4 Functioning in particular conditions

#### 5.4.1 Temperature

°C	Influence of ambient temperature		
	Up to 50	60	70
$I_n$ (A)	400	360	320

For derating temperature with other configuration, see table A.

#### 5.4.2 Altitude

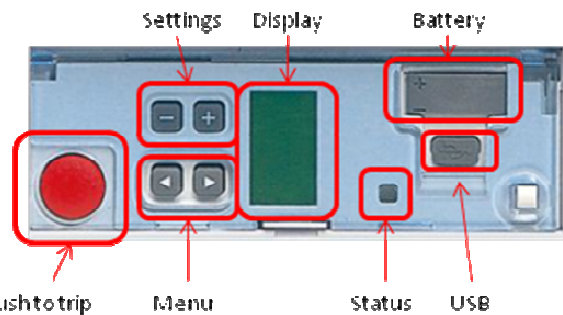
Altitude (m)	2000	3000	4000	5000
$U_e$ (V)	690	590	520	460
$I_n$ (A) ( $T_a = 40^\circ\text{C}/50^\circ\text{C}$ )	$I_n$	$0.98 \times I_n$	$0.93 \times I_n$	$0.9 \times I_n$

#### 5.4.3 Use at 400Hz

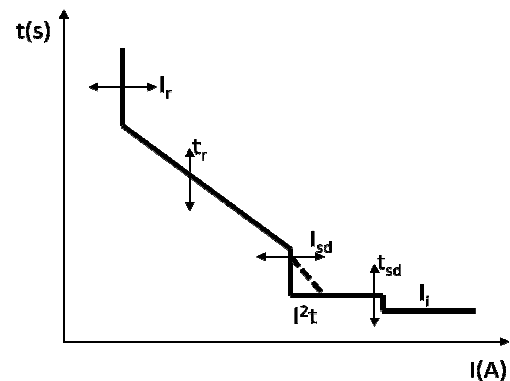
Not possible with electronic release.

### 5.5 Electronic release

#### 5.5.1 Version S2 – Adjustment of $I_t$ , $T_r$ , $I_{sd}$ , $T_{sd}$



LCD display with adjustment buttons, battery case and USB port.



Long delay protection against overloads with an adjustable threshold bases on the RMS value of the current:

- $I_r = 260 - 280 - 300 - 320 - 340 - 360 - 380 - 400$  A (8 steps)
- $T_r = 3 - 30$  s (3 – 5 – 10 – 15 – 20 – 25 – 30) (7 steps)

Short delay protection against short-circuits with an adjustable  $I_{sd}$  threshold:

- $I_{sd} = 1.5 - 2 - 2.5 - 3 - 4 - 5 - 6 - 7 - 8 - 9 - 10 \times I_r$  (11 steps)
- $T_{sd} = 0 - 100 - 200 - 300 - 400 - 500$  ms ( $I=K$ )
- $T_{sd} = 0 - 100 - 200 - 300 - 400 - 500$  ms ( $I^2t=K$ )

Instantaneous protection  $I_i$  with fixed threshold:  $I_i = 5$  kA

Neutral adjustment =  $0 - 0.5 - 1 \times I_r$

# DPX<sup>3</sup> 630 AB

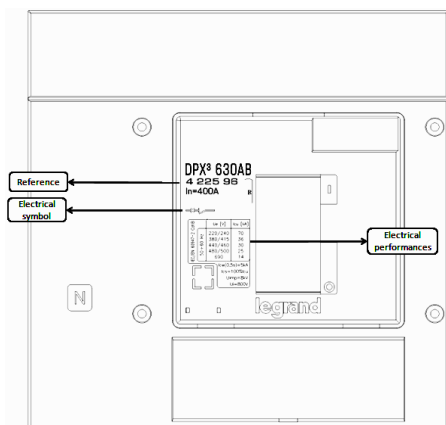
## Electronic release

Reference(s) : 422 596/597

### 6. CONFORMITY

IEC/EN 60 947-2

#### 6.1 MARKING



"Tropical climate":

