SIEMENS

Distribution Equipment

SPEEDFAX

Section 2
Meter Centres

2

Contents

Description

Introduction

Siemens offers the most complete, versatile selection of modern metering equipment available. The Siemens metering line offers an economical approach to virtually any metering requirement, whether it be for residential, commercial or industrial applications; 240 volt; a standard mechanical style system or an electronic one.

Meeting All Your Service Needs

Offering the maximum in versatility to meet all your needs, Siemens metering centres are designed for single phase three wire 120/240V AC or three phase four wire 120/208V AC applications with sub-service modules of 100A, 125A and 200A. Siemens meter centres are designed to meet CSA requirements for "cold metering". Sub-service breakers are mounted on the line side of the meter socket. All individual metering stacks are manufactured to tight specifications and can be selected in pre-assembled units, to minimize on-site labour or as a separate plug-in module for a customized installation when required. The modular construction offers real post installation flexibility permitting on-site changes to be made with minimum down time.

Direct Tap Feature

No Tap Box is required for services up to 600A, when using our **"Direct Tap" Main Lug Feed Kit. Tap box available on one side of meter stack only (refer to page 2/9 & 2/10).**
This custom designed Lug Kit allows connection of main incoming cables directly to the Meter Stack Main Bus. Also, a 200A "Direct Tap" Sub-service Lug Kit, eliminates the need for a Sub-service Tap Box.

Meter Stack Design

All Siemens meter stacks are of uniform design with flexibility in mind. Slide-in metering modules from 100 to 200A fit in any meter stack. You decide whether the system is single or three phase.

Guide Rails

Easy to use, the guide rails simplify installation of the Modular Meter Centre. They enable the metering stacks to be rapidly pre-installed on the wall, automatically aligning the sections for permanent mechanical installation and electrical joining of the main bus.

Meter Stack Enclosure

Meter stack enclosures, barriers and end plates are manufactured of code gauge galvanized steel.
Front covers are fabricated of phosphatized steel finished with ASA 61 light grey paint. Meter socket front covers are embossed and fitted with a label to allow suite identification on the enclosure adjacent to its respective service breaker.

Bus Bar

The main horizontal bus consists of tin plated high conductivity aluminum for maximum performance and economy. The main cross bus is installed at the bottom of the metering stacks and is rated at 600 or 1200A while the vertical bussing is rated at 800A per section.

Flexibility

With Siemens service entrance modules, you can choose what you require for convenient top or bottom incoming cables, for single connection or feed through applications.
Branch wiring can exit via combination knockouts at the top or bottom of each meter stack and a convenient wireway at the top of individual metering stacks allow for maximum flexibility in sub-service wiring.

Slide-in Modules

Slide-in modular design allows for installation flexibility and provides isolation between individual meter sockets as well as between the sockets and sub-service wireways.

Entry Plates

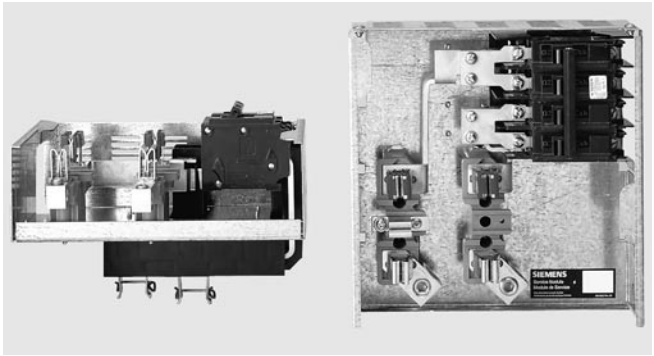
Main cable tap boxes can be provided with punched or unpunched aluminum or fiber entry plates.

Circuit Breakers

Compact high performance branch breakers are constructed of quality materials. Q and EQ type plug-in breakers or BQ and QJ bolt-on branch breakers with interrupting ratings up to 65 kA combine thermal and magnetic trip elements and feature: isolated pole construction with common trip bar for multiple pole devices; silver alloy contacts and high pressure straight-in load connectors.

