

BROCHURE

System pro E power

800V configuration





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800V configuration - Introduction

The new TBBS configuration introduces a switchboard certified at 800V AC, which offers a compact footprint and space-saving design.

The configuration ensures full compliance with IEC 61439-2 standards, and it is compliant to Enel standards, further highlighting its reliability and adherence to industry requirements.

This new switchboard configuration is specifically designed to cater to low voltage power collection requirements in utility-scale and large photovoltaic plants utilizing a high-power string inverter architecture operating at 800V AC.

In the renewable energy sector, there has been an increasing trend of raising voltages to improve power density and reduce balance of system costs. This innovative design allows for installation on skids and in compact substations, among other applications.





800V configuration - General information

The configuration comprises of two columns and contains three main section types:

 Breaker Section: This section incorporates the recently launched Emax 2 E4.2S/E10 (4000A), a breaker certified for Annex H according to IEC 60947-2. It is also possible to mount the Emax 2 E4.2S/E9 when annex H in IT systems is not required.

The breaker needs to be three poles and fixed, with rear vertical terminals (4000A N/S/H/V upper terminals for busduct connection and 4000A N/S/H/V LVR ones for InLine II connections)

 Inverter Protection Sections: This section relies on up to 9 InLine II fuse switches per column with an AC-22B utilization category at 800V. The InLine II installable models are ZLBM1/2/3 with 3 poles (integrated V-Clamp; double V-Clamp; bolt connection M12 and double cable lug kit M12 versions). These fuse switches offer the option to integrate a fuse blown monitoring indicator (EFM). They also provide various connection possibilities, enabling the installation of all available inverter models.

 Auxiliary Section: This compartment typically houses the auxiliary main fuse switch, isolation monitor, voltage transformer, surge protection devices, and all the auxiliary components required for signal collection, remote monitoring, grid interface protection, and other functionalities.



Key characteristics of the configuration

Compliance with standard	IEC 61439-1-2						
	Enel tenders compliance						
Type of installation	Indoor, front access						
Rated service voltage Ue	800V AC						
Rated insulation voltage Ui	up to 1000V AC - 1500V DC						
Rated frequency	50-60Hz						
Rated impulse withstand voltage Uimp	12kV (8kV for InLine)						
Rated current In	up 3622A						
Rated short-time withstand current Icw	up to 50kA (1s)						
Rated peak short-circuit current lpk	up to 105kA						
IP protection class	IP30						
RAL	7035 orange peel						
Form of segregation	Breaker section	4b					
	Inverter protection section	3b					
	Auxiliary section	2a					
Functional dimensions	Height	1800 mm					
	Width	2000 mm (1000 mm per each column)					
	Depth	700 mm					
External dimensions	Height	2114 mm					
	Width	2216 mm					
	Depth	817 mm					

InLine II with Electronic Fuse Monitor (EFM)

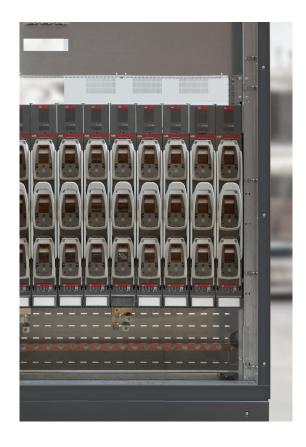


Electrical Fuse Monitoring functionality (EFM)

This functionality monitors operational status and, in the event of a blown fuse, raises an alert. It allows easy location of faults, enhancing safety, serviceability and minimizing downtime. When required, the electronic fuse monitoring unit is integrated in InLine II.

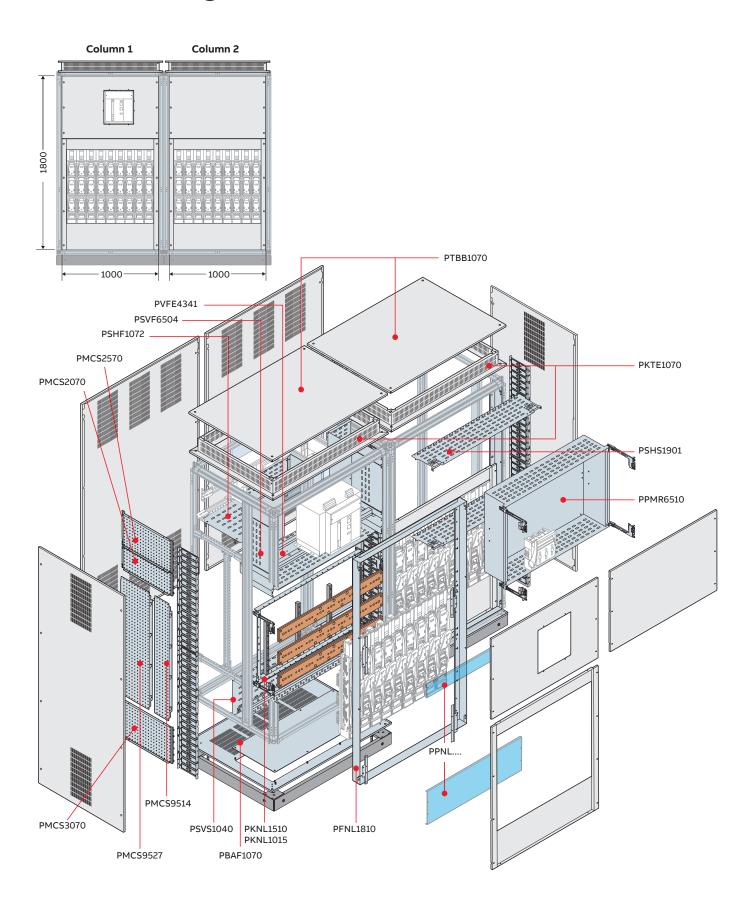
Versions available

Furthermore, other than the solution described above, the single column with Emax 2 can be placed side by side with a standard column of TBBS's general offer containing a total height mounting plate. In such cases, the solution will still be covered by the certificate of conformity of the 800V solution.





