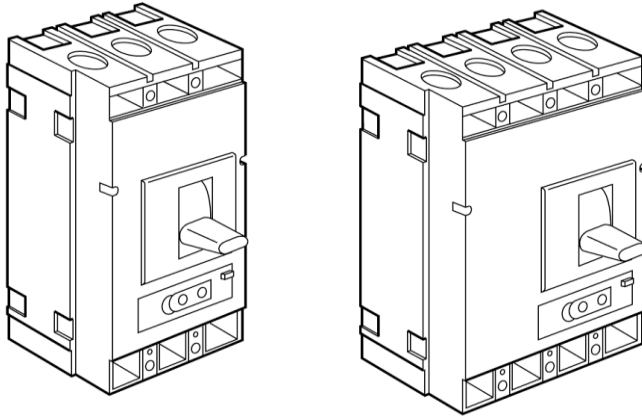


DPX 630

Thermal magnetic and trip-free switches

DPX-I 630

Reference(s) : 255 21/ 22/ 23/ 24/ 25/ 31/ 32/ 33/ 34/ 35/ 36/ 37/ 38/ 39/ 40/ 41/ 42/ 43/ 44/ 45/ 51/ 52/ 53/ 54/ 55/ 56/ 57/ 58/ 59/ 60/ 61/ 62/ 63/ 64/ 65/ 71/ 72/ 73/ 74/ 75/ 76/ 77/ 78/ 79/ 80/ 86/ 87/ 88/ 89



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1. USE

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

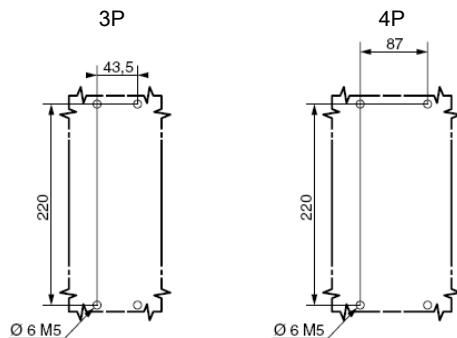
2. RANGE

Current	3P				3P+N	3P+N/2			4P		
	36	70	100	100	36	70	100	36	70	100	
250	255 21	255 41	255 61			255 31	255 51	255 71	255 36	255 56	255 76
320	255 22	255 42	255 62			255 32	255 52	255 72	255 37	255 57	255 77
400	255 23	255 43	255 63			255 33	255 53	255 73	255 38	255 58	255 78
500	255 25	255 45	255 65	258 37		255 35	255 55	255 75	255 39	255 59	255 79
630	255 24	255 44	255 64	258 38		255 34	255 54	255 74	255 40	255 60	255 80

	3P	4P
Current		
400	255 86	255 87
630	255 88	255 89

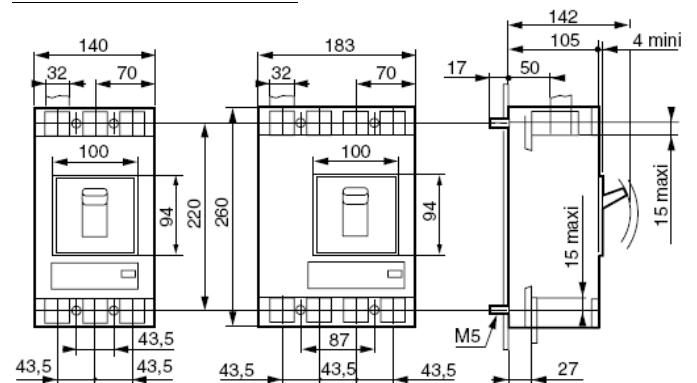
3. DIMENSIONS

Implantation

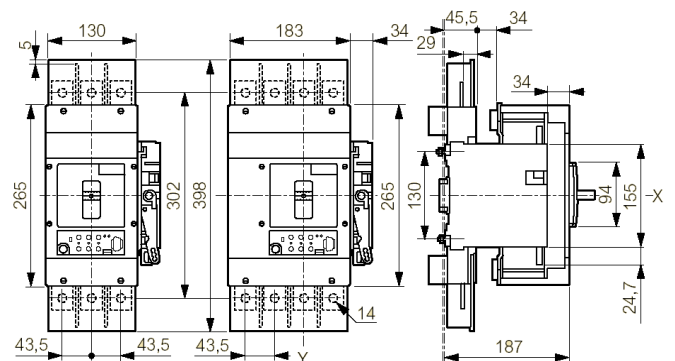


3. DIMENSIONS (NEXT)

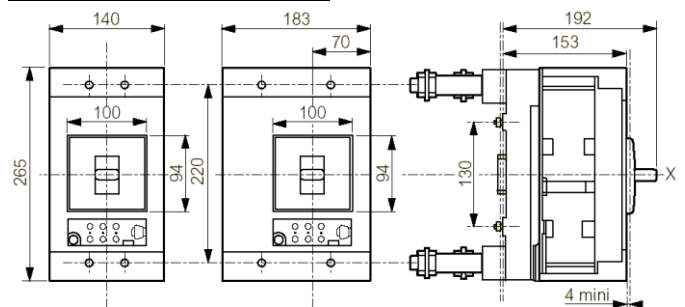
Front terminals, fixed version :