Meter Sockets

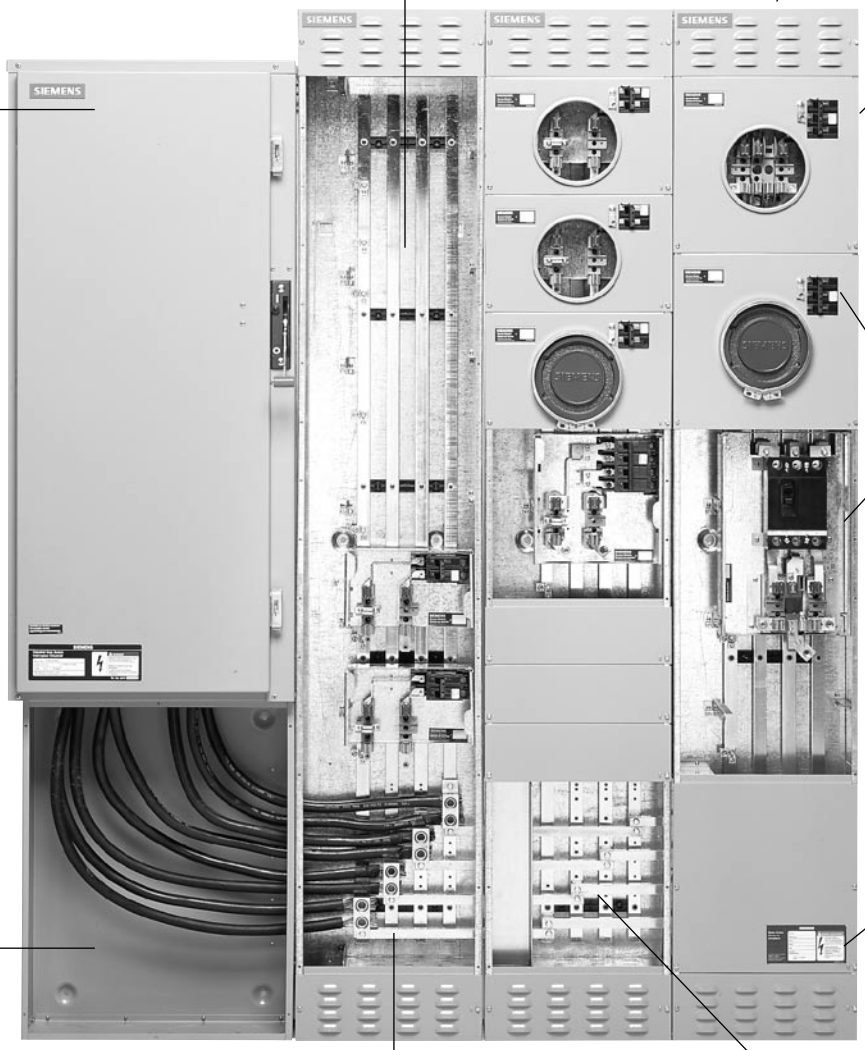
Meter socket jaws consist of tin plated copper with steel spring reinforced clips for reliable contact pressure. Positive alignment of jaws and stabs is assured by bus straps which are bolted in place. By simply removing two screws from the front, an individual pair of jaws can be removed for easy replacement.



Note: Meter Centres with Series rating now available.

Selection Procedure

Overview



Configuration Table

Description

1. a) Select one service entrance safety switch.
   b) Select required main tap box or main lug feed kit with or without a transition box.
2. Select type and quantity of plug-in meter socket modules as per requirements.
3. a) Select quantity of basic meter stacks or complete meter stacks based on quantity of meter socket modules required.
   b) Select main bus connectors to join each stack.
4. a) Select quantities and types of sub-service breakers as required and plug-in meter socket modules.
   b) Select quantities of filler plates as per left-over empty space (1 kit equals 2 x 1/2 module plates).
5. Price all accessories or corner elbows needed.

