MWOCES-191-M-B

Simple 19” OCP Compliant Power Shelf

FEATURES

- 18kW total output power (N+1)
- N+1 redundancy
- Single Phase and HVDC[1] input models
- 1U height
- 448.6(W) x 650(L) x 45(H) mm
- Accommodates up to six PSUs and one RMU
- Supports external BBU (Murata battery backup system)
- 54.5VDC output
- Hot-swappable
- Optional mounting kit available
- 2-year warranty

For full details go to:
www.murata.com/rohs

Certificate and Test Report

PRODUCT OVERVIEW

MWOCES-191-M-B of redundant 19” 1U 18kW support OCP system shelves provide a simple solution for 54V distributed applications that are limited by single phase AC mains or HVDC input power availability. These shelves can be deployed with up to six, 68mm 1U Power Supplies (PSU), and a Remote Management Unit (RMU). These features in addition to the single DC output busbar configuration make this shelf an ideal solution for OCP or application requiring distributed 54V intermediate bus architectures.

ORDERING GUIDE

Part Number	Input Configuration	DC Output Busbar Configuration
MWOCES-191-M-B	Three Phase four wire Delta	Multi-link busbar
	Three Phase five wire Wye	
	3x Single Phase	
	HVDC	

INPUT CHARACTERISTICS

Parameter	Conditions	Min.	Nom.	Max.	Units
Input Voltage Operating Range	Line to Line (Delta source)	180	200/208/277	305	Vac
	Line to Line(Wye source with neutral connection)	312	346/360/480	528	Vac
	HVDC	192	240 / 380	400	Vdc
Frequency	AC Input	47	50/60	63	Hz
Input Current	Delta: 200-240Vac (each input, per line)			41.0	Arms
	Wye / single phase: 200-240Vac (each input, per line)			23.5	
	200-240Vdc (each input, per line)			23	Adc

OUTPUT CHARACTERISTICS

Output Voltage	Parameter	Conditions	Min.	Typ.	Max.	Units
54.5VDC	Output Power	With six (6) PSUs	0		18,000	W
		With five (5) PSUs	0		18,000	
		With four (4) PSUs	0		14,400	
		With three (3) PSUs	0		10,800	
		With two (2) PSU	0		7,200	
		With one (1) PSU	0		3,600	
	Output Current	With six (6) PSUs	0		330	A
		With five (5) PSUs	0		330	
		With four (4) PSUs	0		264	
		With three (3) PSUs	0		198	
		With two (2) PSUs	0		132	
		With one (1) PSU	0		66	
	Holdup Time	With six (6) PSUs [5+1]	14.4			ms
		With six (6) PSUs [3+3]	24			
		With five (5) PSUs [4+1]	15			
		With four (4) PSUs [3+1]	16			
		With four (4) PSUs [2+2]	24			
		With three (3) PSUs [2+1]	18			
		With two (2) PSUs [1+1]	24			
		With one (1) PSU	12			

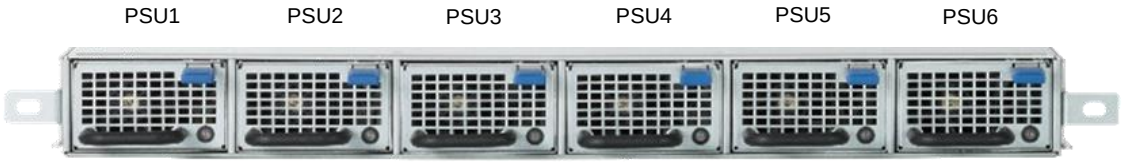
ENVIRONMENTAL CHARACTERISTICS					
Parameter	Conditions	Min.	Typ.	Max.	Units
Storage temperature range		-40		70	°C
Operating temperature range	Altitude < 3,000m	0		40	°C
Storage humidity	Non-condensing	10		90	%
Operating humidity	Non-condensing	10		85	
Shock	30G non-operating				
Vibration	Operating, random vibration, 5-500Hz 1.11G				
Safety approval standards	UL62368-1 : 2014 (2nd Edition) (Information Technology Equipment – safety – Part 1: General Requirements) CAN/CSA-C22.2 No. 62368-1 : 2014 (2nd Edition) (Information Technology Equipment – safety – Part 1: General Requirements) TUV : EN62368-1:2014 (2nd Edition) CQC : GB4943.1-2011 BSMI : CNS14336-1 EAC : IEC60950-1 : 2005, AMD1:2009, AMD2:2013 CB : IEC 60950-1:2005, AMD1:2009, AMD2:2013 CB : IEC 62368-1:2014 (2ND Edition)				
Weight	Shelf only, without PSUs/RMU		8.61		Kg

