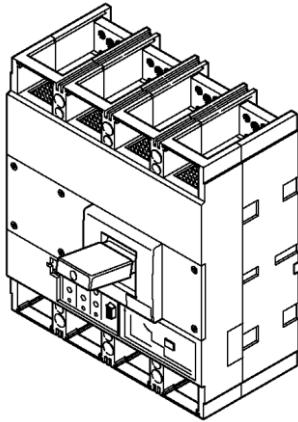


DPX 1250

Thermal magnetic and trip-free switches

DPX-I 1600

Reference(s) : 258 00/01/ 02/ 03/ 04/ 07/ 08/ 09/ 10/ 11/ 14/ 15/ 16/ 17/ 18/ 21/ 22/ 23/ 24/ 25/ 28/ 29/ 30/ 31/ 32/ 39/ 40/ 41/ 92/ 93/ 257 94/ 95/ 96/ 97/ 98/ 99



CONTENTS	PAGES
1. USE	1
2. RANGE	1
3. DIMENSIONS	1
3. DIMENSION (NEXT)	2
4. OVERVIEW	2
5. CONNECTION	2
6. ELECTRICAL AND MECHANICAL CHARACTERISTICS	2
7. CONFORMITY	3
8. EQUIPMENTS AND ACCESSORIES	3
9. CURVES AND TABLES	5

1. USE

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

2. RANGE

DPX

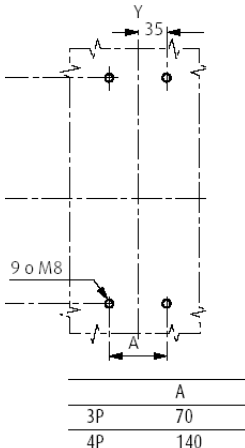
Current	3P			3P+N		
	50	70	100	50	70	100
500	258 00	258 14	258 28	258 07	258 21	
630	258 01	258 15	258 29	258 08	258 22	
800	258 02	258 16	258 30	258 09	258 23	258 39
1000	258 03	258 17	258 31	258 10	258 24	258 40
1250	258 04	258 18	258 32	258 11	258 25	258 41

DPX-I

Current	3P	4P
	800	257 94
1250	257 96	257 97
1600	257 98	257 99

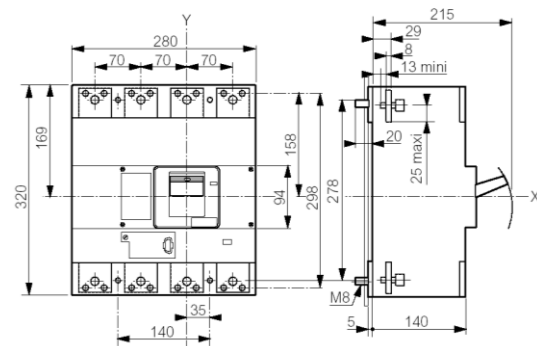
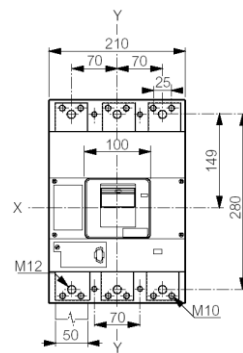
3. DIMENSIONS

Implantation

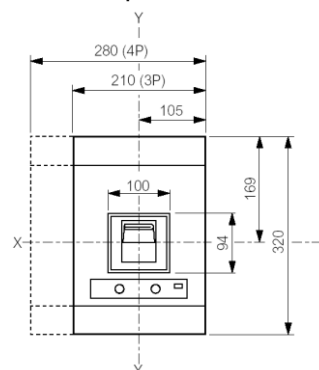


3. DIMENSIONS (NEXT)

Version fixe prises avant



Version fixe prises arrière



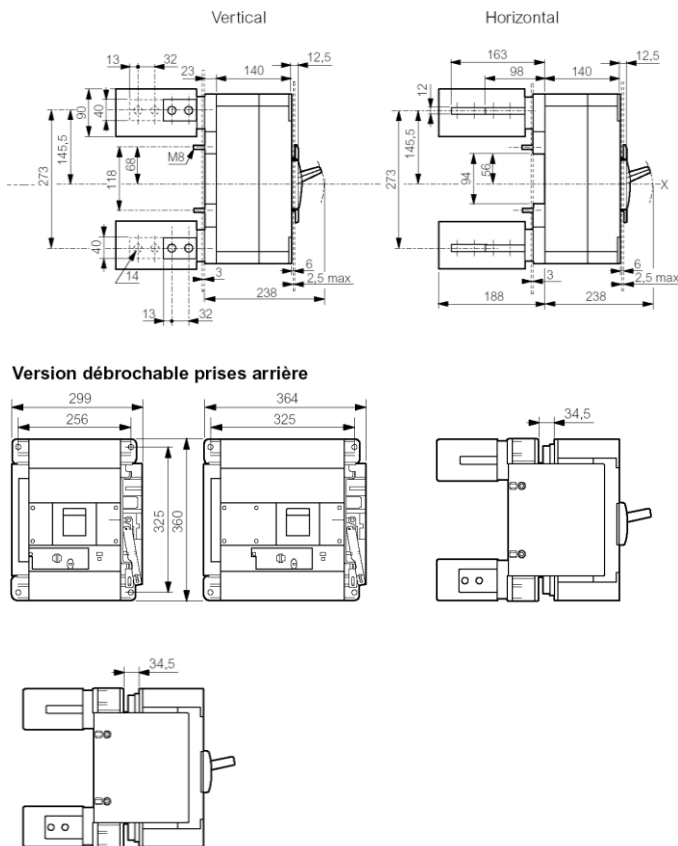
DPX 1250

Thermal magnetic and trip-free switches

DPX-I 1600

Reference(s) : 258 00/01/ 02/ 03/ 04/ 07/ 08/ 09/ 10/ 11/ 14/ 15/ 16/ 17/ 18/ 21/ 22/ 23/ 24/ 25/ 28/ 29/ 30/ 31/ 32/ 39/ 40/ 41/ 92/ 93/ 257 94/ 95/ 96/ 97/ 98/ 99