Pricing Example – Typical 600A Main Service 120/240V 1Ø 3W. c/w 16-100A Sub-Service and 1-200A Sub-Service									
Option 1 c/w Tap Box & Bolt-on Breakers					Option 2 c/w Transition Box & Plug-in Breakers				
QTY	**Catalog No.**	**Description**	**$***	**Total**	**QTY**	**Catalog No.**	**Description**	**$***	**Total**
1	ID226	Safety Switch	$	$	1	ID226	Safety Switch	$	$
1	MLTBI-600	Tap Box	$	$	1	MTB-600	Transition Box	$	$
4	MMS4-125	Met, Sock, Mod	$	$	1	MLFK1	Main Lug Kit	$	$
1	MMS4-200QJ	Met, Sock, Mod	$	$	4	MMS4-125	Met, Sock, Mod	$	$
2	MMC14-6125	Complete Stack	$	$	1	MMS4-200	Met, Sock, Mod	$	$
1	MMC1	Basic Stack	$	$	2	MMC14-6125	Complete Stack	$	$
2	MBSSI-600	Connector Kit	$	$	1	MMC1	Basic Stack	$	$
1	MBHP-2	Blank Plate	$	$	2	MBSSI-600	Connector Kit	$	$
16	BQ2BI00	100A Bolt-On Breaker	$	$	1	MBHP-2	Blank Plate	$	$
1	QJ22B200	200A Bolt-On or Breaker	$	$	16	Q2100	100A, Plug-in Breaker	$	$
					1	EQ9685	200A, Plug-in Breaker	$	$
		TOTAL		$			**TOTAL**		$

Note: Refer to the following chart to calculate how many Blank Plates you need in a Meter Stack after quantities of Meter Socket Modules are determined.

Catalog No.	Description	Height in Modules	Note
MMC1 & MMC3	One Meter Stack	6 Modules Space	0.5 Modules = 4 $^{7}/_{16}$ (112.5)
MBHP-2	Blank Plate	0.5 Module	(2 plates per pkg.)
MMS4-125	Meter Socket	1 Module	
MMS5-125	Meter Socket	1 Module	
MMS4-200	Meter Socket	1.5 Modules	
MMS5-200	Meter Socket	1.5 Modules	
MMS4-200QJ	Meter Socket	1.5 Modules	
MMS5-200QJ	Meter Socket	1.5 Modules	
MMS7-100	Meter Socket	1.5 Modules	
MMS7-200	Meter Socket	3 Modules	

* For pricing refer to Distribution Price Book.

Service Entrance Module

System Ampere Rating	120/240 1Ø,3W		120/208 3Ø,4W		Cable Lug Size② per phase	Dimensions H in (mm)	W in (mm)	D in (mm)	Weight③ lbs (Kg)
Service Entrance Module ①									
Fusible Switch Module①									
400	**ID225**		**ID425**		Refer to Section 1 Safety Switches for Information on Lug sizes.				
600	**ID226**		**ID426**						
800	**HFC227N**		**HFC367N**						
1200	**HFC228N**		**HFC368N**						
Standard Tap Boxes④ Connector Included⑧									
400/600	**MLTB1-600**		**MLTB3-600**		3 x #2 to 600 MCM	25 3/4 (655)	20 1/2 (521)	7 1/4 (184)	40 (18.18)
800/1200	**MLTB1-1200**		**MLTB3-1200**		4 x 1/0 to 750 MCM	25 3/4 (655)	20 1/2 (521)	7 1/4 (184)	45 (20.45)
Feed Through Tap Boxes⑤ Connector Included⑧									
400/600	**MLTB1-600 FT**		**MLTB3-600 FT**		4 x 250 to 750 MCM or 8 x 3/0 to 250 MCM	25 3/4 (655)	20 1/2 (521)	7 1/4 (184)	45 (20.45)
800/1200	**MLTB1-1200 FT**		**MLTB3-1200 FT**		8 x 1/0 to 750 MCM	46 1/4 (1175)	24 (610)	7 1/4 (184)	60 (27.3)
Direct Tap									
Transition Box⑥									
400/600	**MTB-600**		**MTB-600**		—	25 3/4 (655)	20 1/2 (521)	7 1/4 (184)	30 (13.64)

System Voltage	System Ampere Rating Cat. No. 600A		1200A	Cable Lug size② per phase 600A	Use with Meter Module Type	Weight lb (Kg)
Main Lug Feed Kit④ - Safety Switch to Stack⑦						
120/240 1Ø 3W	**MLFK1**		**N/A**	2 x 1/0 to 750 MCM or 4 x 1/0 to 250 MCM	MMC1 MMC14-6125	2 1/2 (1.1)
120/208 3Ø 4W	**MLFK3**		**N/A**	2 x 1/0 to 750 MCM or 4 x 1/0 to 250 MCM	MMC3 MM35-6125	3 (1.3)

① Fusible Switch can be mounted directly to Metering Stack when using Main Lug Feed Kit with or without a Transition Box or on the Standard Tap Boxes. Suitable for left or right entry.

