

## VERTICAL STACK LIGHTING AND POWER DISTRIBUTION BOARDS

### INSTALLATION INSTRUCTIONS

CATALOGUE No:-  
NHLPV....SL  
NHLPV.....ML

BS EN 61439-3  
IEC 61439-3  
BS EN 60898-1  
BSEN 60947-3

### Technical Support

Tel: +44 (0) 1543 438320  
Fax: +44 (0) 1543 438321  
Email: [wylex.technical@electrium.co.uk](mailto:wylex.technical@electrium.co.uk)

## GENERAL WARNINGS



**DANGER: LIVE PARTS ENCLOSED.** Ensure the unit is installed by a qualified competent person in accordance with all relevant legislation and regulations including building regulations and wiring regulations BS7671. If in doubt contact a qualified competent person.

### **IMPORTANT INFORMATION**

Follow the instructions below before working on or inside the equipment.

- Turn off all power supplies.
- Always use a calibrated volt-sensing device to confirm the power is off.
- Replace all devices, doors and covers before turning on the power to this equipment.
- To avoid ingress of swarf and similar material, always remove gland plates to allow cutting/slotting for cable entries.
- Do not use power screwdrivers on electrical connections.
- Parts of the installation in which the meter kit is to be installed may remain live even when isolated. When working on unit isolate MCB.

**Failure to follow these instructions could result in serious injury or death.**

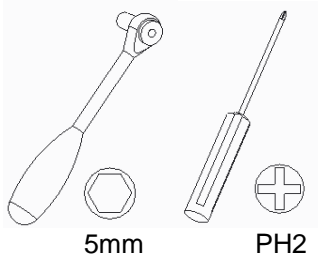


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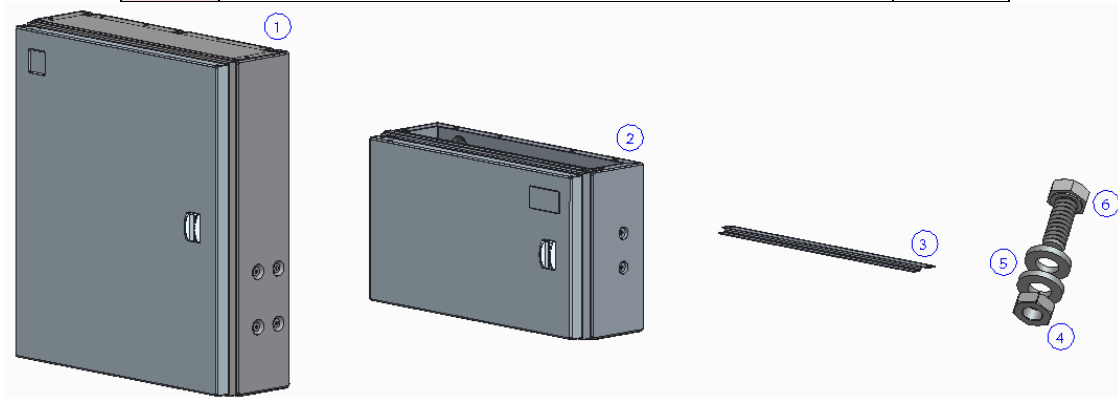
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## Required Tools