3. DIMENSIONS (NEXT)



4. OVERVIEW

4.1 Supplied

Connection plates for bars:

- Width 50 mm max

Seals for adjustment (supplied)

4.2 Mounting possibility

On plate :

- Vertical
- Horizontal
- Supply inverter type

5. CONNECTION

See table B page 9.

6. ELECTRICAL AND MECHANICAL CHARACTERISTICS

Circuit breaker	DPX 1250 /H/L
Uninterrupted nominal current I _n (A)	500-1250
Isolated voltage U _i (V.a.c.)	690
Maximum rated operating voltage U _e (V.a.c./d.c.)	690 VAC 250 VDC
Rated impulse withstand voltage U _{imp} (kV)	8
Nominal frequency (Hz)	50-60
Operating temperature (°C)	-25÷70
Endurance electrical / mechanical	4.000/10.000
Category of use	A
Type of trip	thermal-magnetic
Thermal adjustment	0.8÷1 I _n
Magnetic adjustment	5÷10 I _n
Dimensions (wxhxd) (mm)	210x320x140 (3P) 280x320x140 (4P)
Weight (kg)	12,2 (3P) – 15,1 (4P)
Switches	DPX-I 1600
Uninterrupted nominal current I _n (A)	800-1600
Rated closing capacity on short-circuit I _{cm} (kA)	40kA
Nominal current of use I _e (A)	630/800/1250/1600 - AC23A (690V.a.c.) 630/800/1250/1600 - DC23A (250Vd.c.)
Short-time resistive current I _{cs} (kA) for 1s	20
Isolated voltage U _i (V.a.c.)	690
Maximum rated operating voltage U _e (V.a.c./d.c.)	690/250
Rated impulse withstand voltage U _{imp} (kV)	8
Nominal frequency (Hz)	50-60
Operating temperature (°C)	-25÷70
Endurance electrical / mechanical	3.000/10.000 (2.000 for DPX-I 1600)
Dimensions (wxhxd) (mm)	210x320x140 (3P) 280x320x140 (4P)
Weight (kg)	11,2 (3P) – 14,1 (4P)

6.1 Main pieces constituting the circuit breaker

6.2 Breaking capacity (KA)

Breacking capacity I _{cu} and I _{cs} in AC (kA)				
	U _e		H	L
I _{cu} (kA)	230V	80	100	170
	400V	50	70	100
	440V	45	65	80
	500V	35	45	55
	600V	25	35	35
I _{cs} (%I _{cu})	-	100	75	50

Rated making capacity under short-circuit I _{cm} (kA)				
I _{cm} (kA)	400V	105	154	220

6.3 Nominal current (I_n) at 40 °C (A)

Assigned current trip	thermal		magnetic	
	L1-L2-L3	N	L1-L2-L3	N
500	500	/	2500÷5000	/
630	630	/	3200÷6300	/
800	800	/	4000÷8000	/
1000	1000	/	5000÷10000	/
1250	1250	/	6250÷12500	/

DPX 1250

Thermal magnetic and trip-free switches

DPX-I 1600

Reference(s) : 258 00/01/ 02/ 03/ 04/ 07/ 08/ 09/ 10/ 11/ 14/ 15/ 16/ 17/ 18/ 21/ 22/ 23/ 24/ 25/ 28/ 29/ 30/ 31/ 32/ 39/ 40/ 41/ 92/ 93/ 257 94/ 95/ 96/ 97/ 98/ 99

6.4 Power losses per pole under In

Power losses per pole (W)					
In (A)	500	630	800	1000	1250
M630=1250	10	15,88	25,6	35	54,69
Kit plug-in	7,5	11,91	19,2	50	46,88

Total power losses is the sum of the different accesories value install.

6.5 Functioning in particular conditions

6.5.1 Temperature

Temperature derating Ta (°C)							
In (A)	10	20	30	40	50	60	70
500	475-590	455-570	430-353	400-500	380-480	360-450	420-540
630	590-735	570-705	535-670	500-630	480-600	450-570	540-680
800	735-920	705-880	670-840	630-800	600-760	570-720	540-680
1000	920-1150	880-1100	840-1050	800-1000	760-950	720-900	680-850
1250	1150-144	1100-1380	1050-1310	1000-1250	950-1190	900-1125	850-1080

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 page 9.