② All incoming cable lugs are suitable for copper and aluminum cable.

③ Weight is based on 3Ø 4W system (Heaviest pcs).

④ One service entrance module is required for each line up to accommodate incoming main service cable (unless Main Lug Feed Kit is used). Mount directly to the Meter Stack suitable for right or left entry.

⑤ Feed Through Tap Boxes are required when the main incoming cable enter and exit at same end of line up.

⑥ Transition Box is used when more working space is required to connect on Main Lug Feed Kit in Meter Stack.

⑦ This Main Lug Feed Kit is required only when a Safety Switch is connected to the Meter Centre without a tap box. Suitable for left or right entry.

⑧ 2 Tap Boxes can be used for RHS & LHS connections with an even number of stacks only.

Modular Meter Centres

Meter Socket Module, Meter Centre Stack and Main Bus Connector

Meter Socket Module

Sub-Service Voltage	Number of Jaws	Catalog No.	Meter Socket Rating	Phase Connection	Provision Only Breaker Type	Height in (mm)	Height MOD	Weight lbs (Kg)
120/240 1Ø3W	4	**MMS4-125**	125A	AB	Q-BQ BQH	8 7/8 (225)	1	7 (3.2)
120/240 1Ø3W	4	**MMS4-200**	200A	AB	EQ	13 5/16 (338)	1.5	11 (5)
		MMS4-200QJ			QJ			
120/208 1Ø3W	5①	**MMS5-125**	125A	AB②	Q-BQ BQH	8 7/8 (225)	1	7 (3.2)
120/208 1Ø3W	5①	**MMS5-200**	200A	AB②	EQ	13 5/16 (338)	1.5	11 (5)
		MMS5-200QJ			QJ			
120/208 3Ø4W	7①	**MMS7-100**	100A	ABC	Q-BQ BQH	13 5/16 (338)	1.5	10 (4.55)
120/208 3Ø4W	7①	**MMS7-200**	200A	ABC	QJ	26 5/8 (676)	3	16 (7.27)

① Meter Socket Module unit 5 - Jaw and 7 - Jaw can be assembled in the same Meter Stack Module as long as the system is balanced.

② MMS5-125 and MMS5-200 are factory AB phase connections, but by a simple field conversion the phasing connection can be changed to AC or BC to balance the load on the system.

Basic Meter Stack Module① (Cold Metering)

Main Service Voltage	Sub-Service Voltage	Catalog No.	Max. Sub-Service Per Stack For Each Amperage② 100A	125A	200A	Height (MOD)	Dimensions H in (mm)	W in (mm)	D in (mm)	Weight lbs (Kg)
120/240 1Ø 3W	120/240 1Ø 3W	**MMC1**	–	6	4	6 (1981)	78 (356)	14 (184)	7 1/4 (30.45)	67
120/208 3Ø 4W	120/208 1Ø 3W	**MMC3**	–	6	4	6 (1981)	78 (356)	14 (184)	7 1/4 (31.82)	70
120/208 3Ø 4W	120/208 3Ø 4W	**MMC3**	4	–	2	6 (1981)	78 (356)	14 (184)	7 1/4 (31.82)	70

Complete Meter Stack Module③ (Cold Metering)

Main Service Voltage	Sub-Service Voltage	Number of Jaws	Catalog No.	Quantity of Sub-Services Included	Meter Socket Rating	Provision only Breaker Type	Height (MOD)	Dimensions H in (mm)	W in (mm)	D in (mm)	Weight lbs (Kg)
120/240 1Ø 3W	120/240 1Ø 3W	4	**MMC14-6125**	6XMMS4-125	125A 4-JAW	BQ BQH	6	78 (1981)	14 (356)	7 1/4 (184)	109 (49.55)
120/208 3Ø 4W	120/208 1Ø 3W	5	**MMC35-6125**	6XMMS5-125	125A 5-JAW	BQ BQH	6	78 (1981)	14 (356)	7 1/4 (184)	112 (50.91)

