

TFL (LU) Switchgear Range


CDPD148
Issue 2

TFL (LU) Die-Cast Aluminium & Stainless Steel Enclosed Switchgear

This range of Switch Disconnectors are available in 25A & 40A ranging from 2P to 6P+2EB Aux. Supplied in either IP65 Die-Cast Aluminium enclosures finished in Light Grey (RAL 7035) LU S1085 compliant paint or IP65 Stainless Steel Grade 304 enclosures in a natural brushed finish.

Each unit is supplied with earthing points on both the lid and base, plus an external stud for earth bonding. The Die-Cast handle is padlockable in both 'Off' and 'On' positions. Optional security head fixing screws and external mounting brackets are available on request. 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. To order spare switch interiors, add suffix '/INT' to the part number e.g. DCG252/LUL2/INT

'NL' = unswitched neutral | 'EB' = early break auxiliary contacts

Switch Disconnectors (O-I)								
Image	Rating	Format	Cat. No.	Encl. Size	Encl. Material	Encl. Colour	IP Rating	Cable Entries
	25A	2P	DCG252/LUL2	FA	Die-Cast Aluminium	Light Grey (RAL 7035)	IP65	1xM20 + 1xM25 Top & Btm
		3P	DCG253/LUL2					
		3P+NL	DCG253NL/LUL2					
		3P+2EB Aux	DCG253EB/LUL2					
		4P	DCG254/LUL2					
		6P	DCG256/LUL2					
	6P+2EB Aux	DCG256EB/LUL2		1xM20 + 1xM25 Top & Btm 1xM20 RHS				
	40A	2P	DCG402/LUL2	FB	Die-Cast Aluminium	Light Grey (RAL 7035)	IP65	2 x M25 Top & Btm
		3P	DCG403/LUL2					
		3P+NL	DCG403NL/LUL2					
		3P+2EB Aux	DCG403EB/LUL2					
		4P	DCG404/LUL2					
		6P	DCG406/LUL2					
	6P+2EB Aux	DCG406EB/LUL2		2 x M25 Top & Btm. 1 x M20 Btm				
	25A	2P	DS252/LUL2	A	Stainless Steel Grade 304	Natural Brushed Finish	IP65	2 x M20
		3P	DS253/LUL2					
		3P+NL	DS253NL/LUL2					
		3P+2EB Aux	DS253EB/LUL2					
	4P	DS254/LUL2						
	40A	2P	DS402/LUL2	B	Stainless Steel Grade 304	Natural Brushed Finish	IP65	2 x M20 + 2 x M25
		3P	DS403/LUL2					
		3P+NL	DS403NL/LUL2					
		3P+2EB Aux	DS403EB/LUL2					
	4P	DS404/LUL2						

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TFL (LU) Sheet Steel Enclosed Switchgear

A range of Switch Disconnectors and fuse combination units, supplied in IP65 hinged door Sheet Steel enclosure, coated in a protective LU S1085 Compliant Paint Finish: Grey (RAL 7035) powder coat finish, 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 style.

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 for F200, designed specifically for installations where the supply must be maintained for 120 minutes at 200°C