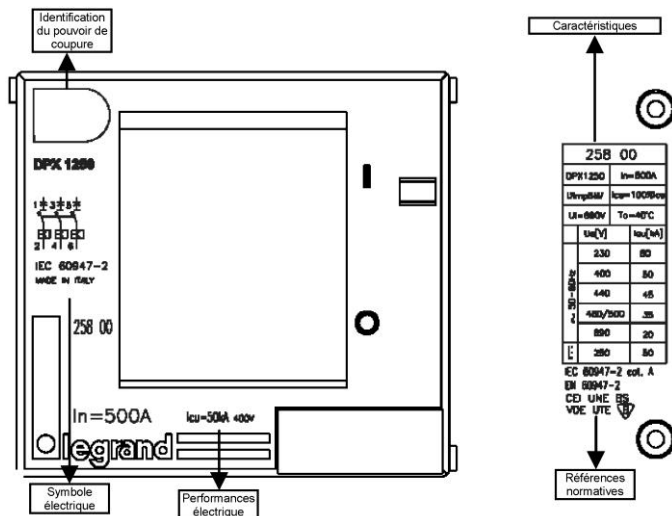
6.5.4 Use in D.C.

Breacking capacity in DC (kA)				
	Ue		H	L
2 serie pole	110V	50	60	80
	250V	50	60	80
3 serie pole	400V	50	60	80
	500V	36	50	60

7. CONFORMITY

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

7.1 MARKING



" Tropical climate " :

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

8. EQUIPMENTS AND ACCESSORIES

8.1 Earth leakage modules :

Add residual current protection to DPX trip-free switches and DPX MCCBs equipped with release ;can use with coils.

- Residual current relay to clip on rail ref. 260 80
- Coils
 - Ø 35mm – 150 A max ref. 260 92
 - Ø 80mm – 400 A max ref. 260 93
 - Ø 110mm – 600 A max ref. 260 94
 - Ø 140mm – 1200 A max ref. 260 95
 - Ø 210mm – 1800 A max ref. 260 96
 - Ø 150mm open – 1200 A max ref. 260 97
 - Ø 300mm open – 2000 A max ref. 260 98

8.2 Releases :

- shunt releases (Power consumption= 300 VA) with voltage:
 - 24 V a.c./d.c. ref. 261 64
 - 48 V a.c./d.c. ref. 261 65
 - 110 V a.c./d.c. ref. 261 66
 - 230 V a.c./d.c. ref. 261 67
 - 400 V a.c./d.c. ref. 261 68
- undervoltage releases (Power consumption = 5 VA) with voltage :
 - 24 V d.c. ref. 261 80
 - 24 V a.c. ref. 261 81
 - 48 V d.c. ref. 261 82
 - 110 V a.c. ref. 261 86
 - 230 V a.c. ref. 261 83
 - 400 V a.c. ref. 261 84
- time-lag undervoltage releases (800 ms) :
 - Time-lag modules with voltage :
 - 24 V a.c./d.c. ref. 261 92
 - 230 V a.c. ref. 261 90
 - 400 V a.c. ref. 261 91
 - Universal Release ref. 261 85

8.3 Auxiliary contact

Changeover switch 3 A – 240 V a.c. 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

3 auxiliary contact + 1 fault signal (max.)

8.4 Rotary handles :

- Direct on DPX
 - Standard (black) ref. 262 61
 - RI a Matrix ref. 262 62
- Vari-deph handle IP55
 - Standard (black) ref. 262 83
 - For emergency use (red / yellow) ref. 262 84
- Adapting on standard handle

Locking accessories

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

DPX 1250

Thermal magnetic and trip-free switches

DPX-I 1600

Reference(s) : 258 00/01/ 02/ 03/ 04/ 07/ 08/ 09/ 10/ 11/ 14/ 15/ 16/ 17/
18/ 21/ 22/ 23/ 24/ 25/ 28/ 29/ 30/ 31/ 32/ 39/ 40/ 41/ 92/ 93/
257 94/ 95/ 96/ 97/ 98/ 99

8.5 Motor-driven handles:

Factory assembled

Front operated

- Voltage 230 V a.c. ref. 261 54

Customer assembled

Front operated

- Voltage 24 V a.c./d.c. ref. 261 24
- Voltage 48 V a.c./d.c. ref. 261 25
- Voltage 110 V a.c. ref. 261 26
- Voltage 220 V a.c. for rating up to 1250A (In ≤ 1250A) ref. 261 23
- Voltage 230 V a.c. for 1600A (In=1600A) ref. 261 27

Locking accessories

- Ronis ref. 262 59
- Profalux ref. 262 58

8.6 Mechanical accessories :

Insulated shields

- Set of 3 ref. 262 66

Sealable terminal shields

- Set of 2 3P ref. 262 64
- Set of 2 4P ref. 262 65

Padlocks

- Accessories for locking in open position ref. 262 60

8.7 Connection's accessories :

Cage terminals

- Set of 4 terminals for cables 2x240mm² max (rigid) or 2x185mm² max (flexible) (Cu/Al) ref. 262 69
- Set of 4 terminals for cables 4x240mm² max (rigid) or 4x185mm² max (flexible) (Cu/Al) ref. 262 70

Extended front terminals

- Short terminals for 630-1250A (2 bars max. per pole) ref. 262 67
- Long terminals for 1600A (3 bars max. per pole) ref. 262 68

Spreaders

- Set of 3 (incoming or outgoing 3P) ref. 262 73
- Set of 4 (incoming or outgoing 4P) ref. 262 74

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 80
 - 4P ref. 263 82
- Set of flat rear terminals, incoming or outgoing
 - 3P ref. 263 81
 - 4P ref. 263 83

8.8 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)

Draw-out base

Base for DPX 1600 supplied with "Debro-lift" assembled a rigid slide and handle for drawing-out

- Front terminals
 - 3P ref. 265 82
 - 4P ref. 265 83
- Rear terminals
 - 3P ref. 265 84
 - 4P ref. 265 85