- execution II (all climates) according to guide UTE C63100

### 7. EQUIPMENTS AND ACCESSORIES

#### 7.1 Earth leakage modules

Earth leakage characteristics for DPX <sup>3</sup> 630		
	Standard	with Led
Type	A-S	A-S
Uninterrupted nominal current I <sub>n</sub> (A)	400	400
Rated earth leakage current I <sub>dn</sub> (A)	0.03 ÷ 3	0.03 ÷ 3
Rated isolated voltage U <sub>i</sub> (V ac)	500	500
Rated operating voltage U <sub>e</sub> (V AC) (50-60Hz)	500	500
Operating voltage (V AC) (50-60Hz)	230 ÷ 500	110 ÷ 500
Nominal frequency (Hz)	50 - 60	50 - 60
Operating temperature (°C)	-25 ÷ 70	-25 ÷ 70
Trip	electronic	electronic
Earth leakage time adjustments (s)	0-0.3-1-3	0-0.3-1-3
Earth leakage breaking capacity I <sub>dm</sub> (% I <sub>cu</sub> )	60	60
Mounted side-by-side	no	no
Montage underneath	yes	yes
50% Earth fault detection contact I <sub>dn</sub>	no	yes
Clip on rail DIN 35	no	no
Dimensions moulded case (WxHxD) (mm)	183x152x105	183x152x106
4P		

(Power losses, see table 5.3)

Standard 400A ref. 0 260 61

LED version 400A ref. 0 260 63

#### 7.2 Releases

- shunt releases (Power consumption= 300 VA) with voltage:
  - 24 V AC and DC ref. 4 222 39
  - 48 V AC and DC ref. 4 222 40
  - 110 V AC and DC ref. 4 222 41
  - 230 V AC and DC ref. 4 222 42
  - 400 V AC and DC ref. 4 222 43

- undervoltage releases (Power consumption = 5 VA) with voltage:

- 24 V DC ref. 4 222 44
- 24 V AC ref. 4 222 45
- 48 V DC ref. 4 222 46
- 110 V AC ref. 4 222 47
- 230 V AC ref. 4 222 48
- 400 V AC ref. 4 222 49

- time-lag undervoltage releases (800 ms)

Time-lag modules with voltage:

- 230V AC ref. 0 261 90
- 400V AC ref. 0 261 91
- Universal Release ref. 4 226 23

#### 7.3 Auxiliary contact

Changeover switch 3 A – 250 V AC ref. 4 210 11

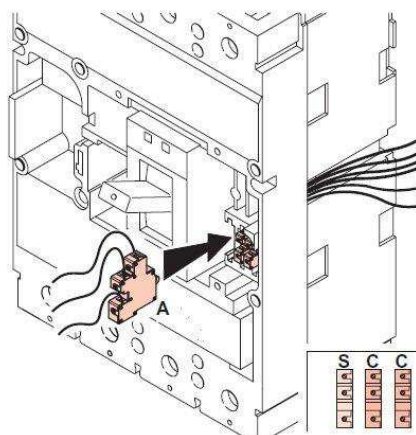
To show the state of the contacts or opening of the DPX<sup>3</sup> on a fault:

Auxiliary contact (standard) C  
 Fault signal S

Auxiliary contact		
Nominal voltage (V <sub>n</sub> )	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:

DPX<sup>3</sup> 630 → 2 auxiliary contact + 1 fault signal + 1 release



# DPX<sup>3</sup> 630 AB

## Electronic release

Reference(s) : 422 596/597

### 7.4 Rotary handles

#### Direct on DPX<sup>3</sup>

- Standard (black) ref. 0 262 41
- For emergency use (red / yellow) ref. 4 222 38

#### Vari-depth handle IP55

- Standard (black) ref. 0 262 81
- For emergency use (red / yellow) ref. 0 262 82

#### Locking accessories

- Profalux type for vari-depth handle ref. 0 262 93
- Ronis type for vari-depth handle ref. 0 262 94

### 7.5 Motor-driven handles

#### Front operated

- Voltage 24 V AC and DC ref. 0 261 40
- Voltage 230 V AC ref. 0 261 44

#### Locking accessories

- Ronis type ref. 0 261 59
- Profalux type ref. 0 261 58

### 7.6 Mechanical accessories

#### Insulated shields

- Set of 3 ref. 0 262 30

#### Sealable terminal shields

- Set of 2 ref. 0 262 45

#### Terminal covers to guarantee IP20

- Set of 2 ref. 4 222 35

#### Padlocks

- Accessories to lock in open position ref. 0 262 40

### 7.7 Connection accessories

#### Cage terminals

- Set of 4 terminals for cables 300mm<sup>2</sup> max (rigid) or 240mm<sup>2</sup> max (flexible) Cu/Al ref. 0 262 50
- Set of 4 terminals for cables 2x240mm<sup>2</sup> max (rigid) or 2x180mm<sup>2</sup> max (flexible) Cu/Al ref. 0 262 51

