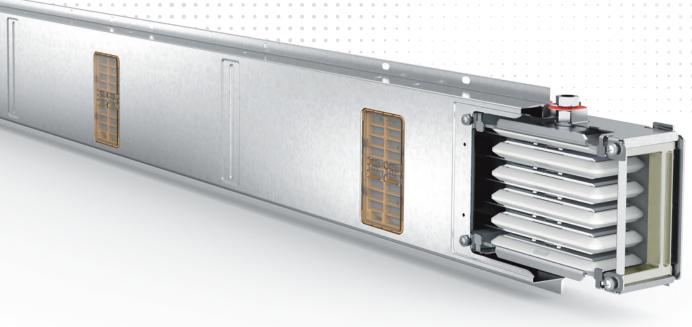
XCM







# **la** legrand



# XCM BUSBAR

# Performance and functionality in medium power

# BUSBAR FROM 160 TO 1000 A

**XCM** is dedicated to the distribution of power in medium to large installations, including rising mains, in commercial and residential buildings.

# Range

The main features of the XCM range are:

- speed, simplicity and flexibility during the installation and design of busbar route
- available in various sizes: from 160 A up to 1000 A with aluminium alloy conductors, and from 250 A to 1000 A with 99.9% electrolytic copper conductors
- compliance with the IEC 61439-6 standard
- reference ambient temperature 40 °C.

# **WIDE RANGE OF TAP-OFF BOXES**

The range of tap-off boxes is capable of meeting all needs of the customer. Tap-off boxes from 32 A to 1000 A are available, inside which it is possible to house protection devices, such as fuses, MCBs and/or MCCBs.

## **QUALITY MATERIAL**

Each component is made using high quality materials, in compliance with technical and safety requirements. During each stage of the manufacturing process, maximum attention is given to each and every element.

## STURDINESS AND FUNCTIONALITY

XCM busbars guarantee maximum system functionality thanks to careful design of the components, easy installation and the construction characteristics, which make XCM busbars among the strongest on the market.

# MAXIMUM ADVANTAGE IN DISTRIBUTION

The unique design of the XCM monobloc compensates the thermal expansion of conductors.

This is a key benefit for vertical (rising mains) applications as the system does not require busbar blocking elements, or thermal expansion elements.



# **Applications**

The typical applications for **XCM busbars** are:

- industrial
- commercial and residential
- hospitals
- data centre
- shopping centres

and everywhere there is the need for power distribution (up to 1000 A).  $\,$ 







# Installation accessories



Feed unit



Intermediate feed unit



Feed unit for switchboard and transformers



End cover



Horizontal elbow



GRP tap-off box



Vertical elbow



Metal tap-off box

# **FEATURES**

# PRE-ASSEMBLED MONOBLOC

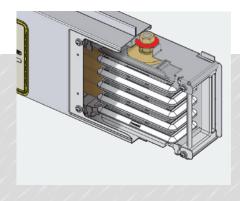
All trunking components (straight lengths, elbows, etc.) are provided with a pre-assembled monobloc which considerably speeds up the installation of the system and makes transportation and storage operations easier.

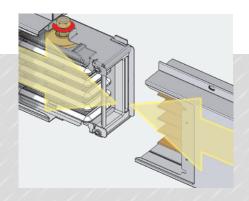
# **EXTREMELY FAST INSTALLATION**

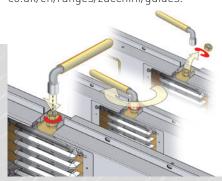
The monobloc and the shearhead bolt allow for a very fast installation of the whole line.

# DYNAMOMETRIC MONOBLOC

Tighten the shearhead bolt on the monobloc until the head breaks to electrically connect the elements. The breakage of the nut head guarantees long-lasting reliability and safety. The connection guarantees long-term reliability and safety. In case of a future modification on the line, the monobloc must be retightened using the second nut head with a torque wrench at the correct settings. For Zucchini XCM installation guide visit: www.legrand.co.uk/en/ranges/zucchini/guides.







# **CONNECTION FLANGES**

If the monobloc has been tightened improperly, the head of the shearhead nut will prevent the mechanical coupling from closing. The connection flanges and seals serve as protection for the element during transportation and ensure their degree of protection as well as their mechanical rigidity when being installed.



## PROTECTION DEGREE

The XCM system has a standard IP55 protection when installed with the tap-off outlet cover.



# **EXCELLENT FIRE RESISTANCE**

The XCM system has lengths provided with a fire barrier (EI according to EN 1366-3) and structures which guarantee a time resistance against propagation of flames, transmission of gases and transmission of heat. The fire load of XCM is extremely low compared to the quantity of plastic materials needed to insulate cables with the same capacity.





# **GLOW-WIRE TEST**

All plastic materials are resistant and in compliance with the 'glow-wire' test [IEC 60695-2-10].

# **VERSIONS**

XCM is available in the following configurations:

3P + N + PE casing

3P + N + PE

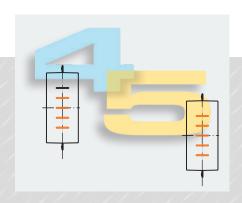
3P + N + FE + PE casing

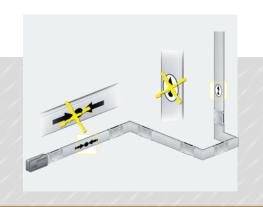
All versions are available in a painted version (RAL to be defined by the customer).

# SIMPLE AND RELIABLE

The monobloc connection of the XCM line is able to compensate for any heat expansion affecting the conductors, thus avoiding the need to insert special expansion lengths even in considerably long systems. If the XCM line is installed vertically (riser main) there is no need to install busbar thrust units because the monobloc prevents the conductors from sliding.







# **MAXIMUM STRENGTH**

The XCM range has been designed and manufactured with a strong casing. The degree of impact resistance of the casing which houses this line is the maximum stated in IEC EN60068-2-62: IK10.

# **ALUMINIUM AND COPPER RATING (A)**

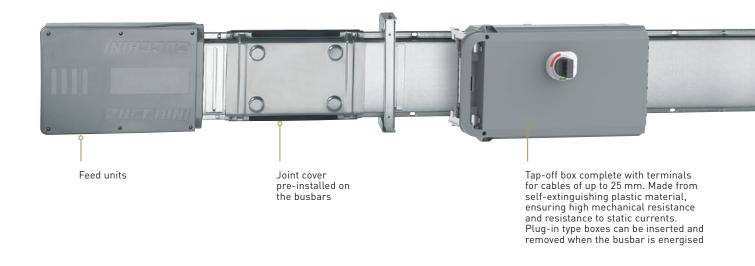
Αl	160	250	315	400	500	630	800	1000	
Cu	-	250	315	400	-	630	800	1000	_







# TRUNKING COMPONENTS AND ADDITIONAL ACCESSORIES

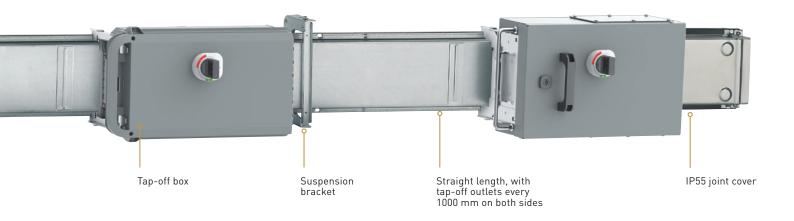


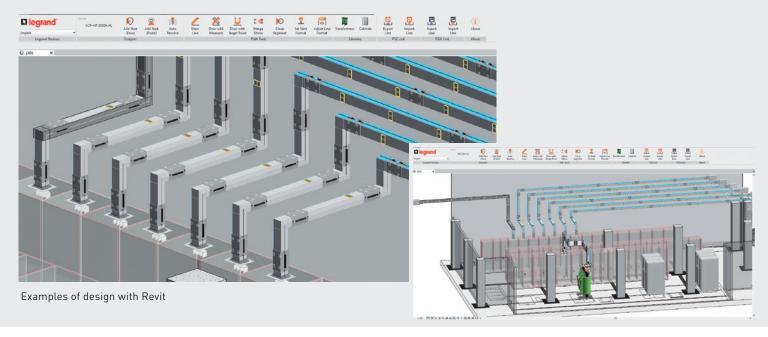
Depending on installation requirements Legrand can provide various technical solutions:

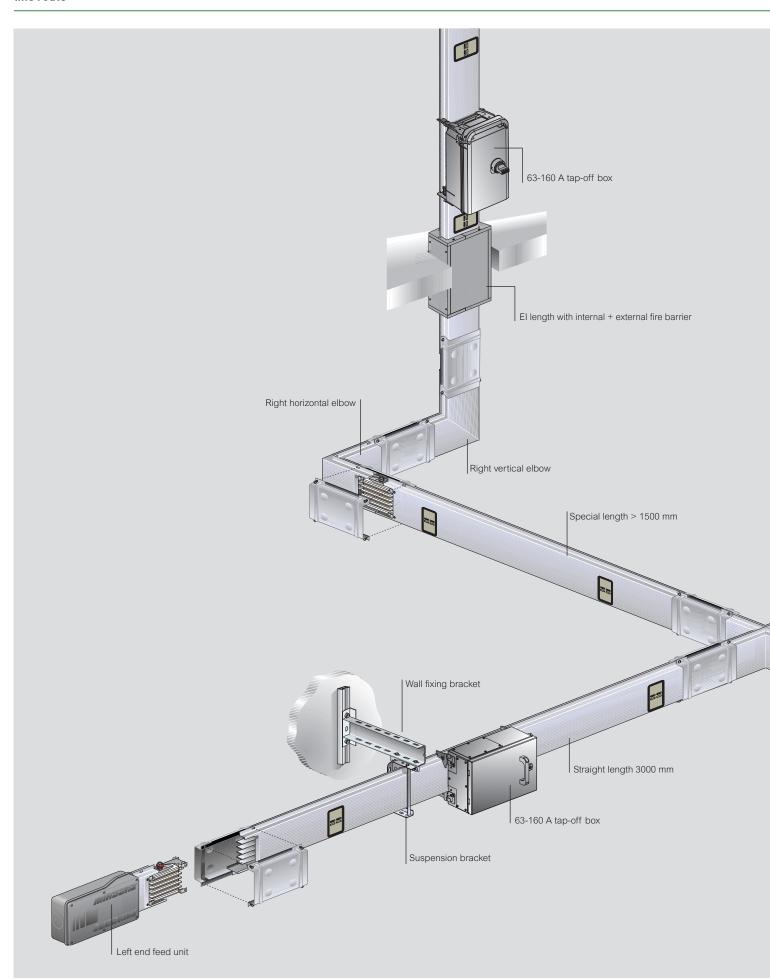
- a) 90° elbows: available for carrying out changes of direction both horizontally and vertically. There is a quick connection, as with the straight lengths. The standard degree of protection is IP55
- b) Tees, crossovers and double elbows available. The standard degree of protection is IP55
- c) straight lengths with fire barrier (internal + external) EI
   Tested in laboratories (in compliance with Standards EN 1366-3) to confirm that, if correctly installed, they maintain the intrinsic fire-resistant properties of the wall

- d) straight lengths with 5 outlets on one side ideal for riser mains
- e) straight lengths with 5+5 outlets on both sides ideal for data centre solutions
- f) straight lengths with no outlets, used for energy transport only.