ISOLATION CHARACTERISTICS					
Parameter	Conditions	Min.	Typ.	Max.	Units
Insulation safety rating / test voltage	Input to output - Reinforced	3,000			Vrms
	Input to chassis	1,500			
Isolation	Output to chassis	50			Vdc

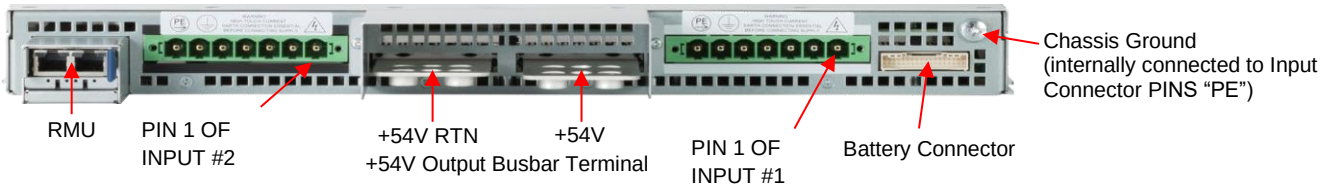
EMISSION AND IMMUNITY		
Parameter	Standard	Criteria
Input current harmonics	IEC/EN 61000-3-12	Class A
ESD immunity	IEC/EN 61000-4-2	Level 4 criteria A
Electrical fast transient / burst immunity	IEC/EN 61000-4-4	Level 3 criteria B
Surge immunity	IEC/EN 61000-4-5	Level 3 criteria A

PRODUCT VIEWS AND CONNECTOR DETAILS

Front View, All Models



Rear Views, MWOCES-191-M-B



Note: Signal Connector is used for battery shelf

INPUT CONNECTOR DETAILS (PHOENIX CONTACT 1999055, SHELF END)

MWOCES-191-M-B

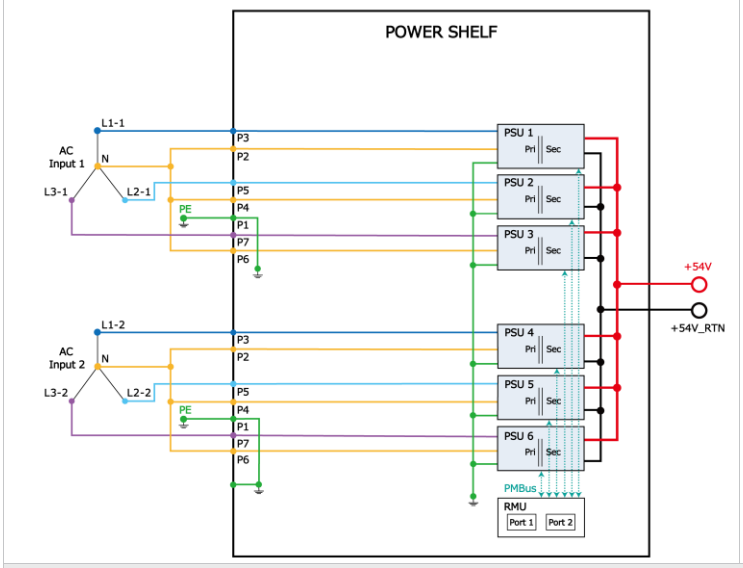
Wye Input			Delta Input			Single Input			HVDC Input		
PIN No	PIN Name	Function	PIN No	PIN Name	Function	PIN No	PIN Name	Function	PIN No	PIN Name	Function
1	PE	PROTECTIVE EARTH	1	PE	PROTECIVE EARTH	1	PE	PROTECIVE EARTH	1	PE	PROTECIVE EARTH
2	N	Neutral	2	L2	AC Line voltage2	2	N	NEUTRAL	2	(- HVDC)	DC RETURN
3	L1	AC Line voltage1	3	L1	AC Line voltage1	3	L	AC LIVE	3	(+ HVDC)	DC POSITIVE
4	N	Neutral	4	L3	AC Line voltage3	4	N	NEUTRAL	4	(- HVDC)	DC RETURN
5	L2	AC Line voltage2	5	L2	AC Line voltage2	5	L	AC LIVE	5	(+ HVDC)	DC POSITIVE
6	N	Neutral	6	L1	AC Line voltage1	6	N	NEUTRAL	6	(- HVDC)	DC RETURN
7	L3	AC Line voltage3	7	L3	AC Line voltage3	7	L	AC LIVE	7	(+ HVDC)	DC POSITIVE