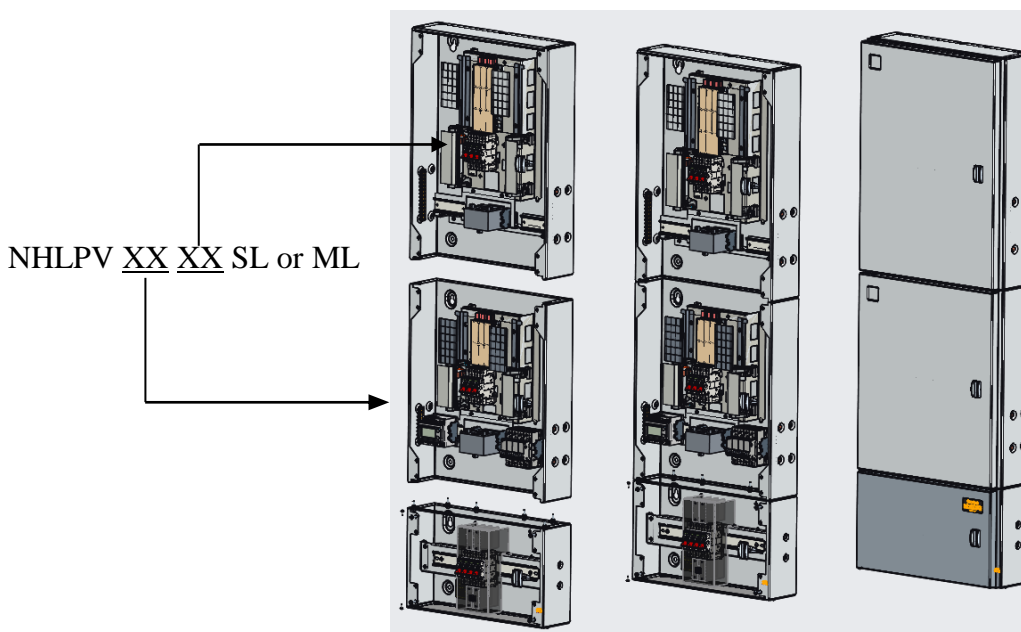


## Content

No.	Description	QTY
1	Distribution board	2
2	Incoming box	1
3	Anti-gap joining shield	2
4	M5 nut	12
5	M5 contact washers	24
6	M5 x 12 mm bolt	12



