

**Loadlimiter XS  
MCB Distribution Board System**





A range of truly versatile MCB distribution board systems providing unobtrusive final circuit management solutions for applications up to 200A. The Loadlimiter XS system offers robust TP&N and SP&N distribution boards with an extensive range of MCBs, RCBOs, RCCBs, switch disconnectors, MCCBs, fuse switch incomers, service centres and modular control and command devices.

Loadlimiter XS features an innovative 200A incoming enclosure for applications above 125A, which connects directly to all TP&N distribution boards and includes all interconnections. This enclosure accommodates the new range of Dorman Smith YA3 MCCBs and switch disconnectors, rated from 20A to 200A in one common frame size.

Loadlimiter XS provides the ultimate flexibility and choice of protection devices with over 300 combinations of distribution boards and incomers. The system ensures simple configuration and quick installation as demanded by today's new and retrofit, commercial and industrial applications.

## Features

- Robust construction
- SP&N 'A' and TP&N 'B' type distribution boards
- Modular DIN rail components
- Over 300 combinations of boards and incomers
- Wide range of switch disconnectors
- MCCBs up to 200A
- Direct connection of 200A incoming enclosure to TP&N boards
- Comprehensive incomer connection range
- Large space for cabling
- Split earth and neutral bars
- Pan assemblies

## Benefits

- MCBs with symmetrical dual terminals
- MCCBs accept up to 150mm<sup>2</sup> cables
- 200A incoming enclosure includes all interconnections
- Earth/neutral terminal close to phase terminal
- Full range range of accessories
- Easy to configure on site
- Simple installation

## Applications

Commercial and industrial final circuit protection

## Standards

- EN 60898 MCBs
- EN 61095 Contactors
- EN 61009 RCBOs
- EN 61008 RCCBs
- EN 60439-3 Distribution Boards

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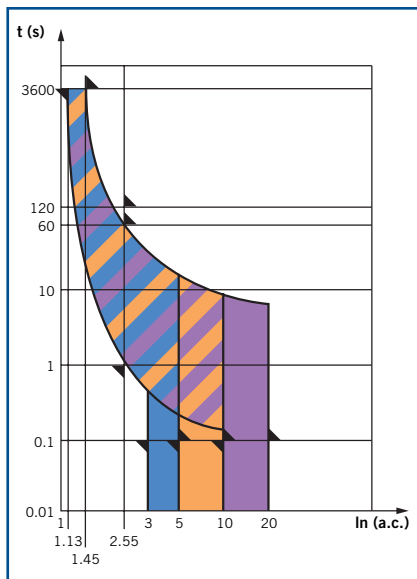
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## MCB and RCBO Features



Easy fit padlocking device allows MCB to be locked in either position.	'GREEN/RED' indicators give positive confirmation of contact position.	Single module RCBOs.	Single module shunt trip, UVR, and auxiliary contacts are easily fitted to MCBs.	Shielded dual terminals are positioned symmetrically on both ends of the MCB. This arrangement allows simultaneous connection of cables up to 35mm <sup>2</sup> and busbars up to 3mm thick.
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## MCB Time/Current Characteristics



### Loadlimiter XS - 10kA MCBs

- IP20 degree of protection
- Shunt trip, UVR and auxiliary accessories available
- Un: 230/400V ac (1p) 400V ac (2p, 3p)
- Service voltage  
Ub min. 12V ac/dc  
Ub max. 460V ac/110V dc
- Impulse withstand voltage Uimp 6kV
- Class 3 up to 40A Standards: EN60898, IEC 60898
- Current ratings: B, C & D types; 6 - 63A

### Loadlimiter XS - MCB Accessories

- Auxiliary contacts (One changeover contact)
- Signal/Auxiliary contact (One changeover contact or signal)
- Shunt trips (110V-415V ac, 110V-125V dc, 48V ac/dc)
- All single module width
- Dolly padlocking device

## EN 60898 Standard

Circuit breakers intended for the protection against overcurrents of wiring installations in buildings and similar applications:

**They are designed for use by un instructed people and for not being maintained.**

### Magnetic Release

An electromagnet with plunger ensures instantaneous tripping in case of short circuit. The EN 60898 distinguishes three different types, following the current for instantaneous release: type B, C, D.