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

Switch Disconnectors (O-I)								
Image	Rating	Format	Cat No.	Encl. Size	Encl. Material	Encl. Colour	IP Rating	Cable Entries
	40A	3P+N	DCG00403N/LUL2	1	Sheet Steel	Light Grey (RAL 7035)	IP65	Gland Plates
	63A	3P+N	DCG00633N/LUL2	1	Sheet Steel	Light Grey (RAL 7035)	IP65	Gland Plates
	80A	3P+N	DCG00803N/LUL2	3	Sheet Steel	Light Grey (RAL 7035)	IP65	Gland Plates
	100A	3P+N	DCG01003N/LUL2	3	Sheet Steel	Light Grey (RAL 7035)	IP65	Gland Plates
	125A	3P+N	DCG01253N/LUL2	4	Sheet Steel	Light Grey (RAL 7035)	IP65	Gland Plates
	160A	3P+N	DCG01603N/LUL2	4	Sheet Steel	Light Grey (RAL 7035)	IP65	Gland Plates
	200A	3P+N	DCG02003N/LUL2	5	Sheet Steel	Light Grey (RAL 7035)	IP65	Gland Plates
	250A	3P+N	DCG02503N/LUL2	7	Sheet Steel	Light Grey (RAL 7035)	IP65	Gland Plates
	315A	3P+N	DCG03153N/LUL2	8	Sheet Steel	Light Grey (RAL 7035)	IP65	Gland Plates
	400A	3P+N	DCG04003N/LUL2	8	Sheet Steel	Light Grey (RAL 7035)	IP65	Gland Plates
	630A	3P+N	DCG06303N/LUL2	10	Sheet Steel	Light Grey (RAL 7035)	IP65	Gland Plates
	800A	3P+N	DCG08003N/LUL2	10	Sheet Steel	Light Grey (RAL 7035)	IP65	Gland Plates
Fuse Combination Units (O-I)								
	32A	3P+N	SFDCG00323N/LUL2	2	Sheet Steel	Light Grey (RAL 7035)	IP65	Gland Plates
	63A	3P+N	SFDCG00633N/LUL2	2	Sheet Steel	Light Grey (RAL 7035)	IP65	Gland Plates
	100A	3P+N	SFDCG01003N/LUL2	4	Sheet Steel	Light Grey (RAL 7035)	IP65	Gland Plates
	160A	3P+N	SFDCG01603N/LUL2	4	Sheet Steel	Light Grey (RAL 7035)	IP65	Gland Plates
	200A	3P+N	SFDCG02003N/LUL2	6	Sheet Steel	Light Grey (RAL 7035)	IP65	Gland Plates
	250A	3P+N	SFDCG02503N/LUL2	6	Sheet Steel	Light Grey (RAL 7035)	IP65	Gland Plates
	315A	3P+N	SFDCG03153N/LUL2	9	Sheet Steel	Light Grey (RAL 7035)	IP65	Gland Plates
	400A	3P+N	SFDCG04003N/LUL2	9	Sheet Steel	Light Grey (RAL 7035)	IP65	Gland Plates
	630A	3P+N	SFDCG06303N/LUL2	11	Sheet Steel	Light Grey (RAL 7035)	IP65	Gland Plates

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TFL (LU) F400 Fire Rated Enclosed Switchgear





The 20A to 630A F400 Fire Rated product range is supplied in either an IP65 Die-Cast Aluminium enclosure or a hinged door Sheet Steel enclosure, coated in a protective LU S1085 Compliant Paint Finish: Red (RAL3020) powder coat finish. The Die-Cast Aluminium products, 20A-40A, are fitted with a black powder coated Die-Cast Aluminium handle while the Sheet Steel enclosed products, 63A and above, are fitted with a highly durable aluminium operating handle. All units from this range feature the ability to be padlocked in both the OFF and ON positions as standard.

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. All units are suitable for enhanced fire rated cables. When using enhanced fire resistant power cables, please check gland sizes to suit the required product. All F400 products are suitable for F300 applications.

Stainless Steel 316L enclosures are available on request for the hinged door Sheet Steel product range. Replace 'R' with 'S' in the catalogue number, e.g. F400SDS0633NL/LUL2.

Factory fitted auxiliaries on the 20A-125A are fully rated and fire rated to F400. Non-fire rated auxiliaries are available for the 160A-630A hinged door Sheet Steel products on request, add '/AUX' to the catalogue number, e.g. F400SDR01604/LUL2/AUX


