ENERGY GROUP LTD

TRUNKING SYSTEMS

ШИНОПРОВОДНИ СИСТЕМИ

MP-H SERIES 160A-600A

THE SMARTEST WAY OF POWER DISTRIBUTION

Най-умният начин за разпределение на електроенергия

DTM®

GENERAL FEATURES

MP-H Busbar trunking systems are systems with air insulated conductors in low voltage energy distribution lines. Plug-in production is produced with four plug-in points as standard. It is produced with aluminum or copper conductors between 160A- 600A. In the 5-pole full neutral configuration, the operating voltage is 1000 V. The case is produced as galvanized sheet in IP 55 protection class.

Applications

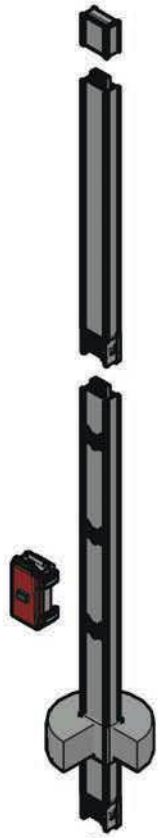
Used in commercial centers, medium-sized industrial facilities, high-rise buildings, data centers.

Finish

RAL 7038

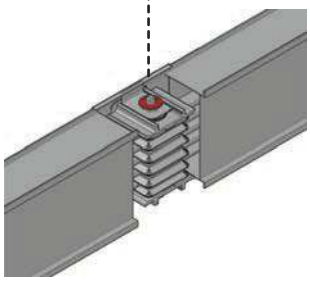
Protection

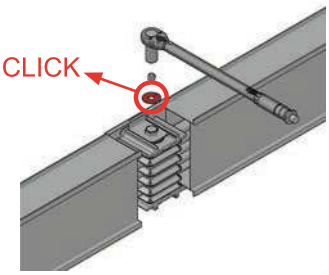
Plug-ins V2 are non-flammable, resistant to harsh environmental conditions and high temperatures. The gasketed protection cover made of flame retardant certified material is IP 55.



Double Head Screw

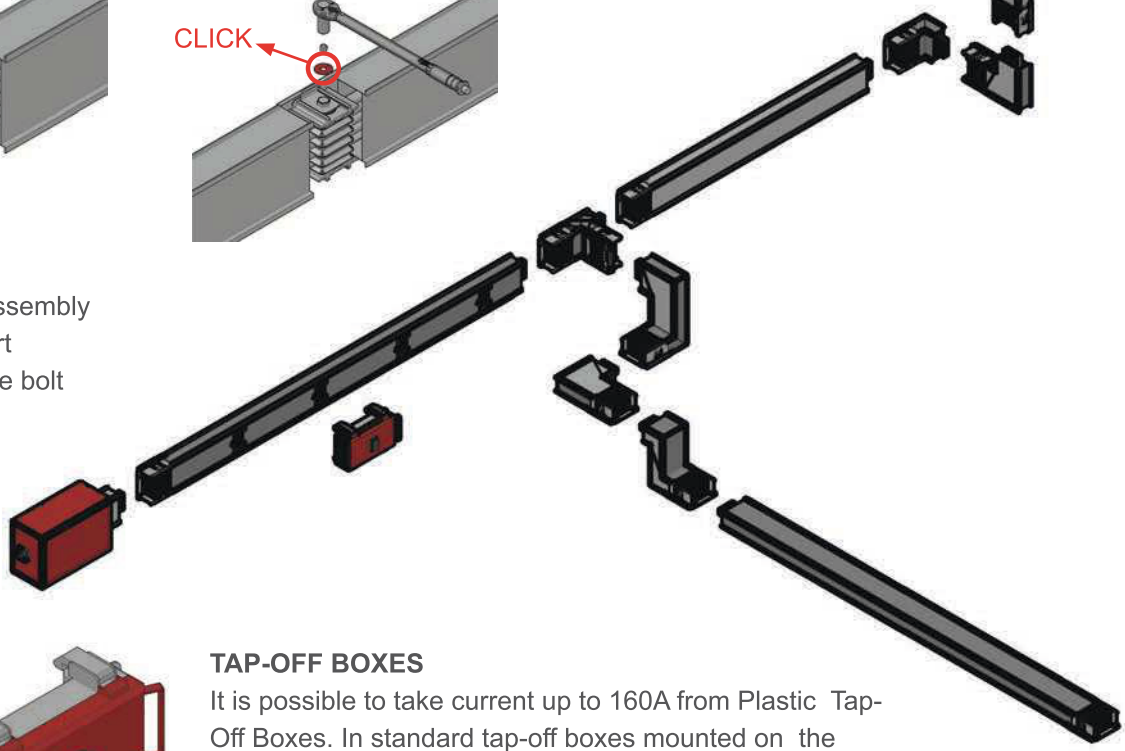
TORQUE VALUE:
40 lbft (55 Nm)

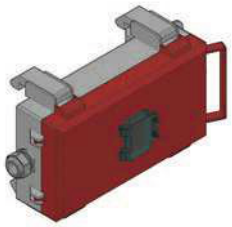




JOINT BLOCK

Fast and safe assembly is done in a short time with a single bolt attachment.

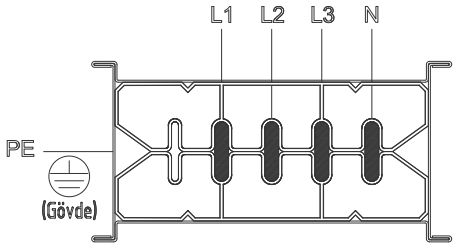




TAP-OFF BOXES

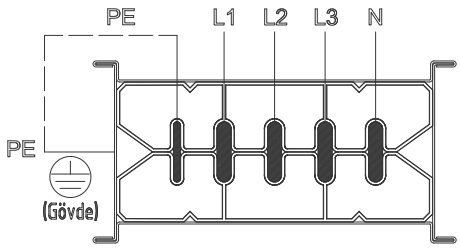
It is possible to take current up to 160A from Plastic Tap-Off Boxes. In standard tap-off boxes mounted on the busbar, it will be su翻□cient to open the cover of the tap-off box in order to cut off the energy without being removed from the busbar in case of failure.

3P+N+PE (4 Conductors) T1



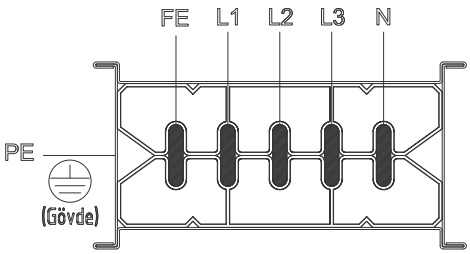
GALVANIZED
STEEL SHEET BODY
The neutral conductor cross section is the same as the phase conductor. The grounding conductor cross-section is placed in the case as the same.

3P+N+PE+PE (4,5 Conductors) T3



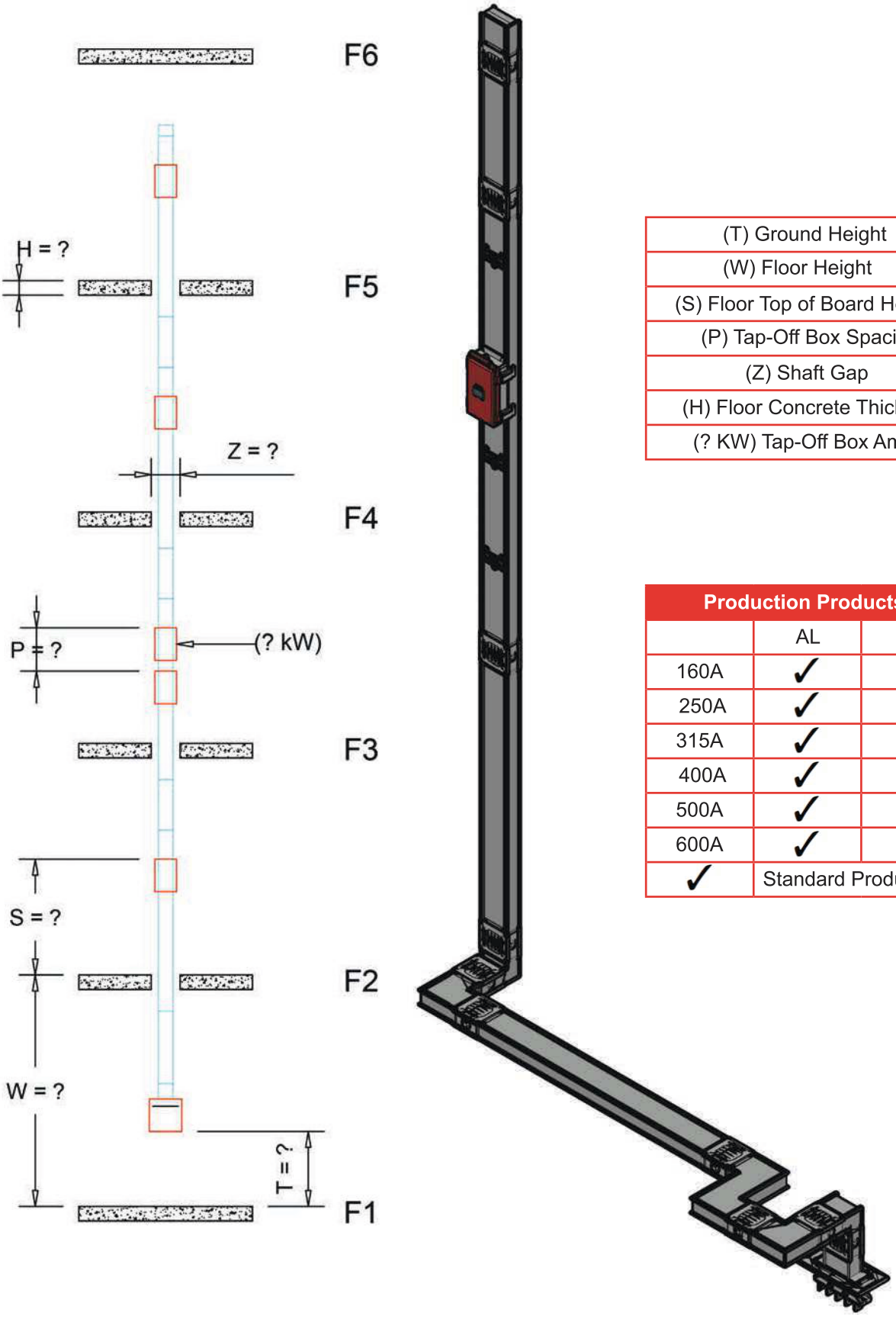
GALVANIZED
STEEL SHEET BODY

3P+N+PE+FE2 (5 Conductors) T2



GALVANIZED
STEEL SHEET BODY
The neutral conductor cross-section is the same as the phase conductor. The conductor cross-section used for grounding is half the cross-section of the phase conductor.

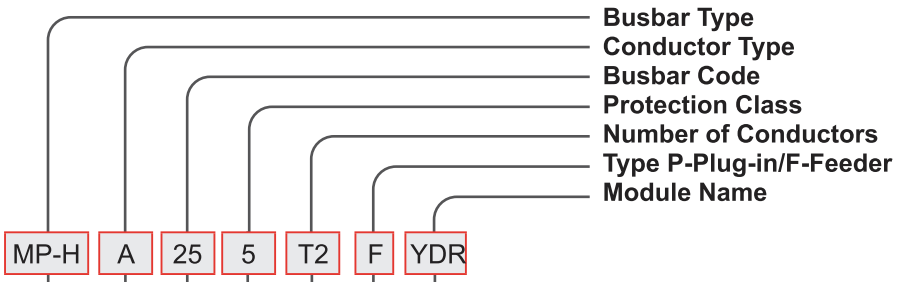
VERTICAL DISTRIBUTION APPLICATION



(T) Ground Height
(W) Floor Height
(S) Floor Top of Board Height
(P) Tap-Off Box Spacing
(Z) Shaft Gap
(H) Floor Concrete Thickness
(? KW) Tap-Off Box Amps

Production Products		
	AL	CU
160A	✓	✓
250A	✓	✓
315A	✓	✓
400A	✓	✓
500A	✓	-
600A	✓	✓
✓	Standard Production	

ORDER CODE SYSTEM



BUSBAR NAME

Busbar Type

ALUMINUM (AL)	(A)
COPPER (CU)	(C)

Conductor Type

MP-H AL		MP-H CU	
CRRNT	BUSBAR CODE	CRRNT	BUSBAR CODE
160	16	250	26
250	25	315	32
315	31	400	41
400	40	600	61
500	50		
600	60		

Busbar Current

IP55	5

Protection Class

Number of Conductors

Number of Conductors	Code	L1	L2	L3	N	1/2 GRND	CLEAN GRND	1/2 CLEAN GRND	GRND (BODY)
3P+N+PE (4P)	T1	✓	✓	✓	✓				✓
3P+N+PE+FE1 (5P)	T2	✓	✓	✓	✓	✓	✓		✓

Type

Information About Busbar Usage Purpose.