	Test Current (a.c.)	Tripping time	Applications
B	3In	t ≥ 0.1s	Only for resistive loads such as: – electrical heating – water heating – cookers
	5In	t < 0.1s	
C	5In	t ≥ 0.1s	Usual loads such as: – lighting – socket outlets – small motors
	10In	t < 0.1s	
D	10In	t ≥ 0.1s	Control and protection of circuits having important transient inrush currents (large motors)
	20In	t < 0.1s	

### Thermal Release

The release is initiated by a bimetal strip in case of overload. The standard defines the range of release for specific overload values. Operating Temperature -20°C to +55°C

	Test Current (a.c.)	Tripping time
1.13 In	1.13 In	t ≥ 1h (In ≤ 63A)
		t ≥ 2h (In > 63A)
1.45 In	1.45 In	t < 1h (In ≤ 63A)
		t < 2h (In > 63A)
2.55 In	2.55 In	1s < t < 60s (In ≤ 32A)
		1s < t < 120s (In > 32A)

### Short Circuit Ratings

MCB Type	Voltage (a.c.)	Voltage (d.c.)	EN60898 Icn (kA)
B	230	60*	10
B	400	60	10
C	230	60*	10
C	400	60	10
D	230	60*	10
D	400	60	10

\* 110V dc, 2 poles in series



Single Pole MCBs

## Single Pole MCBs

- Conforms to EN 60898
- 10kA rated breaking capacity
- Contact position indicator
- 35mm<sup>2</sup> cable capacity

Current Rating (A)	B Type Cat No	C Type Cat No	D Type Cat No
6	X1PB06	X1PC06	X1PD06
10	X1PB10	X1PC10	X1PD10
13	X1PB13	X1PC13	X1PD13
16	X1PB16	X1PC16	X1PD16
20	X1PB20	X1PC20	X1PD20
25	X1PB25	X1PC25	X1PD25
32	X1PB32	X1PC32	X1PD32
40	X1PB40	X1PC40	X1PD40
50	X1PB50	X1PC50	X1PD50
63	X1PB63	X1PC63	X1PD63



Double Pole MCBs

## Double Pole MCBs

Current Rating (A)	B Type Cat No	C Type Cat No	D Type Cat No
6	X2PB06	X2PC06	X2PD06
10	X2PB10	X2PC10	X2PD10
13	X2PB13	X2PC13	X2PD13
16	X2PB16	X2PC16	X2PD16
20	X2PB20	X2PC20	X2PD20
25	X2PB25	X2PC25	X2PD25
32	X2PB32	X2PC32	X2PD32
40	X2PB40	X2PC40	X2PD40
50	X2PB50	X2PC50	X2PD50
63	X2PB63	X2PC63	X2PD63



Triple Pole MCBs

## Triple Pole MCBs

Current Rating (A)	B Type Cat No	C Type Cat No	D Type Cat No
6	X3PB06	X3PC06	X3PD06
10	X3PB10	X3PC10	X3PD10
13	X3PB13	X3PC13	X3PD13
16	X3PB16	X3PC16	X3PD16
20	X3PB20	X3PC20	X3PD20
25	X3PB25	X3PC25	X3PD25
32	X3PB32	X3PC32	X3PD32
40	X3PB40	X3PC40	X3PD40
50	X3PB50	X3PC50	X3PD50
63	X3PB63	X3PC63	X3PD63