800V configuration - Order codes



Column composition

Column 1	Column 2					Description
Q.ty	Q.ty		Туре	Order code	Part	
L	1		PUPM1800	1STQ007033A0000	Structure	No.4 galvanized sheet metal uprights H=1800mm
L	1		PCFM1000	1STQ007043A0000	Structure	No.4 width crosspieces galvanized sheet metal W=1000mm
	1		PCFM0700	1STQ007046A0000	Structure	No.4 depth crosspieces galvanized sheet metal D=700mm
	-		PPFM1070	1STQ007059A0000	Structure	No.2 plinth flanges D=700mm
	1		PPFM1010	1STQ007056A0000	Structure	No.2 plinth flanges W=1000mm
L	1		PPAM0100	1STQ007048A0000	Structure	No.4 plinth angle pieces
<u>l</u>	-		PSBS0065	1STQ008113A0000	Structure	Kit for joining structures side by side/back to back
L	1	NEW	PBAF1070 ⁽⁴⁾	1STQ003406C0000	Structure	Aerated bottom external panel W=1000mm D=700mm
<u>l</u>	1	NEW	PKNL1510 ⁽¹⁾	1STQ003390C0000	Kits	InLine mounting kit + front panel H=1150mm W=1000mm
L	1	NEW	PKNL1015 ⁽²⁾	1STQ003391C0000	Kits	InLine mounting kit + front panel H=1150mm W=1000mm for EFM
	1	NEW	PPMR6510	1STQ003398C0000	Kits	Recessed blind assembly plate H=650mm W=1000mm
	_	NEW	PVFE4341	1STQ003400C0000	Kits	Kit Emax E4.2 fixed H=650mm W=1000mm
2	2		PUKI1800	1STQ008039A0000	Kits	Intermediate upright for internal kits H=1800mm
	1		PTBB1070	1STQ007129A0000	External covers	Blind Top/Bottom IP30/IP40 W=1000mm D=700mm
	1	NEW	PKTE1070	1STQ003407C0000	External covers	Elevated top W=1000mm D=700mm
	1	14244	PPEA1870	1STQ007634A0000	External covers	Vented side panel IP30 H=1800mm D=700mm
	1				External covers	Vented rear panel IP30 H=1800mm W=1000mm
			PPEA1810	1STQ007638A0000		·
	1		PPFV1800	1STQ008059A0000	External covers	No.2 vertical profiles IP30 H=1800mm
	1		PPFH1000	1STQ008057A0000	External covers	No.2 horizontal profiles IP30 W=1000mm
	1		PFNL1810	1STQ001376B0000	External covers	Fixed frame for panels in the InLine column H=1800mm W=1000mm
	1	NEW	PPNL6510	1STQ003395C0000	External covers	Blind flat panel for InLine column H=650mm W=1000mm
	-	NEW	PMCS9527	1STQ003396C0000	Main distribution system	Lateral partial segregation H=950mm D=270mm rear
	-	NEW	PMCS9514	1STQ003397C0000	Main distribution system	Lateral partial segregation H=950mm D=140mm front
	1		PBRP0002	1STQ001554B0000	Main distribution system	No. 2 brackets for earth fixing
1	-		PBMC0002	1STQ009215A0000	Main distribution system	Lateral cable connection module fixing brackets
!	-		PCRM0388	1STQ007377A0000	Main distribution system	2 Galvanized sheet crosspieces L=388Mm
	-		PCRM0888	1STQ007382A0000	Main distribution system	2 Galvanized sheet crosspieces L=888Mm
!	-		PCRM0988	1STQ007383A0000	Main distribution system	2 Galvanized sheet crosspieces L=988Mm
	-		PCRM0288	1STQ007376A0000	Main distribution system	2 Galvanized sheet crosspieces L=288Mm
	-		PCRM0488	1STQ007378A0000	Main distribution system	2 Galvanized sheet crosspieces L=488Mm
	-		PCRM0788	1STQ007381A0000	Main distribution system	2 Galvanized sheet crosspieces L=788Mm
2	-		PTRA0100	1STQ007233B0000	Main distribution system	6 Steel tie rods 75 <l<100 mm<="" td=""></l<100>
	-		PBHB4131	1STQ005630B0000	Main distribution system	24 Busbars insulated supports W=125mm
	_		PBHB2145	1STQ007427A0000	Main distribution system	No.24 insulating supports for busbars W=75mm
L	-	NEW	PCHM1000 ⁽⁵⁾	1STQ003454C0000	Main distribution system	No. 2 support crosspieces for elevated top W=1000mm
)	-		ZX651	2CPX046088R9999	Main distribution system	Cu Spacer Roller 30x12,5x10mm
24	_		ZX652	2CPX046089R9999	Main distribution system	Cu spacer Roller 30x12,5x20mm
	1	NEW	PSVS1040	1STQ003394C0000	Segregation	Segregation 3b for InLine terminals covers W=1000mm
	_	NEW	PSVF6504	1STQ003401C0000	Segregation	Vertical segregation 2a-3a for E4.2 fixed H=650mm W=1000mm
	_	NEW	PSHF1072	1STQ003402C0000	Segregation	Horizontal lexan segregation 3b for E4.2 fixed W=1000mm D=700mm
!	2	.4544	PTVS1001	1STQ003402C0000	Segregation	Vertical front side segregation H=1000mm
	2					
!			PTVS8001	1STQ008511A0000	Segregation	Vertical front side segregation H=800mm
	6		PLVS3072	1STQ008899A0000	Segregation	Side compartment segregation for horizontal CBs H=300mm D=700mm
			PMCS2570	1STQ009208A0000	Segregation	No.2 lateral connection module H=250mm D=700mm
	_		PMCS2070	1STQ009206A0000	Segregation	No.2 lateral connection module H=200mm D=700mm
	-		PMCS3070	1STQ009209A0000	Segregation	No.2 lateral connection module H=300mm D=700mm
	2		PSHS1901	1STQ008694A0000	Segregation	Universal horizontal shelf W=1000mm
	1		PPRS0250	1STQ008584A0000	Segregation	Rubber cover H=200mm
)	()	NEW	PCNL1010 ⁽¹⁾⁽³⁾	1STQ003392C0000	Accessories	InLine vertical compensator W=100mm 800V
)	()	NEW	PCNL1011 ⁽²⁾⁽³⁾	1STQ003393C0000	Accessories	InLine vertical compensator W=100mm for EFM 800V
	1	NEW	PITH8060	1STQ003403C0000	Accessories	Anchorage kit side by side columns
	1	NEW	PPNL1010 ⁽²⁾	1STQ003404C0000	Accessories	Touch protection in lexan for InLine W=1000mm EFM up
	1	NEW	PPNL1030	1STQ003405C0000	Accessories	Touch protection in lexan for InLine W=1000mm down
	1	NEW	PPNL1020 ⁽¹⁾	1STQ003419C0000	Accessories	Touch protection in lexan for InLine W=1000mm up