Main Bus Connector Kit - Stack to Stack

System Voltage	System Ampere Rating Catalog No. 600A	1200A	Use with Meter Module Type	Weight lb (Kg)	
120/240 1Ø 3W	**MBSS1-600**	**MBSS1-1200**	MMC1 MMC14-6125	3 (1.3)	7 (3.18)
120/208 3Ø 4W	**MBSS3-600**	**MBSS3-1200**	MMC3 MM35-6125	4 (1.82)	10 (4.55)

Sub-Service Breakers and Corner Elbow Module

Sub-Service Breakers		10KA IC Cat. No.		22KA IC Cat. No.	
Amperes	**Poles**	**Plug-In**	**Bolt-On**	**Plug-In**	**Bolt-On**
60	2 3	**Q260** **Q360**	**BQ2B060** **BQ3B060**	N/A	**BQ2B060H** **BQ3B060H**
70	2 3	**Q270** **Q370**	**BQ2B070** **BQ3B070**	N/A	**BQ2B070H** **BQ3B070H**
90	2 3	**Q290** **Q390**	**BQ2B090** **BQ3B090**	N/A	**BQ2B090H** **BQ3B090H**
100	2 3	**Q2100** **Q3100**	**BQ2B100** **BQ3B100**	N/A	**BQ2B100H** **BQ3B100H**
125	2 3	**Q2125** **N/A**	**BQ2B125** **QJ23B125**	N/A	**BQ2B125H** **QJH23B125**
150	2 3	**EQ9683** **N/A**	**QJ22B150** **QJ23B150**	**EQ9683** N/A	**QJH22B150** **QJH23B150**
175	2 3	**N/A** **N/A**	**QJ22B175** **QJ23B175**	N/A	**QJH22B175** **QJH23B175**
200	2 3	**EQ9685** **N/A**	**QJ22B200** **QJ23B200**	**EQ9685** N/A	**QJH22B200** **QJH23B200**

Corner Elbow Module①					
System Voltage	**Catalog No.**		**Dimensions**		
	600A	**1200A**	**H in (mm)**	**W in (mm)**	**D in (mm)**
Inside Elbow Module					
120/240 1Ø 3W	**MEL1-IN-6**	**MEL1-IN-12**	6 (406)	12 (304)	7 1/4 (184)
120/208 3Ø 4W	**MEL3-IN-6**	**MEL3-IN-12**	16 (406)	12 (304)	7 1/4 (184)
Outside Elbow Module					
120/240 1Ø 3W	**MEL1-OUT-6**	**MEL1-OUT-12**	6 (406)	12 (304)	7 1/4 (184)
120/208 3Ø 4W	**MEL3-OUT-6**	**MEL3-OUT-12**	16 (406)	12 (304)	7 1/4 (184)

① Elbow Modules permit continuation of the Meter Centre around corners to adjacent walls.