Plug-in version, front terminals :



Rear terminals with threaded rod :



DPX 630

Thermal magnetic and trip-free switches DPX-I 630

Reference(s) : 255 21/ 22/ 23/ 24/ 25/ 31/ 32/ 33/ 34/ 35/ 36/ 37/ 38/
39/ 40/ 41/ 42/ 43/ 44/ 45/ 51/ 52/ 53/ 54/ 55/ 56/ 57/ 58/ 59/ 60/ 61/ 62/
63/ 64/ 65/ 71/ 72/ 73/ 74/ 75/ 76/ 77/ 78/ 79/ 80/ 86/ 87/ 88/ 89

4. OVERVIEW

4.1 Supplied

Connection plates for bars :

- Width 32 mm max

Seals for adjustment (supplied)

4.2 Mounting possibility

On plate :

- Vertical
- Horizontal
- Supply inverter type

5. CONNECTION

See table B.

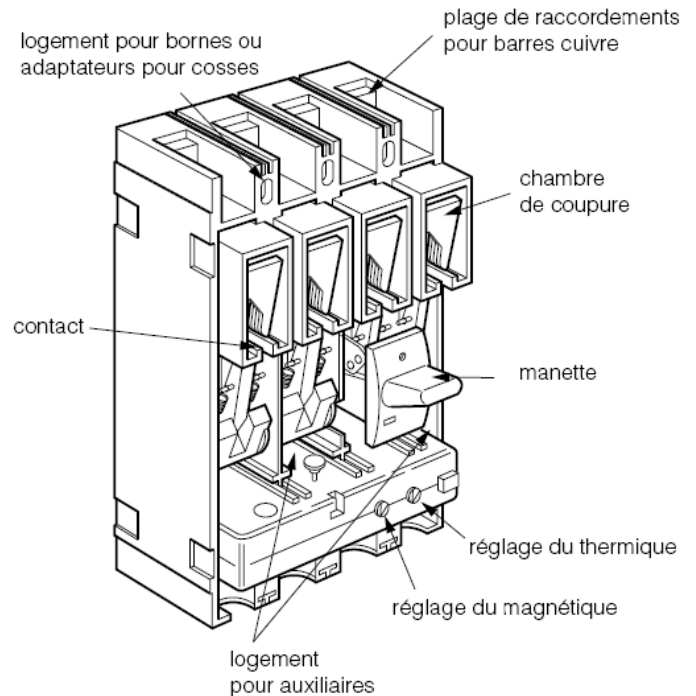
6. ELECTRICAL AND MECHANICAL CHARACTERISTICS

Circuit breaker	DPX 630/H/L
Uninterrupted nominal current Iu (A)	250-630
Isolated voltage Ui (V a.c.)	690
Maximum rated operating voltage Ue (V a.c./d.c.)	690
Rated impulse withstand voltage Uimp (kV)	8
Nominal frequency (Hz)	50-60
Operating temperature (°C)	-25÷70
Endurance electrical / mechanical	5.000/15.000
Category of use	A
Type of trip	thermal-magnetic
Thermal adjustment	0,8-1 In
Magnetic adjustment	5-10 In
Dimensions (w×h×d) (mm)	140x260x105 (3P) 183x260x105 (4P)
Weight (kg)	5,8 (3P) – 7,4 (4P)

DPX-I 630

Switches	DPX-I 630
Uninterrupted nominal current Iu (A)	400-630
Rated closing capacity on short-circuit Icm (kA)	40
Nominal current of use Ie (A)	400/630 - AC23A (690V a.c.) 400/630 - DC23A (250V d.c.)
Short-time resistive current Icw (kA) for 1s	20
Isolated voltage Ui (V a.c.)	690
Maximum rated operating voltage Ue (V a.c./d.c.)	690/250
Rated impulse withstand voltage Uimp (kV)	8
Nominal frequency (Hz)	50-60
Operating temperature (°C)	-25÷70
Endurance electrical / mechanical	5.000/15.000
Dimensions (w×h×d) (mm)	140x260x105 (3P) 183x260x105 (4P)
Weight (kg)	4,5 (3P) – 6,4 (4P)

6.1 Main pieces constituting the circuit breaker



6.2 Breaking capacity (kA)

Breaking capacity Icu and Ics in AC (kA)				
	Ue		H	L
Icu (kA)	230V	60	100	170
	400V	36	70	100
	440V	30	60	70
	500V	25	40	45
	600V	20	25	28
	690V	16	20	22
Ics (%Icu)	-	100	75	50