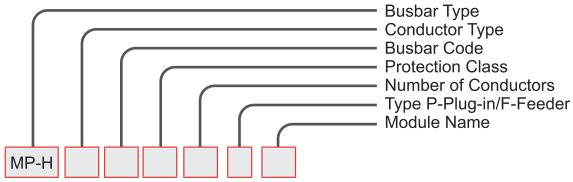
(P) PLUG-IN USED FOR TAKING CURRENT FROM PLUG-IN PLACES IN FLAT SIZES
(F) FEEDER USED WHERE DIRECT FEEDING IS MADE AND CURRENT IS NEEDED TO BE TAKEN FROM ADDITIONAL POINTS

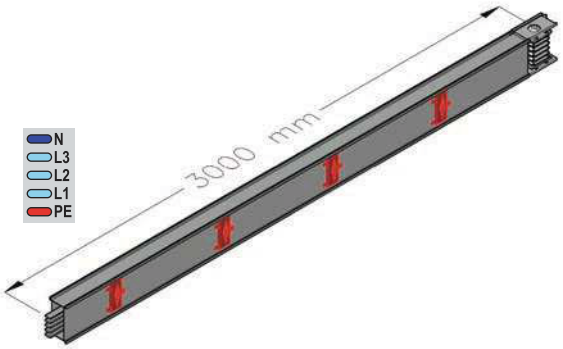
Type P-Plug-in / F-Feeder

Module Name

Feeder Busbar	**FS**
Plug-In Busbar	**PS**
Horizontal Elbow Right	**YDR**
Horizontal Elbow Left	**YDL**
Vertical Elbow Down	**DDD**
Vertical Elbow Up	**DDU**
Feeder Special Length	**FX**
Plug-In Special Length	**PX**
Double Vertical Elbow (Off-Set) Up	DOU
Double Vertical Elbow (Off-Set) Down	DOD
Double Vertical Elbow (Off-Set) Left	YOL
Double Vertical Elbow (Off-Set) Right	YOR
Up Left (Combined Off-Set)	ULK
Up Right (Combined Off-Set)	URK
Down Left (Combined Off-Set)	DLK
Down Right (Combined Off-Set)	DRK
Left Up (Combined Off-Set)	LUK
Right Up (Combined Off-Set)	RUK
Left Down (Combined Off-Set)	LDK
Right Down (Combined Off-Set)	RDK
Center (T) Module	OT
Quadruple (T) Module	DT
Reduction	RD
Expansion Module	G
Panel Connection Module (E)	PME
Panel Connection Module (D)	PMD
Tapoff Box (Plug-in) with Load Breaker	KM1
Plastic Tapoff Box (Empty)	KPO
Tapoff Box (Plug-in) with Switch	KM2
End Feed Module	BM1
Start Feed Module	BM2
Center Feed Module	OB1
Termination Module	S
Expansion (Horizontal)	DH
Horizontal Hanger Vertical Module (U Profile)	YVU
Horizontal Hanger Horizontal Module (U Profile)	YHU
Horizontal Hanger Vertical Module	YVK
(40x40 Bracket)	YVK
Horizontal Hanger Horizontal Module	SA
(40x40 Bracket)	YHK
Shaft Hanger Module	SA
Center Feed Module	OB2

Standard Size





Plug-in Busbar	PS

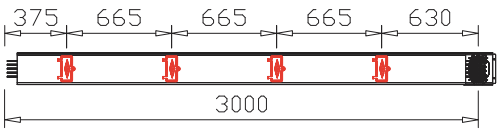
SAMPLE ORDER

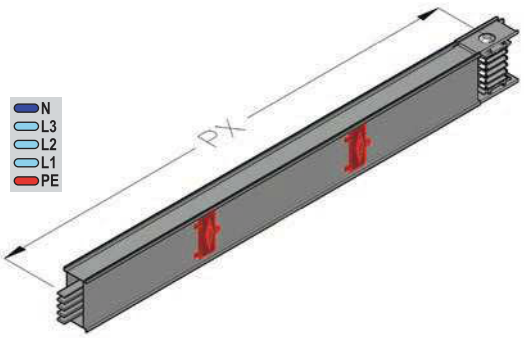
250 A Aluminum,
Plug-in IP 55 5 Conductors

MP-HA255T2PS

PLUG-IN BUSBAR

Standard production in plug-in sizes has 4 outlets. The number of plug-in points can be changed upon request.



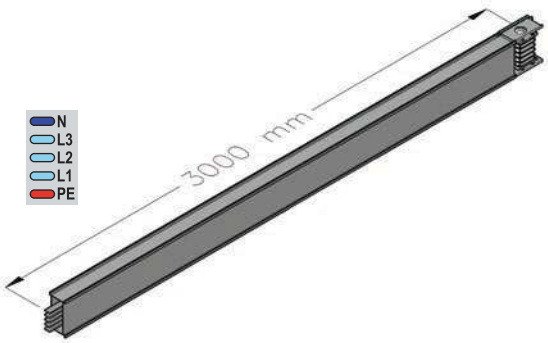


Plug-in Special Length	PX

SAMPLE ORDER

400 A Aluminum,
Plug-in IP 55 5 Conductors

MP-HA405T2PX



Feeder Busbar	FS

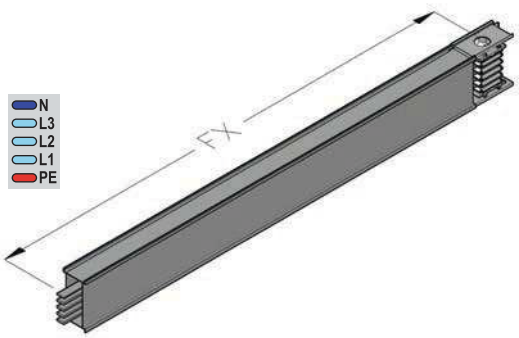
SAMPLE ORDER

400 A Aluminum,
Feeder IP 55 5 Conductors

MP-HA405T2FS

FEEDER BUSBAR

It provides direct feeding in power transmission. Standard production is 3000 mm, upon request, it can be produced in different sizes starting from a minimum of 500 mm.



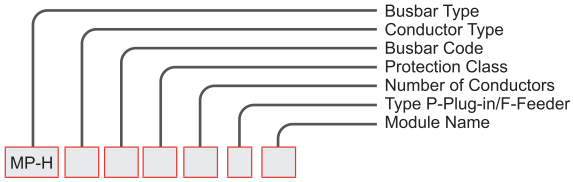
Feeder Special Length	FX

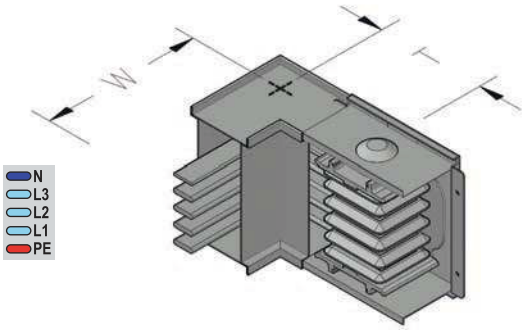
SAMPLE ORDER

400 A Aluminum,
Elbow IP 55 5 Conductors

MP-HA405T2FX

Elbow Modules



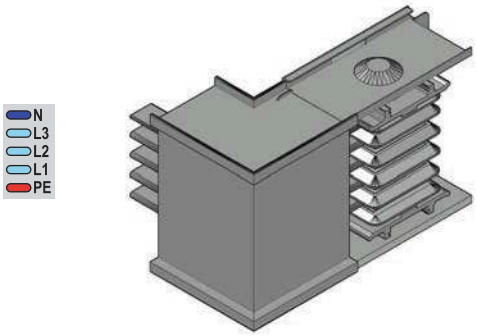


Horizontal Elbow Right	YDR

SAMPLE ORDER

400 A Aluminum,
Elbow IP 55 5 Conductors

MP-HA405T2FYDR

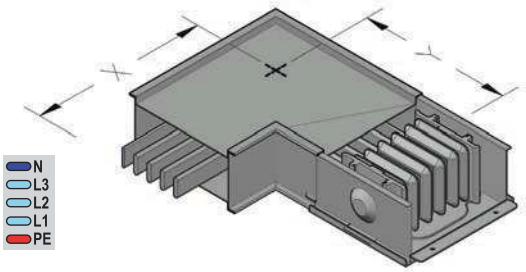


Horizontal Elbow Left	YDL

SAMPLE ORDER

400 A Aluminum,
Elbow IP 55 5 Conductors

MP-HA405T2FYDL

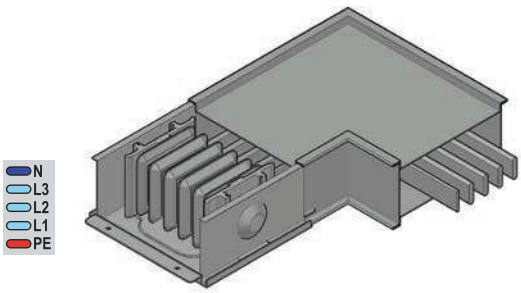


Vertical Elbow Down	DDD

SAMPLE ORDER

400 A Aluminum,
Elbow IP 55 5 Conductors

MP-HA405T2FDDD



Vertical Elbow Up	DDU

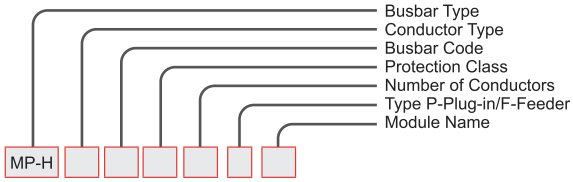
SAMPLE ORDER

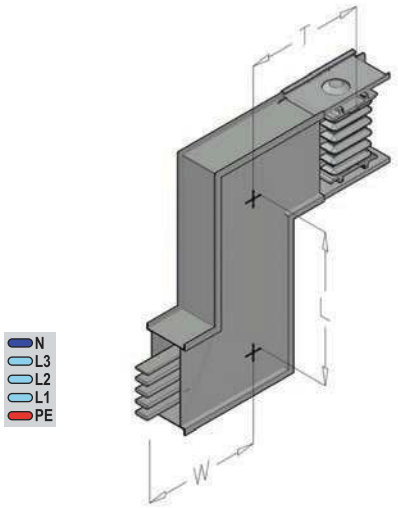
400 A Aluminum,
Elbow IP 55 5 Conductors

MP-HA405T2FDDU

(AL)			(CU)		
AMR.	W mm	T mm	AMR.	W mm	T mm
160A	145	145	250A	150	150
250A	150	150	315A	155	155
315A	155	155	400A	165	165
400A	165	165	600A	180	180
500A	170	170			
600A	180	180			
AMP.	X mm	Y mm	AMP.	X mm	Y mm
160A	240	240	250A	240	240
250A	240	240	315A	240	240
315A	240	240	400A	240	240
400A	240	240	600A	240	240
500A	240	240			
600A	240	240			

