

T e c h n i c a l D a t a S h e e t

London Underground Range



CDPD148
Issue 2

Stainless Steel London Underground (LU) Switchgear

London Underground approved for use lid mounted switch-disconnectors designed to provide the user with an assembly that can be installed for indoor or outdoor use, in the harshest of environments.

Available in 25A & 40A ranging from 2P to 6P, these isolators are supplied in 18 gauge stainless steel Grade 304 enclosures in a natural brushed finish with mounting brackets for easy installation. Sealed to IP65, each unit is supplied with captive lid fixing screws with a security head and earthing points on both lid and base plus external earth stud. The die-cast handle is padlockable in both 'Off' and 'On' positions.

Engraved traffolyte labels in various colours can be supplied attached to the side of the enclosure or supplied loose for fitting adjacent to the isolator.





Image	Rating	Format	Interior Switch	Cat. No.	Encl. Size	Encl. Material	IP Rating	Encl. Colour
	25A	2P	GN25	DS252LUL10	C	Stainless Steel Grade 304	IP65	Natural brushed finish (Non Glare)
		3P		DS253LUL10				
		3P+2EB Aux		DS253EBLUL10				
		4P		DS254LUL10				
		6P		DS256LUL10				
		6P+2EB Aux		DS256EBLUL10				
	40A	2P	GN40	DS402LUL10	D	Stainless Steel Grade 304	IP65	Natural brushed finish (Non Glare)
		3P		DS403LUL10				
		3P+2EB Aux		DS403EBLUL10				
		4P		DS404LUL10				
		6P		DS406LUL10				
		6P+2EB Aux		DS406EBLUL10				

Die-Cast Aluminium London Underground (LU) Switchgear

London Underground approved for use isolators available in 25A & 40A ranging from 2P to 6P. Designed in Die-Cast Aluminium (LM6) enclosures finished in LU S1085 Compliant Paint Finish. Available in either Light Grey (RAL 7035) or Traffic Red (RAL 3020).

Sealed to IP65, these switch-disconnectors are supplied with pre-finished steel mounting brackets for ease of installation. Each unit is supplied with captive lid fixing screws with a security head and earthing points on both lid and base plus external earth stud. The die-cast handle is padlockable in both 'Off' and 'On' positions.

Engraved traffolyte labels in various colours can be supplied attached to the side of the enclosure or supplied loose for fitting adjacent to the isolator.

Image	Rating	Format	Interior Switch	Cat. No.	Encl. Size	Encl. Material	IP Rating	Encl. Colour
	25A	2P	GN25	DCG252LUL10	A	Die-Cast Aluminium (LM6)	IP65	LU S1085 Compliant Paint Finish: Light Grey (RAL 7035)
		3P		DCG253LUL10				
		3P+2EB Aux		DCG253EBLUL10				
		4P		DCG254LUL10				
		6P		DCG256LUL10				
		6P+2EB Aux		DCG256EBLUL10				
	25A	2P	GN25	DCR252LUL10	A	Die-Cast Aluminium (LM6)	IP65	LU S1085 Compliant Paint Finish: Traffic Red (RAL 3020)
		3P		DCR253LUL10				
		3P+2EB Aux		DCR253EBLUL10				
		4P		DCR254LUL10				
		6P		DCR256LUL10				
		6P+2EB Aux		DCR256EBLUL10				
	40A	2P	R32	DCG402LUL10	B	Die-Cast Aluminium (LM6)	IP65	LU S1085 Compliant Paint Finish: Light Grey (RAL 7035)
		3P		DCG403LUL10				
		3P+2EB Aux		DCG403EBLUL10				
		4P		DCG404LUL10				
		6P		DCG406LUL10				
		6P+2EB Aux		DCG406EBLUL10				
	40A	2P	R32	DCR402LUL10	B	Die-Cast Aluminium (LM6)	IP65	LU S1085 Compliant Paint Finish: Traffic Red (RAL 3020)
		3P		DCR403LUL10				
		3P+2EB Aux		DCR403EBLUL10				
		4P		DCR404LUL10				
		6P		DCR406LUL10				
		6P+2EB Aux		DCR406EBLUL10				