Breaking capacity Icu and Ics in AC (kA)				
	Ue		H	L
Icu (kA)	230V	60	100	170
	400V	36	70	100
	440V	30	60	70
	500V	25	40	45
	600V	20	25	28
	690V	16	20	22
Ics (%Icu)	-	100	75	50

Rated making capacity under short-circuit Icm (kA)				
Icm (kA)	400V	75,6	154	220

6.3 Nominal current (In) at 40 °C (A)

Assigned current trip	thermal		magnetic	
	L1-L2-L3	N	L1-L2-L3	N
250	250	160	1250÷1600	800÷1600
320	320	200	1600÷3200	1000÷2000
400	400	250	2000÷4000	1250÷2500
500	500	400	2500÷5000	1600÷2500
630	630	500	3200÷6300	2000÷4000

DPX 630

Thermal magnetic and trip-free switches

DPX-I 630

Reference(s) : 255 21/ 22/ 23/ 24/ 25/ 31/ 32/ 33/ 34/ 35/ 36/ 37/ 38/ 39/ 40/ 41/ 42/ 43/ 44/ 45/ 51/ 52/ 53/ 54/ 55/ 56/ 57/ 58/ 59/ 60/ 61/ 62/ 63/ 64/ 65/ 71/ 72/ 73/ 74/ 75/ 76/ 77/ 78/ 79/ 80/ 86/ 87/ 88/ 89

6.4 Power losses per pole under In

Power losses per pole (W)					
In (A)	250	320	400	500	630
DPX 630	12,5	14,34	19,2	25	43,66
Eath leakage	1,25	2,05	3,2	5	8
Kit plug-in	5	8,19	12,8	20	32

Total power losses is the sum of the different accessories value instal

6.5 FUNCTIONING IN PARTICULAR CONDITIONS

6.5.1 Temperature

Temperature derating Ta (°C)							
In (A)	10	20	30	40	50	60	70
250	260÷335	240÷307	220÷281	200÷250	189÷230	160÷205	130÷180
320	335÷422	307÷384	281÷352	250÷320	230÷288	205÷256	180÷225
400	422÷528	384÷480	352÷440	320÷400	288÷360	256÷320	225÷280
500	475÷590	455÷570	430÷535	400÷500	380÷480	360÷450	340÷420
630	590÷735	570÷705	535÷670	500÷630	480÷600	450÷570	420÷540

For derating temperature with other configuration, see table A.

6.5.2 Altitude

Altitude			
Altitude (mt)	2000	3000	4000
Ue (V)	690 V	600 V	480 V
In (A) (Ta=40°C)	In	0.96 x In	0.93 x In

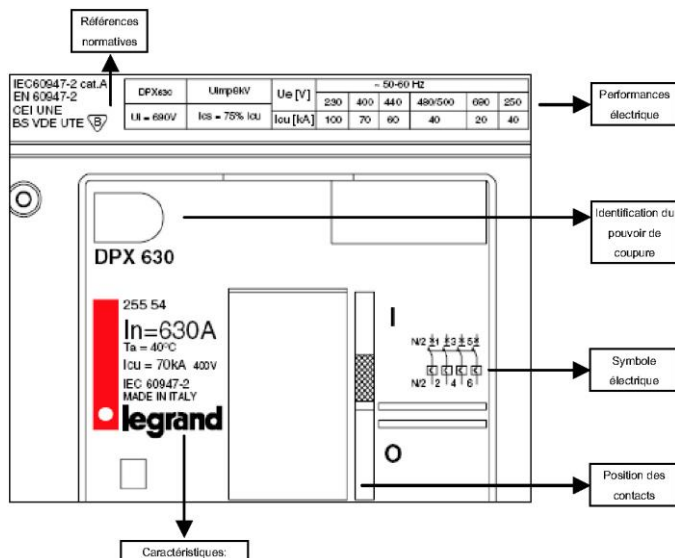
6.5.3 Use in 400 Hz

See table C.

7. CONFORMITY

IEC 60 947-2
EN 60947-2
EN 60947-3 (for switches DPX-I)
NF C
VDE
BS
UNE
CEI

7.1 MARKING



"Tropical climate" :

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

8. EQUIPMENTS AND ACCESSORIES

8.1 Earth leakage modules:

Earth leakage characteristics for DPX 630		
	Standard	with LED
Type	A-S	A-S
Uninterrupted nominal current Iu (A)	630	630
Rated earth leakage current Idn (A)	0.03÷3	0.03÷3
Rated isolated voltage Ui (V.a.c.)	500	500
Rated operating voltage Ue (V.a.c.) (50-60Hz)	500	500
Operating voltage (V.a.c.) (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 protection adjustment Idn (A)	0.03÷3	0.03÷3
Earth leakage time adjustment (s)	0-03-1-3	0-03-1-3
Earth leakage breaking capacity Idm (%Icu)	60	60
Mounted side-by-side	no	no
Montage underneath	yes	yes
50% Earth fault detection contact Idn	no	yes
Clip on rail DIN35	no	no
Dimensions moulded case (wxhxd) (mm)	183x152x105 (undemeath)	183x152x105 (undemeath)
	3.1 (undemeath)	3.1 (undemeath)