Elbow Modules





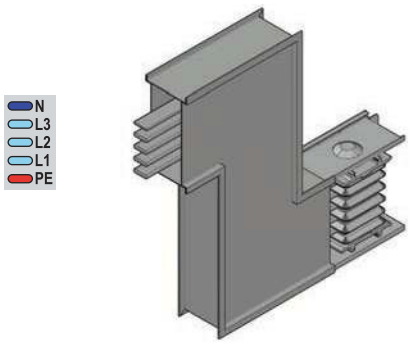
Double Vertical Elbow Up Off-set	DOU

SAMPLE ORDER

250 A Copper

Offset IP 55 5 Conductors

MP-HC265T2FDOU



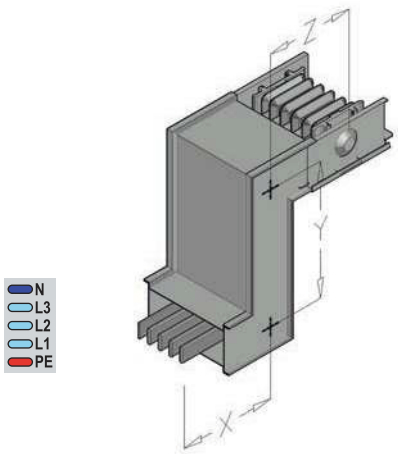
Double Vertical Elbow Down Off-set	DOD

SAMPLE ORDER

400 A Copper

Offset IP 55 5 Conductors

MP-HC415T2FDOD



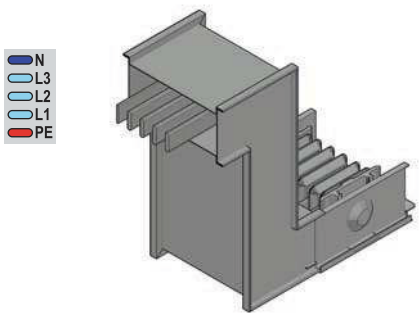
Double Horizontal Elbow Right Off-set	YOR

SAMPLE ORDER

600 A Copper

Offset IP 55 5 Conductors

MP-HC615T2FYOR



Double Horizontal Elbow Left Off-set	YOL

SAMPLE ORDER

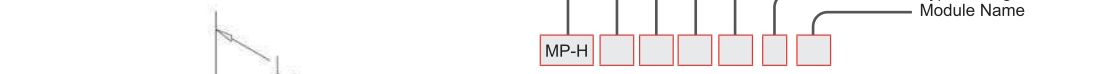
250 A Copper

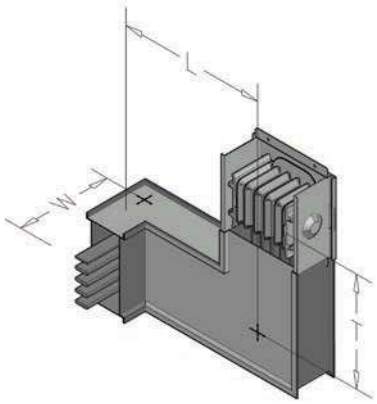
Offset IP 55 5 Conductors

MP-HC265T2FYOL

(AL)				(CU)			
AMR.	W mm	T mm	L mm	AMR.	W mm	T mm	L mm
160A	240	240	240	250A	240	240	240
250A	240	240	240	315A	240	240	240
315A	240	240	240	400A	240	240	240
400A	240	240	240	600A	240	240	240
500A	240	240	240				
600A	240	240	240				
AMR.	X mm	Y mm	Z mm	AMR.	X mm	Y mm	Z mm
160A	145	145	145	250A	150	150	150
250A	150	150	150	315A	155	155	155
315A	155	155	155	400A	165	165	165
400A	165	165	165	600A	180	180	180
500A	170	170	170				
600A	180	180	180				

Elbow Modules





N
L3
L2
L1
PE

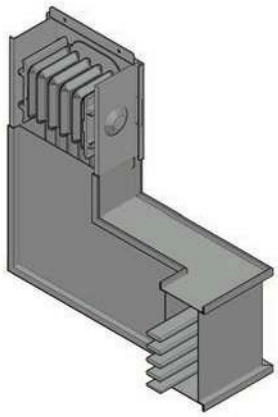
Combined Up Right Off-set	URK

SAMPLE ORDER

600 A Copper

Offset IP 55 5 Conductors

MP-HC615T2FURK



N
L3
L2
L1
PE

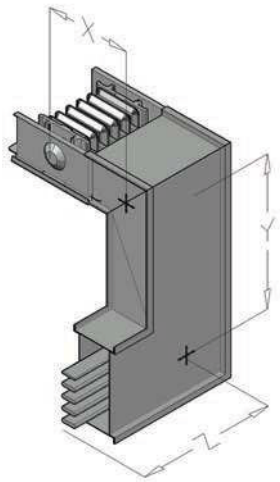
Combined Up Left Off-set	ULK

SAMPLE ORDER

400 A Aluminum

Offset IP 55 5 Conductors

MP-HA405T2FULK



N
L3
L2
L1
PE

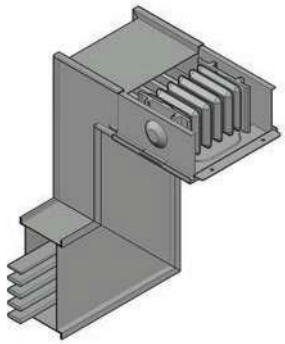
Combined Down Right Off-set	DRK

SAMPLE ORDER

250 A Copper

Offset IP 55 5 Conductors

MP-HC265T2FDRK



N
L3
L2
L1
PE

Combined Down Left Off-set	DLK

SAMPLE ORDER

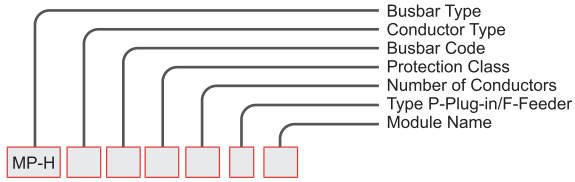
400 A Aluminum

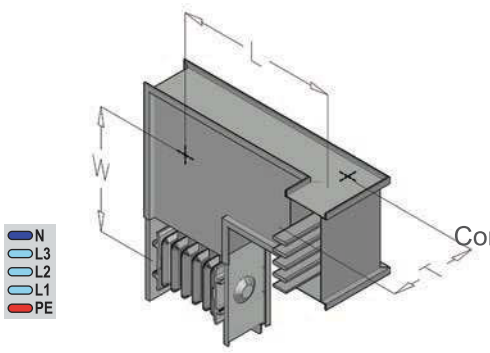
Offset IP 55 5 Conductors

MP-HA405T2FDLK

(AL)				(CU)			
AMR.	W mm	T mm	L mm	AMR.	W mm	T mm	L mm
160A	145	240	240	250A	150	240	240
250A	150	240	240	315A	155	240	240
315A	155	240	240	400A	165	240	240
400A	165	240	240	600A	180	240	240
500A	170	240	240				
600A	180	240	240				
AMR.	X mm	Y mm	Z mm	AMR.	X mm	Y mm	Z mm
160A	145	240	240	250A	150	240	240
250A	150	240	240	315A	155	240	240
315A	155	240	240	400A	165	240	240
400A	165	240	240	600A	180	240	240
500A	170	240	240				
600A	180	240	240				

Elbow Modules





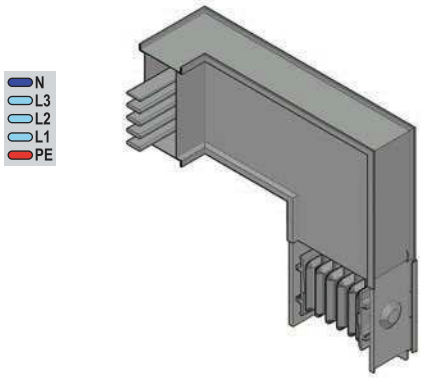
Combined Right Up Off-set	RUK

SAMPLE ORDER

250 A Copper

Combined Off-set IP 55 5 Conductors

MP-HC265T2FRUK



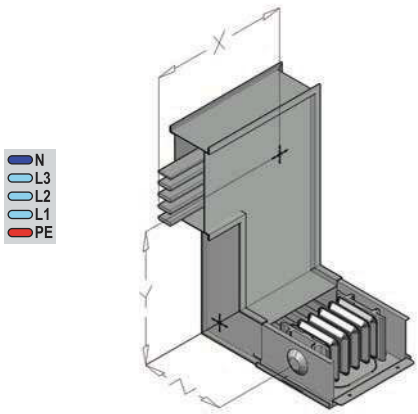
Combined Left Up Off-set	LUK

SAMPLE ORDER

250 A Copper

Combined Off-set IP 55 5 Conductors

MP-HC265T2FLUK



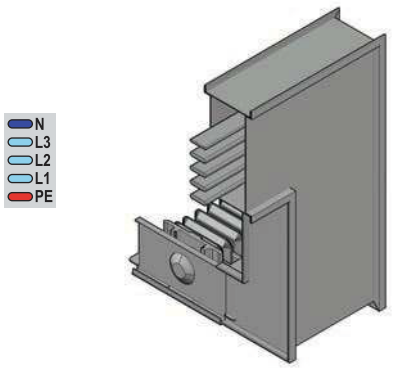
Combined Right Down Off-set	RDK

SAMPLE ORDER

250 A Aluminum

Combined Off-set IP 55 5 Conductors

MP-HA255T2FRDK



Combined Left Down Off-set	LDK

SAMPLE ORDER

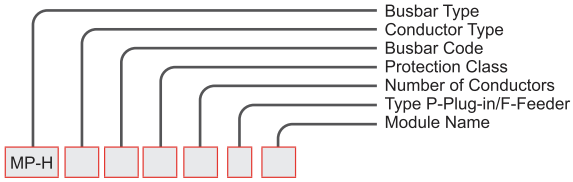
250 A Aluminum

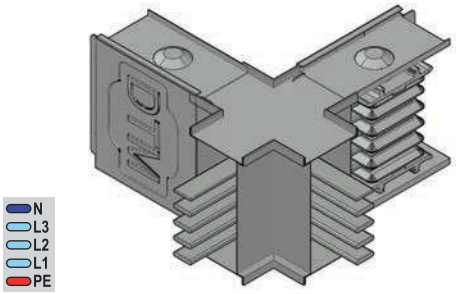
Combined Off-set IP 55 5 Conductors

MP-HA255T2FLDK

(AL)				(CU)			
AMR.	W mm	T mm	L mm	AMR.	W mm	T mm	L mm
160A	240	145	240	250A	240	150	240
250A	240	150	240	315A	240	155	240
315A	240	155	240	400A	240	165	240
400A	240	165	240	600A	240	180	240
500A	240	170	240				
600A	240	180	240				
AMR.	X mm	Y mm	Z mm	AMR.	X mm	Y mm	Z mm
160A	240	240	145	250A	240	240	150
250A	240	240	150	315A	240	240	155
315A	240	240	155	400A	240	240	165
400A	240	240	165	600A	240	240	180
500A	240	240	170				
600A	240	240	180				