SAFETY CONSIDERATIONS

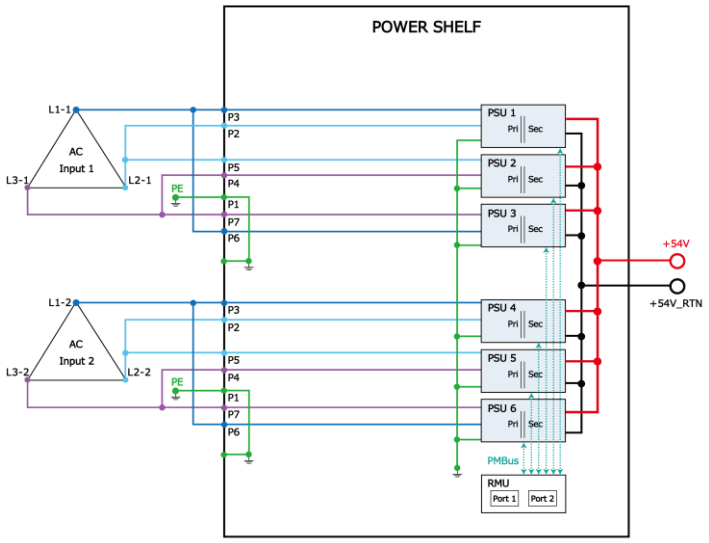
Junction between shelf and rack Busbar may be extremely hot, in the case of a heavy load and especially when shelf is mounted in V2 Open Rack (Single Busbar). Please be aware and take adequate precautions.