## Assembly (Layout)

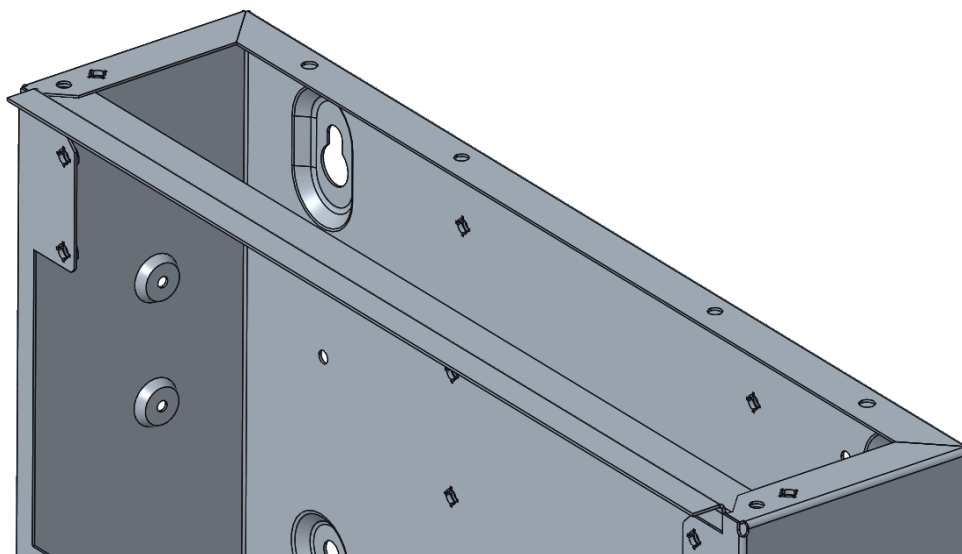


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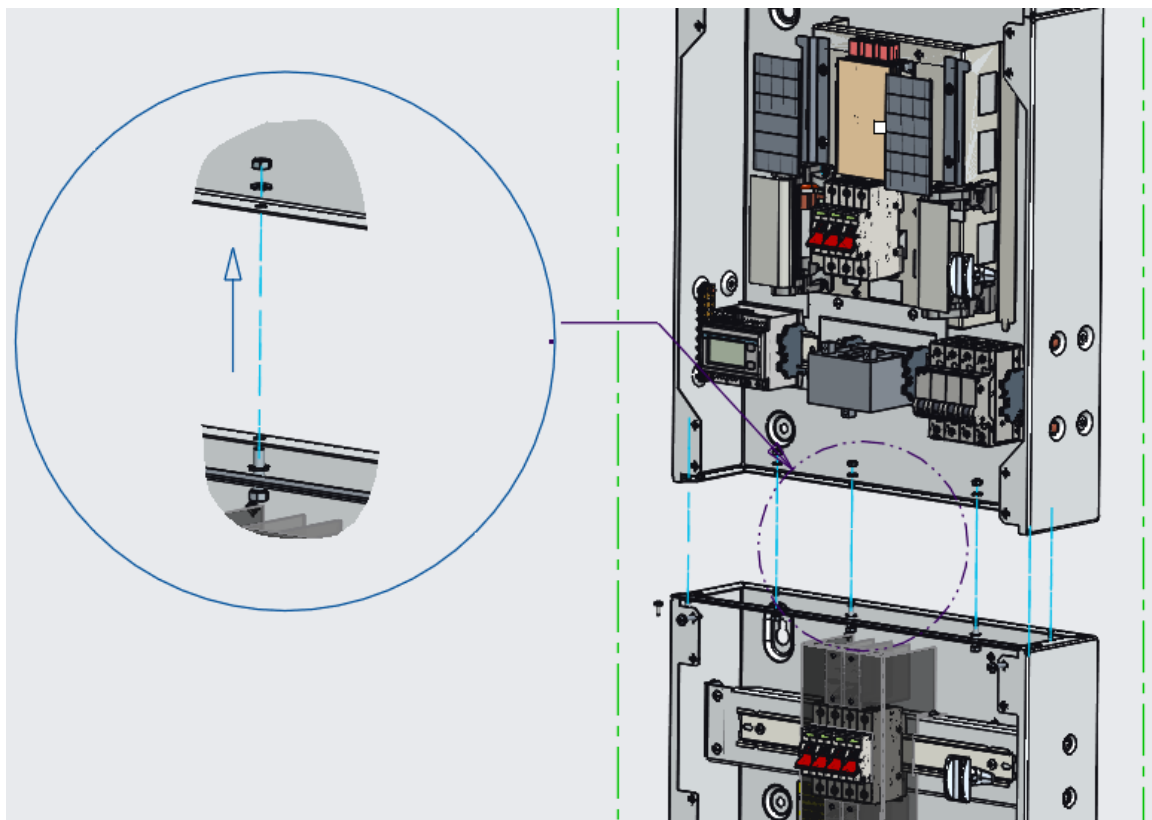


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## Assembly (Anti-gap joining shield positioning)



## Assembly (Connections)



### NOTES: –

- Affix supplied MCB warning labels in a clearly visible area in the following places 1) beneath or next to meter MCB and 2) beneath or next to isolator on front shield.
- The maximum load on either MCB board is 100A. Affix supplied derating labels in a prominent position on each board.



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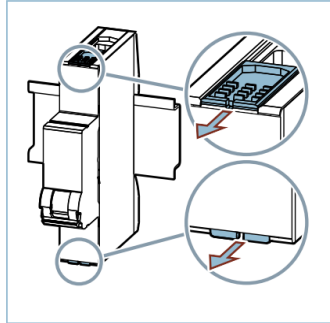
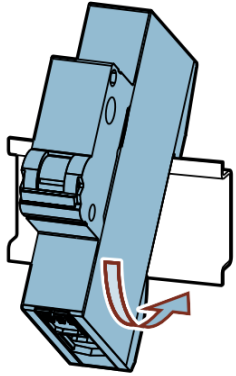