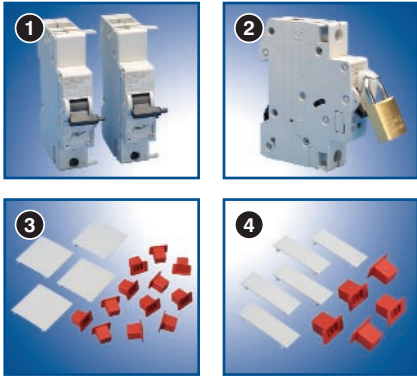


RCBOs

## RCBOs

- Conforms to EN 61009
- Single module: Type A
- 10kA rated breaking capacity
- Terminal capacity: Top terminals 10mm<sup>2</sup> Bottom terminals 25mm<sup>2</sup>

Current Rating (A)	Sensitivity (mA)	Single Module Cat No
6	30	XR1PC0630
10	30	XR1PC1030
10 (6kA)	10	-
16 (6kA)	10	-
16	30	XR1PC1630
20	30	XR1PC2030
25	30	-
32	30	XR1PC3230
40	30	XR1PC4030



Accessories for MCBs and RCBOs

## Accessories for MCBs and RCBOs

Description	Picture	Cat No
<b>Auxiliary Equipment</b>		
MCB aux contact (one changeover contact)	-	XAC2
MCB signal/aux contact (one changeover contact or signal)	1	XCS2
MCB shunt trip (110-415V ac, 110-125V dc)	-	XST415
MCB shunt trip 12-48V ac/dc	-	XST48
MCB undervoltage release (240V ac)	-	XUVR240
Time delay adjustable 0-300mS	-	
<b>Padlocking</b>		
MCB/RCBO dolly locking device	2	XDL
Padlock for dolly locking device	2	XPL
<b>Blanking Pieces</b>		
MCB blanks (4x3 MCB ways + 12 busbar terminal blanks)	3	DBXBP
MCB blanks (5x1 MCB ways + 5 busbar terminal blanks)	4	DBXBM
MCB blanks (5x1/2 MCB ways)	-	DBXBH



2 Pole RCCBs

## 2 Pole RCCBs

- Conforms to EN 61008
- Equipped with transient suppression filter
- Voltage 230/400V 50/60Hz
- Double module: Type AC and Type A
- Terminal capacity: 40A-63A – 25mm<sup>2</sup> 100A – 35mm<sup>2</sup>
- 35mm<sup>2</sup> cable capacity

Current Rating (A)	Sensitivity (mA)	Width	Type AC Cat No	Type A Cat No
25	30	35	LLM25/30/2	LLMA25/30/2
40	30	35	LLM40/30/2	LLMA40/30/2
63	30	35	LLM63/30/2	LLMA63/30/2
100	30	35	LLM100/30/2	LLMA100/30/2
40	100	35	LLM40/100/2	LLMA40/100/2
63	100	35	LLM63/100/2	LLMA63/100/2
100	100	35	LLM100/100/2	LLMA100/100/2
63	300	35	LLM63/300/2	LLMA63/300/2



4 Pole RCCBs

## 4 Pole RCCBs

- Conforms to EN 61008
- Equipped with transient suppression filter
- Voltage 230/400V 50/60Hz
- Double Module: Type AC and Type A
- Terminal capacity: 40A-63A – 25mm<sup>2</sup> 100A – 35mm<sup>2</sup>
- 35mm<sup>2</sup> cable capacity

Current Rating (A)	Sensitivity (mA)	Width	Type AC Cat No	Type A Cat No
40	30	70	LLM40/30/4	LLMA40/30/4
63	30	70	LLM63/30/4	LLMA63/30/4
100	30	70	LLM100/30/4	LLMA100/30/4
40	100	70	LLM40/100/4	LLMA40/100/4
63	100	70	LLM63/100/4	LLMA63/100/4
100	100	70	LLM100/100/4	LLMA100/100/4
63	300	70	LLM63/300/4	LLMA63/300/4
100	300	70	LLM100/300/4	LLMA100/300/4