Accessories

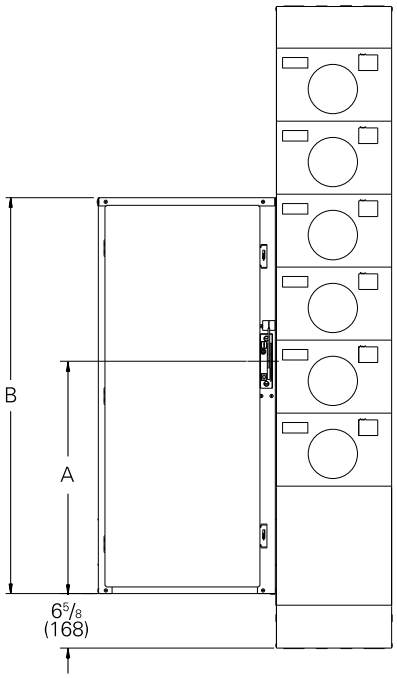
Catalog No.		Description	Application
SFLK-200		Sub-Feed Lug Kit 200A max.	SFLK-200 is used when a sub-feed service is required. SFLK-200 are installed directly on Vertical Bus. Accepts up to 250 MCM copper.
MTRK-64		Wall Mounting Rail 64"	The wall mounting rails simplify installation. They enable the metering stacks to rapidly pre-install on the wall, automatically aligning the sections for permanent installation.
MBHP-2		2 x Half Blank Meter Socket Filler plate	Required to cover any empty space, two half plates per kit.
MUJP-5		Jumper Bar Kits 200A max. 4/5 Jaw	Jumper bar kit is used to jump a metering position when the meter has been temporarily removed.
MUJP-7		Jumper Bar Kits 200A max. 7 Jaw	Jumper bar kit is used to jump a metering position when the meter has been temporarily removed.
MSSR		Meter Sealing Ring	Required to secure a meter in place.
Sub-Service Covers		**Description**	
MC4-125		125A 4 & 5 Jaw Front Cover Plate Q & BQ Breaker	
MC7-100		100A 7 Jaw Front Cover Plate Q & BQ Breaker	
MC4-200		200A 4 & 5 Jaw Front Cover Plate EQ Breaker	
MC4-200QJ		200A 4 & 5 Jaw Front Cover Plate QN Breake	
MC7-200		200A 7 Jaw Front Cover Plate QN Breaker	
Service Entrance Modification Kit		**Description**	
MLTB-AU		Aluminum Plate unpunched for MLTB 600, 600FT and 1200A	
MLTB-AP		Aluminum Plate punched for MLTB 600, 600FT and 1200A	
MLTB-FU		Fiber Plate unpunched for MLTB 600, 600FT and 1200A	
MLTB-FP		Fiber Plate punched for MLTB 600, 600FT and 1200A	
MLTB-AUFT		Aluminum Plate unpunched for MLTB 1200FT	
MLTB-APFT		Aluminum Plate punched for MLTB 1200FT	
MLTB-FUFT		Fiber Plate unpunched for MLTB 1200FT	
MLTB-FPFT		Fiber Plate punched for MLTB 1200FT	
MLTB-L2750		Lug Kit 2–750MCM or 4–250MCM/Ø for 600A Tap Box 1Ø or 3Ø	
SEALSC1		Sealing Screw Kit for All Meter Centres	

NOTE: Multi-stack grounding is accomplished by running a bare wire through the factory installed lay-in lugs in the bottom of each stack. No grounding kit is required.