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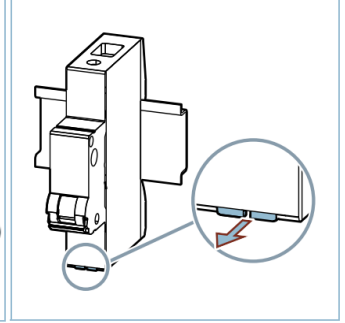
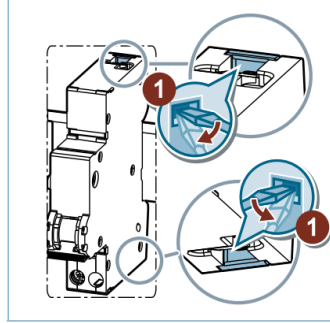


# Install (MCBs & RCBOs)

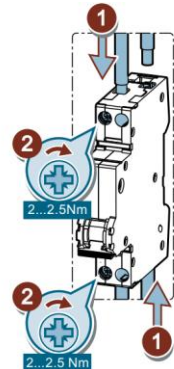
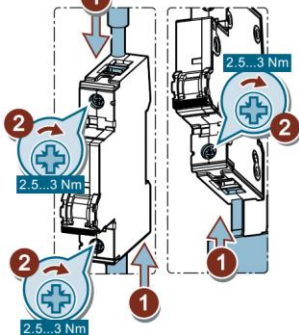
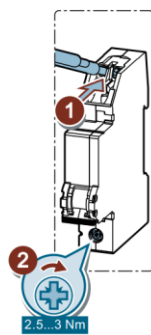
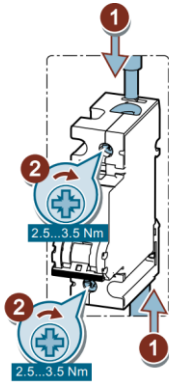
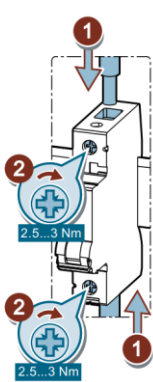
## MCB Assembly



## MCB Removal



## MCB connection



## Installation of RCBOs

- Ensure supply is switched off.
- Loosen all RCBO busbar terminal screws.
- Push RCBO onto appropriate busbar outgoing way making sure that the DIN clip faces towards the busbar assembly.
- Fully tighten busbar connections to a recommended torque of device.
- Connect RCBO Neutral lead to appropriate numbered terminal on the neutral terminal bar.
- Ensure both live and neutral outgoing cables are terminated on the RCBO outgoing terminals.
- Connect white functional earth lead to appropriate terminal on earth terminal bar.