Contactors

## Contactors – DIN rail mounted

- Conforms to EN 61095
- 240V control voltage

Current Rating (AC7a)	No of Poles	Width (mm)	Without Manual Override Cat No	With Manual Override Cat No
25	2	17.5	LLM2P25C	LLM2P25CM
25	3	35	LLM3P25C	LLM3P25CM
25	4	35	LLM4P25C	LLM4P25CM
40	3	53	LLM3P40C	LLM3P40CM
40	4	53	LLM4P40C	LLM4P40CM
63	3	53	LLM3P63C	-
63	4	53	LLM4P63C	-
Venting kit*		9	LLMV	LLMV

\*9mm wide ventilation module for fitting between alternate pairs of contactors to prevent overheating.



Auxiliary Devices

## Auxiliary Devices – DIN rail mounted

- 240V ac
- 2.5mm terminal capacity
- 17.5mm width

Current Rating (A)	Function	Cat No	Function	Cat No
<b>Switches</b>				
16	1 n.o.	LLM1P16N0	1 n.o. + neon	LLM1P16N0N
16	2 n.o. + neon	LLM2P16N0N	1 changeover/c.o.	LLM1P16C0
16	1P 2 way c.o.	LLM1P162W	2P 2 way c.o.	LLM2P162W
<b>Pushbuttons</b>				
6	1 n.o.	LLMPBNO	1 n.o. + neon	LLMPBNO N
6	1 n.o. + 1 n.c.	LLMPBNONC		
<b>Indicators</b>				
6	red	LLMPLR	green	LLMPLG
6	clear	LLMPLC		



Programmable Timers

## Programmable Timers – DIN rail mounted

- 240V ac 50-60Hz
- 250 hour reserve
- 7 day

Nominal Current Rating (AC7a)	Function (AC7b)	Function	Width	Cat No
<b>Lux Controller</b>				
10	6	2-2000 Lux	72	RLP1
<b>Timer</b>				
16	-	1 channel	35	RTIDWR
16	10	2 channel	35	RT2DWR

A suitably rated contactor should be employed with timers, programmers and relays when highly inductive or capacitive loads are to be controlled.



General Purpose Enclosures

## General Purpose Enclosures – Surface/Flush mounted

Number Ways (18mm modules)	Weight (Kg)	Height (mm)	Width (mm)	Depth (mm)	Picture	Cat No
<b>Sheet Steel (IP4X)</b>						
6	1.0	225	134	73	1	LLMGPS6S
6	1.0	250	160	73	1	LLMGPS6F
<b>Insulated (IP4X)</b>						
2	0.1	130	50	60	2	LLMGPI2
4	0.2	130	86	60	2	LLMGPI4
8	0.6	162	214	92	3	LLMGPI8
<b>Insulated (IP55) Surface Mounted</b>						
5	0.5	175	125	115	4	LLMGPW5
8	0.8	175	214	115	4	LLMGPW8

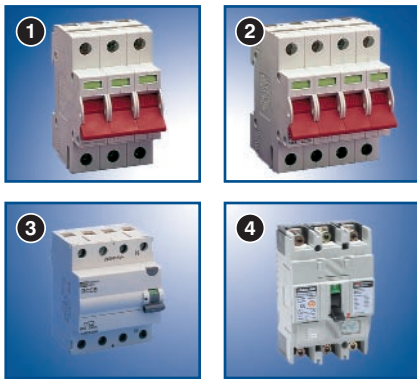


TP&N Distribution Boards

## TP&N Distribution Boards

- Incomers not included
- Conforms to EN 60439-3
- 200A busbars
- Neutral and earth terminal for each SP way
- IP4X
- Clean earth facility