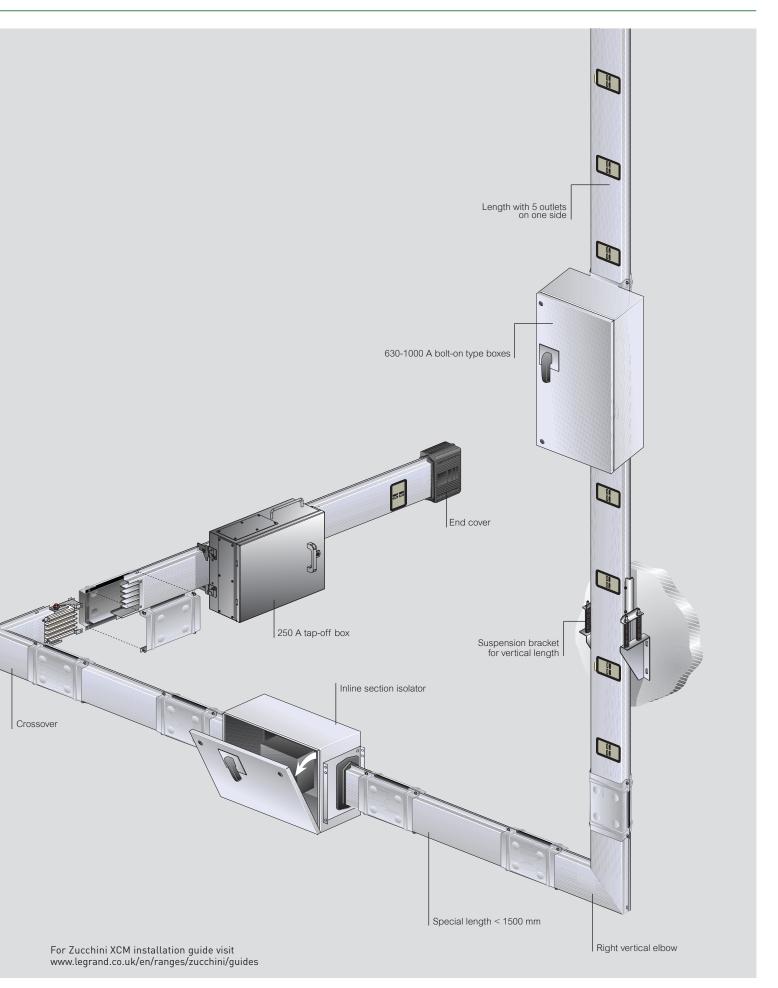












# **la** legrand

# XCM 160 - 1000 A

# straight lengths



53400111

Reference standard: IEC 61439-6 Reference temperature: 40 °C
Protection degree: IP55
Thickness: 0.8 mm
Dimension (LxH): 75-135x196mm
N° of conductors: 4 with equal section 3P+N or 5 (3P+N+PE)

Conducting 'flame retardant' in accordance with EN 60332-3 Separation between the conductors by plastic insulators reinforced with GRP, guarantees a degree of volatile organics self-extinguishing (according to UL94) and conform to the glow-wire test according to IEC 60695-2-10

Pack	Cat.	Straigh	t lengths	
			withou	t outlets
	Al	Cu	In (A)	L (mm)
1	53400111	-	160	
1	53400112	56400112	250	
1	53400113	56400113	315	
1	53400114	56400114	400	000.4500
1	53400118	-	500	600÷1500
1	53400115	56400115	630	
1	53400116	56400116	800	
1	53400117	56400117	1000	
1	53400121	-	160	
1	53400122	56400122	250	
1	53400123	56400123	315	
1	53400124	56400124	400	
1	53400128	-	500	1501÷2999
1	53400125	56400125	630	
1	53400126	56400126	800	
1	53400127	56400127	1000	
1	53400241	-	160	
1	53400242	56400242	250	
1	53400243	56400243	315	
1	53400244	56400244	400	
1	53400248	-	500	3000
1	53400245	56400245	630	
1	53400246	56400246	800	

56400247

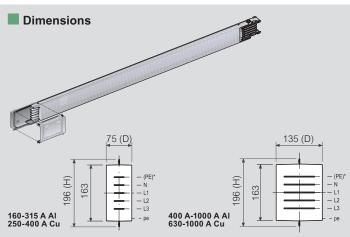
1000

Key: How to select the correct configuration and finish All examples on this page show 4 conductor galvanised lengths No. of conductors and finish is dictated by the blue number Replace 0 with 1, 2 or 3 if required

0 - 3P + N + PE casing 2 - 3P + N + PE casing (painted version) 1 - 3P + N + PE\* 3 - 3P + N + PE (painted version)\*

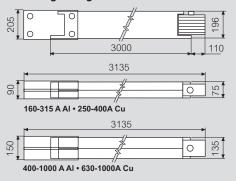
\* Item code-E5 = 3P + N + FE + PE casing

53400247

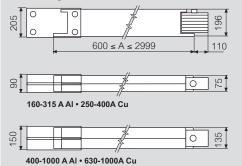


\* for 3P+N+PE and 3P+N+FE+PE casing

# For straight lengths = 3000 mm



# For straight lengths at measurement from 600 mm to 2999 mm



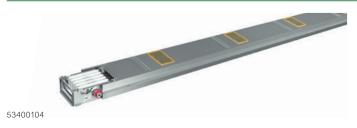
When placing your order please specify the required length (see  ${\bf p.~33}$ : How to take measurements)

In (A)	Al	Weight (kg)	Cu	Weight (kg)
160	53400111	13.6	-	-
250	53400112	14.1	56400112	16.5
315	53400113	14.9	56400113	17.7
400	53400114	23.3	56400114	22.0
500	53400118	25.2	-	-
630	53400115	26.9	56400115	34.3
800	53400116	28.0	56400116	42.2
1000	53400117	30.1	56400117	47.8
160	53400121	13.6	-	-
250	53400122	14.1	56400122	16.5
315	53400123	14.9	56400123	17.7
400	53400124	23.3	56400124	22.0
500	53400128	25.2		-
630	53400125	26.9	56400125	34.3
800	53400126	28.0	56400126	42.2
1000	53400127	30.1	56400127	47.8
160	53400241	19.9		-
250	53400242	20.9	56400242	25.7
315	53400243	22.8	56400243	28.1
400	53400244	33.8	56400244	36.9
500	53400248	37.5	-	-
630	53400245	41.7	56400245	56.0
800	53400246	44.3	56400246	72.1
1000	53400247	46.8	56400247	83.7

In the case of transport of electric energy it is recommended to use XCP busbar trunking All dimensions (mm) are nominal



# straight lengths (continued)



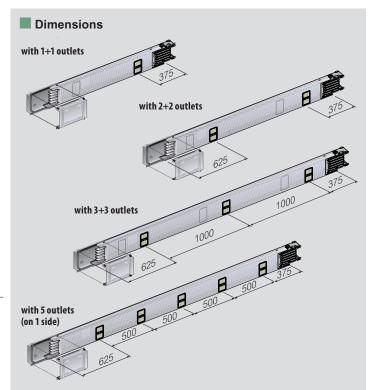
Reference standard: IEC 61439-6
Reference temperature: 40 °C
Protection degree: IP55
Thickness: 0.8 mm
Dimension (LxH): 75-135x196mm
N° of conductors: 4 with equal section 3P+N or 5 (3P+N+PE)
Conducting 'flame retardant' in accordance with EN 60332-3
Separation between the conductors by plastic insulators reinforced with fibreglass, guarantees a degree of V0 self-extinguishing (according to UL94) and conform to the glow-wire test according to IEC 60695-2-10

Pack	Cat. Nos.		Straight lengths with outlets		
	Al	Cu	In (A)	L (mm)	N° windows
1	53400141	-	160		
1	53400142	56400142	250		
1	53400143	56400143	315		
1	53400144	56400144	400		
1	53400148	-	500	1000÷1500	1+1
1	53400145	56400145	630		
1	53400146	56400146	800		
1	534 <mark>0</mark> 0147	564 <mark>0</mark> 0147	1000		
1	53400151	-	160		
1	53400152	56400152	250		
1	53400153	56400153	315		
1	53400154	56400154	400	4504 0000	00
1	53400158	-	500	1501÷2999	2+2
1	53400155	564 <mark>0</mark> 0155	630		
1	53400156	564 <mark>0</mark> 0156	800		
1	53400157	56400157	1000		
1	53400101	-	160		
1	53400102	56400102	250		
1	53400103	56400103	315		
1	53400104	56400104	400	3000	3+3
1	53400108	-	500	3000	313
1	53400105	564 <mark>0</mark> 0105	630		
1	53400106	56400106	800		
1	53400107	56400107	1000		
1	53400251	-	160		
1	53400252	56400252	250		
1	53400253	56400253	315		
1	53400254	56400254	400	3000	5
1	53400258	-	500	3000	5
1	53400255	56400255	630		
1	53400256	56400256	800		
1	53400257	56400257	1000		

Key: How to select the correct configuration and finish All examples on this page show 4 conductor galvanised lengths No. of conductors and finish is dictated by the blue number Replace 0 with 1, 2 or 3 if required

0 - 3P + N + PE casing 2 - 3P + N + PE casing (painted version) 3 - 3P + N + PE (painted version)\*

1 - 3P + N + PE\* \* Item code-E5 = 3P + N + FE + PE casing



	1+1 outlets					
In (A)	Al	Weight (kg)	Cu	Weight (kg)		
160	53400141	13.6	-	-		
250	53400142	14.1	56400142	16.5		
315	53400143	14.9	56400143	17.7		
400	53400144	23.3	56400144	22.0		
500	53400148	25.2	-	-		
630	53400145	26.9	56400145	34.3		
800	53400146	28.0	56400146	42.2		
1000	53400147	30.1	56400147	47.8		

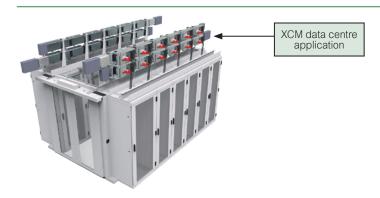
	2+2 outlets					
In (A)	Al	Weight (kg)	Cu	Weight (kg)		
160	53400151	13.6	-	-		
250	53400152	14.1	56400152	16.5		
315	53400153	14.9	56400153	17.7		
400	53400154	23.3	56400154	22.0		
500	53400158	25.2	-	-		
630	53400155	26.9	56400155	34.3		
800	53400156	28.0	56400156	42.2		
1000	53400157	30.1	56400157	47.8		

	3+3 outlets					
In (A)	Al	Weight (kg)	Cu	Weight (kg)		
160	53400101	19.9	-	-		
250	53400102	20.9	56400102	25.7		
315	53400103	22.8	56400103	28.1		
400	53400104	33.8	56400104	36.9		
500	53400108	37.5	-	-		
630	53400105	41.7	56400105	56.0		
800	53400106	44.3	56400106	72.1		
1000	53400107	46.8	56400107	83.7		

		5 outlets on 1 side						
In (A)	Al	Weight (kg)	Cu	Weight (kg)				
160	53400251	19.9	-	-				
250	53400252	20.9	56400252	25.7				
315	53400253	22.8	56400253	28.1				
400	53400254	33.8	56400254	36.9				
500	53400258	37.5	-	-				
630	53400255	41.7	56400255	56.0				
800	53400256	44.3	56400256	72.1				
1000	53400257	46.8	56400257	83.7				



# indoor applications - data centre straight lengths (IP40)



Pack	Cat. Nos.	Straight lengths					
	Al	In (A)	L (mm)	N° outlets (STEP 600 mm)	Weight (kg)		
1	53400261-1200	160			6.7		
1	53400262-1200	250			7.4		
1	53400263-1200	315			8.2		
1	53400264-1200	400	1200	2+2	12.6		
1	53400268-1200	500	1200	2+2	14.1		
1	53400265-1200	630			15.7		
1	53400266-1200	800			16.8		
1	534 <mark>0</mark> 0267-1200	1000			17.8		
1	53400261-2400	160			15.6		
1	53400262-2400	250			17.1		
1	53400263-2400	315			18.7		
1	53400264-2400	400	2400	4+4	27.5		
1	53400268-2400	500	2400	474	30.4		
1	53400265-2400	630			33.8		
1	53400266-2400	800			35.9		
1	534 <mark>0</mark> 0267-2400	1000			37.9		
1	53400261-3000	160			20.1		
1	53400262-3000	250			22.0		
1	53400263-3000	315			23.9		
1	53400264-3000	400	3000	5+5	34.9		
1	53400268-3000	500	3000	313	38.6		
1	53400265-3000	630			42.8		
1	534 <mark>0</mark> 0266-3000	800			45.4		
1	53400267-3000	1000			47.9		
	Al	In (A)	L (mm)	N° outlets (STEP 800 mm)	Weight (kg)		

	Al	In (A)	L (mm)	N° outlets (STEP 800 mm)	Weight (kg)
1	53400271-1600	160			9.3
1	53400272-1600	250			10.4
1	53400273-1600	315	1600		11.4
1	53400274-1600	400		2+2	17.,2
1	53400278-1600	500	1600		19.2
1	53400275-1600	630			21.4
1	53400276-1600	800			22.8
1	53400277-1600	1000			24.2
1	53400271-2400	160			15.6
1	53400272-2400	250			17.1
1	53400273-2400	315			18.7
1	53400274-2400	400	2400	3+3	27.5
1	53400278-2400	500	2400	373	30.4
1	53400275-2400	630			33.8
1	53400276-2400	800			35.9
1	53400277-2400	1000			37.9

For the version with copper conductors please contact technical support on +44 (0) 370 608 9020



The straight lengths for data centres are available with IP40 protection, which is suitable for installation in the white space