Technical Data Sheet

London Underground Range

CDPD148
Issue 2

Rating	Description	Catalogue No.
25A	Set of 4 off security lid fixing screws	MR/SEC/FIX
	Security screwdriver bit	MR/SEC/ALLEN KEY
40A	Set of 4 off security lid fixing screws	R40/SEC/FIX
	Security screwdriver bit	R40/SEC/ALLEN

To order spare switch interiors, add suffix 'INT' to the part number e.g.. DCG252LUL10INT

Sheet Steel London Underground (LU) Switchgear

Craig & Derricott offer a range of London underground approved for use switch disconnectors and fuse combination units. Supplied in IP65 sheet steel hinged door enclosures, the range comes standard in a three phase and switched neutral configuration and is generously sized to allow easy cable connection. Current ratings of 40A - 800A for switch disconnectors and 32A - 630A for fuse combination units are offered in this collection.

Each enclosure has removable top and bottom gland plates and a metal anodised aluminium operating handle lockable in both ON and OFF positions. These are also interlocked with the switching device in the ON position preventing unsafe access. All operating handles accept 3 padlocks with a 6.3mm shackle, optional castell locking available on request. For Castell lock option, add suffix '/CL' to the Cat. No. e.g. DCG00403N/LUL2/CL. The switch-disconnector range is fire rated to F200, designed specifically for installations where the supply must be maintained for 120 mins at 200°C.

'N' = switched neutral (Early make, late break)

Switch-Disconnectors								
Image	Rating	Format	Light Grey Cat. No.	Traffic Red Cat. No.	Encl. Size	Encl. Material	IP Rating	Encl. Colour
	40A	3P+N	DCG00403N/LUL2	DCR00403N/LUL2	1	Sheet Steel	IP65	LU S1085 Compliant Paint Finish: Light Grey (RAL 7035)
	63A	3P+N	DCG00633N/LUL2	DCR00633N/LUL2	1			
	80A	3P+N	DCG00803N/LUL2	DCR00803N/LUL2	3			
	100A	3P+N	DCG01003N/LUL2	DCR01003N/LUL2	3			
	125A	3P+N	DCG01253N/LUL2	DCR01253N/LUL2	4			
	160A	3P+N	DCG01603N/LUL2	DCR01603N/LUL2	4			
	200A	3P+N	DCG02003N/LUL2	DCR02003N/LUL2	5			
	250A	3P+N	DCG02503N/LUL2	DCR02503N/LUL2	7			
	315A	3P+N	DCG03153N/LUL2	DCR03153N/LUL2	8			
	400A	3P+N	DCG04003N/LUL2	DCR04003N/LUL2	8			
	630A	3P+N	DCG06303N/LUL2	DCR06303N/LUL2	10			
	800A	3P+N	DCG08003N/LUL2	DCR08003N/LUL2	10			
Fuse Combination Units								
Image	Rating	Format	Light Grey Cat. No.	Traffic Red Cat. No.	Encl. Size	Encl. Material	IP Rating	Encl. Colour
	32A	3P+N	SFDCG00323N/LUL2	SFDCR00323N/LUL2	2	Sheet Steel	IP65	LU S1085 Compliant Paint Finish: Light Grey (RAL 7035)
	63A	3P+N	SFDCG00633N/LUL2	SFDCR00633N/LUL2	2			
	100A	3P+N	SFDCG01003N/LUL2	SFDCR01003N/LUL2	4			
	160A	3P+N	SFDCG01603N/LUL2	SFDCR01603N/LUL2	4			
	200A	3P+N	SFDCG02003N/LUL2	SFDCR02003N/LUL2	6			
	250A	3P+N	SFDCG02503N/LUL2	SFDCR02503N/LUL2	6			
	315A	3P+N	SFDCG03153N/LUL2	SFDCR03153N/LUL2	9			
	400A	3P+N	SFDCG04003N/LUL2	SFDCR04003N/LUL2	9			
	630A	3P+N	SFDCG06303N/LUL2	SFDCR06303N/LUL2	11			

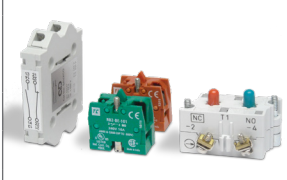
Technical Data Sheet

London Underground Range

CDPD148
Issue 2

Accessories - Auxiliary Contacts

Add-on auxiliary blocks are available for all hinged door products. All auxiliaries are supplied as 1 N/O+1 N/C pair. All N/O auxiliary contacts are early break with respect to the main poles when switching from 'On' to 'Off'.