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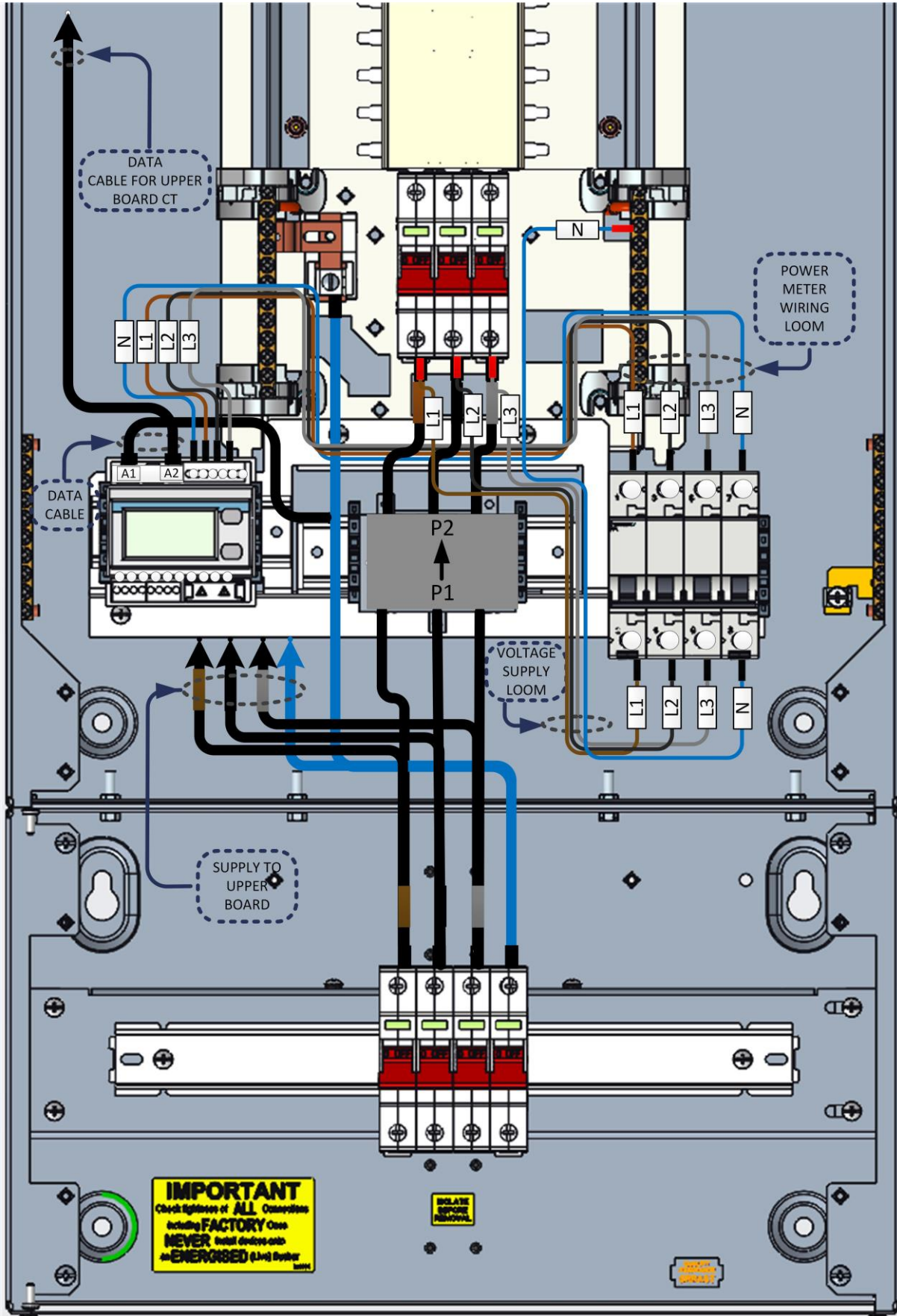
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## Distribution Board Technical Data Information

Main characteristics					
<b>Operating voltage</b>					
					240 V AC to 415 V AC
<b>Operating frequency</b>					
Maximum					50 Hz
<b>Power consumption</b>					
Maximum					≤ 125 A / 30 kW
<b>Degree of protection</b>					
					IP 3XC
<b>Pollution degree</b>					
Environmental conditions to which the panel is intended					2 Minimum
Weight (Kg) – Dimensions (mm)					
Description	Weight	Dimensions			
		Height (mm)	Width (mm)	Depth (mm)	Fixing Centres (width x Height) (mm)
4 Way Distribution Board	9.6	486	430	155	338 x 404
6 Way Distribution Board	11.3	567	430	155	338 x 485
8 Way Distribution Board	12.7	648	430	155	338 x 566
12 Way Distribution Board	15	810	430	155	338 x 728
16 Way Distribution Board	17.7	891	430	155	338 x 809
20 Way Distribution Board	19.3	997	430	155	338 x 915
24 Way Distribution Board	22.4	1134	430	155	338 x 1052
Incoming Enclosure	3	243	430	155	338 x 167
Operating & storage temperature					
Operating temperature					-5 to +40 °C (Average of 24h max)
Storage temperature					-5 to +40 °C (Average of 24h max)
Humidity					
At maximum temperature (+40°C)					50%
Connections (Nm)					
Incoming device					2.3 Nm
Earth / Neutral bar					2.3 Nm
Busbar terminal cage					6 Nm
MCB					2.3 Nm
For more torque connection settings refer to device manual & meter technical data					