For the brackets see p. 28-29

Pack	Cat. Nos.	End cover IP40	
			Weight (kg)
1	50403103	XCM end cover IP40 LOW	0.77
1	50403104	XCM end cover IP40 HIGH	1.13

LOW profile: from 160 A to 315 A Al from 250 A to 400 A Cu HIGH profile: from 400 A to 1000 A Al

from 630 A to 1000 A Cu

For feed units see p. 18

Straight lengths have a distance between outlets of 600 mm or 800 mm; in this way tap-off boxes are centred with the cabinet containing racks they should be connected with

It allows, in case of failure, rapid identification and intervention on the

non-functioning rack
See opposite page for an example of connection between the cabinet containing rack and straight lengths



Standard tap-off boxes are also suitable for installation in data centres

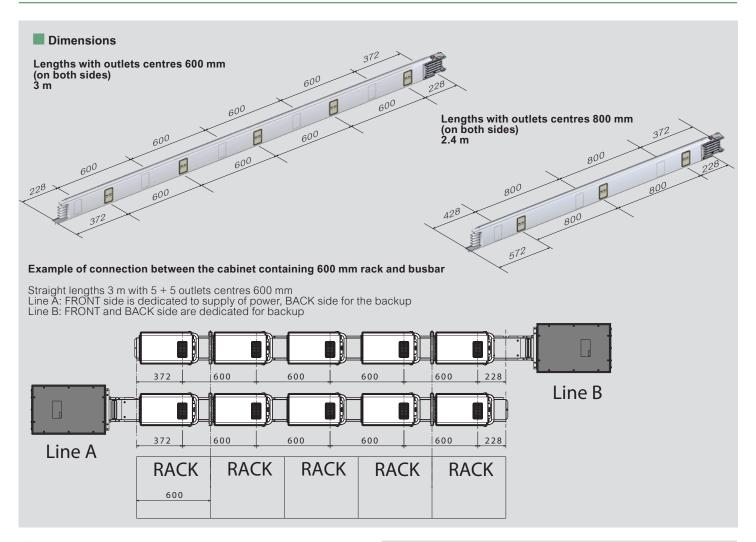
How to select the correct configuration and finish All examples on this page show 4 conductor galvanised lengths No. of conductors and finish is dictated by the blue number Replace 0 with 1, 2 or 3 if required

0 - 3P + N + PE casing 2 - 3P + N + PE casing (painted version) 3 - 3P + N + PE (painted version)\* 1 - 3P + N + PE\*

\* Item code-E5 = 3P + N + FE + PE casing

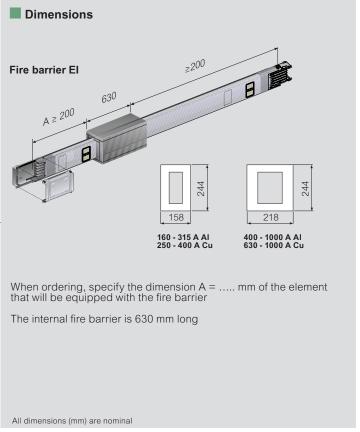


# data centre straight lengths and fire barrier El



# Fire barrier El

Pack	Cat. I	Fire barrier El		
	Al	Cu	No. of conductors	In (A)
	External Internal	External Internal		
1	554EFB01 564IFB01	-		160
1	554EFB01 564IFB02	554EFB01 564IFB01		250
1	554EFB01 564IFB03	554EFB01 564IFB02		315
1	554EFB02 564IFB04	554EFB01 564IFB05	4	400
1	554EFB02 564IFB06	-		500
1	554EFB02 564IFB07	554EFB02 564IFB04		630
1	554EFB02 564IFB08	554EFB02 564IFB06		800
1	554EFB02 564IFB09	554EFB02 564IFB07		1000
1	554EFB01 554IFB11	-		160
1	554EFB01 554IFB12	554EFB01 554IFB11		250
1	554EFB01 554IFB13	554EFB01 554IFB12		315
1	554EFB02 554IFB14	554EFB01 554IFB15	5	400
1	554EFB02 554IFB16	-		500
1	554EFB02 554IFB17	554EFB02 554IFB14		630
1	554EFB02 554IFB18	554EFB02 554IFB16		800
1	554EFB02 564IFB19	554EFB02 554IFB17		1000



# **L**legrand

# XCM 160 - 1000 A

## elbows



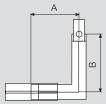


Vertical elbow 53400401

Pack		Cat. Nos.			Elbo	ows
	dimer	dard isions 00mm)	Bespoke dimensions * see dimension (mm) MIN & MAX			
	Al	Cu	Al	Cu	In (A)	Туре
1	53400301	-	53400321	-	160	
1	53400302	56400302	53400322	56400322	250	
1	53400303	56400303	53400323	56400323	315	
1	53400304	56400304	53400324	56400324	400	
1	534 <mark>0</mark> 0308	-	53400328	-	500	
1	53400305	56400305	53400325	56400325	630	Horizontal right
1	53400306	56400306	53400326	56400326	800	ligit
1	53400307	56400307	53400327	56400327	1000	
1	53400311	-	53400331	-	160	
1	53400312	56400312	53400332	56400332	250	
1	53400313	56400313	53400333	56400333	315	
1	53400314	56400314	53400334	56400334	400	
1	53400318	-	53400338	-	500	l la sian satal
1	53400315	56400315	53400335	56400335	630	Horizontal left
1	53400316	56400316	53400336	56400336	800	
1	53400317	56400317	53400337	56400337	1000	
1	53400401	_	53400421	_	160	
1	53400401	56400402	53400421	56400422	250	_
1	53400403	56400403	53400423	56400423	315	
1	53400404	56400404	53400424	56400424	400	
1	53400408	_	53400428	-	500	
1	53400405	56400405	53400425	56400425	630	Vertical
1	53400406	56400406	53400426	56400426	800	right
1	53400407	56400407	53400427	56400427	1000	
1	53400411		53400431		160	
1	53400411	564 <mark>0</mark> 0412	53400431	564 <mark>0</mark> 0432	250	
1	53400412	56400412	53400432	56400432		
1	53400413	56400413	53400433	56400433	315 400	
1	53400414	30400414	53400434	-	500	
1	53400416	564 <mark>0</mark> 0415	53400435	564 <mark>0</mark> 0435	630	Vertical
1	53400415	56400415	53400435	56400436	800	left
1			53400436	56400436		
	53400417	56400417	33400437	30400437	1000	

# Dimensions

# Horizontal elbow



Standard dimensions: A = 300 mm B = 300 mm

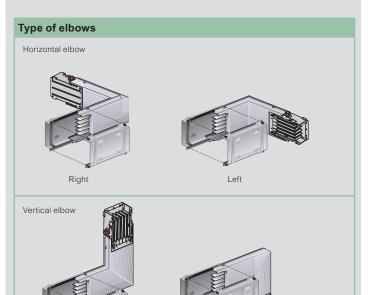
Vertical elbow Ш

Dimension (mm) MIN MAX A 300 899 B 300 899

Din	nensi MIN	on (mı MAX	m)
Α	250	899	
D	250	000	

In (A)	AI Weight (kg)	Cu Weight (kg)
160	8.1	-
250	8.2	9.2
315	8.4	9.6
400	14.5	11.0
500	14.9	-
630	15.4	18.7
800	15.7	21.4
1000	16.0	23.3

The weights indicated in the table refer to the standard elements (300 + 300 mm)



Left

 $^*$  For all the non standard angles, it is possible to have only one of the two sides in size exceeding 600 mm. For example, when ordering a horizontal angle with size A = 650 mm, the B size will have to be  $\leq$  = 600 mm

In your purchase order please specify the required length (see  ${f p.~33}$ : How to take measurements).

Key: How to select the correct configuration and finish All examples on this page show 4 conductor galvanised lengths No. of conductors and finish is dictated by the blue number Replace 0 with 1, 2 or 3 if required

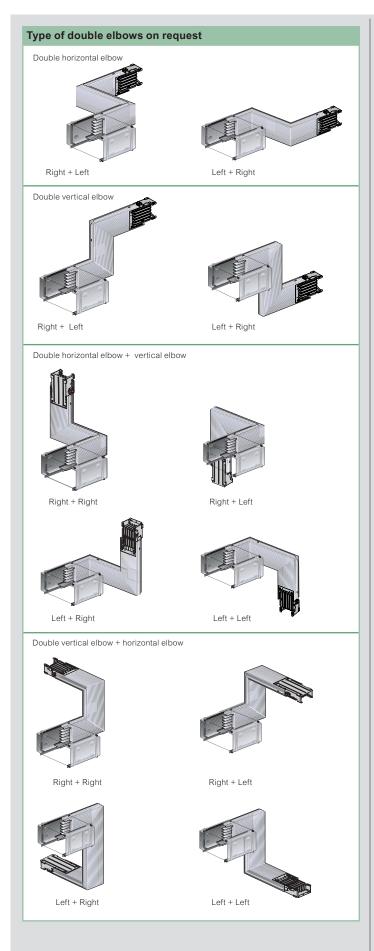
0 - 3P + N + PE casing 2 - 3P + N + PE casing (painted version) 3 - 3P + N + PE (painted version)\* 1 - 3P + N + PE\*

\* Item code-E5 = 3P + N + FE + PE casing

Right

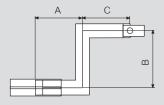


# elbows (continued)



# Dimensions

# **Double Horizontal**

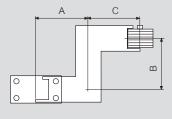


	Dimension (mm)		
	Min. Max.		
Α	250	899	
В	100	599	
С	250	899	

In (A)	Double Horizontal Double Vertical		
	Al	Cu	
160	10.29	-	
250	10.55	12.23	
315	11.06	12.97	
400	18.37	15.72	
500	19.50	-	
630	20.55	25.77	
800	21.20	30.88	
1000	21.80	34.55	

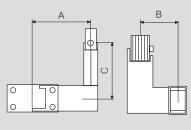
	Dimensi	on (mm)	
	Min. Max.		
Α	300	899	
В	100	599	
_	200	000	

# **Double Vertical**



	Dimension (mm)		
	Min. Max.		
Α	300	899	
В	100	599	
С	300	899	

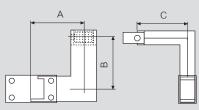
# **Double Horizontal + Vertical**



	Dimension (mm)		
	Min. Max.		
Α	250	899	
В	200	599	
С	300	899	

In (A)	Weight (kg) for Double Horizontal+Vertical and Double Vertical+Horizontal		
	Al Cu		
160	10.29	-	
250	10.55	12.23	
315	11.06	12.97	
400	18.37	15.72	
500	19.50	-	
630	20.55	25.77	
800	21.20	30.88	
1000	21.80	34.55	

# **Double Vertical + Horizontal**



	Dimension (mm)		
	Min. Max.		
Α	300	899	
В	200	599	
С	250 899		

The weights indicated in the tables refer to the standard elements (300 + 300 + 300 mm)

 $^*$  For all the non standard elbow, it is possible to have only one of the three sides in size exceeding 600 mm. For example, when ordering a double horizontal angle with size A = 650 mm, the B and C size will have to be  $\leq$  = 600 mm

Special dimensions are available on request, please contact technical support on +44 (0)  $370\,608\,9020$ 

# **G**legrand

# XCM 160 - 1000 A

## horizontal 'T' elements

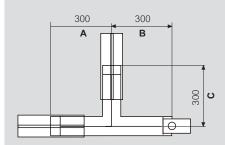


53400711

The various versions allow any type of route and are different from the monoblocs position and branch point Special dimensions are available on request please contact technical support on +44 (0) 370 608 9020

D 1	0.1	N.	Llorizo	ntal standard 'T'
Pack	Cat. Nos.		elements (300 + 300 + 300 mm)	
	AI	Cu	In (A)	Туре
1	53400701	-	160	
1	53400702	56400702	250	
1	53400703	56400703	315	
1	53400704	56400704	400	
1	53400708	-	500	
1	53400705	564 <mark>0</mark> 0705	630	
1	53400706	564 <mark>0</mark> 0706	800	Right 1
1	53400707	564 <mark>0</mark> 0707	1000	
1	53400711	-	160	
1	53400712	564 <mark>0</mark> 0712	250	
1	534 <mark>0</mark> 0713	564 <mark>0</mark> 0713	315	
1	53400714	564 <mark>0</mark> 0714	400	
1	53400718	-	500	
1	53400715	564 <mark>0</mark> 0715	630	
1	53400716	564 <mark>0</mark> 0716	800	Right 2
1	53400717	56400717	1000	
1	53400721	-	160	
1	53400722	564 <mark>0</mark> 0722	250	
1	53400723	56400723	315	
1	53400724	56400724	400	
1	53400728	-	500	
1	53400725	56400725	630	
1	53400726	56400726	800	Left 1
1	53400727	56400727	1000	
1	53400731	-	160	
1	53400732	564 <mark>0</mark> 0732	250	
1	53400733	56400733	315	
1	53400734	56400734	400	
1	53400738	-	500	
1	53400735	564 <mark>0</mark> 0735	630	
1	53400736	56400736	800	Left 2
1	534 <mark>0</mark> 0737	564 <mark>0</mark> 0737	1000	