Auxiliary Contacts				
Image	Rating	Type	Range	Cat. No.
	32A- 160A	B	Fuse Combination	SAUXKITA
	40A- 200A	A	Switch-Disconnectors	SAUXCO
	200A- 400A	C	Fuse Combination	SAUXKITC
	250A	C	Switch-Disconnectors	SAUXKITB
	630A	B	Fuse Combination	SAUXKITD
	400A- 800A	C	Switch-Disconnectors	SAUXKITC

F400 Fire Rated London Underground (LU) Switchgear

The F400 Fire Rated products range from 20A to 630A, supplied in either IP65 die-cast aluminium or sheet steel enclosures with a Traffic Red (RAL 3020) powder coat finish. Units rated 63A and above are fitted with highly durable anodised aluminium metal handles. All enclosures come standard with padlocking in both 'Off' and 'On'. The interior switches are constructed from a high temperature grade thermoset material, designed specifically for installations where the supply must be maintained for 2 hours at 400°C.




When choosing a switch disconnector enclosure, care must be taken to select the most suitable material taking into account the location, level of pollution, temperature, UV levels, vibration and humidity. Typical enclosure materials include powder painted Die-Cast Aluminium, Mild Steel or Stainless Steel. Enclosures that are sealed to IP65 are commonly mistaken as being suitable for all outside environments. A powder painted mild steel or Aluminium enclosure will degrade and corrode under certain environmental conditions.

Installing enclosures in an external environment may also result in condensation forming on the inside of the enclosure, resembling water ingress. This is caused by a difference in temperature between inner and outer surfaces of the enclosure and the most common solution is to fit an anti-condensation heater within the enclosure. When the isolator is subject to chemical cleaning a stainless steel enclosure is recommended although the correct grade of stainless steel must be selected. If in doubt, please consult our technical department on sales@craigandderricott.com or +44(0)1543 375 541.

Stainless Steel Grade 316L enclosures are available on request for 63A- 630A. Replace 'R' with 'S' in the Cat. No. E.g.F3SDS0633NL.

'N' = switched neutral (Early make, late break) | 'NL' = Unswitched neutral | 'EB' = Early break auxiliary contacts






Image	Rating	Format	Cat. No.	Encl. Size	Encl. Material	IP Rating	Encl. Colour
	20A	2P	FSDDR0202/LUL	E	Red Die-Cast Aluminium	IP65	LU S1085 Compliant Paint Finish: Traffic Red (RAL 3020)
		3P	FSDDR0203/LUL				
		3P+2E/B Aux	FSDDR0203EB/LUL				
		3P+NL	FSDDR0203NL/LUL				
		4P	FSDDR0204/LUL				
	32A	6P	FSDDR0206/LUL	B	Red Die-Cast Aluminium	IP65	LU S1085 Compliant Paint Finish: Traffic Red (RAL 3020)
		6P+2E/B Aux	FSDDR0206EB/LUL				
		2P	FSDDR0322/LUL				
		3P	FSDDR0323/LUL				
		3P+2E/B Aux	FSDDR0323EB/LUL				
		3P+NL	FSDDR0323NL/LUL				
	63A	4P	FSDDR0324/LUL	C	Red Sheet Steel	IP65	LU S1085 Compliant Paint Finish: Traffic Red (RAL 3020)
		6P	FSDDR0326 /LUL				
		6P+2E/B Aux	FSDDR0326EB/LUL				
		3P+NL	FSDMR0633NL/LUL				
		3P+2E/B Aux	FSDMR0633EB/LUL				