(Power losses, see table 6.4)

Standard

400A	3P	ref. 260 60
	4P	ref. 260 61
630A	3P	ref. 260 64
	4P	ref. 260 65

LED version

400A	4P	ref. 260 63
630A	4P	ref. 260 67

8.2 Releases :

- shunt releases (Power consumption= 300 VA) with voltage:

24 V ~ et =	ref. 261 64
48 V ~ et =	ref. 261 65
110 V ~ et =	ref. 261 66
230 V ~ et =	ref. 261 67
400 V ~ et =	ref. 261 68
- undervoltage releases (Power consumption = 5 VA) with voltage :

24 V =	ref. 261 80
24 V ~	ref. 261 81
48 V =	ref. 261 82
110 V ~	ref. 261 86
230 V ~	ref. 261 83
400 V ~	ref. 261 84
- time-lag undervoltage releases (800 ms) :

Time-lag modules with voltage :	
24Vac/dc	ref. 26192 + 26190 / 91
230Vac	ref. 261 90
400Vac	ref. 261 91
Universal Release	ref. 261 85

DPX 630

Thermal magnetic and trip-free switches DPX-I 630

Reference(s) : 255 21/ 22/ 23/ 24/ 25/ 31/ 32/ 33/ 34/ 35/ 36/ 37/ 38/
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63/ 64/ 65/ 71/ 72/ 73/ 74/ 75/ 76/ 77/ 78/ 79/ 80/ 86/ 87/ 88/ 89

8.3 Auxiliary contact

Changeover switch 3 A – 240 V ~

ref. 261 60

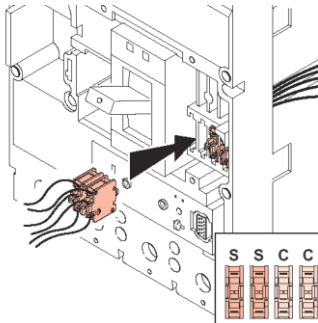
For signalling the state of the contacts or opening of the DPX on a fault:

Auxiliary contact (standard) **C**
Fault signal **S**

Auxiliary contact		
Nominal voltage (Vn)	(Va.c/d.c.)	24 to 250
Intensity (A)	24 Vd.c.	5
	48 Vd.c.	1.7
	110 Vd.c.	0.5
	230 Vd.c.	0.25
	110 Va.c.	4
	230/250 Va.c.	3

Configurations:

DPX 630 → 2 auxiliary contact + 2 fault signal



8.4 Rotary handles :

Direct on DPX

- Standard (black) ref. 262 41
- For emergency use (red / yellow)
Adapting on standard handle ref. 262 24

Vari-depth handle IP55

- Standard (black) ref. 262 81
- For emergency use (red / yellow)
Adapting on standard handle ref. 262 82

Locking accessories

- Eurolocks for vari-depth handle ref. 262 92
- Profalux for vari-depth handle ref. 262 93
- Ronis for vari-depth handle ref. 262 94
- Eurolocks for direct handle ref. 262 25

8.5 Motor-driven handles :

Front operated

- Voltage 24 V ~ et = ref. 262 40
- Voltage 48 V ~ et = ref. 262 41
- Voltage 110 V ~ ref. 262 42
- Voltage 230 V ~ ref. 262 44

Locking accessories

- Ronis locking ref. 261 59
- Profalux locking ref. 261 58

8.6 Mechanical accessories :

Insulated shields

- Set of 3 ref. 262 30

Sealable terminal shields

- Set of 2 3P ref. 262 44
- Set of 2 4P ref. 262 45

Padlocks

- Accessories for locking in open position ref. 262 40

8.7 Connection's accessories :

Cage terminals

- Set of 4 terminals for cables 300mm² max (rigid) or 240mm² max (flexible) Cu/Al ref. 262 50

- Set of 4 terminals for cables 240mm² max (rigid) or 180mm² max (flexible) Cu/Al ref. 262 51

Extended front terminals

- Set of 4 ref. 262 47

Spreaders

- Set of 3 (incoming or outgoing 3P) ref. 262 48
- Set of 4 (incoming or outgoing 4P) ref. 262 49

Rear terminals

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

- Set of swivel terminals, incoming or outgoing
 - 3P ref. 263 50
 - 4P ref. 263 51
- Set of flat rear terminals, incoming or outgoing
 - 3P ref. 263 52
 - 4P ref. 263 53

8.8 Plug-in version

(A plug-in is a DPX fitted with tulip contacts mounted on a base)

Tulip contact

- Set of tulip contact (supplied with an incoming/outgoing protective cover)

- 3P ref. 265 50
- 4P ref. 265 51

Bases

- front terminal mounting base
 - 3P ref. 265 52
 - 4P ref. 265 53
- rear terminal mounting base with threaded rod
 - 3P ref. 265 54
 - 4P ref. 265 55
- flat rear terminal mounting base
 - 3P ref. 265 56
 - 4P ref. 265 57