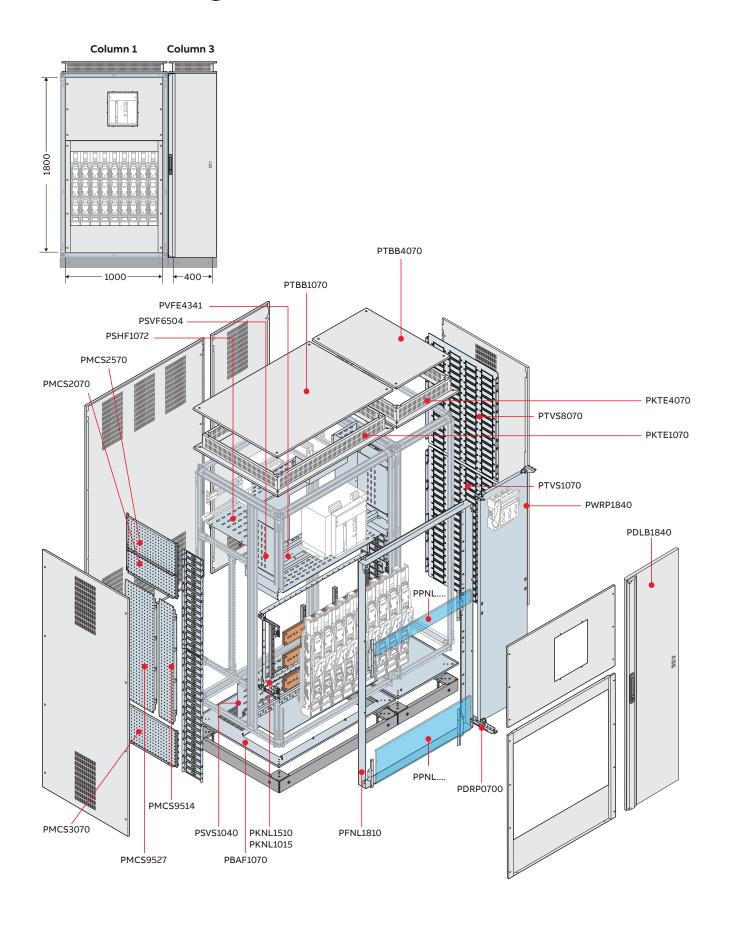
(*) Variable number

- NOTE:

 (i) Codes to be ordered without InLine II EFM functionality
 (ii) Codes to be ordered when the InLine II includes the EFM functionality
 (iii) The vertical compensator is required when the InLine II is not installed, therefore the quantity to be ordered varies according to number of InLine II to be used
 (iv) The correspondent flange is included in this code
 (iv) Needed with busducts connection only

The front panels could be also hinged on the right or the left with the dedicated PHFP0020 kit.