Key lock for "Debro-lift" mechanism

- One key Ronis for DPX only
 - Ronis ref. 265 76
 - Profalux ref. 263 48
- Two keys Ronis ;one key supplied for motorised DPX or with rotary handle
 - Ronis ref. 265 80
 - Profalux ref. 265 79

Accessories for « Debro-lift » mechanism

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

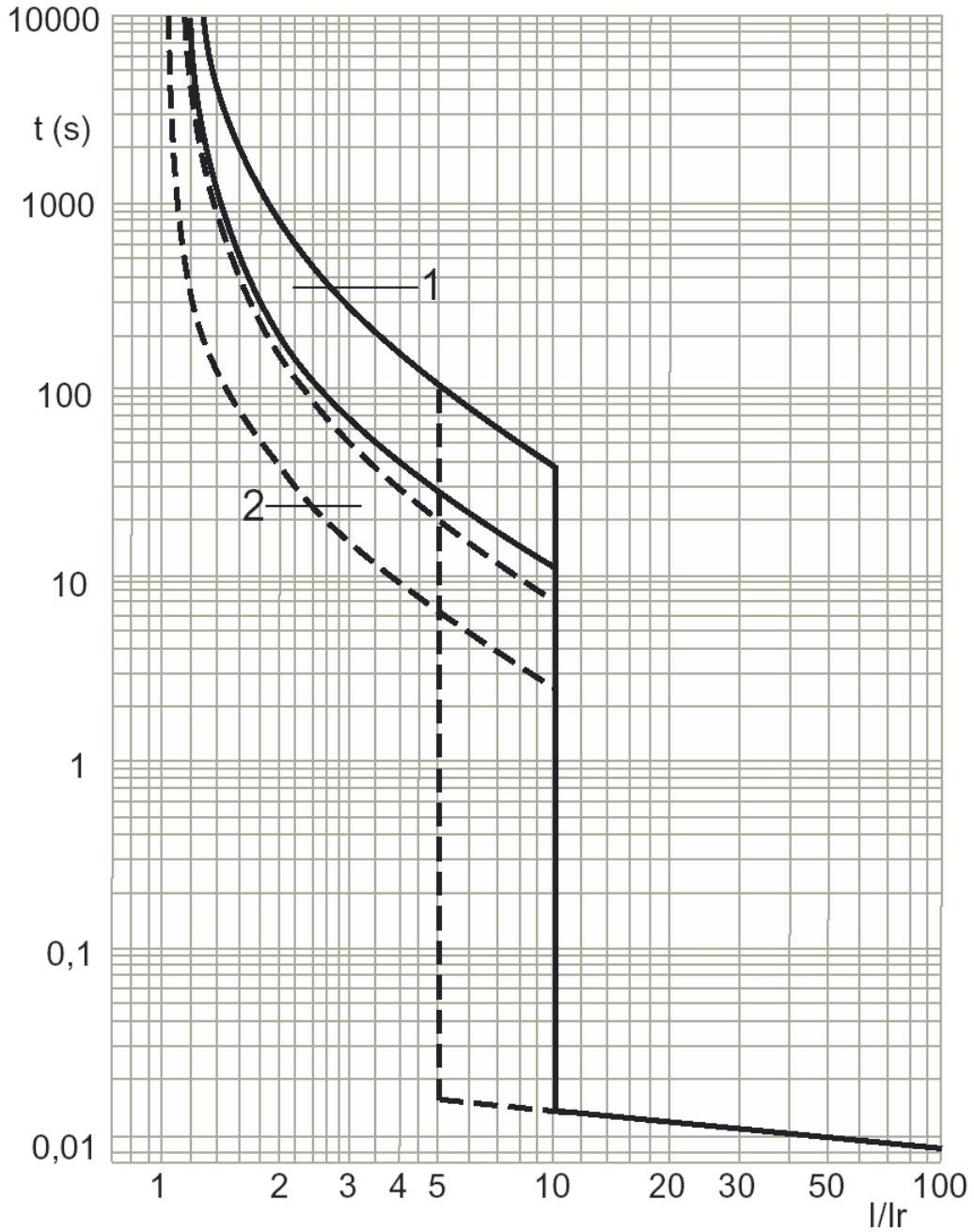
DPX 1250
Thermal magnetic and trip-free switches
DPX-I 1600

Reference(s) : 258 00/01/ 02/ 03/ 04/ 07/ 08/ 09/ 10/ 11/ 14/ 15/ 16/ 17/
18/ 21/ 22/ 23/ 24/ 25/ 28/ 29/ 30/ 31/ 32/ 39/ 40/ 41/ 92/ 93/
257 94/ 95/ 96/ 97/ 98/ 99