Bases with earth leakage underneath mounting (4P)

- front terminal mounting base ref. 265 58
- rear terminal mounting base with threaded rod ref. 265 59
- flat rear terminal mounting base ref. 265 60

Accessories

- Set of 2 extractor handle ref. 263 68
- Set of connectors (8-pin) ref. 263 99
- Signalling contact (plugged-in / drawn-out) ref. 265 74

8.9 Draw-out version

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

«Débro-lift » mechanism

- For DPX base only
 - 3P ref. 265 66
 - 4P ref. 265 67
- For DPX base with earth leakage module ref. 265 68

Key lock for « Debro-lift » mechanism

- For DPX only
 - Ronis ref. 265 76
 - Profalux ref. 263 48
- For motorised DPX or with rotary handle
 - Ronis ref. 265 78
 - Profalux ref. 265 77

Accessories for « Debro-lift » mechanism

- Isolated handle for drawing-out ref. 265 75
- Signalling contact (plugged-in / drawn-out) ref. 265 74

DPX 630

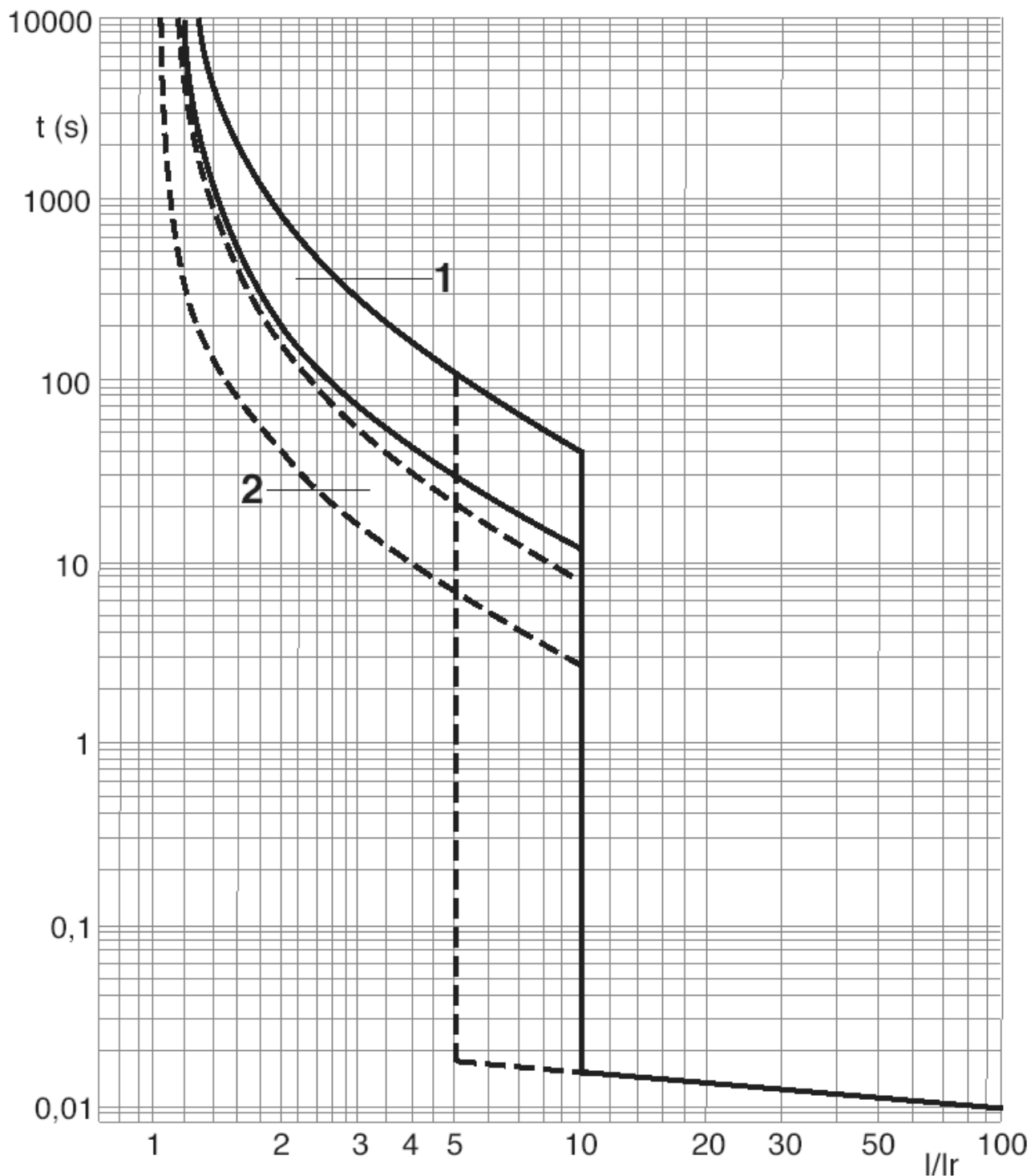
Thermal magnetic and trip-free switches

DPX-I 630

Reference(s) : 255 21/ 22/ 23/ 24/ 25/ 31/ 32/ 33/ 34/ 35/ 36/ 37/ 38/
39/ 40/ 41/ 42/ 43/ 44/ 45/ 51/ 52/ 53/ 54/ 55/ 56/ 57/ 58/ 59/ 60/ 61/ 62/
63/ 64/ 65/ 71/ 72/ 73/ 74/ 75/ 76/ 77/ 78/ 79/ 80/ 86/ 87/ 88/ 89