'NL' = unswitched neutral | 'EB' = early break auxiliary contacts

Switch Disconnectors (O-I)								
Image	Rating	Format	Cat. No.	Encl. Size	Encl. Material	Encl. Colour	IP Rating	Cable Entries
	20A	2P	F400DDR00202/LUL2	FA	Die-Cast Aluminium	Red (RAL 3020)	IP65	1xM20+1xM25 Top & Btm
		3P	F400DDR00203/LUL2					
		3P+NL	F400DDR00203NL/LUL2					
		3P+2EB Aux	F400DDR00203EB/LUL2					
		4P	F400DDR00204/LUL2					
		6P	F400DDR00206/LUL2					
		6P+2EB Aux	F400DDR00206EB/LUL2					1xM20+1xM25 Top & Btm+1xM20 Rhs
	25A	2P	F400DDR00252/LUL2	FA	Die-Cast Aluminium	Red (RAL 3020)	IP65	1xM20+1xM25 Top & Btm
		3P	F400DDR00253/LUL2					
		3P+NL	F400DDR00253NL/LUL2					
		3P+2EB Aux	F400DDR00253EB/LUL2					
		4P	F400DDR00254/LUL2					
		6P	F400DDR00256/LUL2					
		6P+2EB Aux	F400DDR00256EB/LUL2					1xM20+1xM25 Top & Btm+1xM20 Rhs
	40A	2P	F400DDR0040T2/LUL2	FB	Die-Cast Aluminium	Red (RAL 3020)	IP65	2xM25 Top & Btm
		3P	F400DDR0040T3/LUL2					
		3P+NL	F400DDR0040T3NL/LUL2					
		3P+2EB Aux	F400DDR0040T3EB/LUL2					
		4P	F400DDR0040T4/LUL2					
		6P	F400DDR0040T6/LUL2					
		6P+2EB Aux	F400DDR0040T6EB/LUL2					2xM25 Top & Btm + 1xM20 Btm
	63A	3P+NL	F400SDR00633NL/LUL2	F1	Sheet Steel	Red (RAL 3020)	IP65	Gland Plates
		3P+2EB Aux	F400SDR00633EB/LUL2					
	80A	3P+2EB Aux	F400SDR00803EB/LUL2	F2	Sheet Steel	Red (RAL 3020)	IP65	Gland Plates
		4P	F400SDR00804/LUL2					

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Switch Disconnectors (O-I)								
Image	Rating	Format	Cat. No.	Encl. Size	Encl. Material	Encl. Colour	IP Rating	Cable Entries
	125A	3P	F400SDR01253/LUL2	F4	Sheet Steel	Red (RAL 3020)	IP65	Gland Plates
		3P+2EB Aux	F400SDR01253EB/LUL2					
		4P	F400SDR01254/LUL2					
	160A	4P	F400SDR01604/LUL2	F5	Sheet Steel	Red (RAL 3020)	IP65	Gland Plates
	200A	4P	F400SDR02004/LUL2	F5	Sheet Steel	Red (RAL 3020)	IP65	Gland Plates
	250A	4P	F400SDR02504/LUL2	F5	Sheet Steel	Red (RAL 3020)	IP65	Gland Plates
	315A	4P	F400SDR03154/LUL2	F6	Sheet Steel	Red (RAL 3020)	IP65	Gland Plates
	400A	4P	F400SDR04004/LUL2	F6	Sheet Steel	Red (RAL 3020)	IP65	Gland Plates
630A	4P	F400SDR06304/LUL2	F8	Sheet Steel	Red (RAL 3020)	IP65	Gland Plates	

TFL (LU) Form 4 Type 2 Automatic Transfer Switches (ATS)- Solenoid Type, Class PC

At the core of each system is a four-pole ABB TruONE transfer switch. Rated 230V or 400V AC the ATS will provide all the essential requirements for automatically switching to a replacement power source. Units are rated from 32A to 250A with a rated frequency of 50/60Hz.



The Single or Three-phase ATS units allow automatic connection of a secondary electrical supply to a load upon failure of the primary supply.

The Bypass function isolates the ATS by bypassing the 'S1' supply or (in the case of dual-line versions) the 'S2' supply directly to the outgoing load, enabling essential maintenance. The 'S1' supply may be bypassed without a break in supply in accordance with life safety recommendations. The key advantage is that both the 'S1' supply and 'S2' supply to the load can be maintained whilst service and repairs can be carried out on the ATS unit.

Supplied in Sheet Steel enclosures up to IP65 with a Light Grey (RAL 7035) paint finish, each enclosure comes standard with a removable gland plate(s). Stainless Steel options are available on request. Each ATS unit comes standard with incoming isolators for both primary and secondary supplies. Volt-free status relays are included alongside a modbus communication module within the ATS unit in order to connect to the BMS (building management system) and/or life safety systems installed within the building.