Elbow Modules





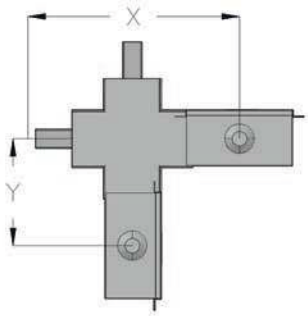
Quadruple (T) Module	DT

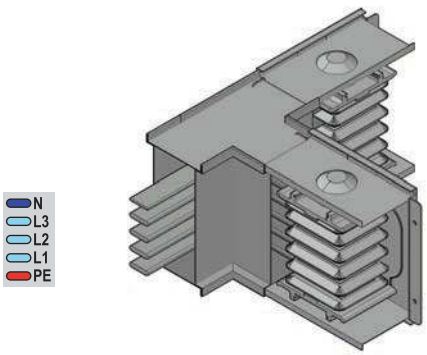
SAMPLE ORDER

250 A Aluminum,

Quadruple T Module IP 55 5 Conductors

MP-HA255T2FDT





Center (T) Module	OT

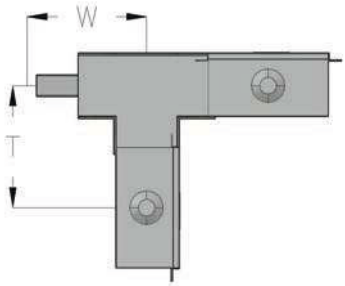
SAMPLE ORDER

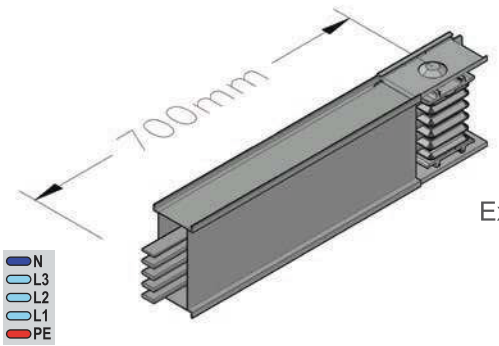
250 A Aluminum,

T Module IP 55 5 Conductors

MP-HA255T2FOT

(AL)			(CU)		
AMR.	X mm	Y mm	AMR.	X mm	Y mm
160A	290	145	250A	300	150
250A	300	150	315A	310	155
315A	310	155	400A	330	165
400A	330	165	600A	360	180
500A	340	170			
600A	360	180			
AMR.	W mm	T mm	AMR.	W mm	T mm
160A	145	145	250A	150	150
250A	150	150	315A	155	155
315A	155	155	400A	165	165
400A	165	165	600A	180	180
500A	170	170			
600A	180	180			





Expansion Module	G

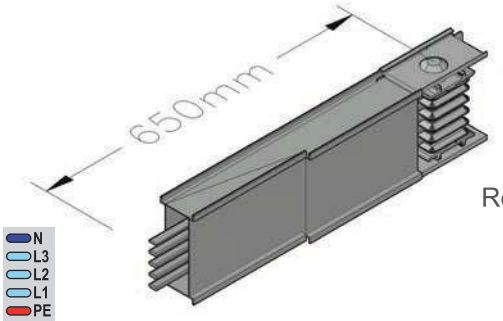
SAMPLE ORDER

400 A Aluminum,

Expansion Module IP 55 5 Conductors

MP-HA405T2FG

MP-H AL Conductor RD					
Rcvin Crrnt	Busbar Code				
	16	25	31	40	50
	Reduced Receiving Current				
	160	250	315	400	500
250A	✓	-	-	-	-
315A	✓	✓	-	-	-
400A	-	✓	✓	-	-
500A	-	-	✓	✓	-
600A	-	-	-	✓	✓



Reduction Module	RD

SAMPLE ORDER

400A-250A Aluminum,

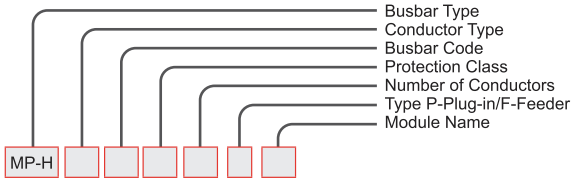
Reduction Module IP 55 5 Conductors

MP-HA405T2FRD

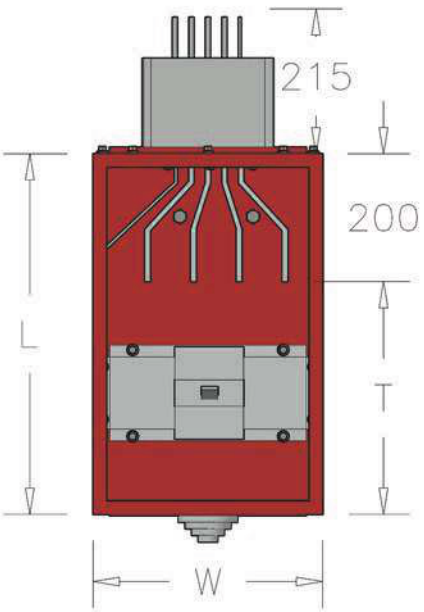
MP-H CU Conductor RD				
Rcvin Crrnt	Busbar Code			
	26	32	41	51
	Reduced Receiving Current			
	250	315	400	500
315A	✓	-	-	-
400A	✓	✓	-	-
500A	-	✓	✓	-
600A	-	-	✓	✓

MP-H

Feed Boxes



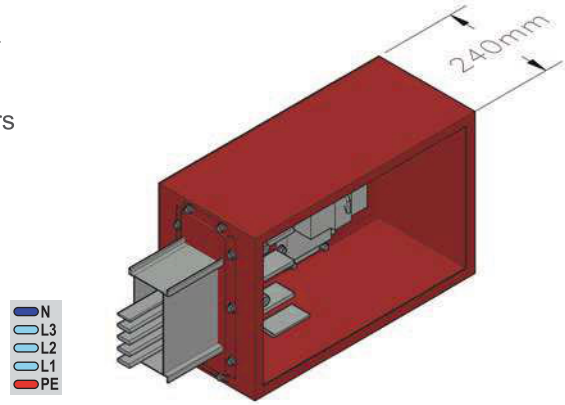
Start Feed Module	BM1



SAMPLE ORDER

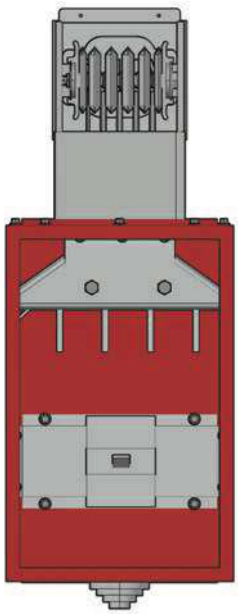
400 A Aluminum,
Feed IP 55 5 Conductors

MP-HA405T2BM1



	(AL)				(CU)			
AMR.	W mm	T mm	L mm	AMR.	W mm	T mm	L mm
160A	350	360	560	250A	350	360	560
250A	350	360	560	315A	350	360	560
315A	350	360	560	400A	350	360	560
400A	350	360	560	600A	350	360	560
500A	350	360	560				
600A	350	360	560				

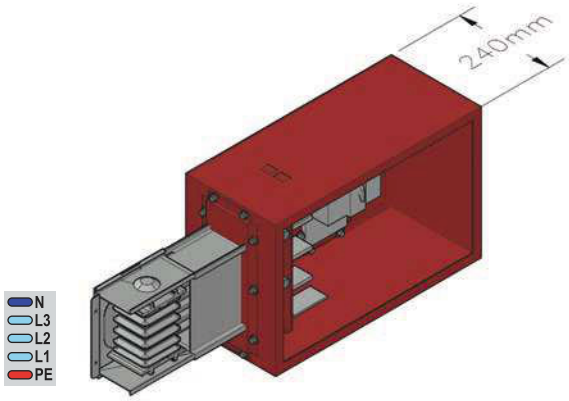
End Feed Module	BM2



SAMPLE ORDER

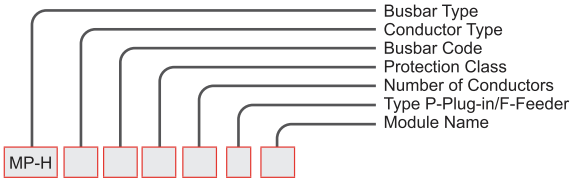
400 A Aluminum,
End Feed IP 55 5 Conductors

MP-HA405T2BM2



For non-standard boxes please call our company.

Feed Boxes

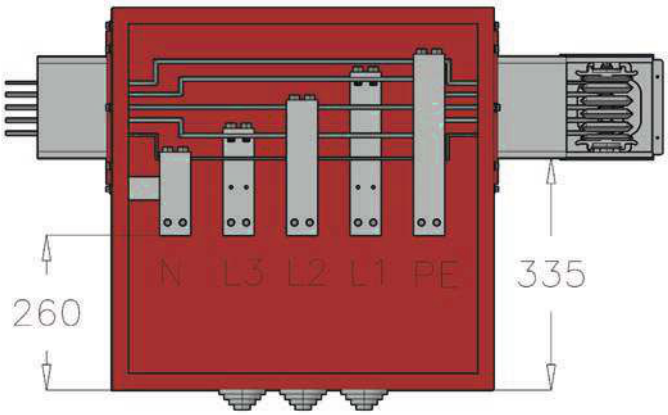


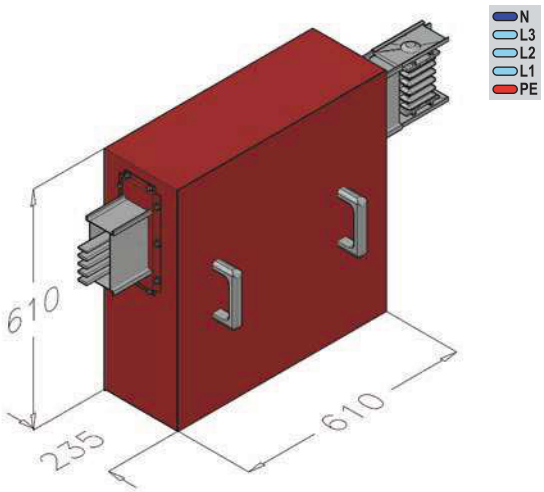
Center Feed Module Left	OB1

SAMPLE ORDER

250 A Aluminum,
Center Feed IP 55 5 Conductors

MP-HA255T2OB1



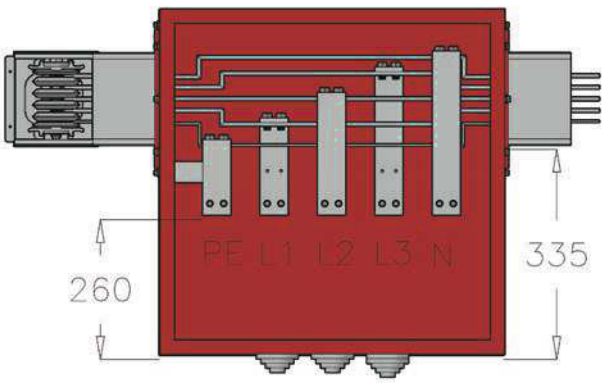


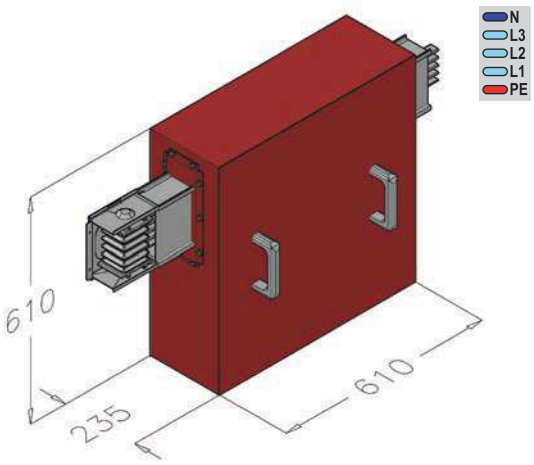
Center Feed Module Right	OB2

SAMPLE ORDER

250 A Aluminum,
Center Feed IP 55 5 Conductors

MP-HA255T2OB2

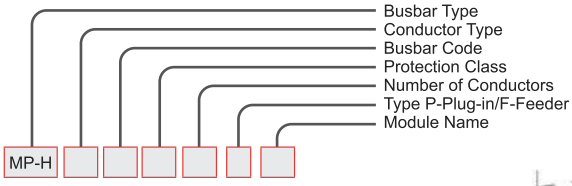


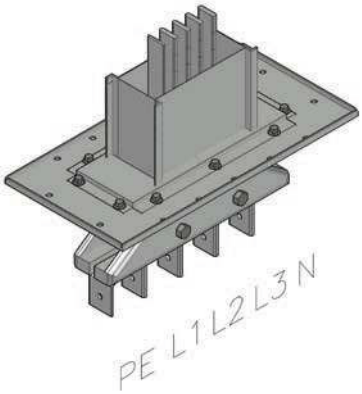


For non-standard boxes please contact local dealer.