#### Extended front terminals

- Set of 4 ref. 0 262 47

#### Spreaders

- Set of 4 (incoming or outgoing) ref. 0 262 49

#### Rear terminals

(use to connect fixed version with front terminals into fixed version with rear terminals)

- Set of swivel terminals, incoming or outgoing ref. 0 263 51
- Set of flat rear terminals, incoming or outgoing ref. 0 263 53

#### Terminals for plug-in and draw-out base

- Set of 8 terminals ref. 4 222 21

### 7.8 Plug-in version

(A plug-in is a DPX<sup>3</sup> fitted with tulip contacts mounted on a base)

#### Tulip contact

- Set of tulip contact (supplied with an incoming/outgoing protective cover) ref. 0 265 51

#### Bases

- front terminal mounting base ref. 4 222 23
- flat rear terminal mounting base ref. 4 222 25

#### Bases with earth leakage underneath mounting

- front terminal mounting base ref. 4 222 26
- Flat rear terminal mounting base ref. 4 222 27

#### Accessories

- Set of 2 extractor handle ref. 4 222 28
- Set of connectors (8-pin) ref. 0 263 99
- Set of connectors (24 pin – 3x8 or 2x12) ref. 4 222 29
- Signal contact (plugged-in / draw-out) ref. 0 265 74
- Support plate for plug-in version ref. 4 222 37

### 7.9 Draw-out version

(A DPX<sup>3</sup> draw-out version is a plug-in DPX<sup>3</sup> fitted with a "Débro-lift" mechanism which can be used to withdraw the DPX<sup>3</sup> while keeping it on its base)

#### "Débro-lift" mechanism

- For DPX<sup>3</sup> base only ref. 4 222 32
- For DPX<sup>3</sup> base with earth leakage module ref. 4 222 33

#### Key lock for "Débro-lift" mechanism

- For DPX<sup>3</sup> only
  - Ronis type ref. 0 265 76
  - Profalux type ref. 0 263 48
- For motorized DPX<sup>3</sup> or with rotary handle
  - Ronis type ref. 0 265 78
  - Profalux type ref. 0 265 77

#### Accessories for "Débro-lift" mechanism

- Isolated handle to draw-out ref. 0 265 75
- Signal contact (plugged-in / drawn-out) ref. 0 265 74
- Support plate for draw-out version ref. 4 222 36
- Automatic auxiliary contacts (6 pin) for D/O version (2 pieces installable max.) ref. 4 222 30