# Meter Wiring for STD Information



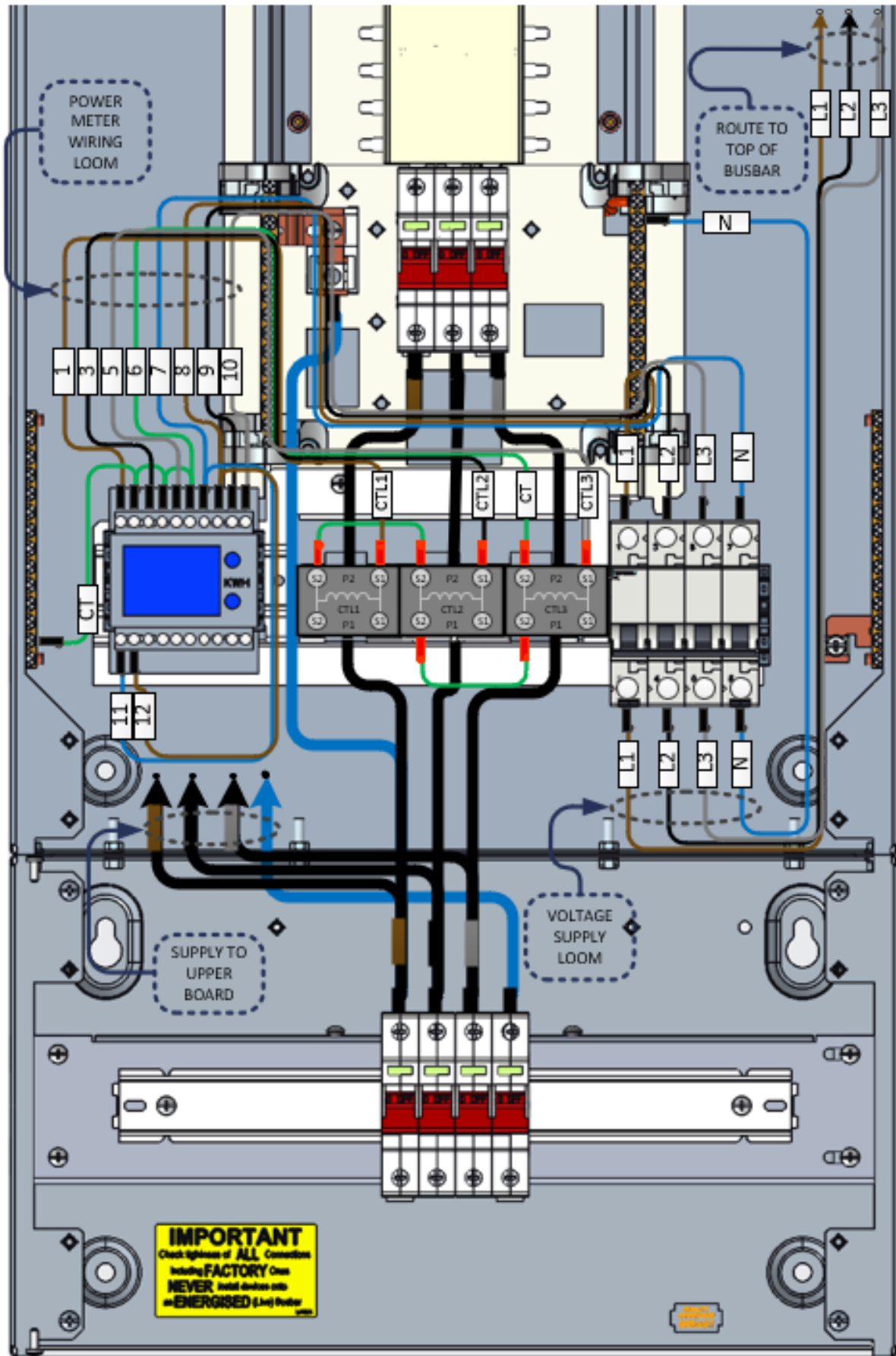
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# Meter Wiring for MID Information