MP-H

Panel Modules



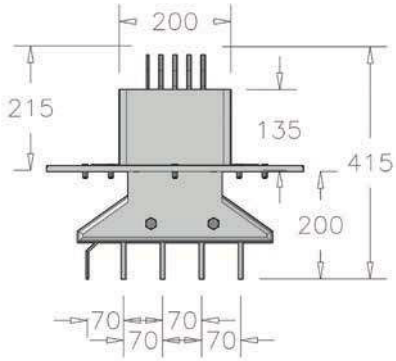


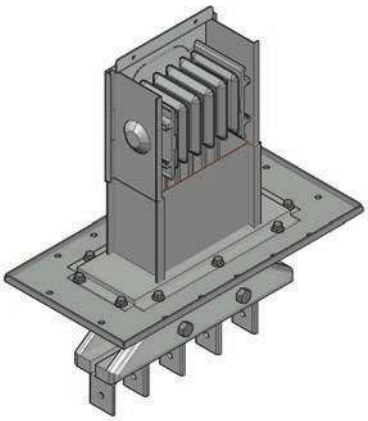
Panel Module (E)	PME

SAMPLE ORDER

250 A Aluminum,
Panel Module IP 55 5 Conductors

MP-HA255T2PME



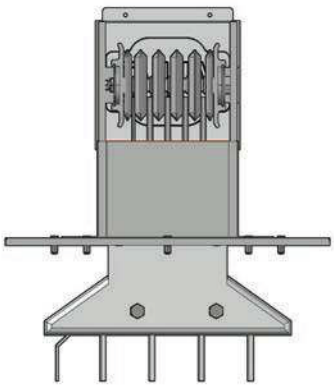


Panel Module (D)	PMD

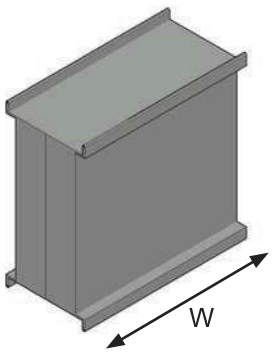
SAMPLE ORDER

400 A Aluminum,
Panel Module IP 55 5 Conductors

MP-HA405T2PMD



Standard Modules



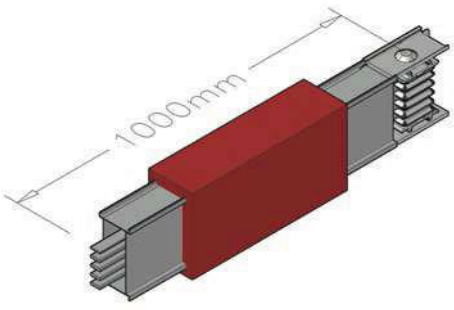
End Covers	S

SAMPLE ORDER

250 A Aluminum,
Termination IP 55 5 Conductors

MP-HA255T2S

Termination			
(AL)		(CU)	
AMR.	W mm	AMR.	W mm
160A	200	250A	200
250A	200	315A	200
315A	200	400A	200
400A	200	600A	200
500A	200		
600A	200		



Horizontal Expansion Module	DH

SAMPLE ORDER

250 A Aluminum,
Expansion IP 55 5 Conductors

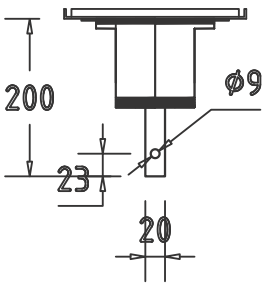
MP-HA255T2DH

Horizontal Expansion Information:
A 40 MT one is used on long horizontal lines.

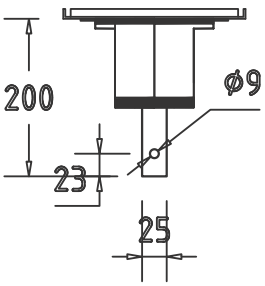
MP-H

Panel Modules (AL)

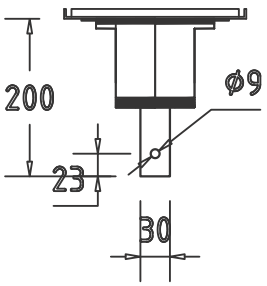
160A



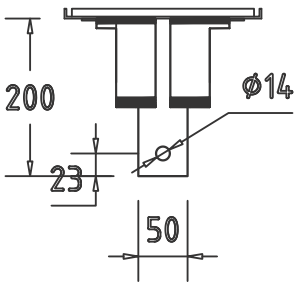
250A



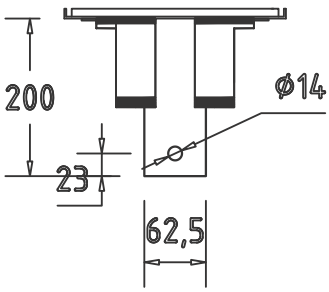
315A



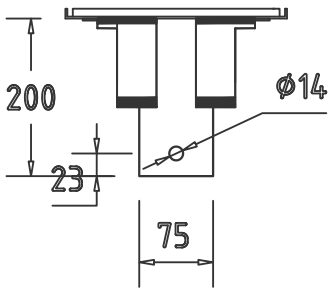
400A



500A

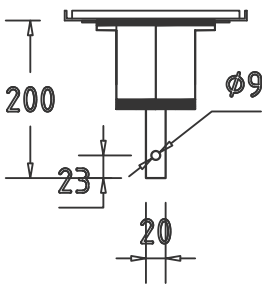


600A

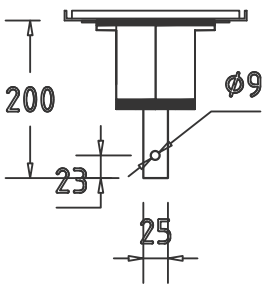


Panel Modules (CU)

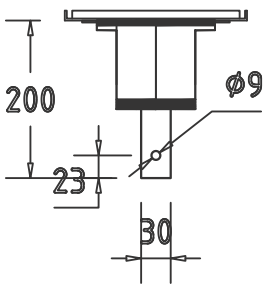
250A



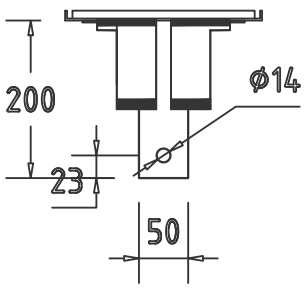
315A



400A

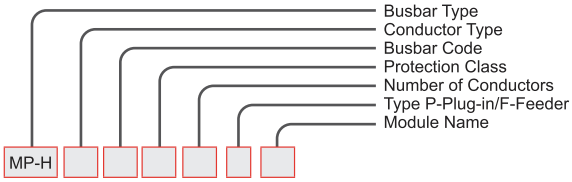


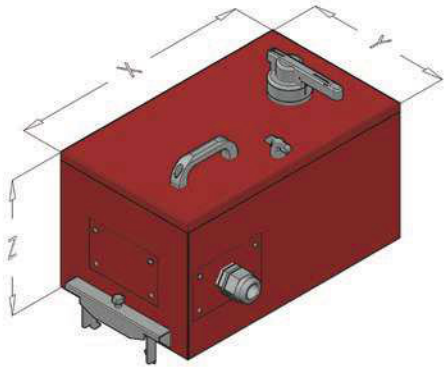
600A



MP-H

Tap-Off Boxes





Tap-Off Box with Automatic Switch	KM1

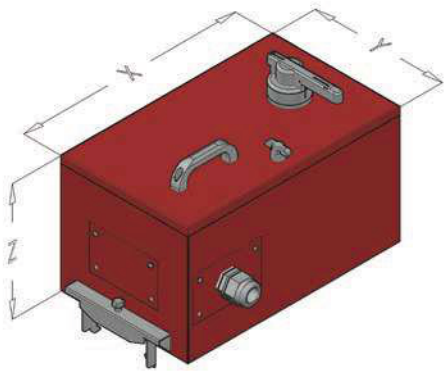
SAMPLE ORDER

250 A Tap-Off Box Empty
IP 55 5 Conductors

MPKM125T2KM1B

TAP-OFF BOX WITH AUTO SWITCH				
AMP.	Box Code	X (mm)	Y (mm)	Z (mm)
160	MPKM116	530	300	220
250	MPKM125	530	300	220
400	MPKM140	710	300	220

SWITCH TYPE CODE	
SWITCH	EMPTY
S	B



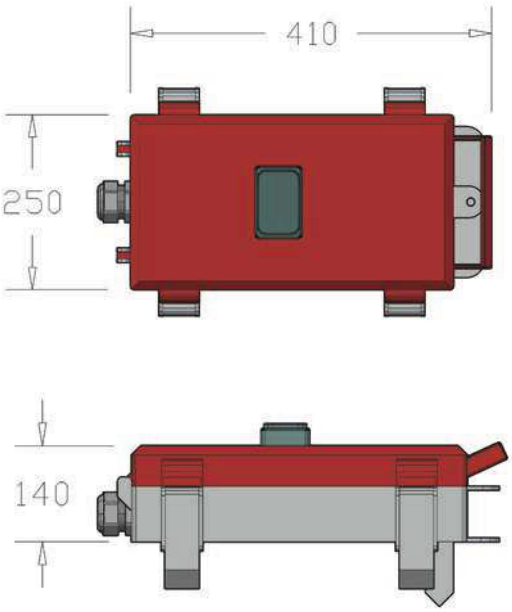
Tap-Off Box with DTM Mechanism	KM2

SAMPLE ORDER

160 A Tap-Off Box with Switch
IP 55 5 Conductors

MPKM216T2KM2S

TAP-OFF BOX WITH DTM MECHANISM AND AUTO SWITCH				
AMP.	Box Code	X (mm)	Y (mm)	Z (mm)
160	MPKM216	530	300	220
250	MPKM225	530	300	220
400	MPKM240	710	300	220



Tap-Off Box Plastic	KPO

SAMPLE ORDER

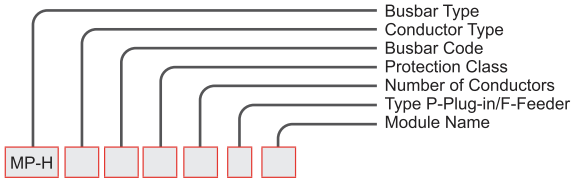
80 A Tap-Off Box
IP 55 5 Conductors

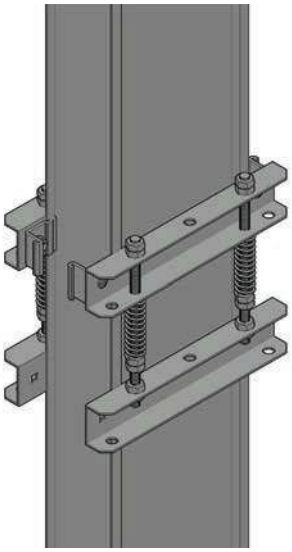
MPH0805T2KPO

TAP-OFF BOX WITH AUTO SWITCH OR FUSE	
Box Code	AMP.
MPH025	25
MPH032	32
MPH040	40
MPH063	63
MPH080	80
MPH100	100
MPH125	125
MPH160	160

For non-standard boxes please contact local dealer.