The main LED indicator lights show the status of the supplies. A test switch is supplied with a set of 2 keys to allow for testing and commissioning of the ABB TruONE transfer switch. A mains return inhibit feature is accessible through the TruONE HMI. Incoming isolators and the bypass arrangement are separated from each other and from the transfer switch using rigid metallic barriers resulting in Form 4, type 2 separation.

Applied standards: BS EN IEC 60947-4, BS EN IEC 60947-6-1, BS 8519:2020, S1069, S1085, S1109, S1909.

TFL/LU Single Line Maintenance Bypass ATS with Incoming Switches								
Image	AC33 Rating	Cat. No.		Encl. Size	Encl. Material	Encl. Colour	IP Rating	Max Cable Size
		Single Phase	Three Phase					
	32A	ATS0322A234	ATS0324A234	1200x800x300	Sheet Steel	Light Grey (RAL 7035)	IP65	16mm ² Btm
	45A	ATS0452A234	ATS0454A234	1200x800x300	Sheet Steel	Light Grey (RAL 7035)	IP65	16mm ² Btm
	63A	-	ATS0634A234	1200x800x300	Sheet Steel	Light Grey (RAL 7035)	IP65	50mm ² Btm
	100A	-	ATS1004A234	1200x800x300	Sheet Steel	Light Grey (RAL 7035)	IP65	70mm ² Btm
	160A	-	ATS1604A434	1800x1000x400	Sheet Steel	Light Grey (RAL 7035)	IP55	70mm ² Top
	250A	-	ATS2504A434	1800x1000x400	Sheet Steel	Light Grey (RAL 7035)	IP55	150mm ² Top
TFL/LU Dual Line Maintenance Bypass ATS with Incoming Switches								
	32A	ATS0322A244	ATS0324A244	1200x800x300	Sheet Steel	Light Grey (RAL 7035)	IP65	16mm ² Btm
	45A	ATS0452A244	ATS0454A244	1200x800x300	Sheet Steel	Light Grey (RAL 7035)	IP65	16mm ² Btm
	63A	-	ATS0634A244	1200x800x300	Sheet Steel	Light Grey (RAL 7035)	IP65	50mm ² Btm
	100A	-	ATS1004A244	1200x800x300	Sheet Steel	Light Grey (RAL 7035)	IP65	70mm ² Btm
	160A	-	ATS1604A444	1800x1000x400	Sheet Steel	Light Grey (RAL 7035)	IP55	70mm ² Top
	250A	-	ATS2504A444	1800x1000x400	Sheet Steel	Light Grey (RAL 7035)	IP55	150mm ² Top

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Accessories

Add-on accessories are available for our TFL (LU) switchgear range. 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'

Fixing Screws for Die-Cast Aluminium & Stainless Steel Enclosed Switchgear	
Description	Cat. No.
Set Of 4 Off Security Lid Fixing Screws For Stainless Steel Enclosures	SS/SEC
Security Screwdriver Bit For Stainless Steel Enclosures	SS/SEC/TOOL
Set Of 4 Off Security Lid Fixing Screws For Die-Cast Aluminium Enclosures	DC/SEC
Security Screwdriver Bit For Die-Cast Aluminium Enclosures	DC/SEC/TOOL
External Fixing Feet for Die-Cast Aluminium & Stainless Steel Enclosed Switchgear	
Description	Cat. No.
External Fixing Feet For 25A Stainless Steel	EFA
External Fixing Feet For 40A Stainless Steel	EFB
External Fixing Feet For 25A Die-Cast Aluminium	EFD25
External Fixing Feet For 40A Die-Cast Aluminium	EFD40
Auxiliary Contacts for Sheet Steel Enclosed Switchgear	
Description	Cat. No.
Auxiliary Contact For 32A- 160A Fuse Combination Units	SAUXKITA
Auxiliary Contact For 40A- 200A Switch Disconnectors	SAUXCO
Auxiliary Contact For 200A- 400A Fuse Combination Units & 400A- 800A Switch Disconnectors	SAUXKITC
Auxiliary Contact For 250A Switch Disconnectors	SAUXKITB
Auxiliary Contact For 630A Fuse Combination Units	SAUXKITD