Technical Data Sheet













London Underground Range

CDPD148
Issue 2

Image	Rating	Format	Cat. No.	Encl. Size	Encl. Material	IP Rating	Encl. Colour
	80A	3P + 2E/B Aux	FSDMR0803EB/LUL	3A	Red Sheet Steel	IP65	LU S1085 Compliant Paint Finish: Traffic Red (RAL 3020)
		4P	FSDMR0804/LUL				
	100A	4P	FSDMR01004/LUL	D	Red Sheet Steel	IP65	
		3P	FSDMR01253/LUL	D			
125A	3P + 2E/B Aux	FSDMR01253EB/LUL	D		Red Sheet Steel	IP65	
	4P	FSDMR01254/LUL					
	160A	4P	FSDMR01604/LUL	5	Red Sheet Steel	IP65	
	200A	4P	FSDMR02004/LUL	5	Red Sheet Steel	IP65	
	250A	4P	FSDMR02504/LUL	5	Red Sheet Steel	IP65	
	315A	4P	FSDMR03154/LUL	6	Red Sheet Steel	IP65	
	400A	4P	FSDMR04004/LUL	6	Red Sheet Steel	IP65	
	630A	4P	FSDMR06304/LUL	8	Red Sheet Steel	IP65	

Technical Specification

Data supplied against tests to IEC/BS EN 60947-3













F400 Fire Rated Switch-Disconnectors																
Application	Sym.	Unit	Category	20A	32A	63A	80A	100A	125A	160A	200A	250A	315A	400A	630A	
Rated thermal current	I_{the}	A		20	32	63	80	100	125	160	200	250	315	400	630	
Rated insulation voltage	U_i	V		690	690	690	690	690	690	1000	1000	1000	1000	1000	1000	
Rated impulse voltage	U_{imp}	kV		6.0	6.0	6.0	6.0	6.0	6.0	12.0	12.0	12.0	12.0	12.0	12.0	
Rated operational power (3 phase AC)	I_e / P_e	A/kW	415V- AC23A	20/9.5	32/15	40/18.5	80/40	90/47.5	100/55	160/90	200/110	250/132	315/175	400/200	630/315	
			690V- AC23A	-	-	-	-	-	-	160/150	200/190	250/200	315/300	350/315	350/355	
			690V- AC23B	20/9.5	20/9.5	20/9.5	-	-	-	-	-	-	-	-	-	-
			660V- AC23B	-	-	-	30/22	30/22	30/22	-	-	-	-	-	-	-
Short circuit withstand (1 sec)	I_{cw}	kA	RMS value	-	-	-	1.5	1.5	1.5	8.0	8.0	8.0	17.0	17.0	17.0	
Conditional Short Circuit Current	Fuse gG	kA/ Fuse (A)	415V	50/32	50/32	50/63	50/150	50/150	50/200	50/160	50/200	50/250	-	-	-	
			690V	40/32	40/32	40/63	50/63	50/63	50/63	50/160	50/200	50/250	50/315	50/400	100/630	
Recommended connecting capacity			Terminal type													
			mm ² Flexible cable	≤ 4.0	6	16	50	50	50	95	95	120	2/150	2/150	2/185	
			mm ² Rigid cable	≤ 4.0	10	25	35	35	50	95	95	120	2/150	2/150	2/185	
			Nm Tightening torque	1.2	1.2	3.0	12.0	12.0	12.0	35.0	35.0	35.0	35.0	35.0	50.0	

Technical Data Sheet

London Underground Range

CDPD148
Issue 2

Stainless Steel & Die-Cast Aluminium Fixed Lid Switch-Disconnectors						
Application	Sym	Unit	Category	GN25	R32	GN40
Rated thermal current	I_{the}	A		25	40	40
Rated insulation voltage	U_i	V		690	690	690
Rated impulse voltage	U_{imp}	kV		6	6	6
Rated operational voltage		V		480	415	480
Rated operational power		kW	AC23A @ 380V/440V	11	15	18.5
Max fuse size for short circuit protection	I_n	(gG/gl)	25kA	25	40	40
			50kA	-	40	40
Mechanical life			Switching cycles	5x10 ⁶	10 ⁶	5x10 ⁶
Terminal screw size				M3.5	M4	M4
Terminal capacity		2xmm ²	max r/f	4/4	6/6	10/6
		2xAWG		10/12	10/10	8/10
		2xmm ²	min r/f	0.5/0.5	1/1	1.5/1.5
		2xAWG		20/20	18/18	16/16