Suspension Elements



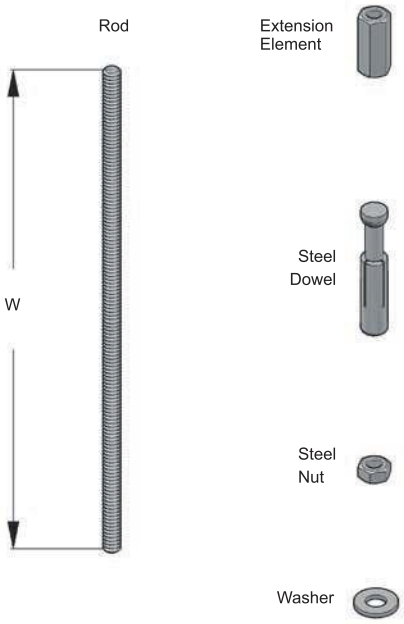


Vertical Suspension (L) Shaft	SA

SAMPLE ORDER

400 A High-Rise/Shaft Suspension
IP 55 5 Conductors

MP-HA405T2SA



Connection Elements	RE

SAMPLE ORDER

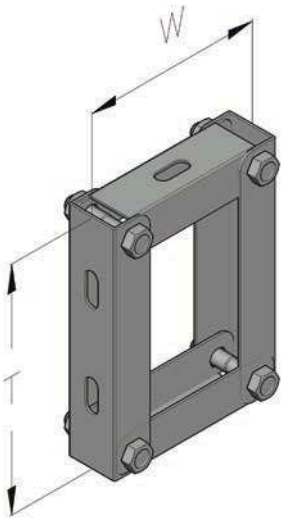
M8 Rod 500 mm

MP-HRE101

Drill Bit Diameter:

M8……..Ø12
M10……..Ø14

CONNECTION ELEMENTS		
Name	W(mm)	Code
B-E 8 Tij Hanger (M8)	500	RE101
B-E 8 Tij Hanger (M8)	1000	RE102
B-E 10 Tij Hanger (M10)	500	RE103
B-E 10 Tij Hanger (M10)	1000	RE104
(M8) Extension Element	-	RE105
(M10) Extension Element	-	RE106
M 8 Pull Dowel	-	RE107
M 10 Pull Dowel	-	RE108
M 8 Steel Nut	-	RE109
M 10 Steel Nut	-	RE110
M 8 Washer	-	BE111
M 10 Washer	-	RE112



Horizontal Suspension Element (CLAMP)	YA

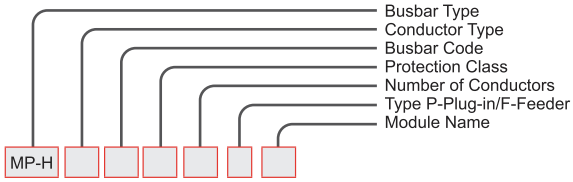
SAMPLE ORDER

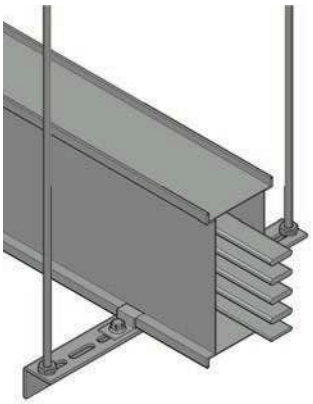
250 A Aluminum
Horizontal Suspension
IP 55 5 Conductors

MP-H255T2YA

HORIZONTAL SUSPENSION SET			
AL			
AMP.	CODE	T (mm)	W (mm)
160	MP-HA16	240	120
250	MP-HA25	240	125
315	MP-HA31	240	130
400	MP-HA40	240	150
500	MP-HA50	240	163
600	MP-HA60	240	175
CU			
AMP.	CODE	T (mm)	W (mm)
250	MP-HC26	240	120
315	MP-HC32	240	125
400	MP-HC41	240	130
600	MP-HC61	240	150

Suspension Elements

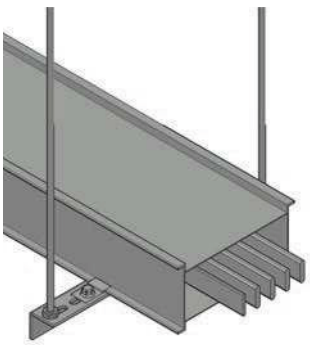




Horizontal Suspension Vertical Module (L) Bracket	YVK

SAMPLE ORDER
400 A Aluminum,
Suspension Element
IP 55 5 Conductors
MP-HA405T2YVK

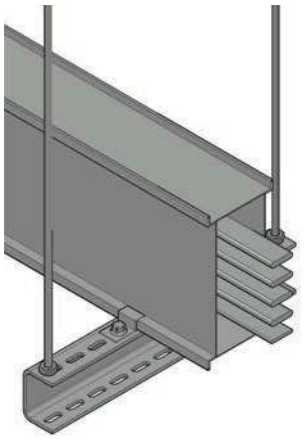
HORIZONTAL SUSPENSION UNIT VERTICAL (40X40 Bracket)			
(AL)		(CU)	
AMP.	L (mm)	AMP.	L (mm)
160A	280	250A	280
250A	285	315A	285
315A	290	400A	290
400A	310	600A	310
500A	325		
600A	335		



Horizontal Suspension Horizontal Module (L) Bracket	YHK

SAMPLE ORDER
400 A Aluminum,
Suspension Element
IP 55 5 Conductors
MP-HA405T2YHK

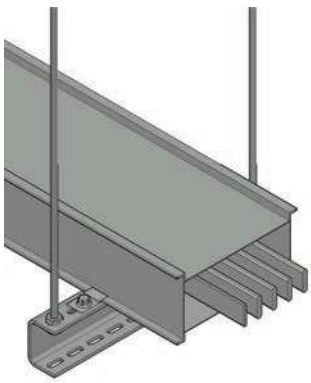
HORIZONTAL SUSPENSION UNIT HORIZONTAL (40X40 Bracket)			
(AL)		(CU)	
AMP.	W (mm)	AMP.	W (mm)
160A	400	250A	400
250A	400	315A	400
315A	400	400A	400
400A	400	600A	400
500A	400		
600A	400		



Horizontal Suspension Vertical Module (U) Profile	YVU

SAMPLE ORDER
250 A Aluminum,
Suspension Element
IP 55 5 Conductors
MP-HA255T2YVU

HORIZONTAL SUSPENSION UNIT VERTICAL (U PROFILE) 45X45			
(AL)		(CU)	
AMP.	T (mm)	AMP.	T (mm)
160A	280	250A	280
250A	285	315A	285
315A	290	400A	290
400A	310	600A	310
500A	325		
600A	335		



Horizontal Suspension Horizontal Module (U) Profile	YHU

SAMPLE ORDER
250 A Aluminum,
Suspension Element
IP 55 5 Conductors
MP-HA255T2YHU

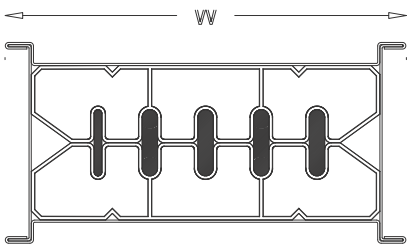
HORIZONTAL SUSPENSION UNIT HORIZONTAL (U PROFILE) 45X65			
(AL)		(CU)	
AMP.	H (mm)	AMP.	H (mm)
160A	400	250A	400
250A	400	315A	400
315A	400	400A	400
400A	400	600A	400
500A	400		
600A	400		

MP-H

Busbar Technical Data

ALUMINUM BUSBAR SIZES AND WEIGHT									
AL									
AMPER CLASS	BUSBAR MM			CONDUCTOR/SECTION			FEEDER KG/M		
	W		H	MM			3P+N+PE	3P+N+PE+PE	3P+N+PE+FE2
160	198		80			20	6,5	6,65	6,8
250	198		85			25	7	7,25	7,5
315	198	X	90	6	X	30	7,5	7,85	8,3
400	198		110			50	9,5	9,85	10,5
500	198		122,5			62,5	10,5	10,85	11,5
600	198		135			75	11,5	11,85	12,5

COPPER BUSBAR SIZES AND WEIGHT									
CU									
AMPER CLASS	BUSBAR MM			CONDUCTOR/SECTION			FEEDER KG/M		
	W		H	MM			3P+N+PE	3P+N+PE+PE	3P+N+PE+FE2
250	198		80			20	9,5	9,85	10,5
315	198	X	85	6	X	25	10,5	10,85	12
400	198		90			30	12	12,8	13,5
600	198		110			50	15,5	16,5	18,5



GALVANIZED STEEL SHEET BODY

ELECTRICAL TECHNICAL INFO			
Current	Resistance R (mohm/m)	Reactance X (mohm/m)	Impedance Z (mohm/m)
Aluminum			
160	0,29	0,29	0,41
250	0,33	0,33	0,47
315	0,27	0,27	0,39
400	0,25	0,25	0,36
500	0,12	0,12	0,17
600	0,10	0,10	0,14
COPPER			
250	0,22	0,18	0,28
315	0,18	0,16	0,24
400	0,15	0,15	0,21
600	0,10	0,12	0,15

Calculate the voltage drop ΔV% according to the formula below.	
$\Delta V\% = \sqrt{3} \times (R \times \cos\varphi + X \times \sin\varphi) \times Ib \times L / Ue \times 100$	
R: Resistance (mohm/m) (Electrical technical info is found from the table)	
X: Reactance (mohm/m) (Electrical technical info is found from the table)	
I_b: Sum of all extra effective charges	
L: Total length of busbar line	
U_e: Supply voltage	
Example: The calculation of 100 A Busbar is as follows.	
(L) Line Length	100 mt
(I_b) Effective load	144 A
U_b : Supply Voltage	400 V
Cos φ	0,80
R value is 0,29 x 10^{-3} ohm/m and X value is 0,29 x 10^{-3} ohm/m from the table.	
(ΔV) Maximum allowable voltage drop 3%	
$\Delta V\% = \sqrt{3} \times (R \times \cos\varphi + X \times \sin\varphi) \times Ib \times L / Ue \times 100$	
$\Delta V\% = \frac{1,73 \times (0,29 \times 0,8 + 0,29 \times 0,6) \times 10\text{-}3 \times 144 \times 100 \times 100}{400} = 2,53\%$	
The value found is less than 3%. 100 A Busbar selection is suitable according to voltage drop calculation.	

Busbar Technical Data

TECHNICAL TABLE (MP-H AL)								
ALUMINUM CONDUCTOR (AL)								
Rated Current	In	A	160	250	315	400	500	600
Busbar Code			MP-HA16	MP-HA25	MP-HA31	MP-HA40	MP-HA50	MP-HA60
Protection Class	IP55							
Standards	IEC 61439-6 TS EN 61439-6 IEC 61439-1 TS EN 61439-1							
Max. Rated Operating Voltage	Ue	Vac	1000					
Frequency	f	Hz	50					
Rated Insulation Voltage	Ui	V	1000	Category IV				
Mechanical Impact Resistance (IK Code)	Plug-in Busbar IK09							
Measures for the Protection of People	Basic Protection (TS HD 60364-4-41, item A1)							
Rated Short Term Current (1s)	Icw	kA	10	15	15	30	30	35
Rated Peak Withstand Current	Ipk	kA	17	30	30	63	63	73,5
Rated Short Time Current for Neutral Conductor (1s)	Icw	kA	6	9	9	18	18	21
Rated Peak Withstanding Current for Neutral Conductor	Ipk	kA	9,18	15,3	15,3	36	36	44,1
Rated Short Time Current For Prot. Circuit (1s)	Icw	kA	6	9	9	18	18	21
Rated Peak Withstand Current for Prot. Circuit	Ipk	kA	9.18	15,3	15.3	36	36	44,1

TECHNICAL TABLE (MP-H CU)						
COPPER CONDUCTOR (CU)						
Rated Current	In	A	250	315	400	600
Busbar Code			MP-HC26	MP-HC32	MP-HC41	MP-HC61
Protection Class	IP55					
Standards	IEC 61439-6 TS EN 61439-6 IEC 61439-1 TS EN 61439-1					
Max. Rated Operating Voltage	Ue	Vac	1000			
Frequency	f	Hz	50			
Rated Insulation Voltage	Ui	V	1000		Category	
Mechanical Impact Resistance (IK Code)	Plug-in Busbar IK09					
Measures for the Protection of People	Basic Protection (TS-HD 60364-4-41, item A1)					
Rated Short Term Current (1s)	Icw	kA	18	18	26	35
Rated Peak Withstand Current	Ipk	kA	36	36	52	72
Rated Short Time Current for Neutral Conductor (1s)	Icw	kA	10,5	10,5	14,5	20
Rated Peak Withstanding Current for Neutral Conductor	Ipk	kA	21	21	31	44,3
Rated Short Time Current For Prot. Circuit (1s)	Icw	kA	10,5	10,5	14,5	20
Rated Peak Withstand Current for Prot. Circuit	Ipk	kA	21	21	31	44,3