Technical Specification

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

Application	Sym.	Unit	Category	Stainless Steel		Die-Cast Aluminium		
				25A	40A	25A	40A	
Rated thermal current	I_{the}	A		25	40	25	40	
Rated insulation voltage	U_i	V		690	690	690	690	
Rated impulse voltage	U_{imp}	kV		6	6	6	6	
Rated operational current (3 phase AC 50/60Hz)	I_e	A	400V AC23A	21	35	25	40	
Rated operational power	I_e	kW	230V	3.7	6	-	-	
	P_e		400V	11	18.5	11	18.5	
Rated short time withstand current	I_{cw}	A	1 sec	500	1100	50 / 32	50 / 40	
Max. fuse size for short circuit protection	gG	kA	10kA	35	80	-	-	
			25kA	32	63	-	-	
			50kA	32	63	-	-	
Recommended connecting capacity		-	Terminal type					
			mm ²	Flexible cable	6	16	6	10
			mm ²	Rigid cable	10	25	10	16
			Nm	Tightening torque	1.2	1.2	1.2	2

























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

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

Sheet Steel 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	I_e	A	400V AC23A	35	47.5	80	100	112	128	128	250	315	400	630	720	
Rated operational power	P_e	kW	400 / 415V AC23A	18.5	25	59	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	
Fire Rated Switchgear																
Application	Sym.	Unit	Category	20A	25A	40A	63A	80A	125A	160A	200A	250A	315A	400A	630A	
Rated thermal current	I_{the}	A		20	25	40	63	80	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	6	6	6	6	6	12	12	12	12	12	12	
Rated operational current (3 phase AC 50/60Hz)	I_e	A	415V AC23A	20	25	40	63	80	100	160	200	250	315	400	630	
			690V AC23A	-	-	-	-	-	-	-	160	200	250	315	350	350
Rated operational power	P_e	kW	415V	9.5	11	18.5	30	40	55	90	110	132	200	200	315	
Conditional short circuit current	Fuse gG	kA/ Fuse (A)	415V	50/32	50/32	50/40	50/63	50/150	50/200	50/160	50/200	50/250	50/315	50/400	50/630	
			690V	40/32	40/32	-	-	50/63	50/63	50/160	50/200	50/250	50/315	50/400	50/630	
Short circuit making capacity	I_{cm}	kA	Peak value	-	-	-	-	-	-	35	35	35	65	65	80	
Short circuit withstand	I_{cw}	kA	RMS value	-	-	-	-	1.5	1.5	8	8	8	17	17	17	
Recommended connecting capacity			Terminal type													
		mm ²	Flexible cable	6	6	10	10	50	50	95	95	120	2/150	2/150	2/185	
		mm ²	Rigid cable	10	10	16	25	35	50	95	95	120	2/150	2/150	2/185	
		mm	Stud/Cu Palm Width	-	-	-	-	M10/21	M10/21	M10/30	M10/30	M10/30	M10/30	M10/30	M10/40	M10/40
		Nm	Tightening torque	1.2	1.2	2	2	12	12	30	30	30	30	30	30	30