800V configuration - Order codes



Column composition

Q.ty Q 1 1 1 - 1 1 1 - 1 1 1 - 1 1 1 - 1 1 1 - 1 1 1 - 1 1 1 1 1 - 1 1 1 - 1 1 1 - 1 1 - 1 1 - 1 1 - 1 1 - 1	1 1 1	NEW NEW NEW	Type PUPM1800 PCFM0400 PCFM1000 PCFM0700 PPFM1070 PPFM1010 PPFM1040 PSBS0065 PPAM0100 PBAF1070 ⁽⁴⁾ PUK11800 PKNL1510 ⁽¹⁾ PKNL1015 ⁽²⁾	Order code 1STQ007033A0000 1STQ007038A0000 1STQ007043A0000 1STQ007046A0000 1STQ007059A0000 1STQ007056A0000 1STQ007051A0000 1STQ008113A0000 1STQ007048A0000 1STQ003406C0000 1STQ008039A0000 1STQ003390C0000	Part Structure	No.4 galvanized sheet metal uprights H=1800mm No.4 width crosspieces galvanized sheet metal W=400mm No.4 width crosspieces galvanized sheet metal W=1000mm No.4 depth crosspieces galvanized sheet metal D=700mm No.2 plinth flanges D=700mm No.2 plinth flanges W=1000mm No.2 plinth flanges W=400mm Kit for joining structures side by side/back to back No.4 plinth angle pieces Aerated bottom external panel W=1000mm D=700mm
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1	NEW	PUPM1800 PCFM0400 PCFM1000 PCFM0700 PPFM1070 PPFM1010 PPFM1040 PSBS0065 PPAM0100 PBAF1070 ⁽⁴⁾ PUK11800 PKNL1510 ⁽¹⁾	1STQ007033A0000 1STQ007038A0000 1STQ007043A0000 1STQ007046A0000 1STQ007059A0000 1STQ007056A0000 1STQ007051A0000 1STQ008113A0000 1STQ007048A0000 1STQ003406C0000 1STQ008039A0000	Structure	No.4 width crosspieces galvanized sheet metal W=400mm No.4 width crosspieces galvanized sheet metal W=1000mm No.4 depth crosspieces galvanized sheet metal D=700mm No.2 plinth flanges D=700mm No.2 plinth flanges W=1000mm No.2 plinth flanges W=400mm Kit for joining structures side by side/back to back No.4 plinth angle pieces
- 1 1 - 1 1 - 1 1 - 1 1 - 1 1 - 1 1 - 1 1 - 1 1 - 1 1 - 1 1 - 1 1 - 1 1 - 1 1 - 1 1 - 1	1 1 1	NEW	PCFM0400 PCFM1000 PCFM0700 PPFM1070 PPFM1010 PPFM1040 PSBS0065 PPAM0100 PBAF1070 ⁽⁴⁾ PUKI1800 PKNL1510 ⁽¹⁾	1STQ007038A0000 1STQ007043A0000 1STQ007046A0000 1STQ007059A0000 1STQ007056A0000 1STQ007051A0000 1STQ008113A0000 1STQ007048A0000 1STQ003406C0000 1STQ008039A0000	Structure	No.4 width crosspieces galvanized sheet metal W=400mm No.4 width crosspieces galvanized sheet metal W=1000mm No.4 depth crosspieces galvanized sheet metal D=700mm No.2 plinth flanges D=700mm No.2 plinth flanges W=1000mm No.2 plinth flanges W=400mm Kit for joining structures side by side/back to back No.4 plinth angle pieces
1 - 1 1 1 - 1 1 - 1 1 - 1 1 1 - 1 1 1 1		NEW	PCFM1000 PCFM0700 PPFM1070 PPFM1010 PPFM1040 PSBS0065 PPAM0100 PBAF1070 ⁽⁴⁾ PUKI1800 PKNL1510 ⁽¹⁾	1STQ007043A0000 1STQ007046A0000 1STQ007059A0000 1STQ007056A0000 1STQ007051A0000 1STQ008113A0000 1STQ007048A0000 1STQ003406C0000 1STQ008039A0000	Structure Structure Structure Structure Structure Structure Structure Structure Structure	No.4 width crosspieces galvanized sheet metal W=1000mm No.4 depth crosspieces galvanized sheet metal D=700mm No.2 plinth flanges D=700mm No.2 plinth flanges W=1000mm No.2 plinth flanges W=400mm Kit for joining structures side by side/back to back No.4 plinth angle pieces
1 - 1 1 1 - 1 1 - 1 1 - 1 1 1 - 1 1 1 1	- - 1 1 - - - - - 1 1	NEW	PPFM1070 PPFM1010 PPFM1040 PSBS0065 PPAM0100 PBAF1070 ⁽⁴⁾ PUKI1800 PKNL1510 ⁽¹⁾	1STQ007059A0000 1STQ007056A0000 1STQ007051A0000 1STQ008113A0000 1STQ007048A0000 1STQ003406C0000 1STQ008039A0000	Structure Structure Structure Structure Structure Structure	No.4 depth crosspieces galvanized sheet metal D=700mm No.2 plinth flanges D=700mm No.2 plinth flanges W=1000mm No.2 plinth flanges W=400mm Kit for joining structures side by side/back to back No.4 plinth angle pieces
1 - 1 1 - 1 1 - 2 - 1 1 - 1 1 - 1 1 - 1 1 - 1 1 - 1 1 - 1	- 1 1 - - - - 1 1	NEW	PPFM1010 PPFM1040 PSBS0065 PPAM0100 PBAF1070 ⁽⁴⁾ PUK11800 PKNL1510 ⁽¹⁾	1STQ007056A0000 1STQ007051A0000 1STQ008113A0000 1STQ007048A0000 1STQ003406C0000 1STQ008039A0000	Structure Structure Structure Structure Structure	No.2 plinth flanges W=1000mm No.2 plinth flanges W=400mm Kit for joining structures side by side/back to back No.4 plinth angle pieces
- 1 1 - 1 1 - 2 - 1 1 - 1 - 1 - 1 - 1 1 - 1 1 - 1	1 1	NEW	PPFM1040 PSBS0065 PPAM0100 PBAF1070 ⁽⁴⁾ PUKI1800 PKNL1510 ⁽¹⁾	1STQ007051A0000 1STQ008113A0000 1STQ007048A0000 1STQ003406C0000 1STQ008039A0000	Structure Structure Structure Structure	No.2 plinth flanges W=400mm Kit for joining structures side by side/back to back No.4 plinth angle pieces
1 - 1 1 1 - 2 - 1 - 1 1 - 1 1 - 1 1 1 - 1 1 1 - 1 1 1 - 1 1 1 - 1 1 1 - 1 1 1 - 1 1 1 - 1 1 1 - 1 1 1 - 1 1 1 - 1 1 1 - 1 1 1 - 1 1 1 - 1 1 1 1 - 1 1 1 1 - 1 1 1 1 - 1	- 1 - - - 1 1	NEW	PSBS0065 PPAM0100 PBAF1070 ⁽⁴⁾ PUKI1800 PKNL1510 ⁽¹⁾	1STQ008113A0000 1STQ007048A0000 1STQ003406C0000 1STQ008039A0000	Structure Structure Structure	Kit for joining structures side by side/back to back No.4 plinth angle pieces
1 1 1 1 2 2 - 1 1 - 1 1 1 - 1 1 1 1 1 1	1 - - - 1 1	NEW	PPAM0100 PBAF1070 ⁽⁴⁾ PUKI1800 PKNL1510 ⁽¹⁾	1STQ007048A0000 1STQ003406C0000 1STQ008039A0000	Structure Structure	No.4 plinth angle pieces