Vertical and Horizontal Busbar Applications

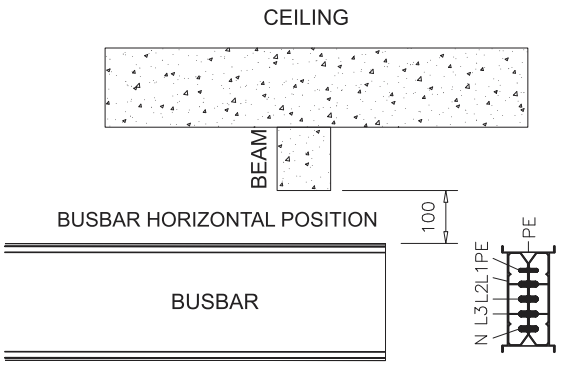


FIGURE-1 BEAM TRANSMISSION

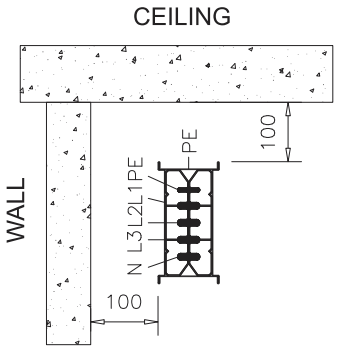


FIGURE-2 HORIZONTAL POSITION

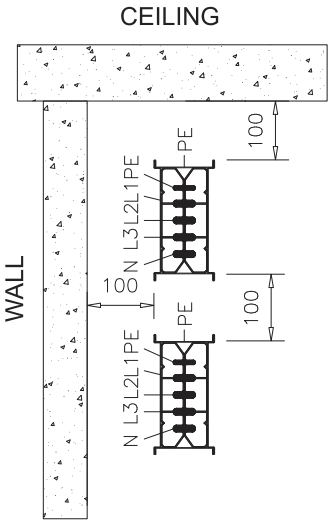


FIGURE-3 HORIZONTAL DOUBLE

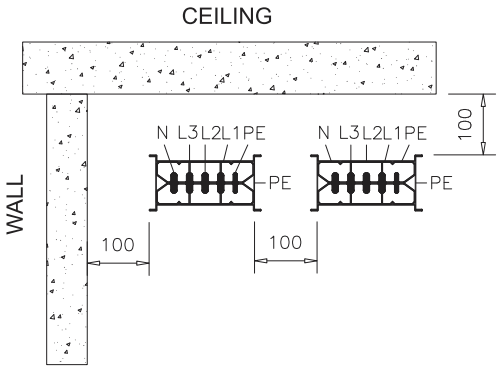


FIGURE-4 VERTICAL DOUBLE

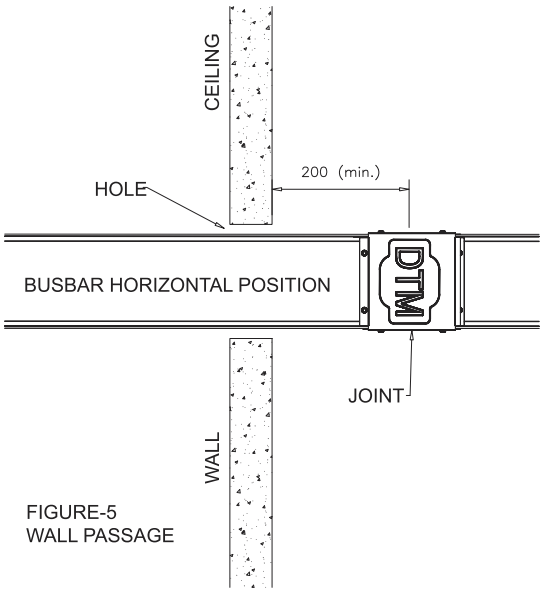


FIGURE-5
WALL PASSAGE

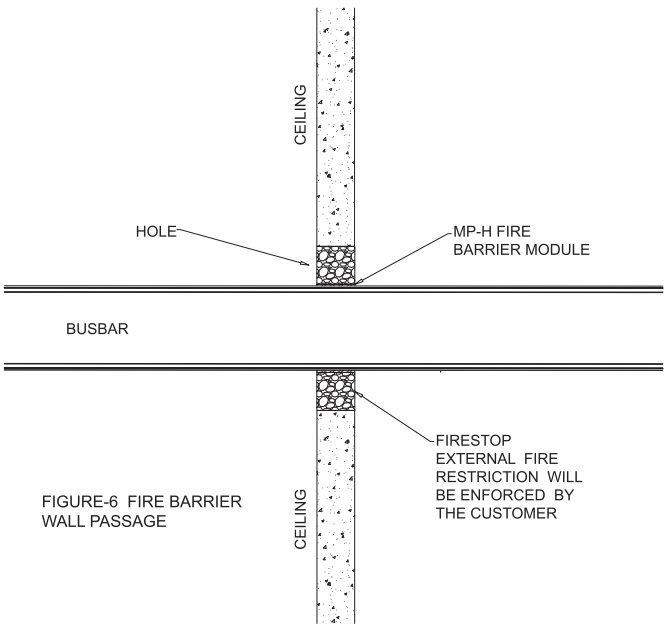


FIGURE-6 FIRE BARRIER
WALL PASSAGE

All dimensions are given in mm. The dimensions given above are minimum values.

Horizontal Expansion Unit Applications

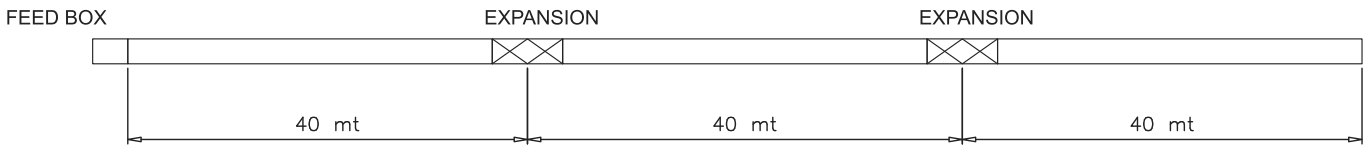
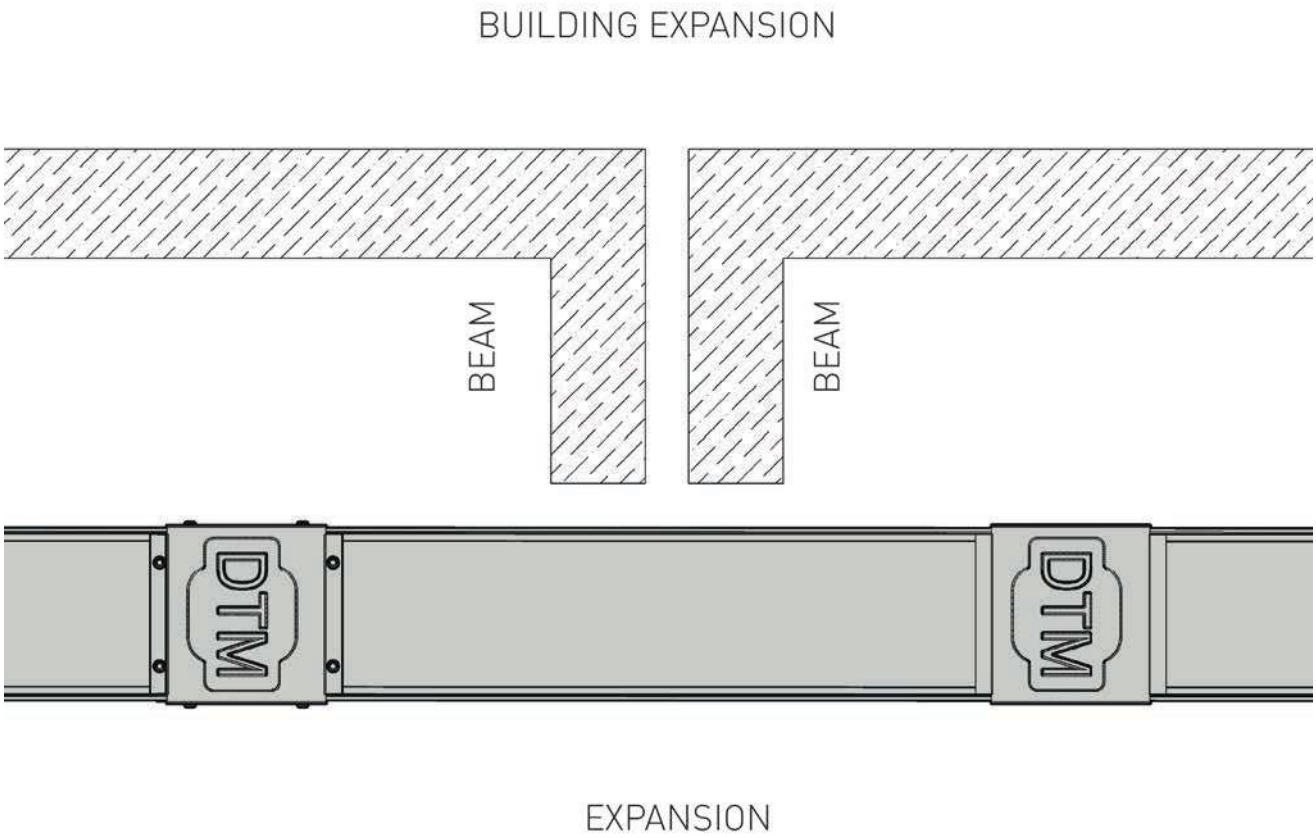


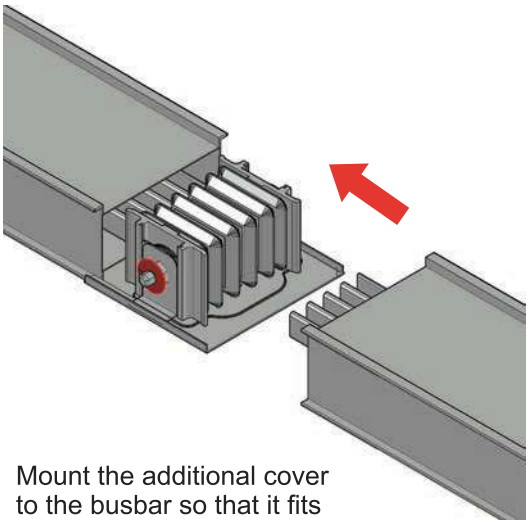
Figure 1. Horizontal expansion application



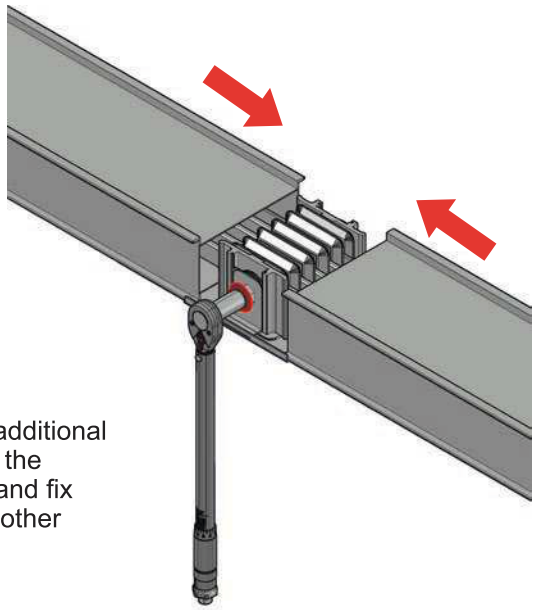
Şekil 2. Horizontal building expansion application

Horizontal Expansion is used in transitions between two buildings. In addition, the horizontal expansion units should be used every 40 meters.