Sheet Steel Hinged Door Switch-Disconnectors															
Application	Sym	Unit	Category	40	63	80	100	125	160	200	250	315	400	630	800
Rated thermal current	I_{the}	A		40	63	80	100	125	160	200	250	315	400	630	720
Rated insulation voltage	U_i	V		690	690	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
Rated impulse voltage	U_{imp}	kV		6	6	8	8	8	8	8	12	12	12	12	12
Rated operational current (AC)	I_e	A	400V- AC23A	35.1	48	56	100	112	128	128	250	315	400	630	720
Rated operational power	P_e	kW	400 / 415V- AC23A	8.5	25	30	59	63	75	75	132	160	200	315	355
Short circuit making capacity	I_{cm}	kA	Peak value	2.7	2.9	3.0	3.7	4.0	5.0	5.0	35	35	65	80	80
Short circuit withstand (1sec)	I_{cw}	kA	rms value	1.1	1.3	2	2.6	2.8	3.0	3.0	8	8	17	17	17
Min. mechanical endurance		-	Operations (10 ³)	250	250	50	50	50	50	50	16	16	10	10	10
Min. electrical endurance		-	415V- at 0.65 pf	-	-	-	-	-	-	-	1,000	1,000	1,000	500	500
Connecting capacity		-	Terminal type												
		mm ²	Min/Max	2.5/25	2.5/25	-/50	-/50	-/70	-/95	-/95	120	2x150	2x150	2x185	2x240
		mm	Stud/Cu palm width	-	-	-	-	-	8x25	8x25	10x30	10x30	10x30	12x40	12x40
		Nm	Tightening torque	1.3	1.3	5	5	5	12	12	25	25	25	40	40

Sheet Steel Hinged Door Fuse Combination Units														
Application	Sym	Unit	Category	32	63	100	125	160	200	250	315	400	630	
Rated thermal current	I_{the}	A		32	63	100	125	160	200	250	315	400	630	
Rated insulation voltage	U_i	V		750	750	750	750	750	750	750	750	750	750	
Rated impulse voltage	U_{imp}	kV		12	12	12	12	12	12	12	12	12	12	
Rated operational current	AC	I_e	A	415V- AC23A	32	63	100	125	160	200	250	315	400	630
	DC			220V- DC23A	-	-	100	125	160	200	250	315	400	630