INTERNAL CONNECTION

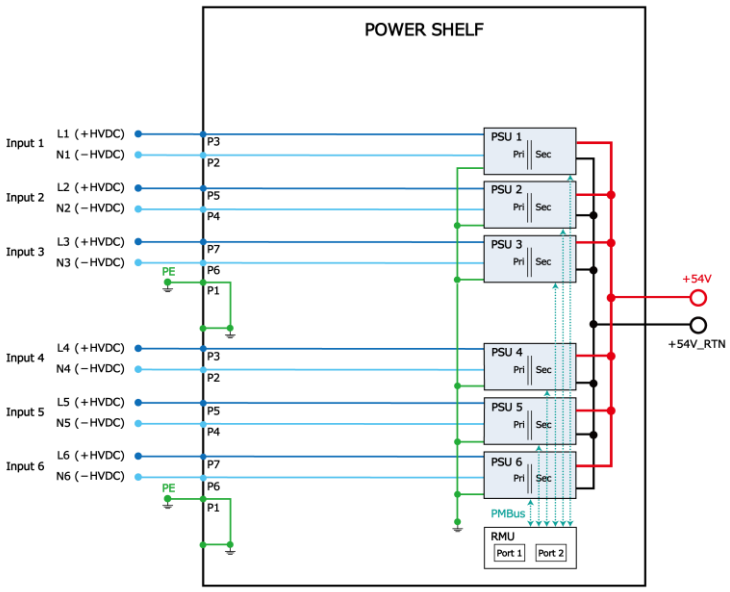
Wye Input



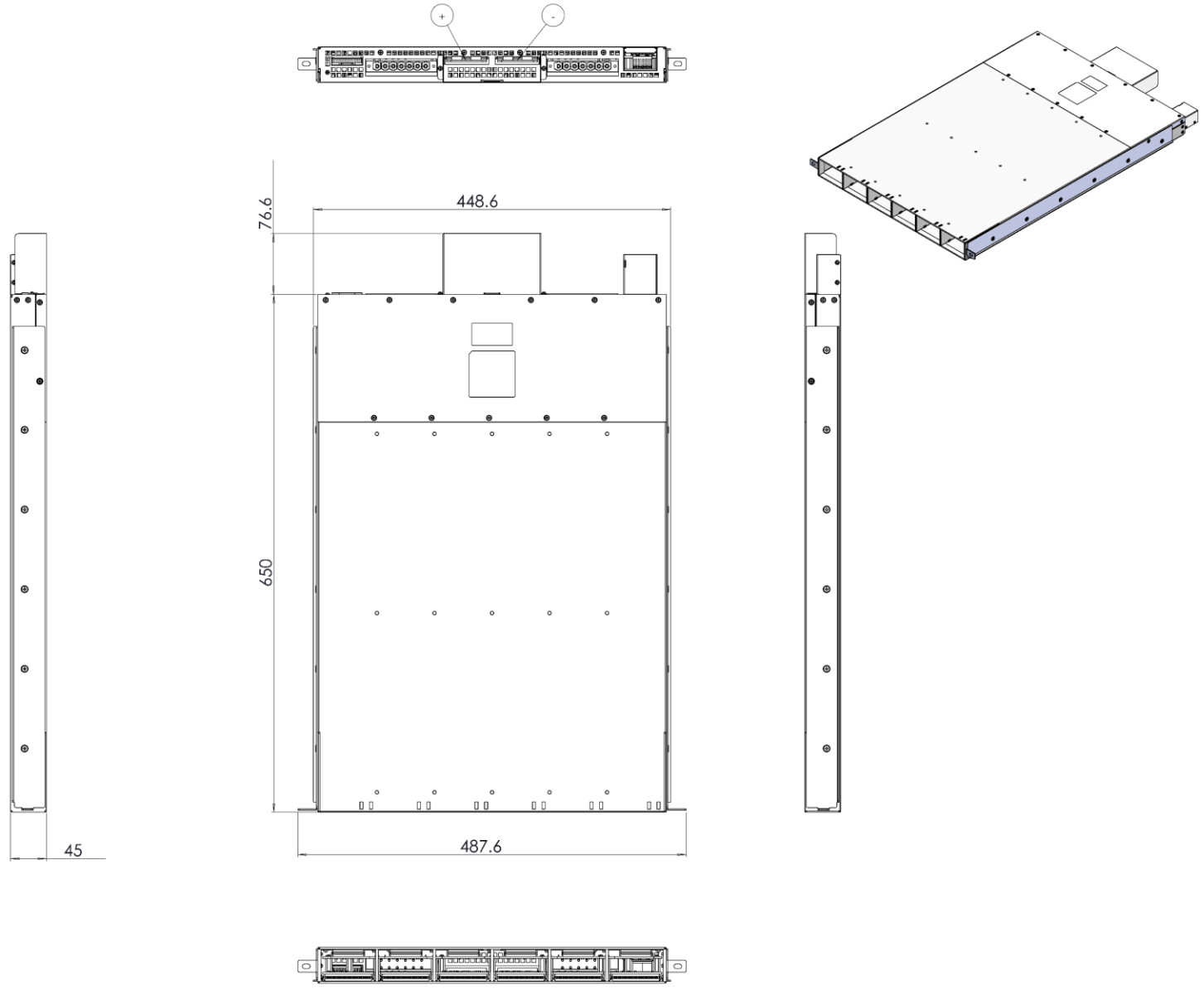
Delta Input



Single Phase AC & HVDC Input



MECHANICAL DRAWING



RELATED PRODUCT DATASHEETS

Document Number	Description	Click link below to open online datasheet
MWOC-RMU	MONITOR AND CONTROL UNIT	Link to: Datasheet
MWOCP68-3600-D-RM	3.6KW AC-DC FRONT END PSU MODULE	Link to: Datasheet
MWOC_BLANKING_PANELS	BLANKING PANEL ACCESSORIES	Link to: Datasheet

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