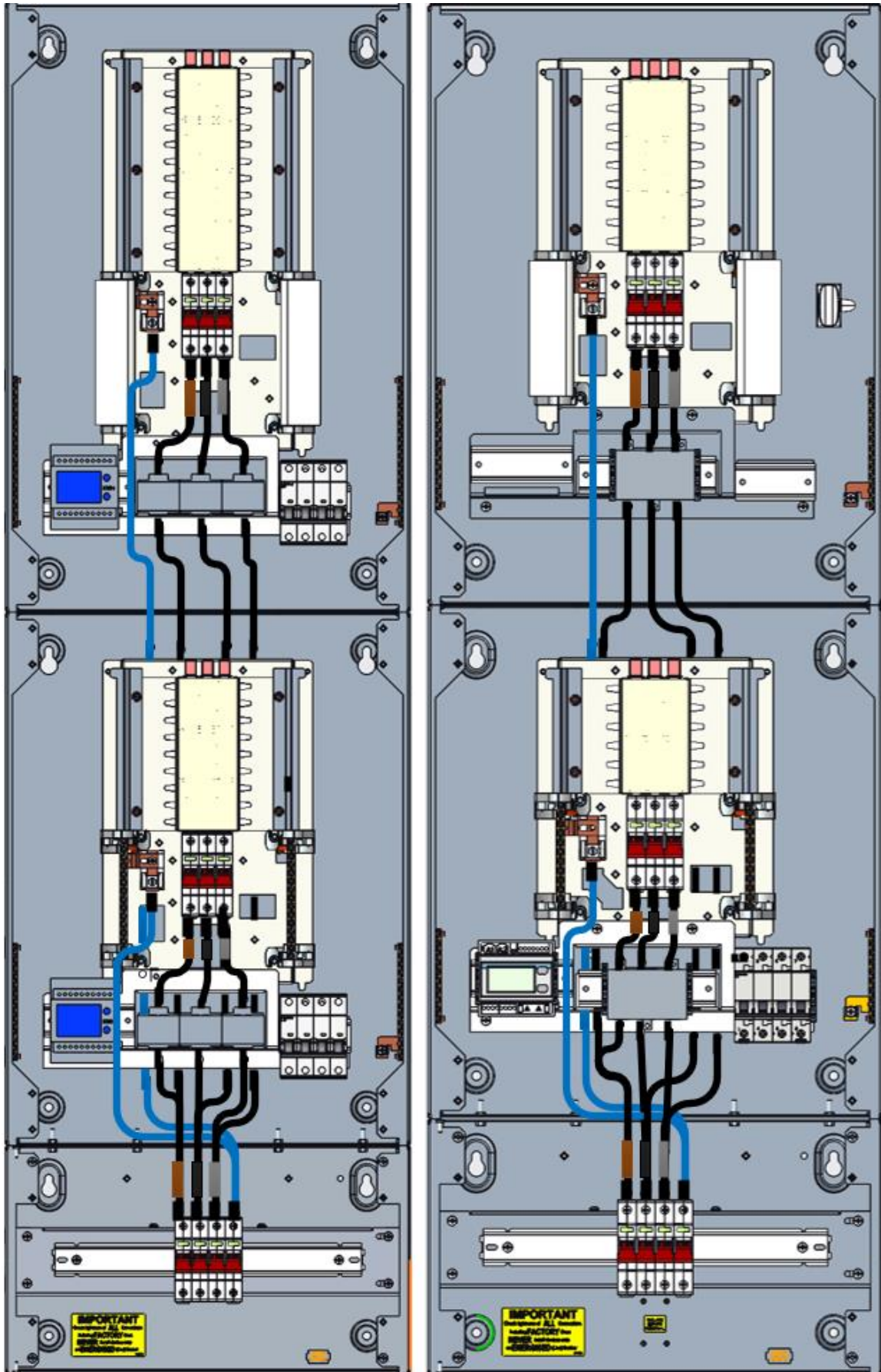


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# Power Wiring Details for MID & STD Information



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## STD Meter Technical Data Information

<b>Main characteristics</b>				
<b>Supply voltage</b>				
Minimum	40 V AC			
Maximum	460 V AC			
<b>Operating frequency</b>				
Minimum	45 Hz			
Maximum	65 Hz			
<b>Power consumption</b>				
Maximum	≤ 4 VA / 2 W			
<b>Degree of protection</b>				
Front	IP 40			
Screw terminals	IP 20			
<b>Weight (Kg) – Dimensions (mm)</b>				
Description	Weight		Dimensions	
	Kg	Height	Width	Depth
Meter only with packaging	0.4	72	72	65
<b>Operating &amp; storage temperature</b>				
Operating	-25 to +55 °C			
Storage	-30 to +70 °C			
<b>System / Single Phase variables available via RS485</b>				
Single circuit variables	V, A, W/VA/VAr, PF, kWh, kVArh, Virtual circuit (sum of difference) measurements: W/VA/VAr, PF, kWh, kVArh			
<b>Connections</b>				
Voltage	Dual screw terminal (Max tightening torque 0.25 Nm)			
Current inputs	2 x RJ11 (Female) for current connections			
Outputs (pulse and RS485 port)	Dual screw terminal (Max tightening torque 0.25 Nm)			
<b>Other information</b>				
Accuracy	Phase – Neutral Voltage	In the range Un: ± (0,5% RDG).		
	Phase – Phase Voltage	In the range Un: ± (1% RDG).		