9. CURVES

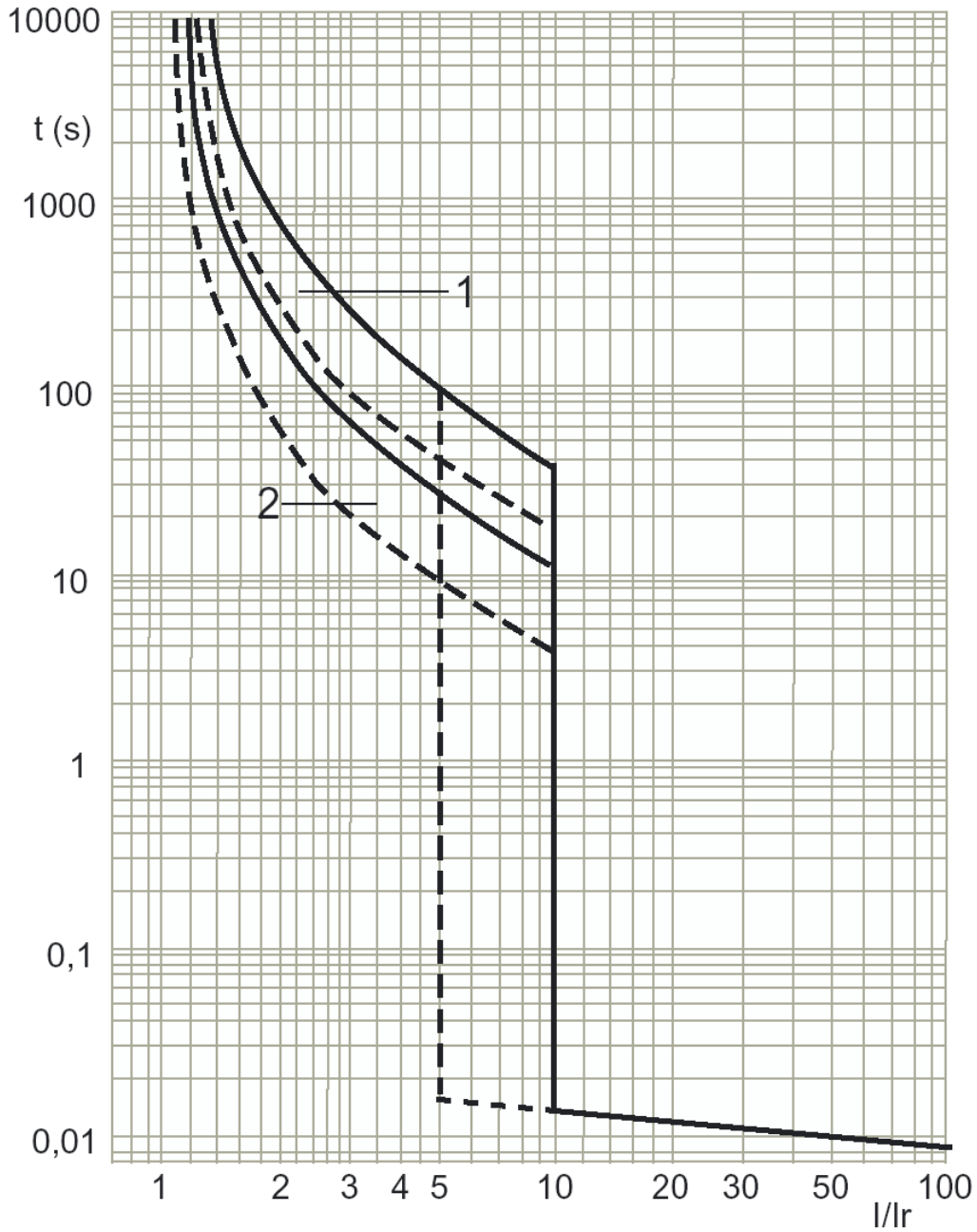
9.1 Operating curve

630 - 800 A



1 : Cold thermal tripping zone
2 : Hot thermal tripping zone

1000 - 1250 A



1 : Cold thermal tripping zone
2 : Hot thermal tripping zone

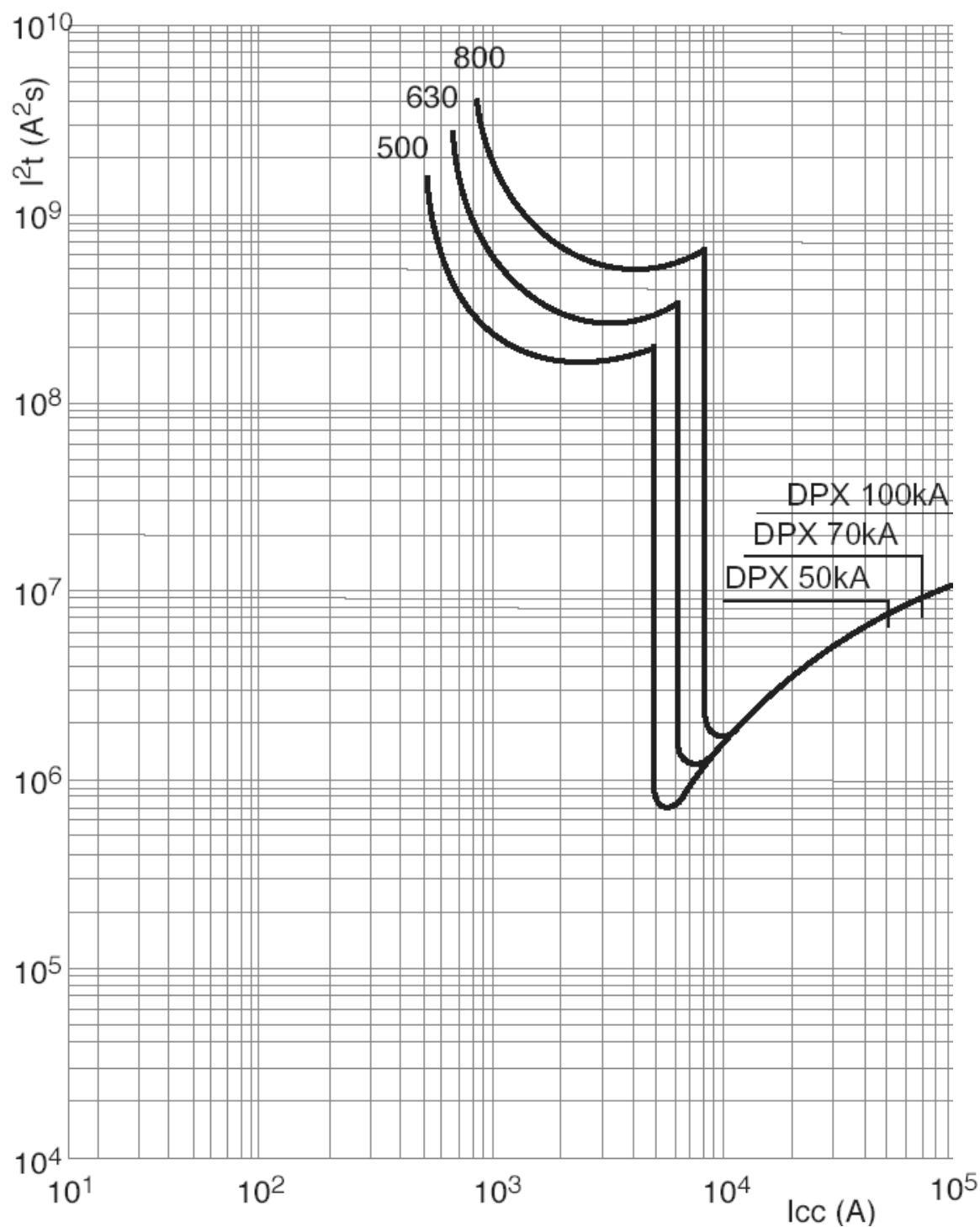
DPX 1250

Thermal magnetic and trip-free switches

DPX-I 1600

Reference(s) : 258 00/01/ 02/ 03/ 04/ 07/ 08/ 09/ 10/ 11/ 14/ 15/ 16/ 17/
18/ 21/ 22/ 23/ 24/ 25/ 28/ 29/ 30/ 31/ 32/ 39/ 40/ 41/ 92/ 93/
257 94/ 95/ 96/ 97/ 98/ 99