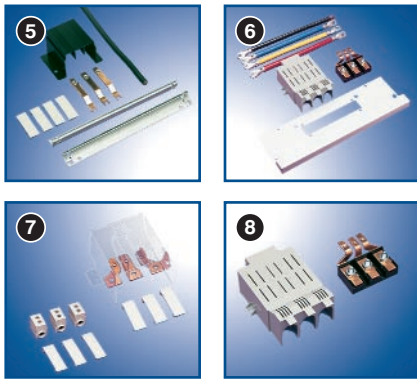
Outgoing 3 Pole Ways	Weight (kg)	Height (mm)	Width (mm)	Cat No
4	13	544	430	DB04X
6	15	598	430	DB06X
8	17	651	430	DB08X
12	19	758	430	DB12X
16	22	865	430	DB16X
20	25	1025	430	DB20X
24	28	1132	430	DB24X



Incomer Connection Kits

## Incoming Connection Kits

Current Rating (A)	Sensitivity (mA)	Poles	Max Cable (mm <sup>2</sup> )	Picture	Device Cat No	Kit Cat No
<b>Switch Disconnector</b>						
100	-	3	50	1	AV3100	n/a
100	-	4	50	2	AV4100	DBXSC
125	-	3	50	1	AV3125	n/a
125	-	4	50	2	AV4125	DBXSC
200	-	3	150	9	YA3N3P200D	DBYA3
200	-	4	150	9	YA3N4P200D	DBYA3



Incomer Connection Kits

<b>RCCB</b>						
40	30	4	35	3	LLM40/30/4	DBXRC
63	30	4	35	3	LLM63/30/4	DBXRC
100	30	4	35	3	LLM100/30/4	DBXRC
40	100	4	35	3	LLM40/100/4	DBXRC
63	100	4	35	3	LLM63/100/4	DBXRC
100	100	4	35	3	LLM100/100/4	DBXRC
63	300	4	35	3	LLM63/300/4	DBXRC
100	300	4	35	3	LLM100/300/4	DBXRC

<b>Contactors</b>						
25	-	4	-	5	LLM4P25C	DBXCC
40	-	4	-	5	LLM4P40C	DBXCC
63	-	4	-	5	LLM4P63C	DBXCC

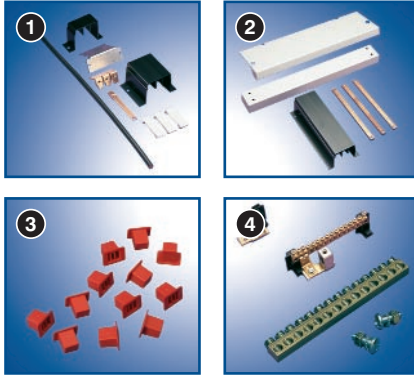
<b>Fuse Switch</b>						
100	-	3	70	6	HBF3P100N	DBXFSA1
200	-	3	150	6	HBF3P200N	DBXFSA2

<b>Direct Connection</b>						
-	-	-	35	7	-	DBXD0
-	-	-	70	7	-	DBXD1
-	-	-	150	7	-	DBXD2



TP&N Distribution Board Fitted with 200A Incoming Enclosure

<b>YA3 Frame MCCBs Thermal/Magnetic</b>						
125	-	3	150	4	YA3N3P125T	DBYA3
125	-	3	150	4	YA3N4P125T	DBYA3
160	-	3	150	4	YA3N3P160T	DBYA3
160	-	4	150	4	YA3N4P160T	DBYA3
200	-	3	150	4	YA3N3P200T	DBYA3
200	-	4	150	4	YA3N4P200T	DBYA3



Accessories



Service Centre for TP&N Distribution Boards

## Accessories for all TP&N Distribution Boards

Description	Picture	Cat No
<b>TP&amp;N Dist. Board Kits</b>		
TP&N to SP&N conversion kit	1	DBXTS
Vertical stacking/coupling kit	2	DBXMK
Spare end plate	-	DBXP
<b>Blanking Kits</b>		
Busbar terminal blanks (x10)	3	DAXTP
<b>Terminal Bars</b>		
6 way terminal bar	4	DBXT06
12 way terminal bar	4	DBXT12
18 way terminal bar	4	DBXT18
24 way terminal bar	4	DBXT24
<b>Earth Bar Kits</b>		
Earth bar	4	DAXEB
Earth bar isolation kit	4	DBXL
<b>Door Lock Kits</b>		
Cylinder door lock	-	DBXCL
Padlock bracket kit	-	DBXPL
<b>Mounting Plate</b>		
For incoming connection kit	-	DBXMP