Installation Method

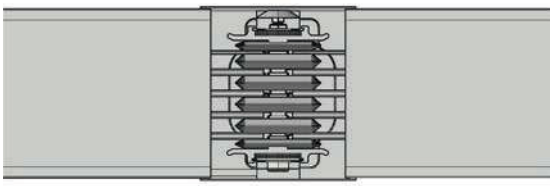


1 Mount the additional cover to the busbar so that it fits into the body.

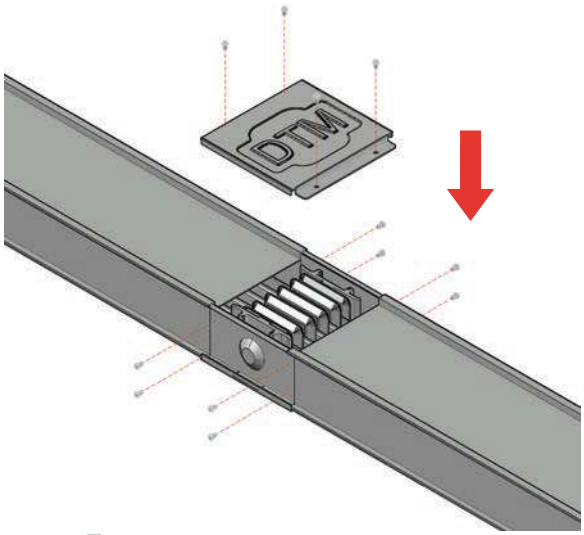


2 Fix the additional block to the busbar and fix it to the other body.

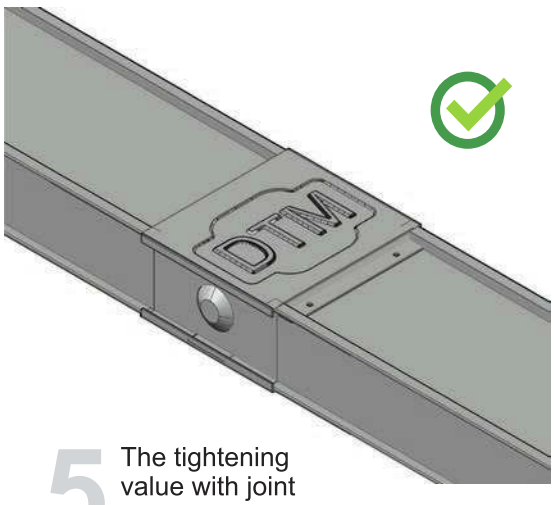
RECOMMENDED TORQUE VALUE: 40 lbft (55 Nm)



3 Tighten the outer head bolt until the first head breaks off.



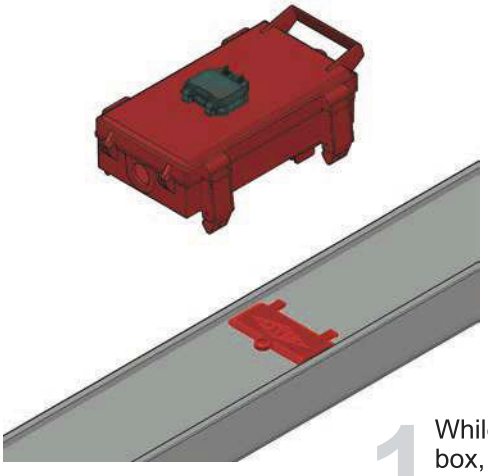
4 Before closing the joint cover, check whether the bolt(s) are cracked or broken and mount the joint cover.



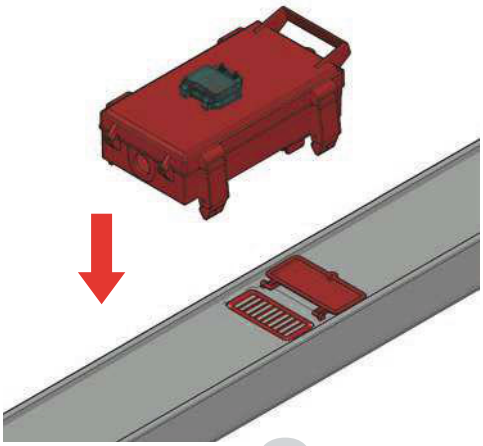
5 The tightening value with joint block torque is around 55Nm (40lbft).

MP-H

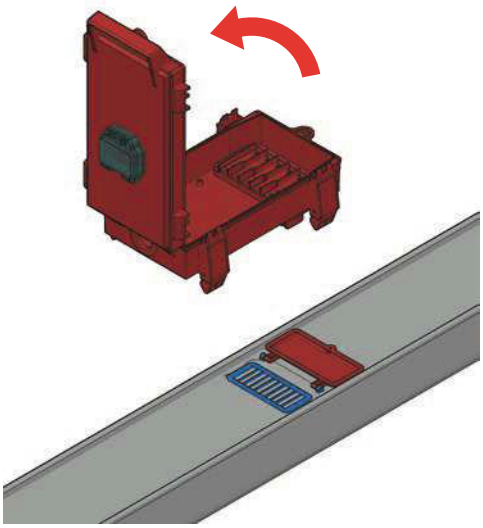
Tap-Off Box (up to 160A) Installation



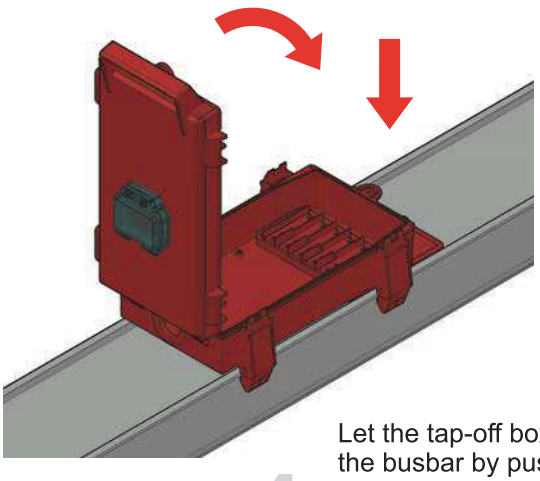
1 While assembling the box, pay attention to the protrusion on the lower entrance of the tap-off box and mount it to the socket.



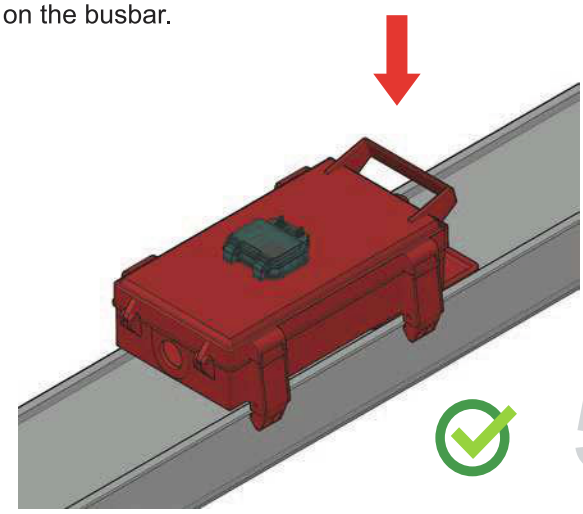
2 Open the socket cover.



3 It should be mounted by opening the cover of the tap-off box and placing it on the busbar.

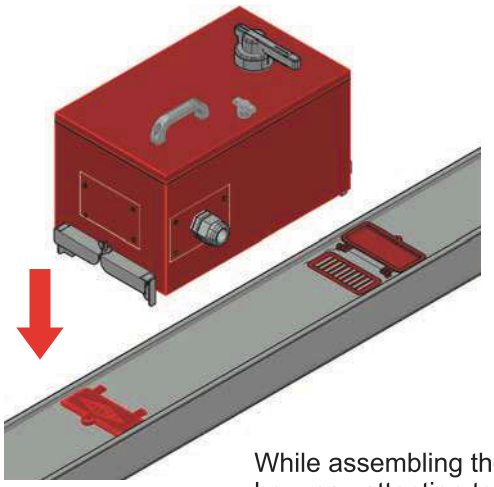


4 Let the tap-off box fit on the busbar by pushing it from the body. Make sure it fits on the busbar.

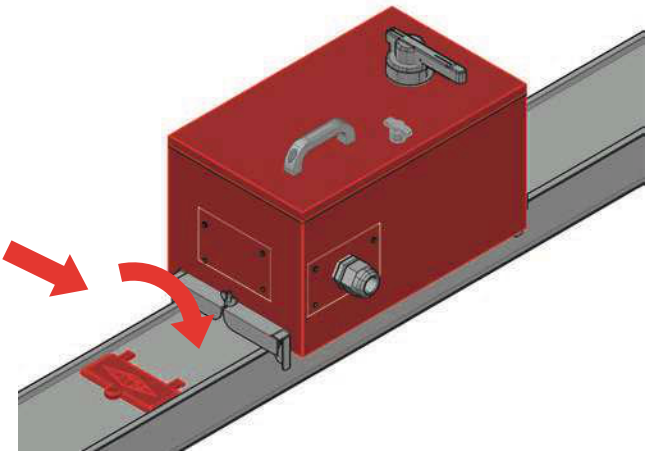


5 Close the cover of the tap-off box. With the help of the lid with a special mechanism energy is activated when the lid is closed.

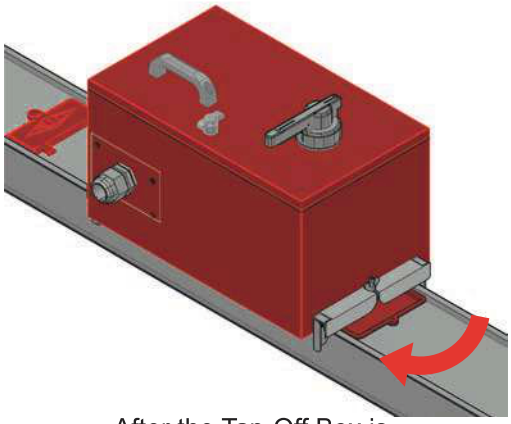
Tap-Off Box (above 160A) Installation



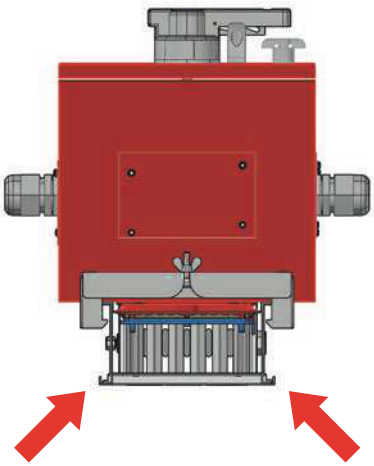
1 While assembling the box, pay attention to the protrusion on the lower entrance of the outlet box and mount it to the socket.



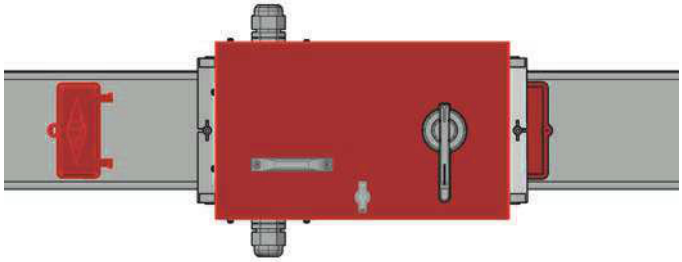
2 After the Tap-Off Box is mounted to the busbar, tighten the lower clamps of the box.



3 After the Tap-Off Box is mounted to the busbar, tighten the box upper clamps.



4 After mounting the Tap-Off Box to the busbar, make sure that the lower clamps of the box are fully seated on the busbar body.



5 Activate the Tap-Off Box via a special mechanism. When the mechanism is in (OFF), the cover is closed, and when it is in the (ON) position, energy is supplied. NOTE: In the (ON) Position for safety reasons, the box cover is prevented from being opened by the mechanism.