1 - 2 - 1 - 1 - 1 - 1 - 1 1 - 1 1 - 1	- - - - 1 1	NEW	PPAM0100 PBAF1070 ⁽⁴⁾ PUKI1800 PKNL1510 ⁽¹⁾	1STQ007048A0000 1STQ003406C0000 1STQ008039A0000	Structure Structure	No.4 plinth angle pieces
1 - 2 - 1 - 1 - 1 - 1 - 1 1 - 1 1 - 1	- - - - 1 1	NEW	PBAF1070 ⁽⁴⁾ PUKI1800 PKNL1510 ⁽¹⁾	1STQ003406C0000 1STQ008039A0000	Structure	1 3 1
2 - 1 - 1 - - 1 - 1 1 - - 1	- - - 1 1	NEW	PUKI1800 PKNL1510 ⁽¹⁾	1STQ008039A0000		
1 - 1 - 1 1 - 1 1 - 1 1 - 1	- - 1 1		PKNL1510 ⁽¹⁾		VILS	
1 1 - 1 1 1 1 1	- 1 1			151000339000000		Intermediate upright for internal kits H=1800mm
- 1 - 1 1 - 1 1 - 1	1 1 -	NEW	PKNL1015 ⁽²⁾		Kits	InLine mounting kit + front panel H=1150mm W=1000mm
- 1 1 - - 1 1 -	1			1STQ003391C0000	Kits	InLine mounting kit + front panel H=1150mm W=1000mm for EFM
1 - - 1 1 -	-		PWRP1840	1STQ001899B0000	Kits	Blind assembly plate total height W=400mm H=1800mm
- 1 1 -			PDRP0700	1STQ002337B0000	Kits	Pair of tracks for total height mounting plate
1 -	1	NEW	PVFE4341	1STQ003400C0000	Kits	Kit Emax E4.2 fixed H=650mm W=1000mm
	T		PDLB1840	1STQ007362A0000	External covers	Blind door IP30/IP40 W=400mm H=1800mm
	_		PTBB1070	1STQ007129A0000	External covers	Blind Top/Bottom IP30/IP40 W=1000mm D=700mm
	2		PTBB4070	1STQ007115A0000	External covers	Blind Top/Bottom IP30/IP40 W=400mm D=700mm
- 1		NEW	PKTE4070	1STQ003434C0000	External covers	Elevated top W=400 D=700mm
						·
-		NEW	PKTE1070	1STQ003407C0000	External covers	Elevated top W=1000mm D=700mm
1 1			PPEA1870	1STQ007634A0000	External covers	Vented side panel IP30 H=1800mm D=700mm
- 1	1		PPEA1840	1STQ007631A0000	External covers	Vented rear panel IP30 H=1800mm W=400mm
1 -	-		PPEA1810	1STQ007638A0000	External covers	Vented rear panel IP30 H=1800mm W=1000mm
1 -	-		PPFV1800	1STQ008059A0000	External covers	No.2 vertical profiles IP30 H=1800mm
1 -	_		PPFH1000	1STQ008057A0000	External covers	No.2 horizontal profiles IP30 W=1000mm
1 -	_		PFNL1810	1STQ001376B0000	External covers	Fixed frame for panels in the InLine column H=1800mm W=1000mm
2 -	_	NEW	PMCS9527	1STQ003396C0000	Main distribution system	Lateral partial segregation H=950mm D=270mm rear
2 -	_	NEW	PMCS9514	1STQ003397C0000	Main distribution system	Lateral partial segregation H=950mm D=140mm front
1 1			PBRP0002	1STQ001554B0000	Main distribution system	No. 2 brackets for earth fixing
						<u> </u>
9 -			PBMC0002	1STQ009215A0000	Main distribution system	Lateral cable connection module fixing brackets
2 -			PCRM0388	1STQ007377A0000	Main distribution system	2 Galvanized sheet crosspieces L=388Mm
1 -	_		PCRM0888	1STQ007382A0000	Main distribution system	2 Galvanized sheet crosspieces L=888Mm
2 -			PCRM0988	1STQ007383A0000	Main distribution system	2 Galvanized sheet crosspieces L=988Mm
1 -	-		PCRM0288	1STQ007376A0000	Main distribution system	2 Galvanized sheet crosspieces L=288Mm
1 -	_		PCRM0488	1STQ007378A0000	Main distribution system	2 Galvanized sheet crosspieces L=488Mm
1 -	_		PCRM0788	1STQ007381A0000	Main distribution system	2 Galvanized sheet crosspieces L=788Mm
2 -	_		PTRA0100	1STQ007233B0000	Main distribution system	6 Steel tie rods 75 <l<100 mm<="" td=""></l<100>
1 -	_		PBHB4131	1STQ005630B0000	Main distribution system	24 Busbars insulated supports W=125mm
1 -	_		PBHB2145	1STQ007427A0000	Main distribution system	No.24 insulating supports for busbars W=75mm
		NEW	PCHM1000 ⁽⁶⁾		.	
1 -		NEW		1STQ003454C0000	Main distribution system	No. 2 support crosspieces for elevated top W=1000mm
21 -			ZX651	2CPX046088R9999	Main distribution system	Cu Spacer Roller 30x12,5x10mm
12 -	-		ZX652	2CPX046089R9999	Main distribution system	Cu spacer Roller 30x12,5x20mm
1 -		NEW	PSVS1040	1STQ003394C0000	Segregation	Segregation 3b for InLine terminals covers W=1000mm
1 -	_	NEW	PSVF6504	1STQ003401C0000	Segregation	Vertical segregation 2a-3a for E4.2 fixed H=650mm W=1000mm
1 -	-	NEW	PSHF1072	1STQ003402C0000	Segregation	Horizontal lexan segregation 3b for E4.2 fixed W=1000mm D=700mm
- 2	2		PTVS1070 ⁽⁵⁾	1STQ008492A0000	Segregation	Vertical side segregation H=1000mm
_ 2	2		PTVS8070 ⁽⁵⁾	1STQ008491A0000	Segregation	Vertical side segregation H=800mm
2 –			PTVS1001	1STQ008512A0000	Segregation	Vertical front side segregation H=1000mm
2 -			PTVS8001	1STQ008511A0000	Segregation	Vertical front side segregation H=800mm
1 -			PMCS2570	1STQ009208A0000	Segregation	No.2 lateral connection module H=250mm D=700mm
1 -			PMCS2070	1STQ009206A0000	Segregation	No.2 lateral connection module H=200mm D=700mm
1 -	-		PMCS3070	1STQ009209A0000	Segregation	No.2 lateral connection module H=300mm D=700mm
(*) –		NEW	PCNL1010 ⁽¹⁾⁽³⁾	1STQ003392C0000	Accessories	InLine vertical compensator W=100mm 800V
(*) -	-	NEW	PCNL1011 ⁽²⁾⁽³⁾	1STQ003393C0000	Accessories	InLine vertical compensator W=100mm for EFM 800V
1 -	_	NEW	PPNL1010 ⁽²⁾	1STQ003404C0000	Accessories	Touch protection in lexan for InLine W=1000mm EFM up
1 -	_	NEW	PPNL1030	1STQ003405C0000	Accessories	Touch protection in lexan for InLine W=1000mm down
1 -		NEW	PPNL1020 ⁽¹⁾	1STQ003419C0000	Accessories	Touch protection in lexan for InLine W=1000mm up