9.2 Restricted curve in thermal constraint

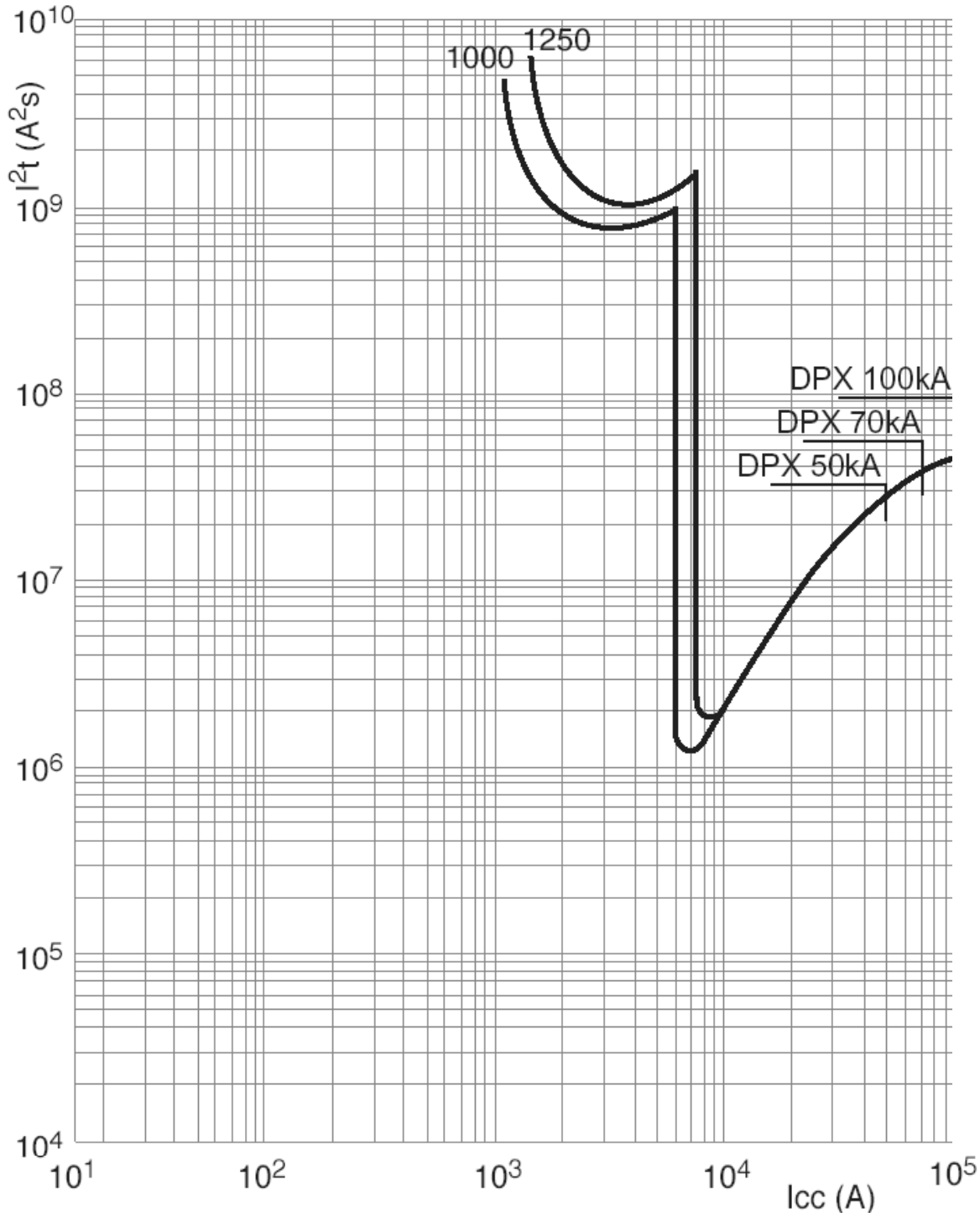


DPX 1250

Thermal magnetic and trip-free switches

DPX-I 1600

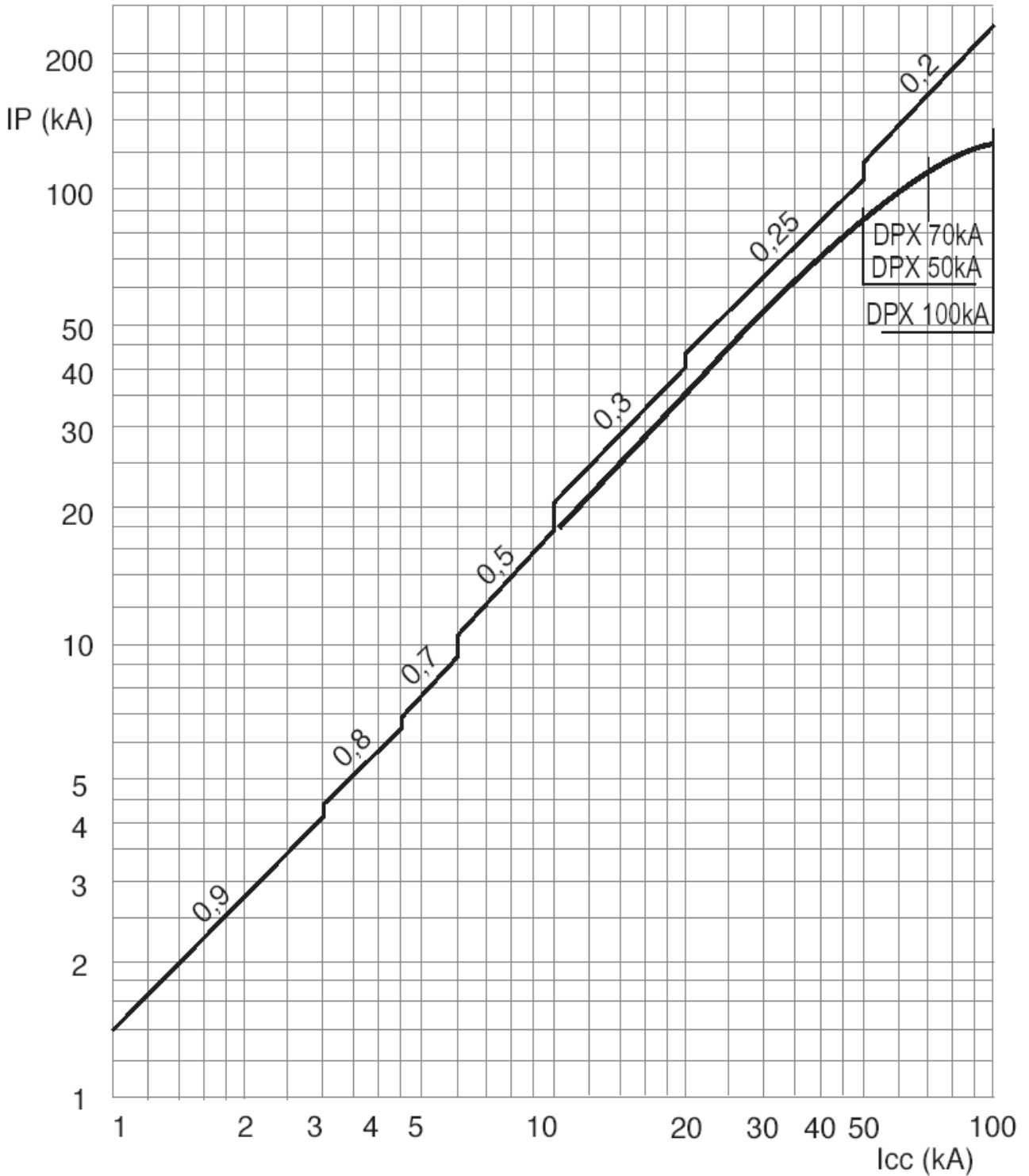
Reference(s) : 258 00/01/ 02/ 03/ 04/ 07/ 08/ 09/ 10/ 11/ 14/ 15/ 16/ 17/
18/ 21/ 22/ 23/ 24/ 25/ 28/ 29/ 30/ 31/ 32/ 39/ 40/ 41/ 92/ 93/
257 94/ 95/ 96/ 97/ 98/ 99



DPX 1250
Thermal magnetic and trip-free switches
DPX-I 1600

Reference(s) : 258 00/01/ 02/ 03/ 04/ 07/ 08/ 09/ 10/ 11/ 14/ 15/ 16/ 17/
 18/ 21/ 22/ 23/ 24/ 25/ 28/ 29/ 30/ 31/ 32/ 39/ 40/ 41/ 92/ 93/
 257 94/ 95/ 96/ 97/ 98/ 99