# Dimensions



Dimension (mm)			
	Min.	Max.	
Α	300	899	
В	300	899	
С	300	899	

In (A)	Weight (kg)		
	Al	Cu	
160	11.2	-	
250	11.4	12.8	
315	11.8	13.4	
400	18.4	15.7	
500	19.5	-	
630	20.0	24.4	
800	20.5	28.5	
1000	20.5	31.3	

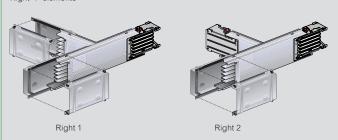
The weights indicated in the tables refer to the standard elements (300  $\pm$  300  $\pm$  300 mm)

\* For non standard 'T' elements, it is possible to have only one of the three sides in size exceeding 600 mm. For example, when ordering a horizontal 'T' element with size A = 650 mm, B and C sizes will have to be  $\leq~600$  mm

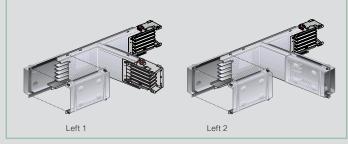
For horizontal 'T' special dimensions (not standard) and vertical 'T' elements, please contact technical support on +44 (0) 370 608 9020

# Type of horizontal standard 'T' elements

Right 'T' elements







Key: How to select the correct configuration and finish
All examples on this page show 4 conductor galvanised lengths

All examples on this page show 4 conductor galvanised length:
No. of conductors and finish is dictated by the blue number
Replace 0 with 1, 2 or 3 if required

0 - 3P + N + PE casing 1 - 3P + N + PE\* 2 - 3P + N + PE casing (painted version) 3 - 3P + N + PE (painted version)\*

\* Item code-E5 = 3P + N + FE + PE casing



# crossovers

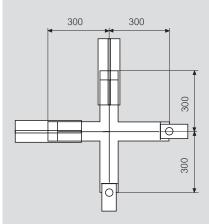


53403004

Pack	Cat. Nos.		Standard crossovers
			(300 + 300 + 300 + 300 mm)
	Al	Cu	In (A)
1	534 <mark>0</mark> 3001	-	160
1	534 <mark>0</mark> 3002	564 <mark>0</mark> 3002	250
1	534 <mark>0</mark> 3003	564 <mark>0</mark> 3003	315
1	53403004	56403004	400
1	534 <mark>0</mark> 3008	-	500
1	534 <mark>0</mark> 3005	564 <mark>0</mark> 3005	630
1	534 <mark>0</mark> 3006	564 <mark>0</mark> 3006	800
1	534 <mark>0</mark> 3007	564 <mark>0</mark> 3007	1000

Special dimensions (not standard) are available on request, please contact technical support on +44 (0) 370 608 9020

# Dimensions



In (A)	Weight (kg)		
	Al	Cu	
160	15.5	-	
250	15.7	17.6	
315	16.1	18.4	
400	27.5	21.1	
500	29.1	-	
630	29.3	35.2	
800	29.5	40.2	
1000	29.9	43.7	

The weights indicated in the tables refer to the standard elements (300 + 300 + 300 + 300 mm)  $\,$ 

Key: How to select the correct configuration and finish
All examples on this page show 4 conductor galvanised lengths
No. of conductors and finish is dictated by the blue number
Replace 0 with 1, 2 or 3 if required

0 - 3P + N + PE casing 2 - 3P + N + PE casing (painted version) 1 - 3P + N + PE\* 3 - 3P + N + PE (painted version)\*

\* Item code-E5 = 3P + N + FE + PE casing

# **la legrand**

# XCM 160 - 1000 A

## feed units



Pack	Cat. Nos.		Feed units		
	Al	Cu	In (A)	Description	Туре
1	53401101		160		
4	E0.404400	50404400	050		Right
1	53401102	56401102	250		
1	53401111		160	Plastic feed unit	
					Left
1	53401112	56401112	250		Lon
1	53401121	_	160		
1	53401122	56401122	250		
1	53401123	56401123	315		
1	53401124	56401124	400		
1	53401128	-	500		Right
1	53401125	56401125	630		
1	53401126	56401126	800		
1	53401127	56401127	1000		
1	53401131	-	160	Metal feed unit	
1	53401132	56401132	250		
1	53401133	56401133	315		
1	53401134	56401134	400		1 -44
1	53401138	-	500		Left
1	53401135	56401135	630		
1	53401136	56401136	800		
1	53401137	56401137	1000		
1	53401201	-	160		
1	53401202	56401202	250	Intermediate	
1	53401203	56401203	315	Intermediate	
1	53401204	56401204	400		
1	53401208	-	500		
1	53401205	56401205	630		
1	53401206	56401206	800		
1	53401207	56401207	1000		
			End co	over IP55*	

1	50403101
1	50403102

## End cover IP55\*

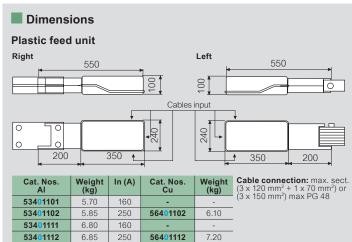
For bars in Cu of 250-315-400 A and Al 160-250-315 A For bars in Cu of 630-800-1000 A and Al 400-500-630-800-1000 A

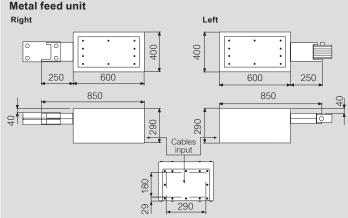
Ensures the closure and the IP55 degree of protection (EN 60529).

Key: How to select the correct configuration and finish All examples on this page show 4 conductor galvanised lengths No. of conductors and finish is dictated by the blue number Replace 0 with 1, 2 or 3 if required

0 - 3P + N + PE casing 1 - 3P + N + PE\* 2 - 3P + N + PE casing (painted version) 3 - 3P + N + PE (painted version)\*

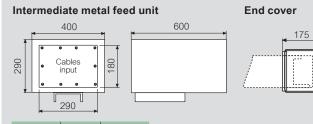
\* Item code-E5 = 3P + N + FE + PE casing





Feed units with AC23 switch disconnector installed are available, please contact technical support on +44 (0)  $370\,608\,9020$ 

Cat. Nos. Al	Weight (kg)	In (A)	Cat. Nos. Cu	Weight (kg)
53401121	16.64	160	-	- (1.9)
53401122	16.76	250	56401122	17.37
53401123	17.03	315	56401123	17.70
53401124	18.32	400	56401124	18.88
53401128	20.00	500	-	-
53401125	19.43	630	56401125	21.17
53401126	19.80	800	56401126	23.30
53401127	20.20	1000	56401127	24.83
53401131	17.74	160	-	-
53401132	17.76	250	56401132	18.47
53401133	17.83	315	56401133	18.70
53401134	23.22	400	56401134	19.58
53401138	23.20	500	-	-
53401135	23.63	630	564 <mark>0</mark> 1135	26.07
53401136	23.70	800	564 <mark>0</mark> 1136	27.80
53401137	24.00	1000	56401137	29.03



Cat. Nos. Al	Weight (kg)	Cat. Nos. Cu			
53401201	17.3	-			
53401202	18.4	56401202			
53401203	17.0	56401203			
53401204	22.06	56401204			
53401208	22.65	-			
53401205	23.24	56401205			
53401206	23.02	56401206			
53401207	24.70	56401207			
All dimensions (mm) are nominal					

Used to power a busbar from any intermediate point on the connection between two elements. The intermediate end feed unit is also used for reducing the voltage drop of the line

240

<sup>\*</sup>Suitable for all XCM versions



# feed units for switchboard / transformer



53401017

53401001

Feed unit for direct connection of the busbar to a switchboard or to the LV terminals of a distribution transformer

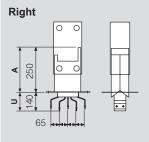
Pack	Cat. Nos.		Feed u	inits for swite	:hboard/
	Al	Cu	In (A)	Description	Туре
1	53401001	-	160		
1	53401002	564 <mark>0</mark> 1002	250		
1	53401003	564 <mark>0</mark> 1003	315		
1	53401004	564 <mark>0</mark> 1004	400		D'alai
1	534 <mark>0</mark> 1008	-	500	m,	Right
1	534 <mark>0</mark> 1005	564 <mark>0</mark> 1005	630		
1	53401006	564 <mark>0</mark> 1006	800		
1	53401007	564 <mark>0</mark> 1007	1000	switchboard	
1	53401011	-	160	Switchboard	
1	53401012	564 <mark>0</mark> 1012	250		
1	53401013	564 <mark>0</mark> 1013	315		
1	53401014	564 <mark>0</mark> 1014	400		1 - 0
1	53401018	-	500		Left
1	53401015	564 <mark>0</mark> 1015	630	4 ,	
1	53401016	564 <mark>0</mark> 1016	800		

56401017

1000

# Dimensions

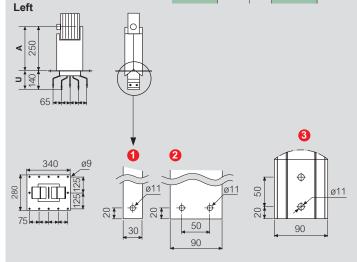
# Feed unit for switchboard/ transformer



Dime	Dimension (mm)			
	Min. Max.			
Α	250	849		
U	140*	200		

\*170 mm for In=1000 A

Cat. Nos. Al	Weight (kg)	In (A)	Cat. Nos. Cu	Weight (kg)
53401001	4.9	160	-	-
53401002	5.1	250	56401002	5.7
53401003	5.3	315	56401003	6.0
53401004	6.4	400	56401004	9.2
53401008	6.9	500	-	-
53401005	7.5	630	56401005	9.3
53401006	7.9	800	56401006	11.4
53401007	8.3	1000	56401007	12.9
53401011	6.0	160	-	-
53401012	6.1	250	56401012	6.7
53401013	6.2	315	56401013	7.0
53401014	11.3	400	56401014	7.8
53401018	11.4	500	-	-
53401015	11.7	630	56401015	14.2
53401016	11.8	800	56401016	15.9
53401017	12.5	1000	56401017	17.1



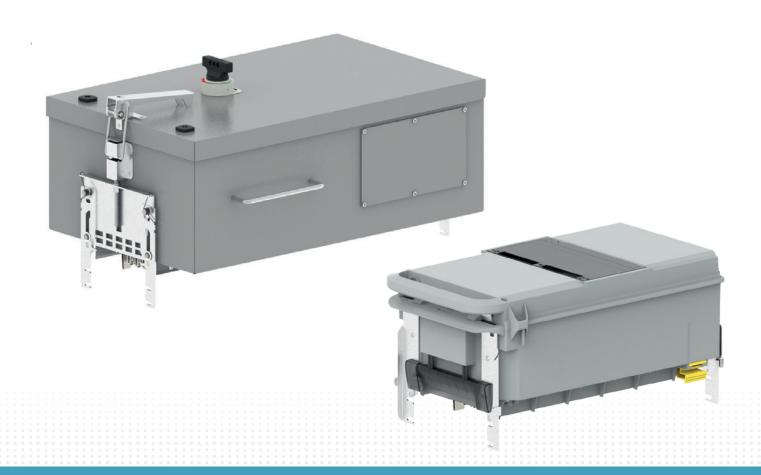
	Al	Cu
XCM	160A	-
1	250A	250 A
	315A	315 A
XCM	400A	400 A
2	500A	-
	630A	630 A
	800A	800 A
		1000 A
XCM	1000A	
3		

Key: How to select the correct configuration and finish
All examples on this page show 4 conductor galvanised lengths
No. of conductors and finish is dictated by the blue number
Replace 0 with 1, 2 or 3 if required

0 - 3P + N + PE casing 2 - 3P + N + PE casing (painted version)
1 - 3P + N + PE\* 3 - 3P + N + PE (painted version)\*