9. CURVES

9.1 OPERATING CURVE



1 : Cold thermal tripping zone

2 : Hot thermal tripping zone

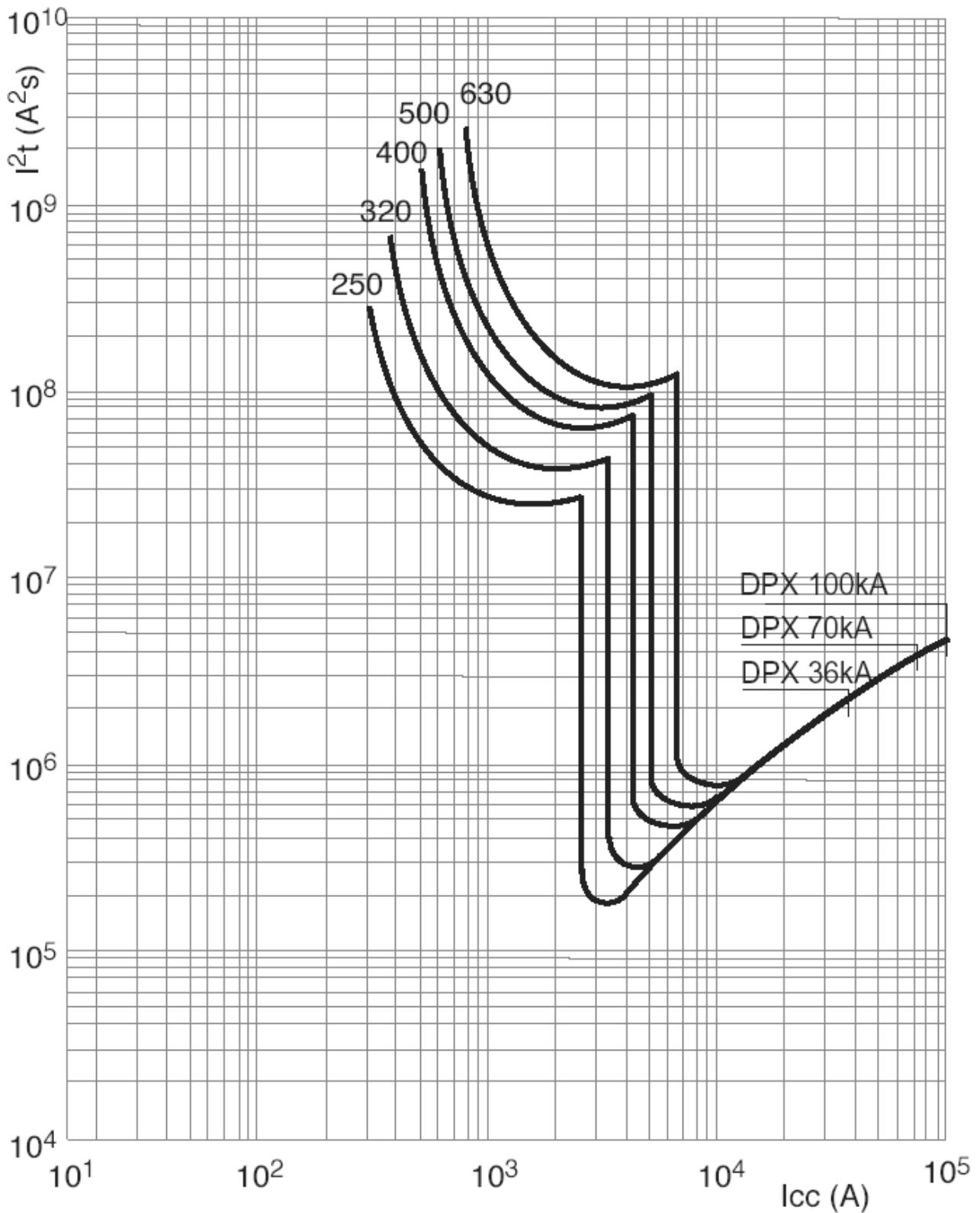
DPX 630

Thermal magnetic and trip-free switches

DPX-I 630

Reference(s) : 255 21/ 22/ 23/ 24/ 25/ 31/ 32/ 33/ 34/ 35/ 36/ 37/ 38/
39/ 40/ 41/ 42/ 43/ 44/ 45/ 51/ 52/ 53/ 54/ 55/ 56/ 57/ 58/ 59/ 60/ 61/ 62/
63/ 64/ 65/ 71/ 72/ 73/ 74/ 75/ 76/ 77/ 78/ 79/ 80/ 86/ 87/ 88/ 89