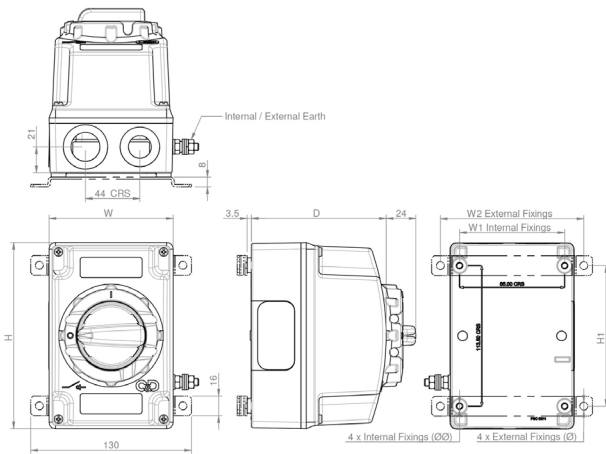
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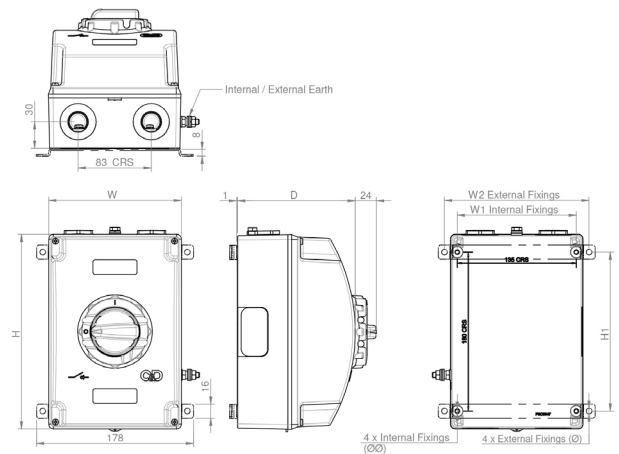
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TFL/LU Die-Cast Aluminium

Size FA

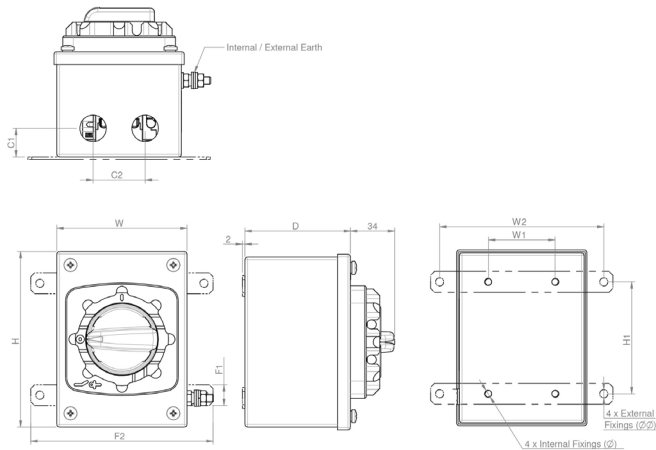


Size FB



TFL/LU Stainless Steel

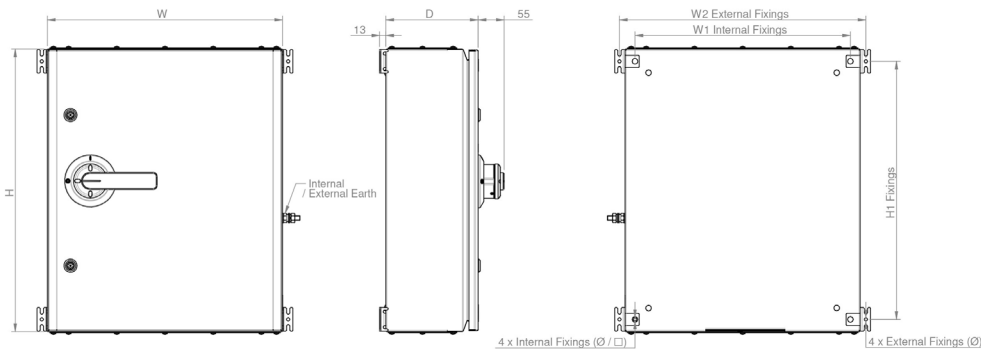
Size A- B



Encl. Size	Overall Dims.			Fixing Details				
	H	W	D	H1	W1	W2	Ø	Ø Ø
FA	150	100	109	113.5	85	116	6.5	4
FB	220	150	133.5	180	135	164	6.5	4
A	135	100	81	86	52	126	6.5	5.5
B	175	130	99	126	81	155	6.5	5.5
1	300	300	150	248	258	324	10.5	7
2	400	400	200	348	358	424	10.5	7
3	400	300	150	348	258	324	10.5	7
4	500	400	200	448	358	424	10.5	7
5	600	400	200	548	358	424	10.5	7
6	600	600	300	548	558	624	10.5	7
7	600	500	200	548	458	524	10.5	7
8	800	600	200	748	558	624	10.5	7
9	800	600	300	748	558	624	10.5	7
10	1000	600	300	948	558	624	10.5	7
11	1000	800	300	948	758	824	10.5	7