Instant variable readouts	3 DGT			
Energy readouts	Total: 5+2, 6+1 or 7DGT			



# MID Meter Technical Data Information

<b>Main characteristics</b>				
<b>Auxiliary Power Supply</b>				
Minimum	60 V ac			
Maximum	400V ac			
<b>Operating frequency</b>				
Minimum	45 Hz			
Maximum	65 Hz			
<b>Power consumption</b>				
Maximum	≤ 2 VA / 1 kW			
<b>Degree of protection</b>				
Front	IP 40			
Screw terminals	IP 20			
<b>Weight (Kg) – Dimensions (mm)</b>				
Description	Weight	Dimensions		
	Kg	Height	Width	Depth
Meter only with packaging	0.4	72	72	65
<b>Operating &amp; storage temperature</b>				
Operating	-25 to +55 °C			
Storage	-30 to +70 °C			
<b>System / Single Phase variables available via Pulse outputs</b>				
System variables	W, VAr, Hz, Phase-sequence			
Single phase variables	VLL, VLN, A, PF, THD (A, V, up to the 15 <sup>th</sup> harmonic)			
Energy measurements	Total kWh (imported and exported); kVArh			
<b>Connections</b>				
All connections	Screw connections max torque 0.8 Nm			
<b>Other information</b>				
Accuracy	Phase – Neutral Voltage	In the range Un: ± (0,5% RDG +1DGT).		
	Phase – Phase Voltage	In the range Un: ± (1% RDG +1DGT).		
Instant variable readouts	3 DGT			
Energy readouts	Total: 5+2, 6+1 or 7DGT			
Meter Setup	Refer to meter instructions to setup meter. (Note meter CT ratio pre-set to 25/1A).			