## Service Centres for all TP&N Distribution Boards

- Accepts all DIN rail mounting devices
- IP4X
- 12 or 24 modular ways

Outgoing 3 Pole Ways	Weight (kg)	Height (mm)	Width (mm)	Cat No
12 (Single row)	5	213	430	DBS12X
24 (Double row)	8	427	430	DBS24X

No top or bottom plate supplied with service centre.  
Removable plate from distribution board is to be utilised.





SP&N Distribution Boards

## SP&N Distribution Boards

- Conforms to EN 60439-3
- 125A busbars
- Neutral and earth terminal for each SP way
- IP4X
- 6 - 22 single pole outgoing ways

Outgoing 1 Pole Ways	Weight (kg)	Height (mm)	Width (mm)	Cat No
6	3.8	250	270	DA06X
9	4.3	250	323	DA09X
12	4.8	250	377	DA12X
15	5.3	250	430	DA15X
18	6.0	250	484	DA18X
22	7.0	250	555	DA22X



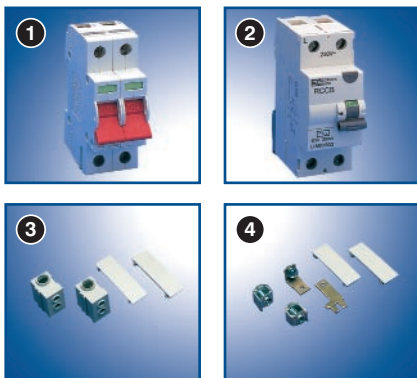
SP&N Distribution Service Centres

## Service Centres for SP&N Distribution Boards

- Accepts all DIN rail mounting devices
- IP4X
- 8 - 24 modular ways

Modular Ways	Weight (kg)	Height (mm)	Width (mm)	Cat No
8	3.8	250	270	DAS08X
11	4.3	250	323	DAS11X
14	4.8	250	377	DAS14X
17	5.3	250	430	DAS17X
20	6.0	250	484	DAS20X
24	7.0	250	555	DAS24X

## Incoming Options for SP&N Distribution Boards



Incomer Connection Kits

Current Rating (A)	Sensitivity (mA)	Poles	Max Cable (mm <sup>2</sup> )	Picture	Device Cat No
<b>Switch Disconnecter</b>					
100	-	2	50	1	AV2100
125	-	2	50	1	AV2125
<b>RCCB</b>					
25	30	2	35	2	LLM25/30/2
40	30	2	35	2	LLM40/30/2
63	30	2	35	2	LLM63/30/2
100	30	2	35	2	LLM100/30/2
40	100	2	35	2	LLM40/100/2
63	100	2	35	2	LLM63/100/2
100	100	2	35	2	LLM100/100/2
63	300	2	35	2	LLM63/300/2
<b>Direct Connection</b>					
-	-	-	35	3	DAXD0
-	-	-	70	4	DAXD1