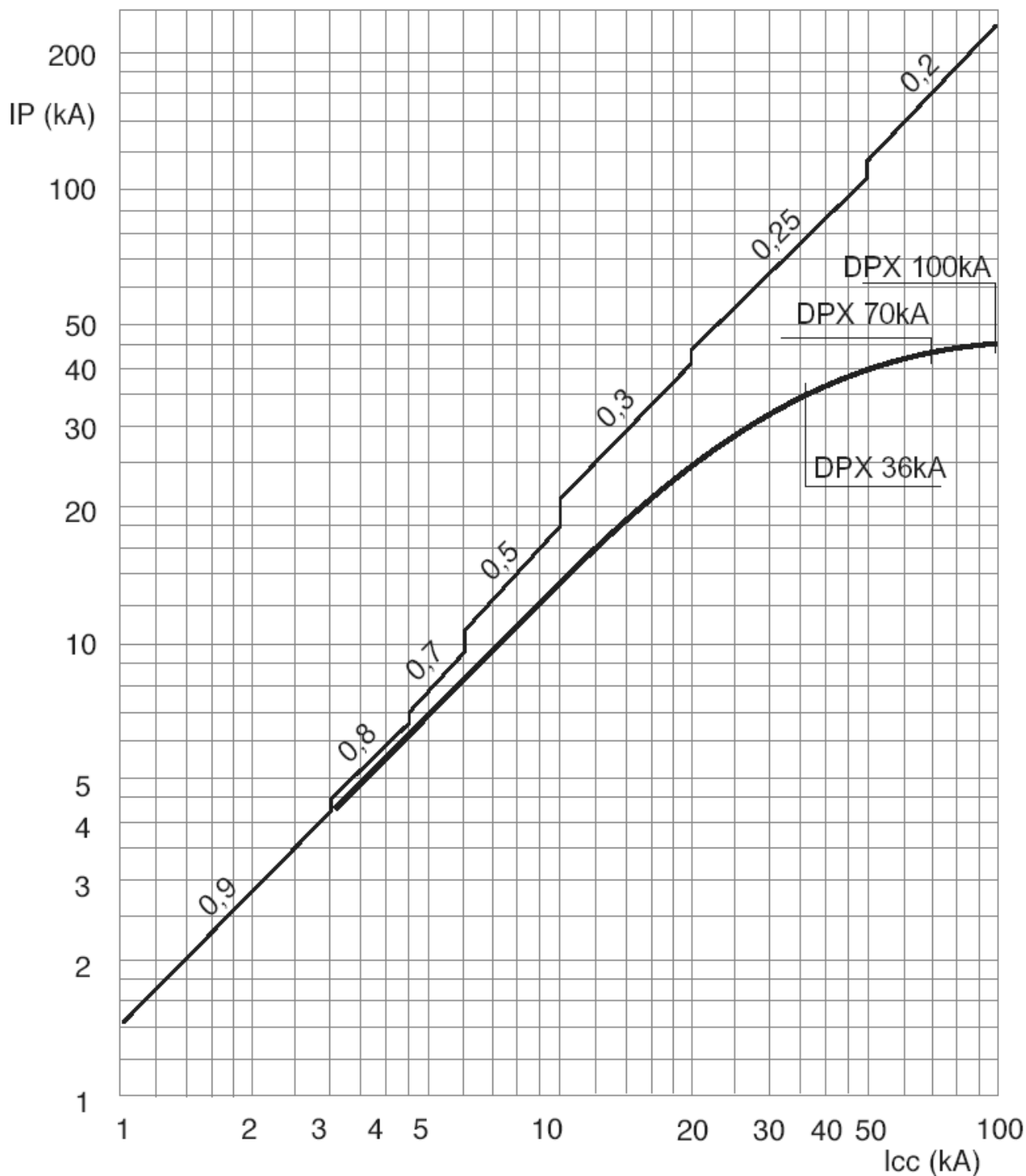
9.2 Restricted curve in thermal constraint



DPX 630
Thermal magnetic and trip-free switches
DPX-I 630

Reference(s) : 255 21/ 22/ 23/ 24/ 25/ 31/ 32/ 33/ 34/ 35/ 36/ 37/ 38/
 39/ 40/ 41/ 42/ 43/ 44/ 45/ 51/ 52/ 53/ 54/ 55/ 56/ 57/ 58/ 59/ 60/ 61/ 62/
 63/ 64/ 65/ 71/ 72/ 73/ 74/ 75/ 76/ 77/ 78/ 79/ 80/ 86/ 87/ 88/ 89