The front panels could be also hinged on the right or the left with the dedicated PHFP0020 kit.

^(*) Variable number
NOTE:

(*) Codes to be ordered without InLine II EFM functionality
(*) Codes to be ordered when the InLine II includes the EFM functionality
(*) Codes to be ordered when the InLine II includes the EFM functionality
(*) The vertical compensator is required when the InLine II is not installed, therefore the quantity to be ordered varies according to number of InLine II to be used
(*) The correspondent flange is included in this code
(*) Alternatively, the segregation could be blind
(*) Needed with busducts connection only

800V configuration – Order codes



Uprights - Galvanized sheet metal

Upright formed by a closed profile made of galvanized sheet metal. The uprights include 8 already assembled 3-way joints, 8 already assembled axial screws and 16 loose axial screws. For applications with $\ln \le 4000A$.

	Dimensions			
	(mm)			Pkg/
Description	Н	Туре	Order code	No. pcs
No.4 galvanized sheet metal uprights	1800	PUPM1800	1STQ007033A0000	1/4



Intermediate upright for internal kit assembly

Intermediate depth upright for assembling kits for Tmax and Emax 2.

	Dimensions			
	(mm)			Pkg/
Description	Н	Туре	Order code	No. pcs
Intermediate upright for internal kits	1800	PUKI1800	1STQ008039A0000	1/1



Structure crosspieces - Galvanized sheel metal

Depth and width crosspieces for structures in galvanized sheet metal. For applications with In ≤4000A.

	Pkg/				
Description	W	D	Type	Order code	No. pcs
Width crosspieces					
No.4 width crosspieces galvanized sheet metal	400		PCFM0400	1STQ007038A0000	1/4
No.4 width crosspieces galvanized sheet metal	1000		PCFM1000	1STQ007043A0000	1/4
Depth crosspieces					
No.4 depth crosspieces galvanized sheet metal		700	PCFM0700	1STQ007046A0000	1/4



Kit for joining structures

The kit for joining structures is composed of different brackets and a gasket for the maintenance of the IP protection degree and allows both a side-by-side and a back-to-back joining of structures.

Description	Туре	Order code	Pkg/ No. pcs
Kit for joining structures side by side / back to back	PSBS0065	1STQ008113A0000	1/8

800V configuration – Order codes



Elevated top

•	Dimensions (mm)					Pkg/
Description	W	D		Type	Order code	No. pcs
Elevated top	1000	700	NEW	PKTE1070	1STQ003407C0000	1/1
Elevated top	400	700	NEW	PKTE4070	1STQ003434C0000	1/1

With the elevated top the enclosure cannot be lifted from above.



Blind Top/Bottom IP30,40 - Pickled sheet steel

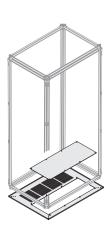
Pickled sheet steel without gasket. The code includes four M12x20 screws.

	Dimen	sions (mm)			Pkg/
Description	W	D	Туре	Order code	No. pcs
Blind Top/Bottom IP30, 40	400	700	PTBB4070	1STQ007115A0000	1/1
Blind Top/Bottom IP30, 40	1000	700	PTBB1070	1STQ007129A0000	1/1

The column is compatible with the following busducts:

Brand and type	Rated current	N° of poles
EAE Copper	4000A	4P + PE housing (PE not isolated)
EAE Aluminium	4000A	4P + PE housing (PE not isolated)
Pogliano Copper	4000A	4P + PE housing (PE not isolated)

To allow the busducts access, the blind top (PTBB1070/1STQ007129A0000) has to be cut accordingly. The cut-out dimensions are provided in the instruction manual as a general reference, please always verify the busducts models details.



Aerated bottom external panel IP40 W 1000mm

Internal galvanized steel aerated bottom.

	Dimen	sions (m	ım)		Pkg/	
Description	W	D		Туре	Order code	No. pcs
Arrated bottom external	1000	700	NEW	PBAF1070	1STQ003406C0000	1/1

800V configuration – Order codes



External vented side panel IP30

	No.	Dimensions				
	Vented	(mm)				Pkg/
Description	grates	Н	D	Туре	Order code	No. pcs
Vented side panel IP30	2	1800	700	PPEA1870	1STQ007634A0000	1/1



External vented rear panel IP30

	Dimens (mm)	ions			Pkg/
Description	Н	W	Type	Order code	No. pcs
Vented rear panel IP30	1800	400	PPEA1840	1STQ007631A0000	1/1
Vented rear panel IP30	1800	1000	PPEA1810	1STQ007638A0000	1/1



Universal angle pieces for plinths in galvanized sheet metal

Not pre-assembled to the structure. New angle piece with high mechanical strength. Can be fixed from the outside and from the inside of the structure even at a later date. Equipped with anti-rotation system and bottom that can be transported with a transpallet.