### 7.10 Supply

- Auxiliary supply (input 24 V AC and DC) ref. 4 210 83

### 7.11 RS485 ModBus communication interface

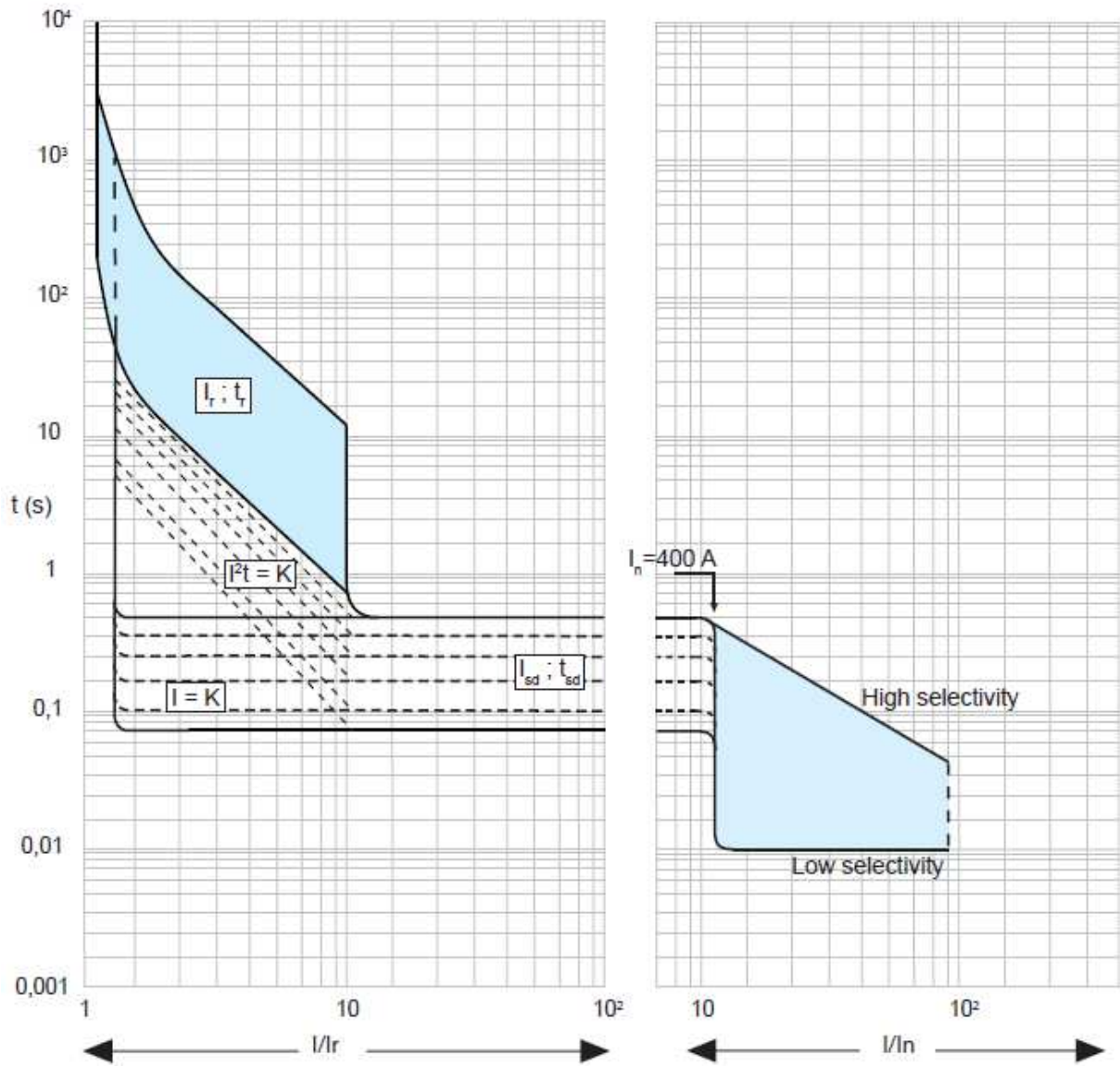
To connect thermal-magnetic DPX<sup>3</sup> with residual current protection and electronic DPX<sup>3</sup> to an RS485 ModBus communication network.