\* Item code-E5 = 3P + N + FE + PE casing

# **L**legrand



# TAP-OFF BOXES

The new range of universal tap-off boxes suitable for XCM and XCP

# TAP-OFF BOXES FROM 32 TO 630 A

Available in two different materials: GRP or sheet metal, both characterised by simple installation and fast connection thanks to the new layout of the hooks that offer safety and speed of assembly



# GRP tap-off boxes - 32 A to 250 A: plug-in type



## IP55

Equipped with a sectioning cover. Can be installed and removed when

the busbar is energised
To be applied on lengths with any rating, with tap-off outlets
Ratings go from 32 A to 250 A

Ratings go from 32 A to 250 A					
Pack	Cat. Nos.	Tap-off boxes DPX³ ready*			
		Prepared for Legrand MCCB (not provided) and supplied 'ready for' DPX <sup>3</sup> , with rotary handle already installed on the cover and rotary mechanism inside the box			
		In (A)	Туре		
1	50485231	63	2		
1	50485232	160	2		
1	50485333	250	3		
		Tap-off boxes with fuse carriers			
		Equipped with fuse carriers. Fuses not included For selection of fuses, see Legrand catalogue**			
		In (A)	Туре	Fuse carrier	
1	50485101	32	1	3 x CH10	
1	50485202	63	2	3 x CH22	
1	50485203	125/160	2	3 x NH00	
1	50485305	250	3	3 x NH2	
		Empty tap-of	fboxes		
		In (A)		Туре	

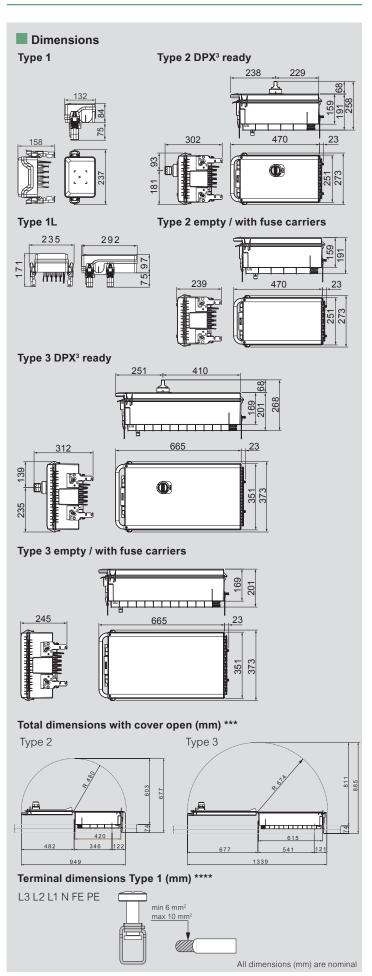
	Empty tap-off boxes		
		In (A)	Туре
1	50485111	32 A - blind cover	1L
1	50485121	32 A - 4 module	1L
1	50485131	32 A - 8 module	1L
1	50485212	63 A - 12 module	2
1	50485213	125/160 A - 12 module	2
1	50485222	63 A - blind cover	2
1	50485223	160 A - blind cover	2
1	50485241	63 A - 12 module + 2 P17 sockets place	2
1	50485242	160 A - 12 module + 2 P17 sockets place	2
1	50485314	250 A - 12+12 module	3
1	50485324	250 A - blind cover	3
1	50485343	250 A - 12 + 12 module +3 P17 sockets place	3



For Zucchini XCM installation guide and further

mounting details visit www.legrand.co.uk/en/ranges/zucchini/guides

- \* DPX3: MCCB (Moulded case circuit breaker not mounted or supplied) visit: www.legrand.co.uk/en/catalog/protection-control-measurement
- \*\* For selection of fuses see the **Legrand Protection, control** & measurement guide at www.legrand.co.uk
- \*\*\* For Zucchini XCM installation guide and further mounting details visit: www.legrand.co.uk/en/ranges/zucchini/guides
- \*\*\*\* For the size of the Type 2 and Type 3 terminals, see the metal boxes on the following pages with this rule: plastic T2 terminals = metal T1 terminals plastic T3 terminals = metal T2 terminals



# **L**legrand

# XCM 160 - 1000 A

# metal tap-off box Type 1 - 63 A to 160 A: plug-in type



Equipped with a sectioning cover. Can be installed and removed when the busbar is energised

To be app These are	To be applied on lengths with any rating, with tap-off outlets These are the smallest metal tap-off boxes available and the rating is from 63 A to 160 A				
Pack	Cat. Nos.	Tap-off boxes	DPX3 ready*		
		Prepared for Legrand MCCB (not provided) and available in 2 versions, one with hinged cover and one with completely removable cover. Supplied 'ready for' DPX <sup>3</sup> , with rotary handle already installed on the cover and rotary mechanism inside the box			
1	50481721		In (A) 63 / 125 / 160 A		
1	50481721	63 / 125 /	/ 160 A - removable cover		
		Tap-off boxes with fuse carriers			
		Equipped with fuse carriers. Fuses not included For selection of fuses, see Legrand catalogue**  In (A) Fuse carrier			
1	50484021	63	3 x NH00		
1	50484022	125	3 x NH00		
1	50484023	160	3 x NH00		
		Tap-off boxes with switch fuse			
		Equipped with a switch disconnector (AC23) and a fuse carrier. The disconnector switch is operated through a rotary handle on			

# fuse

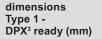
nector (AC23) ector switch ndle on N.B. Cover with AC21A disconnection: it is not possible to open, close, install or pull out the tap-off box if the switch is in 'ON' position Fuses not included. For the selection of fuses, see Legrand catalogue

In (A)	Fuse carrier
63	3 x NH000
125	3 x NH00
160	3 x NH00
63 A - removable cover	3 x NH000

## **Empty tap-off boxes**

In (A) 50484002 63 50484003 125 / 160

Dimensions Type 1 (63 - 125 - 160 A) 199 DPX<sup>3</sup> ready 68 196 163 264 504 481 24 280 Empty and with fuse carriers 125 / 160 A 198 481 280 (0) 199 242 DPX3 ready removable 88 cover 163 196 264 307 481 Total dimensions with cover open\*\*\* 591 665 74 Terminal dimensions Type 1 - fuse carriers L3 L2 L1 430



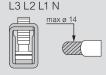
**Terminal** 

For item

codes,

please

contact Legrand

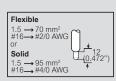


Flexible → 70 mm² → #2/0 AWG 1.5 → 95 mm<sup>2</sup> #16→ #4/0 AWG

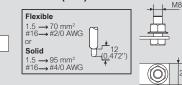
360

# Terminal dimensions Type 1 - empty (mm)





# N FE PE max ø 14



\* DPX3: MCCB (Moulded case circuit breaker not mounted or supplied) visit: www.legrand.co.uk/en/catalog/protection-control-measurement

<sup>\*\*</sup> For selection of fuses see the **Legrand Protection, control & measurement guide at www.legrand.co.uk** 

<sup>\*\*\*</sup> For Zucchini XCM installation guide and further mounting details visit: www.legrand.co.uk/en/ranges/zucchini/guides



# metal tap-off box Type 2 - 250 A: plug-in type



IP55 Equipped with a sectioning cover. Can be installed and removed when the busbar is energised
To be applied on lengths with any rating, with tap-off outlets
These are the medium size metal tap-off boxes available and the rating

Pack	Cat. Nos.	Tap-off boxes DPX <sup>3</sup> ready*
		Prepared for Legrand MCCB (not provided) and available in 2 versions, one with hinged cover and one with completely removable cover.
1	50481722	250 A
1	50481724	250 A - DRXHP ready
1	50481732	250 A - removable cover
1	50481734	250 A - DRXHP ready removable cover
		Tap-off boxes with fuse carriers

For selection of fuses, see Legrand catalogue\*

## Equipped with fuse carriers. Fuses not included In (A) Fuse carrier 3 x NH2\*\*\* 50484024 250 Tap-off boxes with switch fuse Equipped with a switch disconnector (AC23) and a fuse carrier. The disconnector switch is operated through a rotary handle on the cover (not shown in the picture) N.B. Cover with AC21A disconnection: it is not possible to open, close, install or pull out the tap-off box if the switch is in 'ON' position For item codes, Fuses not included. For selection of fuses, please see Legrand catalogue Fuse carrier contact Legrand 125 A - removable cover 3 x NH00 160 A - removable cover 3 x NH00 3 x NH2\*\*\* 250 A - switch fuse 250 A - switch fuse 3 x NH2\*\*\* removable cover **Empty tap-off boxes** In (A) 50484005 250 Terminal dimensions Type 2 Terminal dimensions Type 2 DPX<sup>3</sup> ready and empty (mm) fuse carriers (mm)

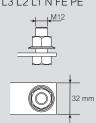
# Type 2 (250 A) 351 DPX<sup>3</sup> ready 236 624 601 24 365 400 241 **Empty and with** fuse carriers 236 203 276 624 601 24 400 492 0 351 210 DPX3 ready removable cover 29 236 304 624 601 365 23 400 241

Total dimensions with cover open (mm)\*\*\*

Dimensions

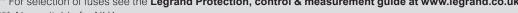


# L3 L2 L1 N FE PE



<sup>\*</sup> DPX3: MCCB (Moulded case circuit breaker not mounted or supplied) visit: www.legrand.co.uk/en/catalog/protection-control-measurement Rotary handles for DPX³ already mounted

\*\*\* Also suitable for NH1



550 480 130 771

16

All dimensions (mm) are nominal

754 828

<sup>\*\*</sup> For selection of fuses see the Legrand Protection, control & measurement guide at www.legrand.co.uk

<sup>\*\*\*\*</sup> For Zucchini XCM installation guide and further mounting details visit: www.legrand.co.uk/en/ranges/zucchini/guides

# **la** legrand

# XCM 160 - 1000 A

# metal tap-off box Type 3 - 400 A to 630 A: plug-in type



Equipped with a sectioning cover. Can be installed and removed when the busbar is energised
To be applied on lengths with any rating, with tap-off outlets
These are the largest size metal tap-off boxes available and the rating is 400 A or 630 A

15 400 A 0	15 400 A 01 030 A				
Pack	Cat. Nos.	Tap-off boxes DPX <sup>3</sup> ready*			
		Prepared for Legrand MCCB (not provided) and available in 2 versions, one with hinged cover and one with completely removable cover.			
1	50481723	400 / 630 A - DPX <sup>3</sup> ready			
1	50481733	400 / 630 A - DPX <sup>3</sup> ready removable cover			
		Tap-off boxes with fuse carriers			
		Equipped with fuse carriers. Fuses not included For selection of fuses, see Legrand catalogue			
		In (A)   Fuse carrier			
1	50484025	400 3 x NH2			
1	50484026	630 3 x NH3			
		Tap-off boxes with switch fuse			
		Equipped with a switch disconnector (AC23) and a fuse carrier. The disconnector			

For item codes, please contact Legrand

switch is operated through a rotary handle on the cover (not shown in the picture) N.B. Cover with AC21A disconnection it is not possible to open, close, install or pull out the tap-off box if the switch is in 'ON' position Fuses not included

For selection of fuses, see Legrand catalogue

400 A - switch fuse 3 x NH2 400 A - switch fuse 3 x NH2 removable cover

630 A - switch fuse removable cover

**Empty Tap-off boxes** In (A) 630 A

L3 L2 L1

50484006

**Terminal dimensions** 

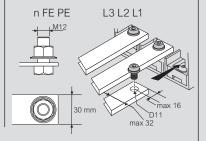
n FE PE

Type 3 - fuse carriers (mm)

# Terminal dimensions Type 3 - empty (mm) L3 L2 L1 N FE PE

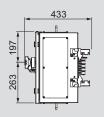


# Terminal dimensions Type 3 - DPX3 ready (mm)



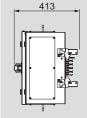
# Dimensions

Type 3 (400 - 630 A) Box dimensions (mm) DPX<sup>3</sup> ready

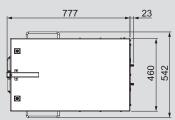


# 795 772 460 542

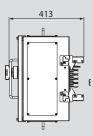
## **Empty and with** fuse carriers

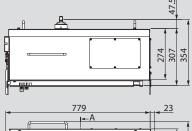


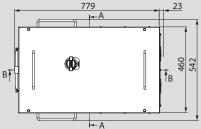
# 47.5 307



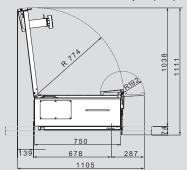
DPX<sup>3</sup> ready removable cover







# Total dimensions with cover open (mm)\*\*\*



\* DPX3: MCCB (Moulded case circuit breaker not mounted or supplied) visit: www.legrand.co.uk/en/catalog/protection-control-measurement

