

Technical Data Sheet

Photovoltaic (PV) Enclosed Switchgear Range

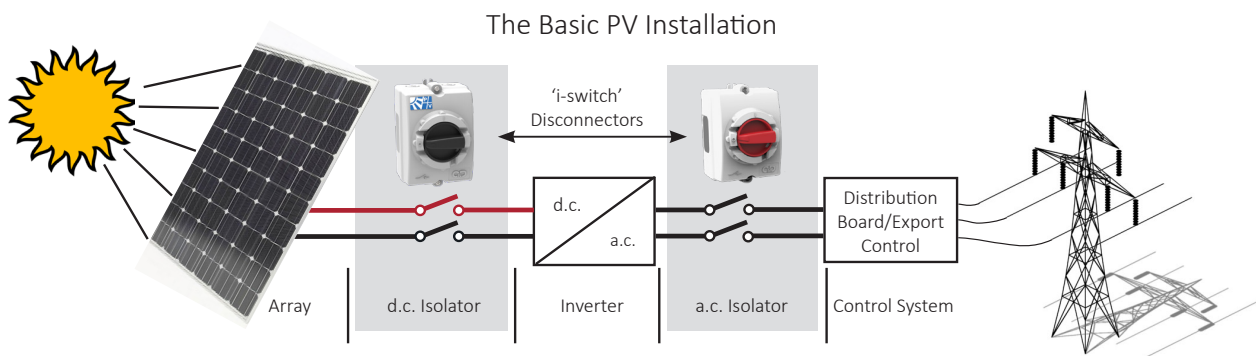
CDPD147
Issue 5

Photovoltaic (PV) Enclosed Switchgear

Solar power is an environmentally friendly method of producing electricity and is achieved using Photovoltaic (PV) cells that capture sunlight and convert it to electricity. By combining cells into an array, different voltages and current combinations can be achieved. Once installed an array will continue to generate voltage and current and it is therefore essential to isolate the array in the event of a fault or for maintenance purposes. To enable this Craig & Derricott have developed a range of DC Switch Disconnectors to manage this specific application.

Our range of true A.C and D.C photovoltaic isolators, developed to meet the unique requirements of Solar Panel technology and based upon our well-established i-switch family of products. Rated up to IP66 these PV isolators are enclosed in a moulded plastic enclosure. All units have a padlockable handle which allows for an insertion of up to three padlocks in the 'Off' position thus preventing the isolator being switched to the 'On' position.

Pre-cabled DC isolators and PV Bundle packs of one AC and one DC isolators are available as an alternative options to provide users with the complete PV isolation solution.



Switch Disconnectors (O-I)

Image	Rating	Format	Max. DC Voltage	Cat No.	Encl. Size	Encl. Material	Encl. Colour	IP Rating	Cable Entries
	16A	DC 2P	1,000V	EPV162	E	PA / ABS	Light Grey RAL 7035	IP66	2 x M20 Knock-outs Top & Btm & Back
		DC 4P	1,500V	PVP164	B			IP65	1 x M20 & M25 Knock-outs Top & Btm. 2 x M20 Knock-outs Back
		Twin Array DC 2x 2P	1,000V	PVP1622*1					
	25A	DC 2P	1,000V	EPV252	E	PA / ABS	Light Grey RAL 7035	IP66	2 x M20 Knock-outs Top & Btm & Back
		DC 3P	1,000V	EPV253	B			IP65	1 x M20 & M25 Knock-outs Top & Btm. 2 x M20 Knock-outs Back
		DC 4P	1,000V	PVP254					
	32A	DC 2P	1,000V	EPV322	E	PA / ABS	Light Grey RAL 7035	IP66	2 x M20 Knock-outs Top & Btm & Back
			600V	EPV323	B			IP65	1 x M20 & M25 Knock-outs Top & Btm. 2 x M20 Knock-outs Back
		DC 3P	1,500V	PVP324					
		Twin Array DC 2x 2P	600V	PVP3222*1					
	40A	DC 2P	300V/400V	EPV402	E	PA / ABS	Light Grey RAL 7035	IP66	2 x M20 Knock-outs Top & Btm & Back
		DC 3P	800V	EPV403	B			IP65	1 x M20 & M25 Knock-outs Top & Btm. 2 x M20 Knock-outs Back
DC 4P		1,500V	PVP404						
Twin Array DC 2x 2P		300V/400V	PVP4022*1						