Technical Data Sheet

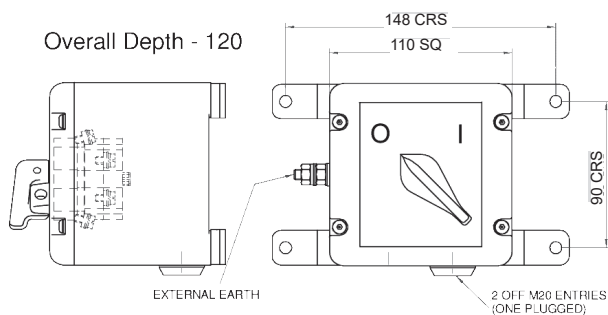
London Underground Range

CDPD148
Issue 2

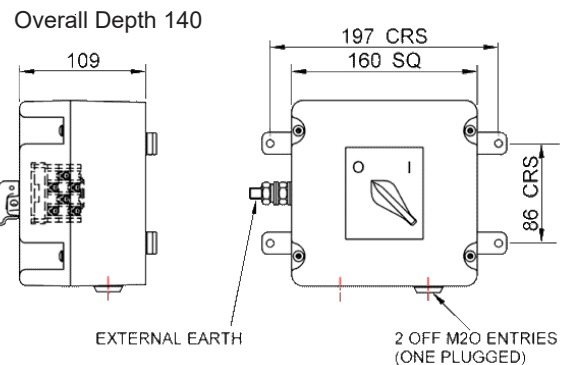
Sheet Steel Hinged Door Fuse Combination Units													
Application	Sym	Unit	Category	32	63	100	125	160	200	250	315	400	630
Rated operational power @ 0.75pf	P _e	kW	400/415- AC23A	17.2	33.9	53.9	67.3	86.2	107.8	134.7	169.8	215.6	339.6
Rated making capacity (AC23A)		A	415V, 0.35 pf	320	630	1,000	1,250	1,600	2,000	2,500	3,150	4,000	6,300
Rated breaking capacity (AC23A)		A	415V, 0.35 pf	256	504	800	1,000	1,280	1,600	2,000	2,520	3,200	5,040
Rated Conditional (Fused) short circuit		kA	S/C current rms	80	80	80	80	80	80	80	80	80	80
		A	back-up fuse	32	63	100	125	160	200	250	315	400	630
Min. mechanical endurance		-	Operations	25,000	25,000	15,000	15,000	15,000	10,000	10,000	10,000	10,000	6,000
Min. electrical endurance		-	415V- at 0.65 pf	1,500	1,500	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
BS fuse format				A2	A2	A4	A4	B1, B2	B1, B2	B1, B2	B1, B4	B1, B4	C1, C3
Connecting capacity		-	Terminal type										
		mm ²	Min/Max	16	25	95	95	120	240	240	300	300	400
		mm	Stud/Cu palm width	-	-	8x20	8x20	8x20	10x25	10x25	10x25	10x25	12x50
		Nm	Tightening torque	2.5	2.5	10	12	16	25	30	35	45	50