All dimensions (mm) are nominal \*\*\* For Zucchini XCM installation guide and further mounting details visit: www.legrand.co.uk/en/ranges/zucchini/guides

3 x NH3

<sup>\*\*</sup> For selection of fuses see the Legrand Protection, control & measurement guide at www.legrand.co.uk



# tap-off boxes bolt-on type

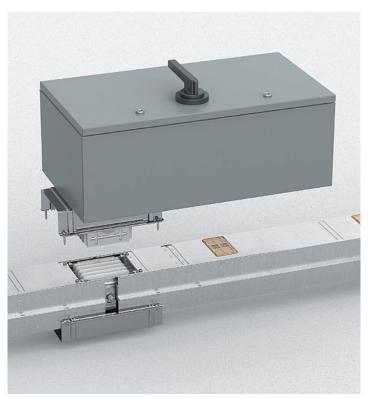


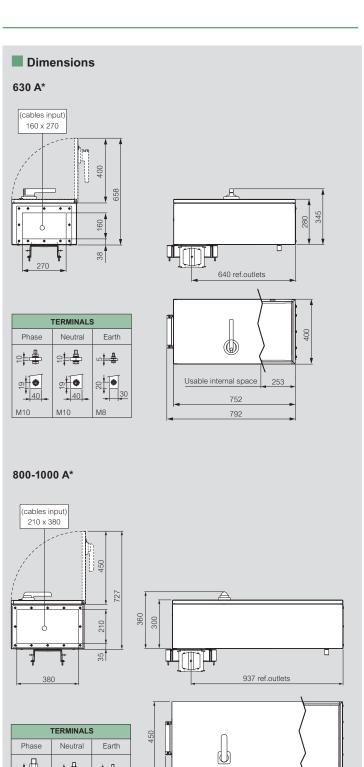
Bolt-on tap-off boxes They are installed on the junction between 2 straight lengths As this connection affects live conductors, it can NOT be carried out when the line is energised – the line has to be isolated

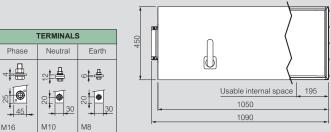
Pack		Cat. Nos. Tap-off boxes with fuse				
				carrier		
	A 630	A 800	A 1000	Rating (A) <b>Aluminium</b>	Circ. breaker	Fuse
1	53401801	53401802	53401803	630	AC23	NH3
1	-	53401804	53401805	800	AC23	NH4
1	-	-	53401806	1000	AC23	NH4
				Copper		
1	56401801	56401802	56401803	630	AC23	NH3
1	-	56401804	56401805	800	AC23	NH4
1	-	-	56401806	1000	AC23	NH4

# Cable entry plate

Tuno	630 A = 160 x 270 mm
Type	800-1000 A = 210 x 380 mm



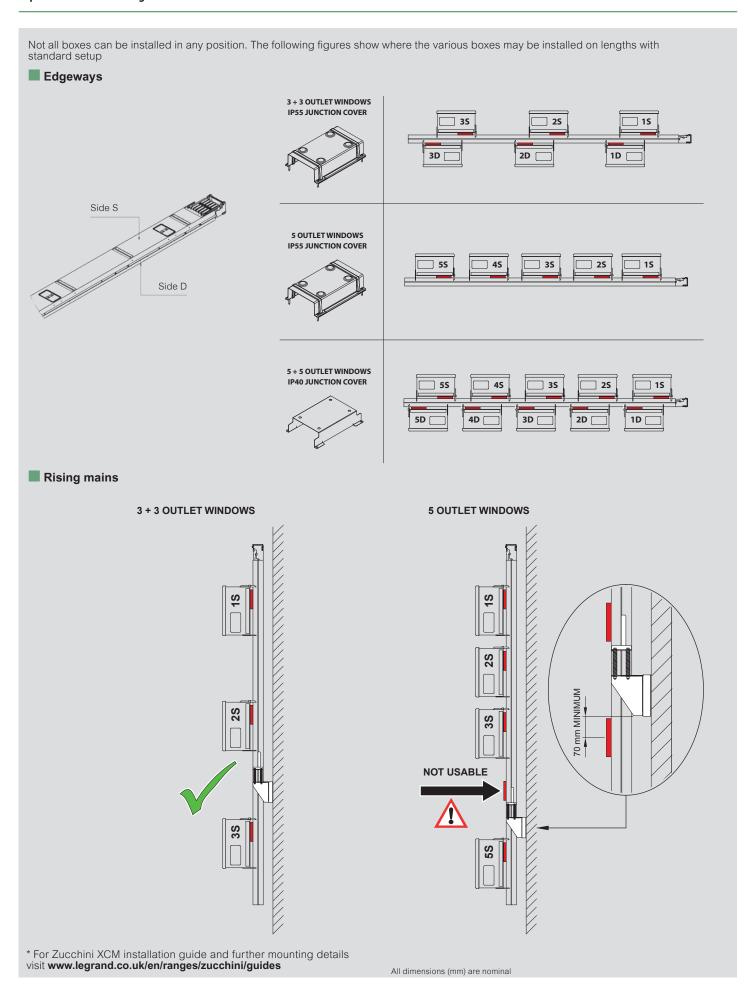




\* For Zucchini XCM installation guide and further mounting details visit www.legrand.co.uk/en/ranges/zucchini/guides



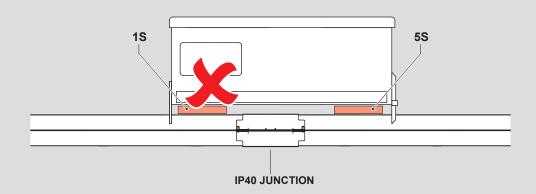
# tap-off boxes mounting



# tap-off boxes mounting

ELEMENT TYPE	DOSITION	TAP-OFF BOX		
ELEMENT TYPE	POSITION	METAL	PLASTIC	
	1S	size 1, size 2, size 3	size 1, size 2, size 3	
	2S	size 1, size 2, size 3	size 1, size 2, size 3	
3 + 3 OUTLET	3S	size 1, size 2	size 1, size 2	
WINDOWS	1D	size 1, size 2	size 1, size 2	
	2D	size 1, size 2, size 3	size 1, size 2, size 3	
	3D	size 1, size 2, size 3	size 1, size 2, size 3	
	1S	size 1, size 2, size 3	size 1, size 2, size 3	
FOUTLET	2S	size 1	size 1, size 2	
5 OUTLET WINDOWS	3S	size 1, size 2, size 3	size 1, size 2, size 3	
WiiNBOWO	4S	size 1	size 1, size 2	
	5S	size 1	size 1, size 2	
	1S	size 1, size 2, size 3	size 1, size 2, size 3	
	2S	size 1	size 1, size 2	
	3S	size 1, size 2, size 3	size 1, size 2, size 3	
	4S	size 1	size 1, size 2	
5 + 5 OUTLET	5S	size 1*, size 2*, size 3*	size 1*, size 2*, size 3*	
WINDOWS	1D	size 1*, size 2*, size 3*	size 1*, size 2*, size 3*	
	2D	size 1	size 1, size 2	
	3D	size 1, size 2, size 3	size 1, size 2, size 3	
	4D	size 1	size 1, size 2	
	5D	size 1, size 2, size 3	size 1, size 2, size 3	

<sup>\*</sup> When mounted in this position the outlet window on next element will be unused



# **La legrand**

# XCM 160 - 1000 A

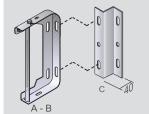
# fixing accessories



30032001	3040	30403/12	
Pack	Cat. Nos.	Suspension brackets	
10	50632001	Al: 160 A - 250 A - 315 A Cu: 250 A - 315 A - 400 A	
10	50632003	B Suspension brackets for bars from 400 A to 1000 A AI: 400 A - 500 A - 630 A - 800 A - 1000 A Cu: 630 A - 800 A - 1000 A	
10	50632205	Wall spacer, required when the bracket needs to be fixed directly to the wall (40 mm)	
2	50403711	Suspension bracket for vertical lengths, suitable for riser mains up to 4 m and for weights up to 300 kg Used together with Cat. Nos. 50632001/3	
2	50403712	Suspension bracket with springs for riser mains This bracket is used in vertical applications Use one bracket every 300 kg (see weight busbars table opposite)	
		Wall fixing bracket	
4	50632212	Adjustable arm both in height and in depth Bracket holder can be combined with the XCM - MS - TS brackets L = 0.45 m - max weight = 80 kg	
4	50632213	Adjustable arm both in height and in depth Bracket holder can be combined with the XCM - MS - TS brackets L = 0.55 m - max weight = 68 kg	
2	50632214	Adjustable arm both in height and in depth Bracket holder can be combined with the XCM - MS - TS brackets L = 0.75 m - max weight = 50 kg	

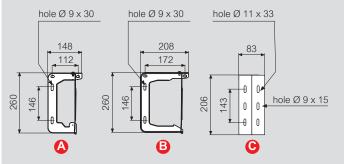
# Dimensions

## **Brackets**



Cat. Nos.	Fig.	Weight (kg)
50632001	Α	0.55
50632003	В	0.60
50632205	С	0.05

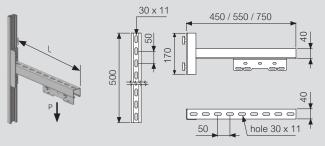
1 bracket for every 2 m of line For more detail see p. 33 : How to take measurements



# **Brackets for vertical lengths**

Cat. Nos.	Weight (kg)		
50403711	1.05	1 bracket at the base of the riser mains max 4 m.	
<b>50403712 (1</b> .20		1 bracket every 300 kg	

# Wall fixing bracket



Cat. Nos. Length		Max. weight	Weight (kg)	
<b>50632212</b> L = 0.45 m		p max. = 80 kg	2.80	
50632213	L = 0.55 m	p max. = 68 kg	3.00	
50632214	L = 0.75 m	p max. = 50 kg	3.50	

# Definition of the maximum distance (Dmax) between two subsequent suspension bracket with springs

Depending on the capacity of the busbar, the quantity and the type of brackets being installed, check that the selected distance (D) is the same or less than the maximum distance (Dmax) between two subsequent brackets with springs

XCM 4 conductors									
	D max (m)								
In (A)	Al	Cu							
160	19	-							
250	19	17							
315	18	16							
400	15	13							
500	14	-							
630	13	10							
800	13	9							
1000	12	8							

XCM 5 conductors								
	D max (m)							
In (A)	Al	Cu						
160	19	-						
250	18	16						
315	17	15						
400	15	12						
500	13	-						
630	12	9						
800	12	8						
1000	11	7						

Max. load applicable to the brackets is 300 kg Values in the table have been calculated taking into consideration, in addition to weight of the busbar, the estimated weight of the accessories (25 kg for each element)



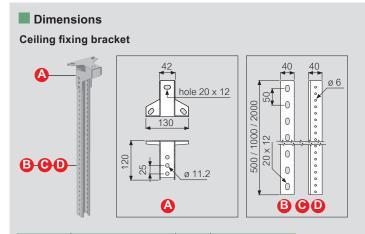
# accessories



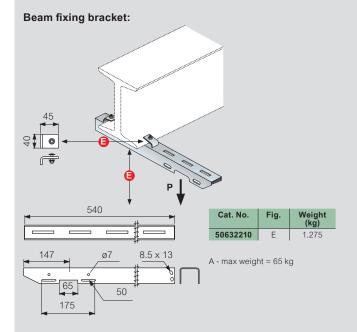
53403601

Pack	Cat. Nos.	Fixing accessories					
		Ceiling fixing bracket with a base to be fixed to the ceiling and a drilled u-shaped section bar available in various lengths Section bar holes are suitable for being installed with the XCM brackets					
10	50632201	A Ceiling flange					
10	50632202	B U-shaped bar L = 0.5 m					
5	50632203	G U-shaped bar L = 1 m					
1	50632204	D U-shaped bar L = 2 m					
10	50632210	Beam fixing bracket. This bracket holds has a bracket and two clamps that are hooked to the wings of the beam					
		Various accessories					
6	53403601	Outlet cover (spare part*) Suitable for all XCM versions					

 $<sup>^{\</sup>star}$  Outlet cover is pre-mounted on the windows of the XCM busbar Cat. No. refers to a spare part