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Pre-wired Switch Disconnectors (O-I)

Image	Rating	Format	Max. DC Voltage	Cat No.	Encl. Size	Encl. Material	Encl. Colour	IP Rating	Cable Entries
	16A	DC 2P	1,000V	EPV162C	E	PA / ABS	Light Grey RAL 7035	IP66	Flying Leads with MC4 Connectors Top & Btm
				PVP162C	A				
	16	DC 2P	1,000V	EPV162P	E	PA/ABS	Light Grey RAL 7035	IP66	Panel Mounted MC4 Connectors
				PVP162P	A				

AC/DC PV Bundle Switch Disconnectors (O-I)

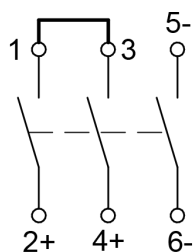
Image	Rating	Format	Interior Switch	Cat No.	Encl. Size	Encl. Material	Encl. Colour	IP Rating	Cable Entries
	16A	DC 2P	EPV162	EPV162/ BUNDLE	E	PC / ABS	Light Grey RAL 7035	IP66	2 x M20 Knock-outs Top & Btm & Back
	25A	AC 2P	EDKP252						
	25A	DC 2P	EPV252	EPV252/ BUNDLE	E	PC / ABS	Light Grey RAL 7035	IP66	2 x M20 Knock-outs Top & Btm & Back
	25A	AC 2P	EDKP252						
	16A	Twin Array DC 2x 2P	PVP1622	PVP1622/ BUNDLE	B	PC / ABS	Light Grey RAL 7035	IP65	1 x M20 & M25 Knock-outs Top & Btm. 2 x M20 Knock-outs Back
	40A	AC 2P	EDP402						
	25A	Twin Array DC 2x 2P	PVP2522	EPV2522/ BUNDLE	B	PC / ABS	Light Grey RAL 7035	IP65	1 x M20 & M25 Knock-outs Top & Btm. 2 x M20 Knock-outs back
	40A	AC 2P	EDP402						