9.3 Restricted current curve



DPX 630

Thermal magnetic and trip-free switches

DPX-I 630

Reference(s) : 255 21/ 22/ 23/ 24/ 25/ 31/ 32/ 33/ 34/ 35/ 36/ 37/ 38/
39/ 40/ 41/ 42/ 43/ 44/ 45/ 51/ 52/ 53/ 54/ 55/ 56/ 57/ 58/ 59/ 60/ 61/ 62/
63/ 64/ 65/ 71/ 72/ 73/ 74/ 75/ 76/ 77/ 78/ 79/ 80/ 86/ 87/ 88/ 89

A) Derating Temperature and configurations

		40°C		50°C		60°C		65°C	
		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 630 fixed version thermal-magnetic									
DPX 630 - 400A	front	380	0,95	380	0,95	360	0,9	320	0,8
	rear	400	1	400	1	380	0,95	340	0,85
DPX 630 - 400A with earth leakage	front	380	0,95	380	0,95	360	0,9	320	0,8
	rear	400	1	380	0,95	360	0,9	320	0,8
DPX 630 - 630A	front	567	0,9	504	0,8	441	0,7	378	0,6
	rear	630	1	599	0,95	504	0,8	441	0,7
DPX 630 - 630A with earth leakage	front	504	0,8	441	0,7	378	0,6	315	0,5
	rear	630	1	567	0,9	504	0,8	441	0,7
DPX 630 Plug-in / Draw-out version thermal-magnetic									
DPX 630 - 400A	front	380	0,95	360	0,9	320	0,8	280	0,7
	rear	400	1	380	0,95	360	0,9	300	0,75
DPX 630 - 400A with earth leakage	front	360	0,9	360	0,9	320	0,8	280	0,7
	rear	380	0,95	360	0,9	320	0,8	280	0,7
DPX 630 - 630A	front	504	0,8	441	0,7	378	0,6	315	0,5
	rear	567	0,9	504	0,8	441	0,7	378	0,6
DPX 630 - 630A with earth leakage	front	441	0,7	441	0,7	378	0,6	315	0,5
	rear	441	0,7	441	0,7	378	0,6	378	0,6

B) Connection

Connecting type	Bars	Cables		Standard lugs S - Ø	Compact copper S - Ø	Standard lugs S - Ø	Compact aluminium S - Ø
	Width (mm)	Section (mm ²) rigid	flexible	(mm ² -mm)	(mm ² -mm)	(mm ² -mm)	(mm ² -mm)
Direct plates	32			150-12	300-10	240-12	300-10
Cage terminals réf. 262 88	25	300	240				
Cage terminals 2 cables réf. 262 51		2 x 240	2 x 185				
Extended front terminals réf. 262 47	32			2 x 150-12	2 x 300-10	2 x 240-12	2x 300-10
Spreaders réf. 262 48/49	50			2 x 185-12	2 x 300-10	2 x 240-16	2x 300-10
Rear terminal réf. 263 50/51	32			2 x 300-16		2 x 300-16	
Flat rear terminal mounting base réf. 263 52/53	40			2 x 185-12	2 x 300-10	2 x 240-12	2 x 300-10
Front terminal mounting base réf. 265 52/53/58	25			150-12	300-10	240-12	300-10
Rear terminal mounting base réf. 265 54/55/59	32			2 x 300-16		2 x 300-16	
Flat rear terminal mounting base réf. 265 56/57/60	40			2 x 185-12	2 x 300-10	2 x 240-12	2 x 300-10
DPX support bases réf 098/71/72/73/74	25			150-12	2 x 300-10	2 x 240-12	2 x 300-10

C) Correct factor for adjustment for use in 400 Hz

In (A) to 50 Hz	Thermal adjustment			Magnetic adjustment	
	Correction factor	I _r max at 400 Hz	I _m (A) at 50 Hz	Correction factor	I _m at 400 Hz
250	0,85	210	1250 à 2500	1	1250 à 2500
320	0,85	270	1600 à 3200	1	1600 à 3200
400	0,8	320	2000 à 4000	1	2000 à 4000
500	0,8	320	2500 à 5000	1	2500 à 5000
630	0,8	380	3200 à 6300	1	3200 à 6300

DPX 630

Thermal magnetic and trip-free switches

DPX-I 630

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 63/ 64/ 65/ 71/ 72/ 73/ 74/ 75/ 76/ 77/ 78/ 79/ 80/ 86/ 87/ 88/ 89

D) Breaking capacity in DC

Short-circuit breaking capacity in D.C. current								
Circuit breakers	Rated current	Breaking capacity I_{cs} (kA)					Protection	
		1 pole in series	2 poles in series	2 poles in series	3 poles in series	3 poles in series	thermal	magnetic
LEGRAND SERIES		up to 55-60V	up to 110-125V	250V	400V	500V		
DPX 630	250-630A	40	40	36	40	36	like AC	1,5 Im AC
DPX 630-H	250-630A	45	45	40	45	40	like AC	1,5 Im AC
DPX 630-L	250-630A	50	50	45	50	45	like AC	1,5 Im AC