TFL/LU Sheet Steel

Sizes 1- 11



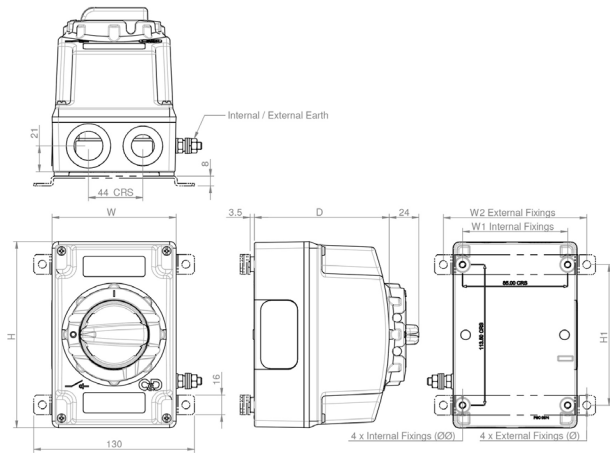
Technical Data Sheet

TFL (LU) Switchgear Range

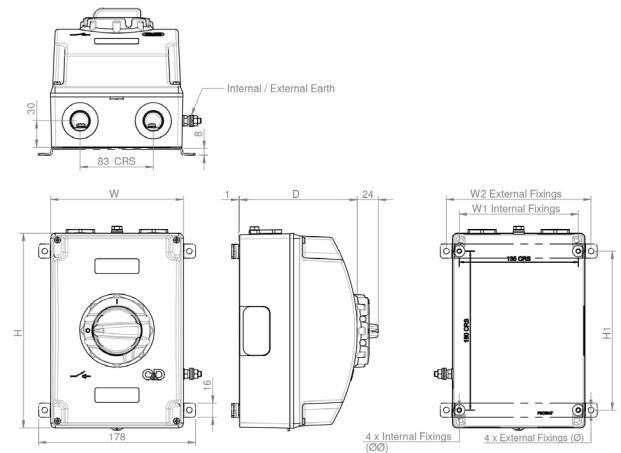
CDPD148
Issue 2

TFL/LU F400 Fire Rated

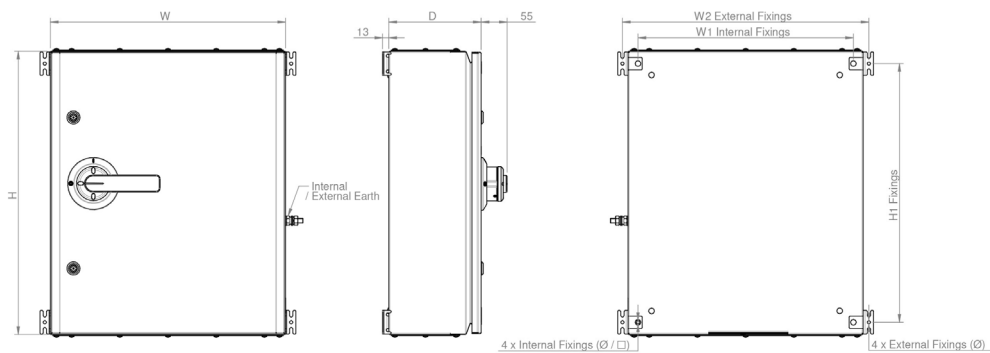
Size FA



Size FB



Sizes F1- F8



Encl. Size	Overall Dims.			Fixing Details				
	H	W	D	H1	W1	W2	Ø	Ø Ø
FA	150	100	109	113.5	85	116	6.5	4
FB	220	150	133.5	180	135	164	6.5	4
F1	300	300	150	248	258	324	10.5	7
F2	400	300	200	348	258	324	10.5	7
F4	500	300	250	448	258	324	10.5	7
F5	600	500	200	548	458	524	10.5	7
F6	800	600	200	748	558	624	10.5	7
F8	1000	600	300	948	558	624	10.5	7