LU Die-Cast Aluminium Switchgear

Size A

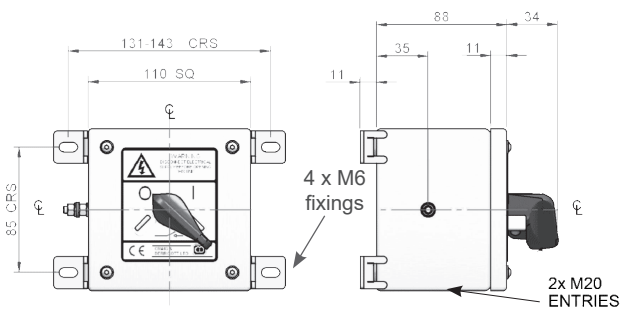


Size B

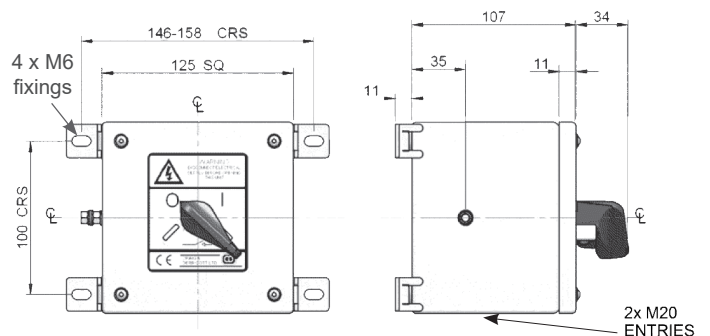


LU Stainless Steel Switchgear

Size C



Size D

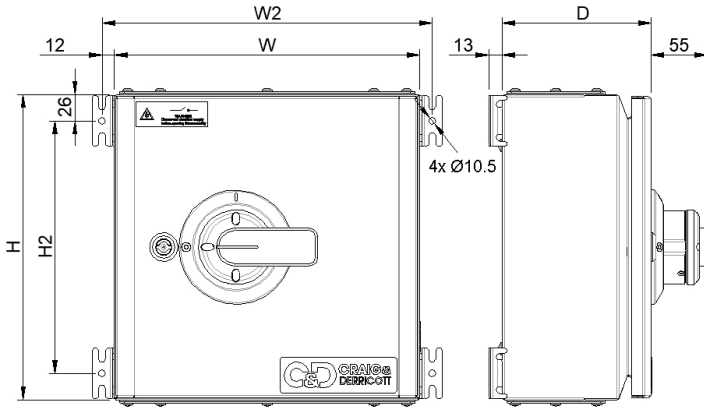


Technical Data Sheet

London Underground Range

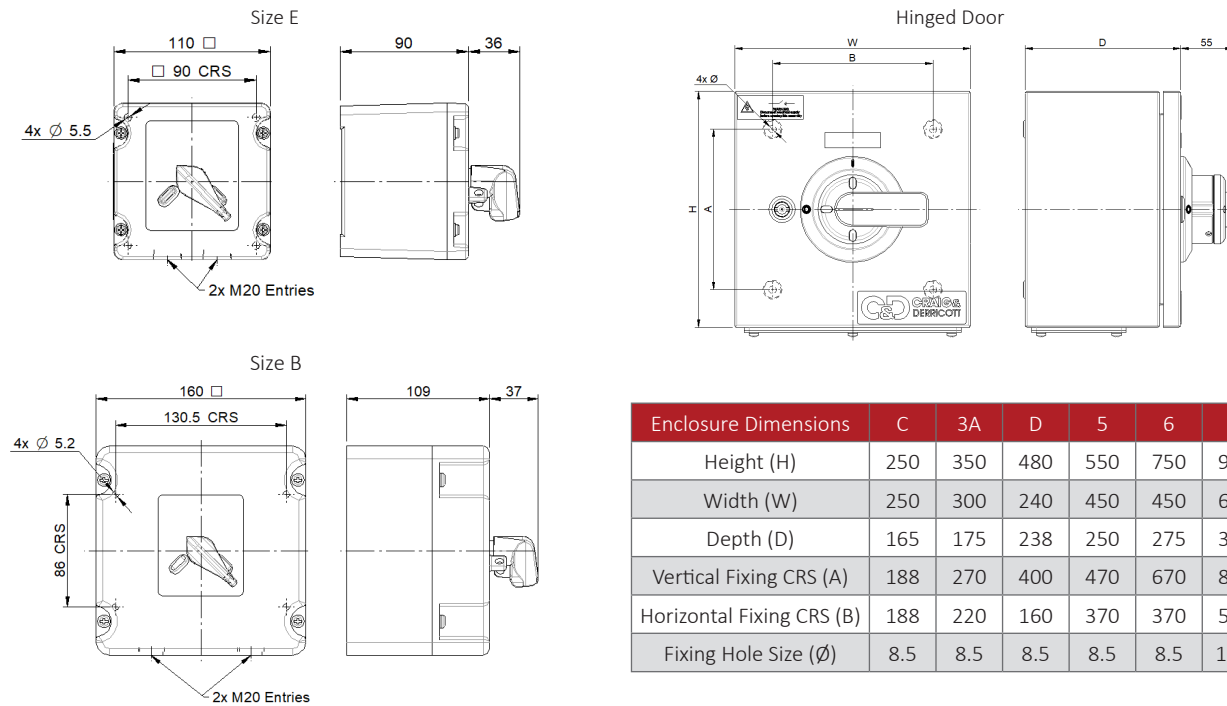
CDPD148
Issue 2

LU Sheet Steel Switchgear



Encl Size	Dimensions (mm)				
	H	W	D	H2	W2
1	300	300	150	248	324
2	400	400	200	348	324
3	400	300	150	348	324
4	500	400	200	448	424
5	600	400	200	548	424
6	600	600	300	548	424
7	600	500	200	548	524
8	800	600	200	748	624
9	800	600	300	748	624
10	1000	600	300	948	624
11	1000	800	300	948	624

LU Fire Rated Switchgear



Enclosure Dimensions	C	3A	D	5	6	8
Height (H)	250	350	480	550	750	900
Width (W)	250	300	240	450	450	600
Depth (D)	165	175	238	250	275	300
Vertical Fixing CRS (A)	188	270	400	470	670	820
Horizontal Fixing CRS (B)	188	220	160	370	370	520
Fixing Hole Size (Ø)	8.5	8.5	8.5	8.5	8.5	10.5