Cat. Nos.	Description	Fig.	Weight (kg)
50632201	Ceiling flange	А	0.66
50632202	U-shaped bar L = 0.5 m	В	1.0
50632203	U-shaped bar L = 1 m	С	1.5
50632204	U-shaped bar L = 2 m	D	2.0





# technical information

			Х	CM - AI	4 cond	uctors (3	3P+N+P	E)		XCM - Cu - 4 conductors (3P+N+PE)						
Rated current	In [A]	160	250	315	400	500	630	800	1000	250	315	400	630	800	1000	
Overall dimension of the busbars	LxH [mm]		75×196				135x196	3			75×196			135x196	3	
Rated operational voltage	Ue (V)				1000				690			10	00			
Rated insulation voltage	Ui (V)		1000 690							1000						
Frequency	f (Hz)							5	0							
Rated short-time current (1 s)	lcw [kA]rms	15*	25*	25*	25	30	36	36	36	25 *	25 *	30 *	36	36	36	
Peak current	lpk [kA]	30	53	53	53	63	76	76	76	53	53	63	76	76	76	
Allowable specific energy for three phase fault	I²t [M A²s]	23	63	63	625	900	1296	1296	1296	63	63	90	1296	1296	1296	
Rated short-time current of the neutral bar (1 s)	Icw [kA]rms	15 *	25 *	25 *	25	30	36	36	36	25 *	25 *	30 *	36	36	36	
Peak current of the neutral bar	lpk [kA]	28	49	49	49	59	70	70	70	53	53	63	76	76	76	
Rated short-time current of the protective circuit (1 s)	Icw [kA]rms	15 *	15 *	15 *	13	13	13	13	13	15 *	15 *	15 *	13	13	13	
Peak current of the protective circuit	lpk [kA]	30	30	30	26	26	26	26	26	30	30	30	26	26	26	
Phase resistance at 20 °C	R <sub>20</sub> [mΩ/m]	0.493	0.331	0.202	0.120	0.077	0.060	0.052	0.037	0.239	0.182	0.099	0.061	0.040	0.032	
Phase reactance at 50 Hz	X [mΩ/m]	0.150	0.150	0.150	0.140	0.070	0.070	0.070	0.060	0.158	0.138	0.119	0.064	0.064	0.056	
Phase impedance	Z [mΩ/m]	0.515	0.363	0.252	0.184	0.104	0.092	0.087	0.070	0.287	0.228	0.155	0.088	0.075	0.064	
Phase resistance at thermal conditions	R [mΩ/m]	0.651	0.485	0.285	0.152	0.098	0.080	0.074	0.053	0.320	0.254	0.133	0.082	0.054	0.046	
Phase impedance at thermal conditions	Z [mΩ/m]	0.668	0.507	0.322	0.207	0.120	0.106	0.102	0.080	0.357	0.289	0.179	0.104	0.084	0.073	
Neutral resistance	R <sub>20</sub> [mΩ/m]	0.493	0.331	0.202	0.120	0.077	0.060	0.052	0.037	0.239	0.182	0.099	0.061	0.040	0.032	
Resistance of the protective bar	R <sub>PE</sub> [mΩ/m]	0.310	0.310	0.310	0.257	0.257	0.257	0.257	0.257	0.310	0.310	0.310	0.257	0.257	0.257	
Reactance of the protective bar at 50 Hz	Li 713	0.220	0.220	0.220	0.180	0.180	0.180	0.180	0.180	0.220	0.220	0.220	0.180	0.180	0.180	
Resistance of the fault loop	R <sub>0</sub> [μΩ/μ]	0.803	0.641	0.512	0.377	0.334	0.317	0.309	0.294	0.549	0.492	0.409	0.318	0.297	0.289	
Reactance of the fault loop	Χ <sub>0</sub> [μΩ/μ]	0.370	0.370	0.370	0.320	0.250	0.250	0.250	0.240	0.378	0.358	0.339	0.244	0.244	0.236	
Impedance of the fault loop  Zero-sequence short-circuit	$Z_0 \left[\mu\Omega/\mu\right]$	0.884	0.740	0.632	0.494	0.417	0.404	0.397	0.380	0.667	0.608	0.531	0.401	0.384	0.373	
average resistance phase - N	R <sub>o</sub> [μΩ/μ]	0.657	0.441	0.269	0.160	0.103	0.080	0.069	0.049	0.319	0.243	0.132	0.081	0.053	0.043	
Zero-sequence short-circuit average reactance phase - N	Χ <sub>ο</sub> [μΩ/μ]	0.200	0.200	0.200	0.187	0.093	0.093	0.093	0.080	0.211	0.184	0.159	0.085	0.085	0.075	
Zero-sequence short-circuit average impedance phase - N	Ζ <sub>0</sub> [μΩ/μ]	0.687	0.485	0.335	0.246	0.139	0.123	0.116	0.094	0.382	0.305	0.206	0.118	0.101	0.086	
Zero-sequence short-circuit average resistance phase - PE	R <sub>o</sub> [μΩ/μ]	0.474	0.420	0.377	0.297	0.283	0.277	0.274	0.269	0.390	0.371	0.343	0.277	0.270	0.268	
Zero-sequence short-circuit average reactance phase - PE	Χ <sub>ο</sub> [μΩ/μ]	0.270	0.270	0.270	0.227	0.203	0.203	0.203	0.200	0.273	0.266	0.260	0.201	0.201	0.199	
Zero-sequence short-circuit average impedance phase - PE	Ζ <sub>ο</sub> [μΩ/μ]	0.546	0.500	0.464	0.374	0.348	0.344	0.341	0.335	0.476	0.457	0.430	0.342	0.337	0.334	
	$\cos \varphi = 0.7$	0.429	0.326	0.233	0.167	0.095	0.084	0.080	0.063	0.331	0.226	0.154	0.081	0.076	0.061	
	$\cos \varphi = 0.75$	0.446	0.336	0.237	0.167	0.096	0.084	0.079	0.062	0.340	0.230	0.155	0.081	0.076	0.060	
Valtage drep with distributed land	$\cos \varphi = 0.8$	0.462	0.344	0.239	0.165	0.096	0.083	0.078	0.061	0.348	0.232	0.154	0.080	0.075	0.059	
Voltage drop with distributed load Δν [V/m*A]10-6	$\cos \varphi = 0.85$	0.477	0.351	0.239	0.162	0.095	0.082	0.076	0.059	0.355	0.234	0.153	0.079	0.073	0.057	
	$\cos \varphi = 0.9$	0.489	0.356	0.237	0.157	0.093	0.079	0.073	0.056	0.359	0.233	0.149	0.077	0.071	0.054	
	$\cos \varphi = 0.95$	0.497	0.357	0.231	0.148	0.089	0.075	0.068	0.051	0.359	0.228	0.142	0.073	0.067	0.050	
	$cos \varphi = 1$	0.480	0.333	0.201	0.116	0.074	0.059	0.052	0.037	0.333	0.201	0.116	0.059	0.052	0.037	
Weight	[kg/m]	7.1	7.6	8.3	11.0	12.7	14.0	15.0	17.0	9.5	10.4	14.3	19.8	25.4	29.5	
Degree of protection	IP	55	55	55	55	55	55	55	55	55	55	55	55	55	55	
Losses for the Joule effect at nominal current	P [W/m]	43	72	69	64	64	81	115	128	51	62	54	82	87	111	
Ambient temperature min/ MAX (daily average)**	[°C]	-5/70 **	-5/70 **	-5/70 **	-5/70 **	-5/70 **	-5/70 **	-5/70 **	-5/70 **	-5/70 **	-5/70 **	-5/70 **	-5/70 **	-5/70 **	-5/70 *	

# Temperature rating schedule according to the room temperature

Ambient temperature (°C)	-5	0	10	15	20	25	30	35	40	45	50	55	60	65	70
Factor Kt	1.28	1.25	1.19	1.16	1.13	1.10	1.07	1.03	1	0.97	0.93	0.89	0.86	0.82	0.78

<sup>\*</sup> Values referred to 0.1 s

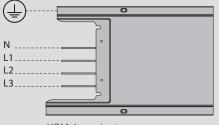
Data on this page refers to the 50 Hz frequency. For details of 60 Hz data, please contact technical support on +44 (0) 370 608 9020

(\*\*) **THREE PHASE:**  $\Delta V3f = \sqrt{3}/2 \times (R_t \cos \varphi + X \sin \varphi)$   $\Delta V3f(\ln) = 1 \times L \times \Delta V3f$ : (knowing the current and length of the line)  $\Delta V3f(\ln)\% = (\Delta V3f(\ln) / Ue) \times 100 (\%)$ To calculate the  $\Delta V1f$  (SINGLE PHASE) on distributed load:

 $\Delta V1f=1/2\times(2R_i\cos\phi+2X\sin\phi)$   $\Delta V1f(ln)=I\times L\times\Delta V1f:$  (knowing the current and length of the line)

ΔV1f(ln)%=(ΔV1f(ln) / Ue) x 100 (%)

I = operating current (A) L = length (m)



XCM 4 conductors

<sup>\*\*</sup>For temperatures over 40°C it will be necessary to derate the busbar and for ambient temperatures under -5°C. For details please contact technical support on +44 (0) 370 608 9020



## technical information

# Straight lengths

The components and features of XCM straight lengths are:

- a casing made of galvanised steel used as protective earth (PE)
  overall busbar dimensions: 75x196 and 135x196
  painted casing available on request
  number of conductors: 4 with the same section (3P+N) with PE made from the casing or 5 when using XCM (3P+N+PE), available in the aluminum or electrolytic copper version with 99.9% purity
  conductor insulators are made by CPP printered plactic.
- conductor insulators are made by GRP reinforced plastic material, ensuring a V0 self-extinguishing degree (according to UL94), in compliance with the glow-wire test according to IEC 60695-2-10
- tap-off outlets with a constant centre distance of 1 m on both sides of the busbar (3+3 outlets every 3m), set up for being connected to plug-in type tap-off boxes; These outlets open and close automatically when inserting or pulling out a tap-off box
- monobloc electric junction system made with tin plated aluminium for XCM Al and copper for XCM Cu system to connect conductors and PE in a fast and reliable way. The monobloc has shearhead bolts with a preset torque setting which ensure good, long-lasting electrical continuity

  • all components and accessories of the XCM line are IP55
- the whole busbar is fire retardant in compliance with the IEC 60332-3 standard

## Feed units

Allow you to electrically power the XCM line through a cable line or directly connected to a distribution board. The 160 and 250 A feed units have terminals for cables up to 150 mm²; for higher ratings, the cable connection to the feed unit requires cable lugs to be fastened to the provided spreaders. The XCM line can be provided with intermediate feed units or end feed units with a switch-disconnector which allows you to isolate the whole line for carrying out maintenance operations or layout changes, if required

## End cover

The end cover ensures IP55 protection degree at the end of the line

# Fixing supports

In order to fix the line to the structure of the building, directly or with wall / ceiling / beam supports, it is necessary to use bracket supports or vertical suspension supports

# Tap-off boxes

Used for energising three phase loads from 32 A up to 1000 A; they can be divided into two main categories:

- 1) Plug-in type tap-off boxes (from 32 A up to 630 A) with the following features:Intervention under load possible up to 32 A;
- disconnection device integrated into the cover of the boxes with a rating from 63 A to 630 A, ensuring automatic absence of electric current when the cover is opened
- possibility of padlocking box cover in the open/disconnected position so that all maintenance operations of the loads connected to it can be carried out safely
- the supplied PE contact (protective conductor) is the first to make an electrical connection when inserting the box into the outlet and it is the last to disconnect when pulling it out
- all insulating plastic components are in compliance with the IEC 60695-2-1 glow-wire test and rated V2 self-extinguishing according to the UL94
   standard IP55 degree of protection without using additional accessories
- availability of boxes in the following versions¹:
- with a set of three fuse carriers
- with Lexic MCBs
- with industrial sockets and Schuko sockets with AC23 switch disconnector and fuse carrier
- for MCCBs
- 2) Boxes bolted onto the connection (from 630 A to 1000 A) which include the following features:
- very easy, fast and reliable installation
- high rated current
- rigid connection to the busbar through the use of a monobloc junction similar to the straight length system possibility of removing the boxes only when the busbar is not energised
- (isolated busbar)
- availability of boxes in the following versions
- AC23 switch disconnector and fuse carrier
- for MCCBs
- 1: For full range of Legrand power protection product ranges, see opposite

Product fully in compliance with the following Standard: IEC 61439 -6

Product suitable for these climates:

- IEC 60068 2-11: Environmental tests Part 2-11: Tests – Test Ka: Salt mist - IEC 60068 2-30: Environmental tests Part 2-30: Tests – Test Db: Damp heat, cyclic (12 h + 12 h cycle)

## Conversion table

Conductors	Case	Item code	
4	galvanised	0	-
5	galvanised	1	-[1111]-
5	galvanised	1E5	-[1111]-
4	painted	<b>2</b>	
5	painted	3	-[1111]-
5	painted	3E5	-[1111]-

Note: item code -E5 = 3P + N + FE + PE casing

# Short circuit protection for Legrand's product ranges (In≤100A)¹

Legrand busbar trunking systems with a rated current lower than or equal to 100 A are properly protected through an MCB (modular circuit breaker) with a nominal current lower than or equal to that of the busbar. This protection is guaranteed up to the MCB breaking capacity

1 : For full range of Legrand power protection product ranges, see below



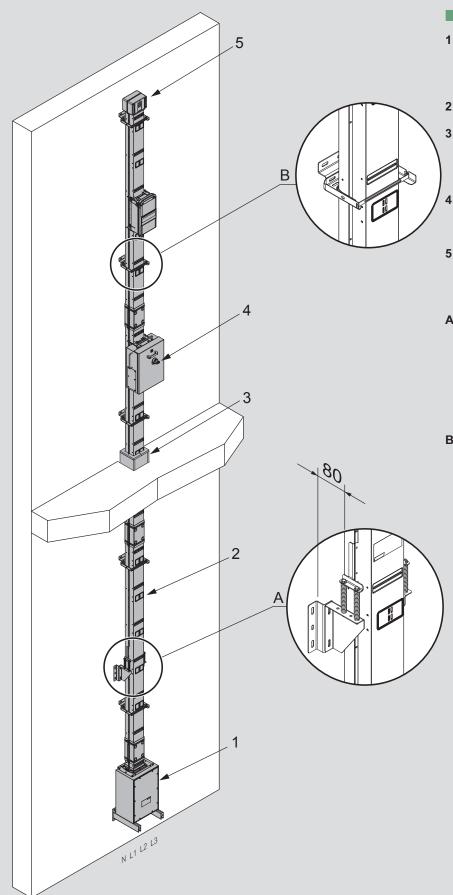
For details of full range of power protection product ranges

contact us on +44 (0) 370 608 9020 or visit www.legrand.co.uk





# how to design rising mains



# ■ General rules for design of rising mains

- 1 Use a LH end feed unit. This allows the neutral bar to be positioned on the left side of the busbar, hence the cable exit of the tap-off boxes is located downwards
- 2 Use straight lengths with 5 outlets on one side
- 3 Use a straight element with fire barrier for each compartment floor. It is necessary to specify the position of the internal fire barrier before placing an order
- 4 The tap-off boxes can be installed in the tap-off outlets and near the connection between the lengths
- 5 At the end of the riser mains, position the IP55 end cover. Before installing the end cover remove the monobloc located on the last element
- A Use one or more suspension brackets for the vertical lengths, according to the weight of the whole rising mains. For risers that are shorter than 4 metres, fix to the base with Cat. No. 50403711; when longer, use a suspension bracket Cat. No. 50403712 every 300 kg of rising main
- **B** Use a standard suspension bracket with a 40 mm spacer every 2 metres of rising mains

For Zucchini XCM installation guide and further mounting details visit www.legrand.co.uk/en/ranges/zucchini/guides

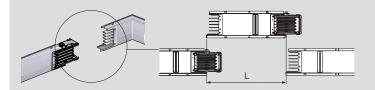
# **₩** MEASURING BESPOKE DIMENSIONS

# Straight lengths

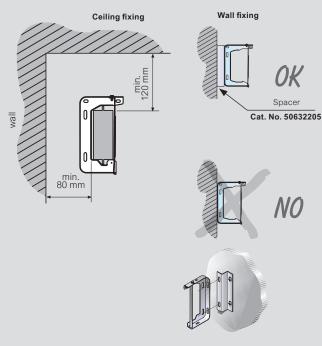
Always take measurements on the long side on the metal casing as shown in the figure. For simplicity's sake, it will be referred to as 'long casing'



The dimension of the straight lengths can range from 600 mm to 3000 mm



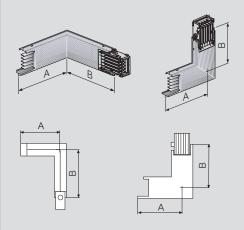
# Minimum fixing distances



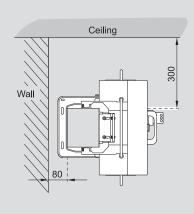
Do not fix the bracket directly on the wall Use the special spacer Cat. No. 50632205

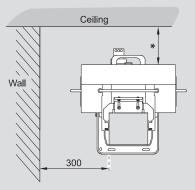
# **Elbows**

When using elbows, the dimension should be measured from the long casing to the axis of the element



# ■ Minimum installation distance with tap-off boxes





\* When there is a tap-off box installed above the busbar, check the overall dimension of the open cover of the tap-off unit used in the specific section



# design example

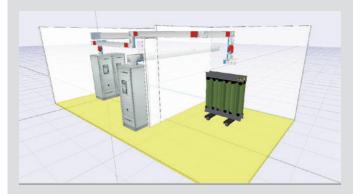
## Technical information

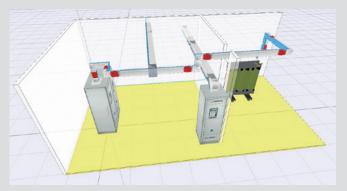
Due to the flexibility of the XCM line, it is possible to customise the system according to specific requirements It is therefore possible to request special products such as direct current or particular frequency (60Hz) distribution systems, or, as it is the case for the food sector, with stainless steel casing

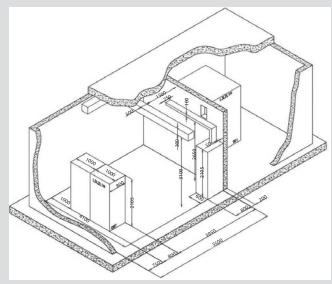
- Possible special requirements:
   5 conductor version with separate FE earth
   painting in customised colour
   fitting with Al/Cu earth conductors

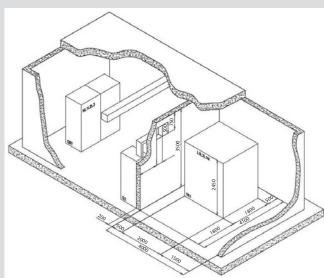
- arrangement for direct current systems

Below is the example of a system route The figures below show the initial situation, listing all the measurements that must be known





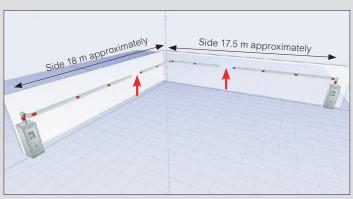




# Route not completely defined

If the route cannot be defined with sufficient degree of precision, some parts may be left out and ordered at a later stage

In order to simplify the process of taking the necessary measurements for the definition of the completion items, it is recommended that the supply of all sections with direction changes is defined from the start, leaving the completion of straight section to a later stage



NOTE: The red arrows indicate the elements that can be dealt with at a later stage, and the correct layout of those supplied initially



# **Protection classifications**

# Protection against solid bodies and liquids: Index of protection - IP xx

Degree of protection of enclosures of electrical equipment in accordance with standards IEC 60529, BS EN 60529 Up to 1 000 V  $\sim$  and 1 500 V =

	1 <sup>st</sup> digit:			lditional letter BCD): protecti	on against	2 <sup>nd</sup> digit: protection against liquids								
	rotection against solid odies			the access to hazardous current-carrying parts			the access to hazardous			the access to hazardous			tests	No protection
ΙP	tests		ΙP	tests	protection		19999	Protected against						
0		No protection		Ø 50 mm	The back of the	1		vertically-falling drops of water (condensation)						
1	Ø 50 mm	Protected against solid bodies larger than 50 mm	A	<b>4</b>	hand remains remote from dangerous parts	2	)\s	Protected against drops of water falling at up to 15° from the vertical						
	Ø 12.5 mm	Protected against solid		12 mm	The dangerous parts can not be touched	3		Protected against drops of rain water at up to 60° from the vertical						
2		bodies larger than 12.5 mm	В	4	when introducing a finger	4		Protected against projections of water from all directions						
3	Ø 2.5 mm	Protected against solid bodies larger	С		The dangerous parts can not be touched when introducing	5		Protected against jets of water from all directions						
		than 2.5 mm		7	a tool (eg a screwdriver)	6		Protected against jets of water of similar force to heavy seas						
4	<u>Ø 1 mm</u>	Protected against solid bodies larger than 1 mm				7	1 mini	Protected against the effects of immersion						
5		Protected against dust (no harmful deposit)	D	D			The dangerous parts cannot be touched when introducing a wire	8	E	Protected against prolonged effects of immersion under pressure				
6		Completely protected against dust				9 9K¹		Protected against high pressure and temperature water jets						

Legrand appliances for domestic applications, once installed, have a degree of protection IP equal to or greater than IP 2XC 1: In accordance to ISO 20653

# Protection against mechanical impact : Index of protection - IK

According to standards IEC 62262 and BS EN 62262

IK	Tests	Impact energy (in Joules)
IK 00		0
IK 01	0.2 kg 75 mm	0.15
IK 02	0.2 kg 100 mm	0.2
IK 03	0.2 kg 175 mm	0.35
IK 04	0.2 kg 250 mm	0.5
IK 05	0.2 kg 350 mm	0.7
IK 06	0.5 kg 200 mm	1
IK 07	0.5 kg 400 mm	2
IK 08	1.7 kg 295 mm	5
IK 09	5 kg 200 mm	10
IK 10	5 kg 400 mm	20

A product previously classed as IP xx-7 can be assumed to fulfill the conditions of an IP xx - IK 08

This table can be used to ascertain the resistance of a product to an impact given in Joules from the IK code (graduated from 00 to 10). It can also be used to ascertain the correspondence with the old IP code 3rd digit and the corresponding external "Ag" conditions.

The contents of the Protection Classifications charts are for guidance only. If you have any doubt as to the interpretation of the information contained therein, please refer either to the standard itself or contact Legrand.

# Health and Safety at Work, etc. Act. 1974

## Statement to Purchasers and Prospective Purchasers

- 1. Section 6 of this Act provides that manufacturers, designers, importers or suppliers of articles for use at work have a duty to ensure so far as is reasonably practical, that the article will be safe and without risk to health when properly used. An article is not regarded as being 'properly used' if it is used without regard to any relevant information or advice relating to its use made available by the manufacturer, designer, importer or supplier.
- 2. With regard to these provisions the following is given as a guide to the information which is readily available to you. This information relates to those products detailed in our catalogue(s) or associated literature or may be obtained by specific request to the Company.
- 3. All products should be installed and maintained in accordance with good engineering practice and relevant British or

other applicable standards, regulations for the installation of equipment by the Institute of Electrical Engineers or any other applicable Codes of Practice.

# Health and Safety at Work Act

# The Electricity at Work Regulations, 1989

- 1. All installations and maintenance should be carried out within the provision of the above Act and by persons so qualified as defined in the Act
- 2. Information and advice on the suitability of our products can be obtained from Legrand Electric Limited on specific request.

For information concerning wiring device standards outside the UK contact:

Customer Services

09:00 to 17:00 - Monday to Friday

Tel: +44 (0) 20 8996 9001 Fax: +44 (0) 20 8996 7001 Email: cservices@bsi-global.com



marking appears on electrical or electronic products from Legrand and enables the circulation of goods outside the UK.

## Conditions of sale

Please consult our current price list

# **Contact details**

# **United Kingdom**

Great King Street North, Birmingham, B19 2LF

# **Customer Services:**

Tel: +44 (0) 345 605 4333 E-mail: legrand.sales@legrand.co.uk

# **Quotations and Technical Support:**

Tel: +44 (0) 370 608 9020

E-mail: powersales.uk@legrand.co.uk

# Republic of Ireland:

Tel: 01 295 9673

E-mail: legrand.sales@legrand.co.uk





# Head office (UK and Ireland):

Legrand Electric Limited Great King Street North, Birmingham, B19 2LF Tel: +44 (0) 370 608 9000 Website: www.legrand.co.uk

In accordance with its policy of continuous improvement, the Company reserves the right to change specifications and designs without notice. All illustrations, descriptions, dimensions and weights in this catalogue are for guidance and cannot be held binding on the Company. All contents and design presentation included in this publication are © Legrand Electric Limited. All rights reserved. 2024