9.3 Restricted current curve



DPX 1250

Thermal magnetic and trip-free switches

DPX-I 1600

Reference(s) : 258 00/01/ 02/ 03/ 04/ 07/ 08/ 09/ 10/ 11/ 14/ 15/ 16/ 17/
18/ 21/ 22/ 23/ 24/ 25/ 28/ 29/ 30/ 31/ 32/ 39/ 40/ 41/ 92/ 93/
257 94/ 95/ 96/ 97/ 98/ 99

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 1250 fixed version thermal-magnetic									
DPX 1250 - 500A	front	500	1	500	1	475	0,95	450	0,9
	rear	500	1	500	1	475	0,95	450	0,9
DPX 1250 - 630A	front	630	1	630	1	599	0,95	567	0,9
	rear	630	1	630	1	599	0,95	567	0,9
DPX 1250 - 800A	front	800	1	760	0,95	736	0,92	656	0,82
	rear	800	1	760	0,95	760	0,95	680	0,85
DPX 1250 - 1000A	front	1000	1	950	0,95	920	0,92	820	0,82
	rear	1000	1	950	0,95	950	0,95	850	0,85
DPX 1250 - 1250A	front	1250	1	1150	0,92	1088	0,87	975	0,78
	rear vertical	1250	1	1188	0,95	1188	0,95	1000	0,8
	rear horizontal	1250	1	1188	0,95	1125	0,9	1063	0,85
DPX 1250 - 1600A	front	1600	1	1472	0,92	1392	0,87	1248	0,78
	rear vertical	1600	1	1520	0,95	1440	0,9	1280	0,8
	rear horizontal	1600	1	1472	0,92	1392	0,87	1248	0,78
DPX 1250 Plug-in / Draw-out version thermal-magnetic									
DPX 1250 - 500A	front	500	1	500	1	475	0,95	450	0,9
	rear	500	1	500	1	475	0,95	450	0,9
DPX 1250 - 630A	front	630	1	630	1	599	0,95	567	0,9
	rear	630	1	630	1	599	0,95	567	0,9
DPX 1250 - 800A	front	800	1	720	0,9	696	0,87	624	0,78
	rear	800	1	720	0,9	720	0,9	648	0,81
DPX 1250 - 1000A	front	1000	1	900	0,9	870	0,87	780	0,78
	rear	1000	1	900	0,9	900	0,9	810	0,81
DPX 1250 - 1250A	front	1188	0,95	1088	0,87	1038	0,83	925	0,74
	rear vertical	1188	0,95	1125	0,9	1125	0,9	950	0,76
	rear horizontal	1188	0,95	1125	0,9	1063	0,85	1013	0,81
DPX 1250 - 1600A	front	1440	0,9	1392	0,87	1328	0,83	1184	0,74
	rear vertical	1520	0,95	1440	0,9	1360	0,85	1216	0,76
	rear horizontal	1440	0,9	1392	0,87	1328	0,83	1184	0,74

B) Connection

Connecting type	Bars	Cables		Standard lugs	Compact copper	Standard lugs	Compact aluminium
	Width (mm)	Section (mm ²) rigid flexible		S - Ø (mm ² -mm)	S - Ø (mm ² -mm)	S - Ø (mm ² -mm)	S - Ø (mm ² -mm)
Direct plates	50			300-14		300-16	
Cage terminals 2 cables réf. 262 69		2 x 240	2 x 185				
Cage terminals 4 cables réf. 262 70		4 x 240	4 x 158				
Extended front terminals réf. 262 67/68	50			2 x 300-14		2 x 300-16	2 x 300-14
Spreaders réf. 262 73/74	80			4 x 300-14		2 x 300-16	2 x 300-14
Short rear terminal réf. 263 80/82	50			2 x 300-14		2 x 300-16	2 x 300-14
Long rear terminal réf. 265 81/83	50			3 x 300-14		3 x 300-16	3 x 300-14
Front terminal mounting base réf. 265 31/32/37	50			2 x 300-14	4 x 185-10	2 x 300-14	4 x 150-10
Rear terminal mounting base réf. 265 33/34/38	50			2 x 185-12		2 x 240-12	

C) Correct factor for adjustment for use in 400 Hz

I _n (A) to 50 Hz	Thermal adjustment		I _m (A) at 50 Hz	Magnetic adjustment	
	Correction factor	I _r max at 400 Hz		Correction factor	I _m at 400 Hz
500	0,6	300	2500÷5000	1	2500÷5000
630	0,6	380	3200 à 6300	1	3200 à 6300
800	0,6	480	4000 à 8000	1	4000 à 8000
1000	0,6	600	3000 à 6000	1	3000 à 6000
1250	0,6	750	3800 à 7500	1	3800 à 7500

DPX 1250

Thermal magnetic and trip-free switches

DPX-I 1600

Reference(s) : 258 00/01/ 02/ 03/ 04/ 07/ 08/ 09/ 10/ 11/ 14/ 15/ 16/ 17/
18/ 21/ 22/ 23/ 24/ 25/ 28/ 29/ 30/ 31/ 32/ 39/ 40/ 41/ 92/ 93/
257 94/ 95/ 96/ 97/ 98/ 99

D) Breaking capacity in DC

Short-circuit breaking capacity in D.C. current								
Circuit breakers	Rated current	Breaking capacity I_{cu} (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 1250-H / L	500-1250A	50 / 60 / 80	50 / 60 / 80	50 / 60 / 80	50 / 60 / 80	36 / 50 / 60	like AC	1,5 Im AC