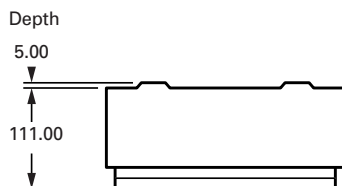
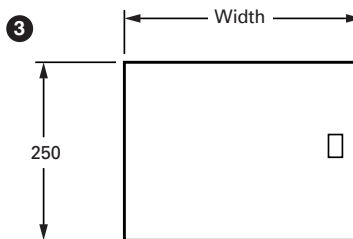
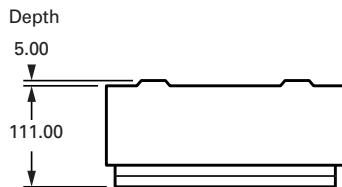
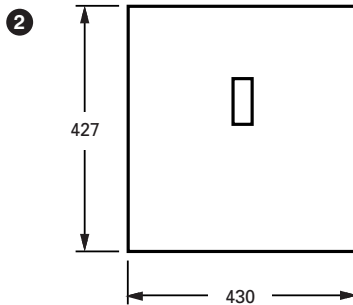
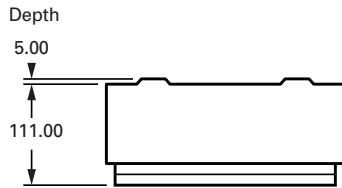
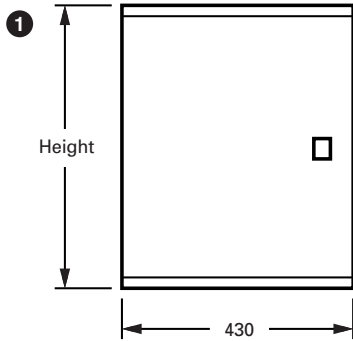


Accessories

## Accessories for SP&N Distribution Boards

Description	Picture	Cat No
<b>Vertical Stacking Kits</b>		
(DAS17 to B type board)	5	DAXSKB
270mm stacking kit	5	DAXSK08
323mm stacking kit	5	DAXSK11
377mm stacking kit	5	DAXSK14
430mm stacking kit	5	DAXSK17
484mm stacking kit	5	DAXSK20
555mm stacking kit	5	DAXSK24
<b>Terminal Bars</b>		
6 way terminal bar	7	DBXT06
12 way terminal bar	7	DBXT12
18 way terminal bar	7	DBXT18
24 way terminal bar	7	DBXT24

Description	Picture	Cat No
<b>Blanking Kits</b>		
Busbar terminal blanks (x10)	6	DAXTP
<b>Earth Bar Kits</b>		
Earth bar	7	DAXEB
Earth bar isolation kit	7	DBXL
<b>Door Lock Kits</b>		
Cylinder door lock	8	DBXCL
Padlock bracket kit	8	DBXPL



## Dimensions (mm)

Catalogue No	TP Ways	Drawing No	Height (mm)	Weight (kg)
<b>TP&amp;N Distribution Boards without incoming device</b>				
DB04X	4	1	544	13
DB06X	6	1	598	15
DB08X	8	1	651	17
DB12X	12	1	758	19
DB16X	16	1	865	22
DB20X	20	1	1025	25
DB24X	24	1	1132	28

Catalogue No	SP Ways	Drawing No	Height (mm)	Weight (kg)
<b>Service Centres for TP&amp;N Distribution Boards</b>				
DBS12X	12(single row)	1	213	5
DBS24X	24(double row)	1	427	8

Catalogue No	TP Ways	Drawing No	Height (mm)	Weight (kg)
<b>YA3 Frame MCCB Enclosures for TP&amp;N Distribution Boards</b>				
DBYA3	TP Unit	2	427	8
DBYA3	4P Unit	2	427	8

Catalogue No	SP Ways	Drawing No	Width (mm)	Weight (kg)
<b>SP&amp;N Distribution Boards</b>				
DA06X	6	3	270	3.8
DA09X	9	3	323	4.3
DA12X	12	3	377	4.8
DA15X	15	3	430	5.3
DA18X	18	3	484	6
DA22X	22	3	555	7

Catalogue No	Modular Ways	Drawing No	Width (mm)	Weight (kg)
<b>Service Centres for SP&amp;N Distribution Boards</b>				
DAS08X	8	3	270	3.8
DAS11X	11	3	323	4.3
DAS14X	14	3	377	4.8
DAS17X	17	3	430	5.3
DAS20X	20	3	484	6
DAS24X	24	3	555	7

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