ref. 4 210 75

8. CURVES

8.1 TRIPPING CURVE

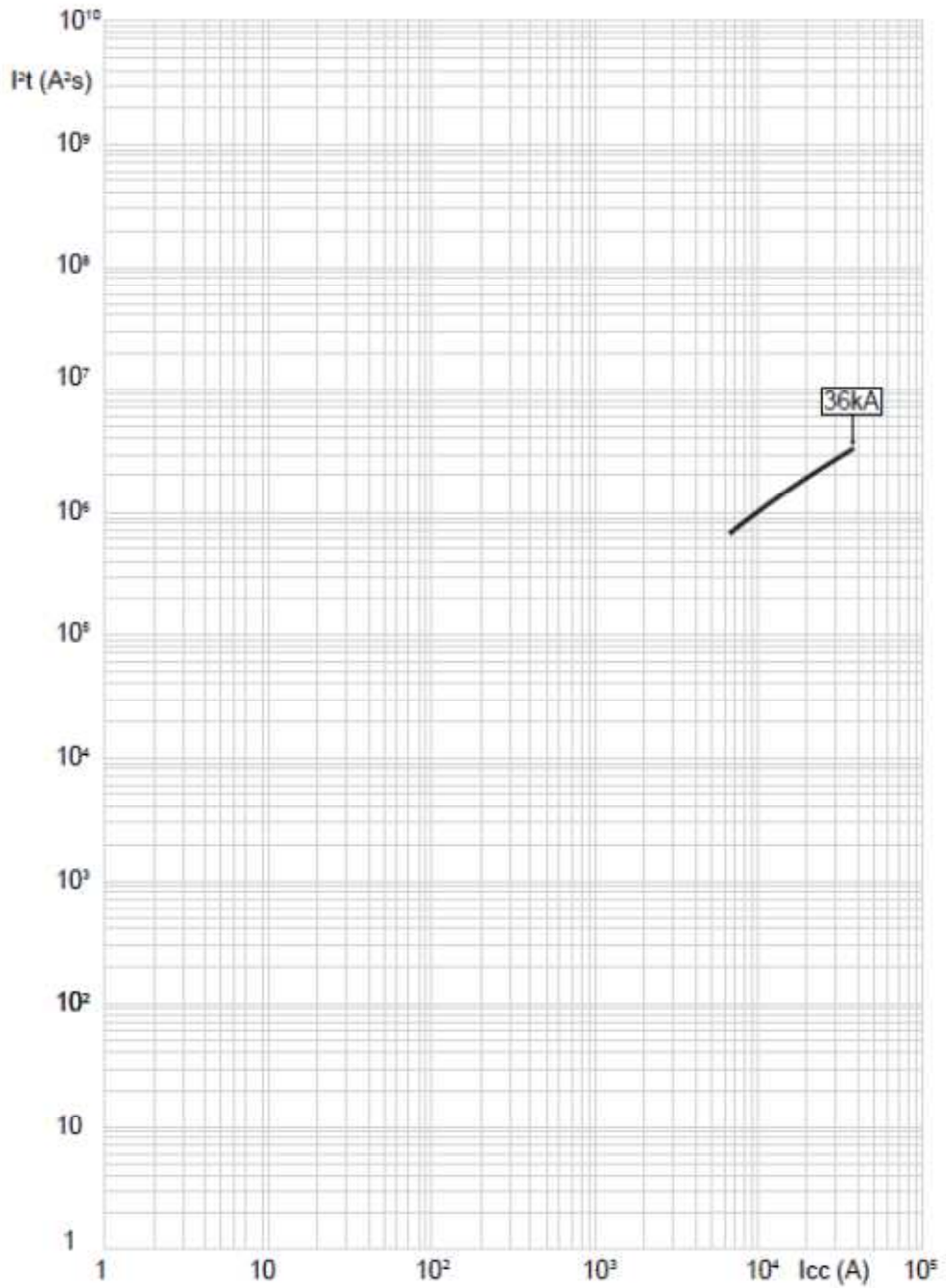
DPX<sup>3</sup> 630 AB      36 kA       $I_{max} = 400A$       4P      415 V<sub>ac</sub>



Value	Description
$t$	time
$I$	current
$I_n$	rated current
$I_r$	long time setting current
$t_r$	long time delay
$I_{sd}$	short time setting current
$t_{sd}$	short time delay