Switch Diagrams

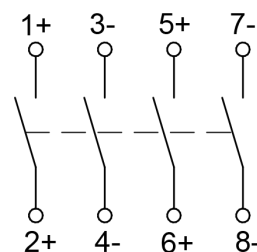
EPV**2 / PVP**2



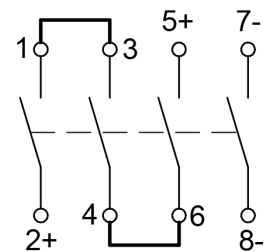
EPV**3 / PVP**3



EPV**4 / PVP**4



PVP**22



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Technical Specification

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

1 = Pollution Degree 3
2 = Pollution Degree 2

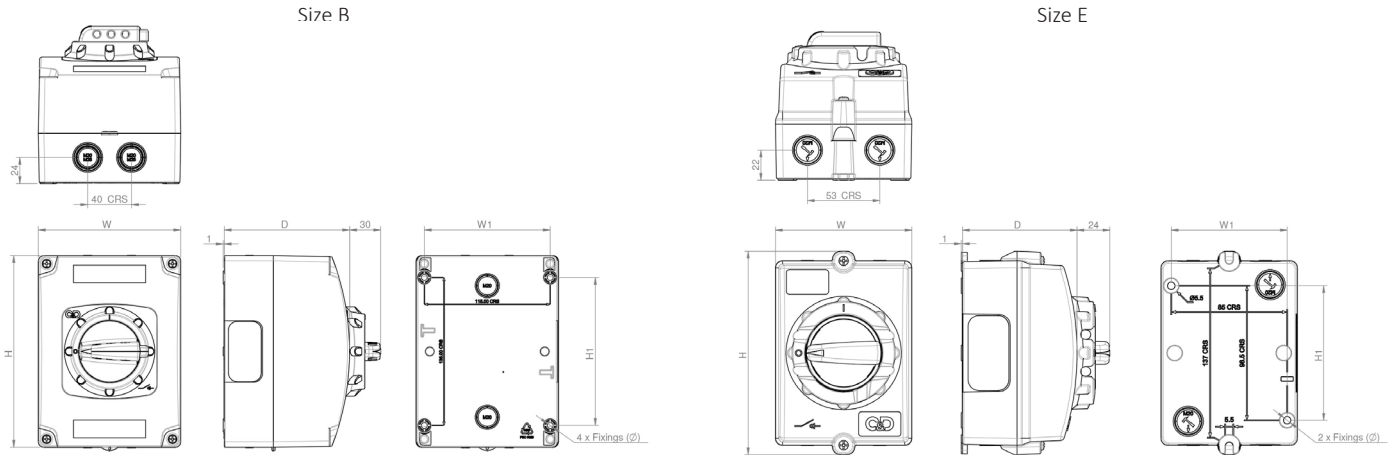
Single Array Switch Disconnecter Units															
Application	Category	Unit	EPV162	PVP164	EPV252	EPV253	PVP254	EPV322	EPV323	PVP324	EPV402	EPV403	PVP404		
Rated thermal current	I_{the}	A	16		25			32			40				
Rated insulation voltage	U_i	V	1,000 ¹		1,000 ¹			1,000 ¹			1,000 ¹				
			1,500 ²		1,500 ²			1,500 ²			1,500 ²				
Rated impulse withstand voltage	U_{imp}	kV	8		8			8			8				
Rated operational current (DC21B)	I_e	300V (A)	16	16	25	25	25	32	32	32	40	40	40		
		400V (A)	16	16	25	25	25	32	32	32	40	40	40		
		600V (A)	16	16	25	25	25	32	32	32	-	40	40		
		800V (A)	16	16	25	25	25	-	32	32	-	40	40		
		1,000V (A)	16	16	16	25	25	-	32	32	-	-	40		
		1,200V (A)	-	16	-	-	20	-	-	25	-	-	-	32	
1,500V (A)	-	16	-	-	16	-	-	20	-	-	-	25			
Mechanical life		Ops	15,000		15,000			15,000			15,000				
Rated short-time withstand current	I_{cw}	1s	500		500			500			500				
Short circuit making capacity	I_{cm}	A	550		550			550			550				
Terminal type															
Terminal tightening torque		Nm	1.2		1.2			1.2			1.2				
Conductor size	Max r/f	2x	mm2	10/6		10/6			10/6			10/6			
			AWG	8/10		8/10			8/10			8/10			
r = rigid f = flexible	Min r/f	2x	mm2	1.5/1.5		1.5/1.5			1.5/1.5			1.5/1.5			
			AWG	16/16		16/16			16/16			16/16			
Twin Array Switch Disconnecter Units															
Application	Category	Unit	PVP1622			PVP2522			PVP3222			PVP4022			
Rated thermal current	I_{the}	A	16			25			32			40			
Rated insulation voltage	U_i	V	1,000 ¹			1,000 ¹			1,000 ¹			1,000 ¹			
			1,500 ²			1,500 ²			1,500 ²			1,500 ²			
Rated impulse withstand volt.	U_{imp}	kV	8			8			8			8			
Rated operational current (DC21B)	I_e	300V (A)	16			25			32			40			
		400V (A)	16			25			32			40			
		600V (A)	16			25			32			-			
		800V (A)	16			25			-			-			
		1,000V (A)	16			16			-			-			
Mechanical life		Ops	15,000			15,000			15,000			15,000			
Rated short-time withstand current	I_{cw}	1s	500			500			500			500			
Short circuit making capacity	I_{cm}	A	550			550			550			550			
Terminal type															
Terminal tightening torque		Nm	1.2			1.2			1.2			1.2			
Conductor size	Max r/f	2x	mm2	10/6			10/6			10/6			10/6		
			AWG	8/10			8/10			8/10			8/10		
r = rigid f = flexible	Min r/f	2x	mm2	1.5/1.5			1.5/1.5			1.5/1.5			1.5/1.5		
			AWG	16/16			16/16			16/16			16/16		