	Dimensions (mm)			Pkg/
Description	Н	Туре	Order code	No. pcs
No.4 plinth angle pieces	100	PPAM0100	1STQ007048A0000	1/4



Plinth flanges

Side and front/rear plinth flanges H=100mm RAL 7012.

	Dimen	sions (mm	1)			
Description	W	D	Туре	Order code	No. pcs	
Front/rear plinth flanges						
No.2 plinth flanges	400	'	PPFM1040	1STQ007051A0000	1/2	
No.2 plinth flanges	1000		PPFM1010	1STQ007056A0000	1/2	
Side plinth flanges						
No.2 plinth flanges		700	PPFM1070	1STQ007059A0000	1/2	

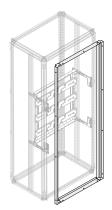
800V configuration – Order codes



Horizontal/vertical front closing profiles IP30

Profiles for IP30 pickled sheet painted RAL 7035.

	Dimensio (mm)	ns		'	Pkg/
Description	H W		Туре	Order code	No. pcs
Finishing profiles vertical structure and exte	rnal cable c	omp	artment		
No.2 vertical profiles IP30	1800		PPFV1800	1STQ008059A0000	1/2
Finishing profiles horizontal structure and ex	ternal cabl	e cor	npartment		
No.2 horizontal profiles IP30	10	000	PPFH1000	1STQ008057A0000	1/2



Fixed frame for InLine II panels

fixed frame for InLine II for internal panels reduces the available useful space by 100mm. InLine II fixed frame allows to fit only InLine II panels listed below.

	Dimer	sions			
	(mm)				Pkg/
Description	Н	W	Type	Order code	No. pcs
Fixed frame for panels in the InLine column	1800	1000	PFNL1810	1STQ001376B0000	1/1



Blind door IP30/IP40

Suitable for IP30 and IP40 configuration. Pickled sheet steel without gasket and 4 rubber overlapping plugs. Opens through 135° (single column). Complete with 4 hinges to be screwed onto the uprights, 4 door closing brackets with cover and handle. Handle and hinges provided (not pre-assembled for complete reversibility).



		Dimens	sions			
	No. DIN	(mm)				Pkg/
Description	module	s H	W	Type	Order code	No. pcs
Blind door IP30/IP40	12	1800	400	PDLB1840	1STQ007362A0000	1/1

800V configuration – Order codes



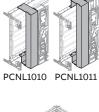
InLine mounting kit + front panel

	Dimer (mm)	sions				Pkg/
Description	Н	W		Туре	Order code	No. pcs
InLine mounting kit + front panel H=1150mm W=1000mm	1150	1000	NEW	PKNL1510	1STQ003390C0000	1/1
InLine mounting kit + front panel H=1150mm W=1000mm for EFM	1150	1000	NEW	PKNL1015	1STQ003391C0000	1/1



InLine vertical compensator

	Dime (mm)	nsions				Pkg/	
Description	Н	W		Type	Order code	No. pcs	
InLine vertical compensator		100	NEW	PCNL1010	1STQ003392C0000	1/1	
InLine vertical compensator for EFM		100	NEW	PCNL1011	1STQ003393C0000	1/1	



Universal horizontal shelf W=1000mm

1	Dimensions (mm)			Pkg/
Description	W	Туре	Order code	No. pcs
Universal horizontal shelf	1000	PSHS1901	1STQ008694A0000	1/1



Segregation

	Dime (mm)	nsions			Pkg/
Description	н	W	Туре	Order code	No. pcs
Segregation 3b for InLine	1150	1000 NEW	PSVS1040	1STQ003394C0000	1/1



800V configuration – Order codes



Blind mounting plates

The kit includes the dedicated fixing brackets and the mounting plate.

	Dimens (mm)	sions				Pkg/
Description	Н	W		Type	Order code	No. pcs
Recessed blind assembly plate	650	1000	NEW	PPMR6510	1STQ003398C0000	1/1



Blind flat panel for InLine column

		nsions				
	(mm)					Pkg/
Description	н	W		Туре	Order code	No. pcs
Blind flat panel for InLine column	650	1000	NEW	PPNL6510	1STQ003395C0000	1/1



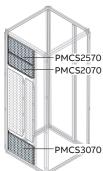
Blind mounting plates total height

Dimensions (mm)						
Description	Н	W	D	Type	Order code	No. pcs
Blind assembly plate	1800	400		PWRP1840	1STQ001899B0000	1/1
Tracks for front insertion					•	
Pair of tracks for total height mounting plate			700	PDRP0700	1STQ002337B0000	1/1



Lateral partial segregations

	Dime (mm)	nsions				Pkg/
Description	н	D		Туре	Order code	No. pcs
Rear lateral partial segregation	950	270	NEW	PMCS9527	1STQ003396C0000	1/1
Front lateral partial segregation	950	140	NEW	PMCS9514	1STQ003397C0000	1/1



Lateral connection module

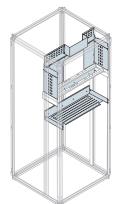
	Dime (mm)	nsions				Pkg
Description	н	D	Ту	/pe	Order code	No. pc
No.2 lateral connection module	200	700	PN	4CS2070	1STQ009206A0000	1/2
No.2 lateral connection module	250	700	PN	MCS2570	1STQ009208A0000	1/2
No.2 lateral connection module	300	700	PN	4CS3070	1STQ009209A0000	1/2

800V configuration – Order codes



Kit Emax

	Dimer	nsions				
	(mm)					Pkg/
Description	Н	W		Type	Order code	No. pcs
Kit Emax E4.2 fixed	650	1000	NEW	PVFE4341	1STQ003400C0000	1/1