8.2 Restricted curve in thermal constraint

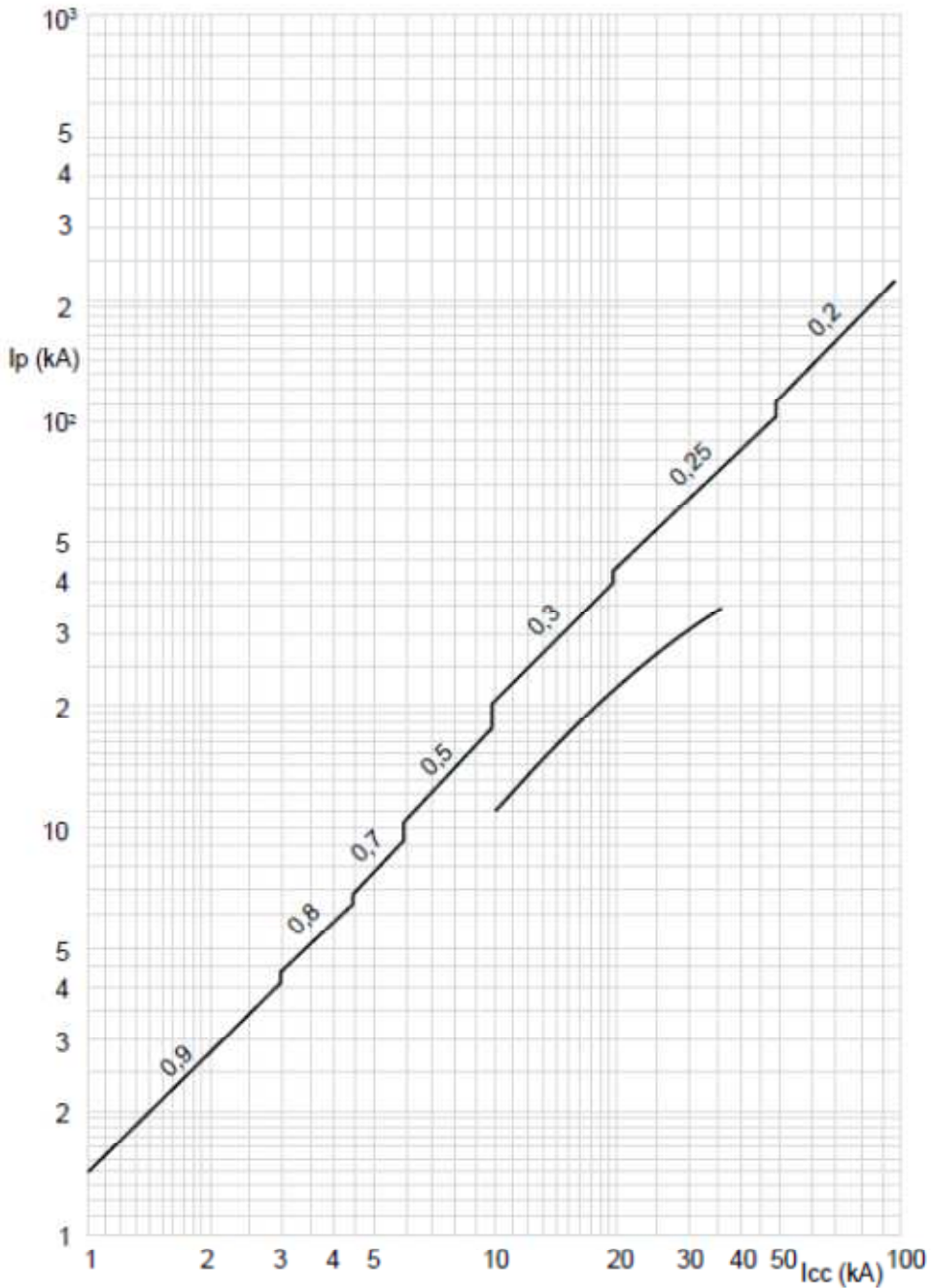
DPX<sup>3</sup> 630 AB      36 kA       $I_{max} = 400A$       4P      415 V<sub>ac</sub>



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

8.3 Restricted current curve

DPX<sup>3</sup> 630 AB      36 kA       $I_{max} = 400A$       4P      415 V<sub>ac</sub>



Value	Description
$I_{cc}$	short circuit current
$I_p$	peak current

# DPX<sup>3</sup> 630 AB

## Electronic release

Reference(s) : 422 596/597

### A) Derating Temperature and configurations

		30°C		40°C		50°C		60°C		70°C	
		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>
DPX <sup>3</sup> 630 AB fixed	Cage terminals, flexible cable	400	1	400	1	400	1	380	0.95	360	0.9
	Lugs, flexible cable	400	1	400	1	400	1	360	0.9	340	0.85
	Lugs, rigid cable	400	1	400	1	400	1	380	0.95	360	0.9
	Spreaders, flexible cable	400	1	400	1	400	1	340	0.85	320	0.8
	Rear flat staggered terminals, flexible cable	400	1	400	1	400	1	360	0.9	340	0.85
	Rear tang terminals, flexible cable	400	1	380	0.95	380	0.95	320	0.8	300	0.75
DPX <sup>3</sup> 630 AB fixed + RCD	Cage terminals, flexible cable + RCD	400	1	400	1	340	0.85	320	0.8	300	0.75
	Lugs, flexible cable + RCD	380	0.95	380	0.95	340	0.85	320	0.8	300	0.75
	Lugs, rigid cable + RCD	400	1	380	0.95	340	0.85	320	0.8	300	0.75
	Spreaders, flexible cable + RCD	400	1	400	1	340	0.85	320	0.8	300	0.75
	Rear flat staggered terminals, flexible cable + RCD	400	1	400	1	340	0.85	320	0.8	300	0.75
	Rear tang terminals, flexible cable + RCD	380	0.95	380	0.95	360	0.9	340	0.85	320	0.8