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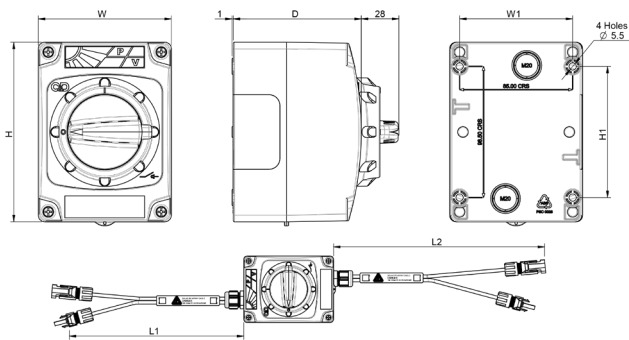
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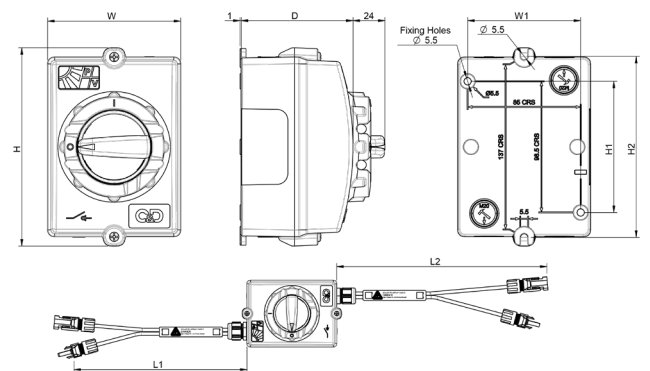
Photovoltaic (PV)



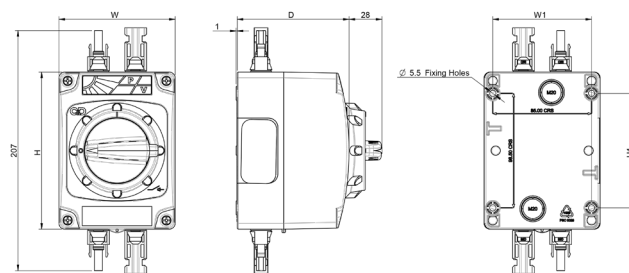
Size A with Flying Leads



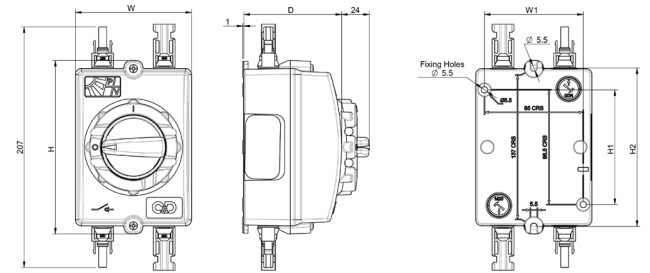
Size E with Flying Leads



Size A with MC4 Connectors



Size E with MC4 Connectors



Encl. Size	Overall Dims.					Fixing Details		
	H	W	D	L1	L2	H1	W1	Ø
B	175	130	115	-	-	135	115	5.5
E	149	100	108.5	-	-	136 / 98.5	85	5.5
A with flying leads	135	100	96	300	500	98.5	85	5.5
E with flying leads	135	100	84	300	500	136 / 98.5	85	5.5
A with MC4	135	100	96	-	-	98.5	85	5.5
E with MC4	135	100	84	-	-	136 / 98.5	85	5.5