Vertical segregation 2a-3a for E4.2 fixed

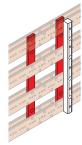
	Dime (mm)	nsions				Pkg/
Description	н	W		Туре	Order code	No. pcs
Vertical segregation 2a- 3a for E4.2 fixed	650	1000	NEW	PSVF6504	1STQ003401C0000	1/1



Horizontal lexan segregation 3b for E4.2 fixed

	Dimer (mm)	Dimensions (mm)				Pkg/
Description	W	D		Type	Order code	No. pcs
Horizontal lexan segregation 3b for E4.2 fixed	1000	700	NEW	PSHF1072	1STQ003402C0000	1/1

800V configuration – Order codes



Anchorage kit side by side columns

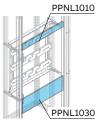
			Pkg/
Description	Type	Order code	No. pcs
Anchorage kit side by side columns NEV	/ PITH8060	1STQ003403C0000	1/1



Support crosspieces for elevated top

Crosspiece to be placed under the top for busducts support.

	Dimensions (mm)				Pkg/
Description	W		Type	Order code	No. pcs
No. 2 support crosspieces for elevated top=1000mm	1000	NEW	PCHM1000	1STQ003454C0000	1/1

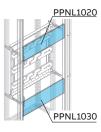


Touch protection in lexan for InLine W=1000mm

	Dimensions (mm)				Pkg/	
Description	Н	W		Туре	Order code	No. pcs
Touch protection in lexan for InLine	100	1000	NEW	PPNL1010 (1)	1STQ003404C0000	1/1
Touch protection in lexan for InLine	200	1000	NEW	PPNL1020 (2)	1STQ003419C0000	1/1
Touch protection in lexan for InLine	300	1000	NEW	PPNL1030	1STQ003405C0000	1/1



⁽²⁾ Codes to be ordered without InLine II EFM functionality.



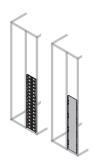
800V configuration – Order codes



Side segregation for structure without intermediate upright

Vertical side walls for assembly between front and rear structural uprights. To use for structures with fixed circuitbreakers that do not require the intermediate upright. The precuts in the segregations are at 50mm pitch. At least three vertical ones must be removed.

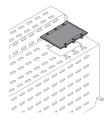
	Dimens	Dimensions (mm)			
Description	н	D	Type	Order code	Pkg/ No. pcs
Precut		'			
Precut vertical side segregation	800	700	PTVS8070	1STQ008491A0000	1/1
Precut vertical side segregation	1000	700	PTVS1070	1STQ008492A0000	1/1



Front side segregation for structure with intermediate upright

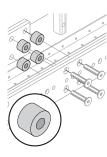
Precut vertical front side wall for assembly between intermediate upright and front structural upright.

	Dimensions (mm)			Pkg/
Description	н	Туре	Order code	No. pcs
Precut vertical front side segreg	ation			
Vertical side segregation	800	PTVS8001	1STQ008511A0000	1/1
Vertical side segregation	1000	PTVS1001	1STQ008512A0000	1/1



Rubber cover for routing connections

	Dimensions cella (mm)	Rubber dimensions (mm)			Pkg/
Description	Н	Н	Type	Order code	No. pcs
Rubber cover	250	200	PPRS0250	1STQ008584A0000	1/1



Cu Spacer Roller

Copper spacers for busbars connections.

	Dimensions (mm)			Pkg/
Description	Н	Type	Order code	No. pcs
Cu Spacer Roller 30x12,5	10	ZX651	2CPX046088R9999	1/1
Cu spacer Roller 30x12,5	20	ZX652	2CPX046089R9999	1/1

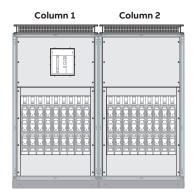
800V configuration – Certificate specifications

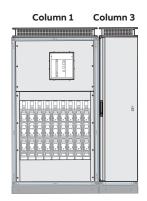
The configuration comes with a certificate of conformity issued by ACAE LOVAG, ensuring full compliance with IEC 61439-2 standards.

Additionally, it has received approval for use in Enel tenders, further highlighting its reliability and adherence to industry requirements.

The certificate also includes thermal calculations for the configuration's operational range from 20°C up to 50°C.

The tables below indicate the maximum nominal current that can be safely utilized at different temperatures.





Configuration column 1 + column 2

Ambient air temperature (°C)	20°C	25°C	30°C	35°C	40°C	45°C	50°C
Ambient air temperature (C)	20 C		30 C	35 C	40 C	45 C	30 C
Inverters number	18	18	18	18	18	18	18
Ing Emax E4.2 (A)	4000	3933	3761	3622	3450	3277	3105
Ing InLine II 400A (A)	400	400	400	378	360	342	324
Ing InLine II 250A (A)	250	250	250	250	250	237	225
Nominal current In configuration (A)	4000	3933	3761	3622	3450	3277	3105

Configuration column 1 + column 3

Ambient air temperature (°C)	20°C	25°C	30°C	35°C	40°C	45°C	50°C
Inverters number	9	9	9	9	9	9	9
Ing Emax E4.2 (A)	2035	1966	1880	1811	1725	1638	1552
Ing InLine II 400A (A)	400	400	392	378	360	342	324
Ing InLine II 250A (A)	250	250	250	250	250	238	225
Nominal current In column (A)	2000	1966	1880	1811	1725	1639	1552

For plants using solar inverters with power up to 250kW (typically up to 185 A as maximum output current) it is possible to use up to 18 inverters; while with bigger inverter sizes like the 330 kW (typically 254 A as maximum output current) only 14 InLine II could be installed and it is necessary to cover the empty space in the InLine kit with the compensators. Note that the sum of devices currents cannot exceed the nominal current of the configuration and, similarly, each device current cannot exceed the maximum admissible current for InLine II specified in the table.





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Contact

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Due to possible developments of standards as well as of materials, the characteristics and dimensions specified in this document may only be considered binding after confirmation by ABB SACE.