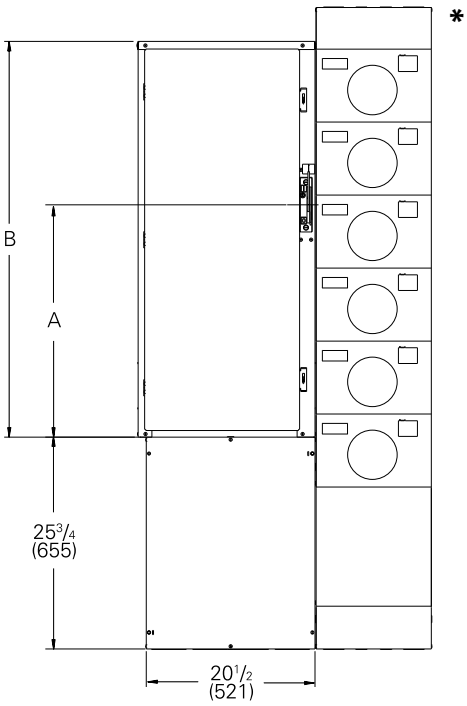
Dimensions

Configuration Data

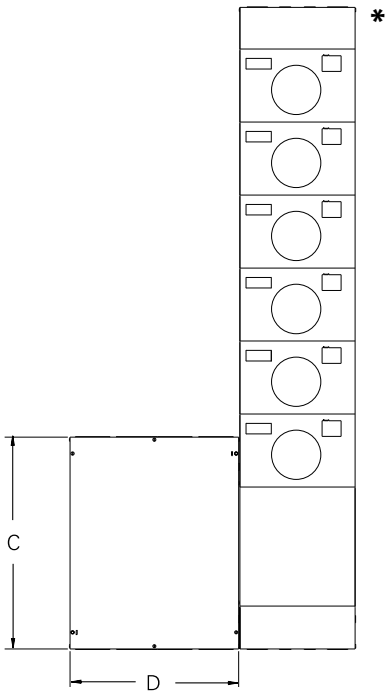
With Switch



With Transition Box and Switch



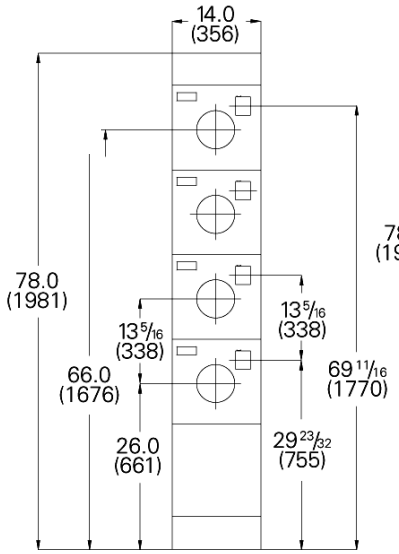
With Tap Box



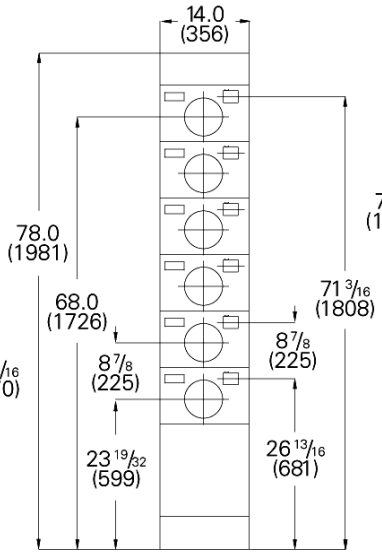
400A A = 24 1/4" (616) B= 40.0" (1016)
600A A = 28 1/4" (718) B = 48.0" (1219)

400A to 600A C = 25 3/4" (655)
D = 20 1/2" (521)

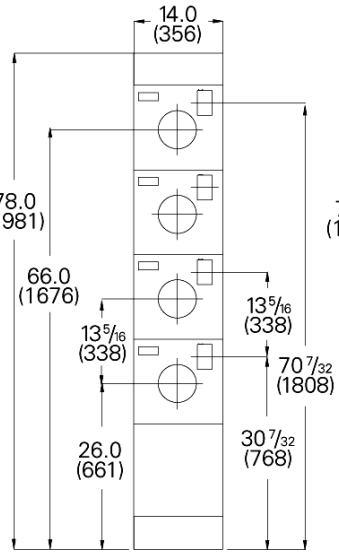
Meter Modules



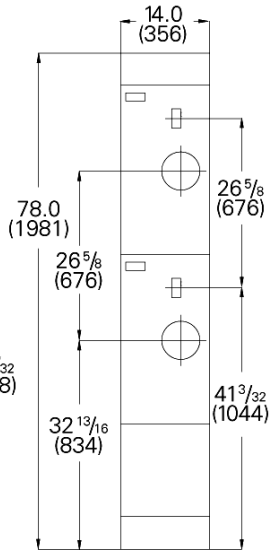
MMC3
MMS7-100



MMC1
MMC3
MMS4-125
MMS5-125



MMC1
MMC3
MMS4-200
MMS5-200
MMS4-200QJ
MMS5-200QJ



MMC3
MMS7-200

*** Tap box available for installation on any one side only**

Dimensions

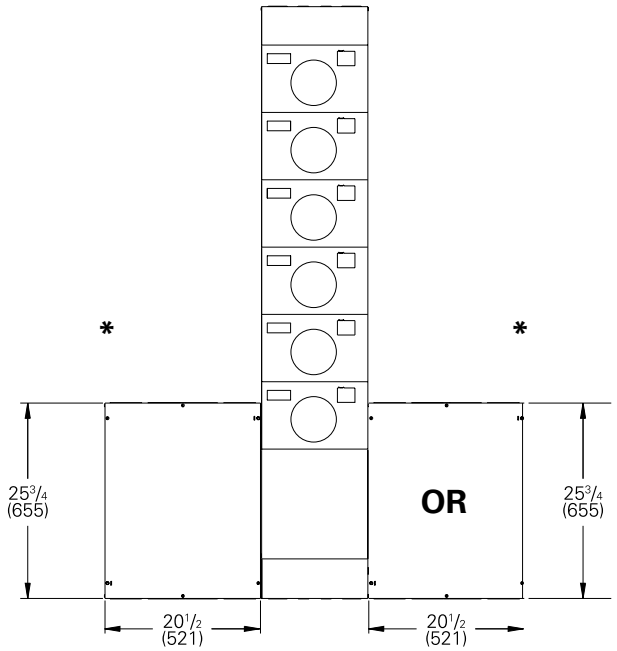
Standard Tap Boxes and Transition Box

Depth: 7 1/4

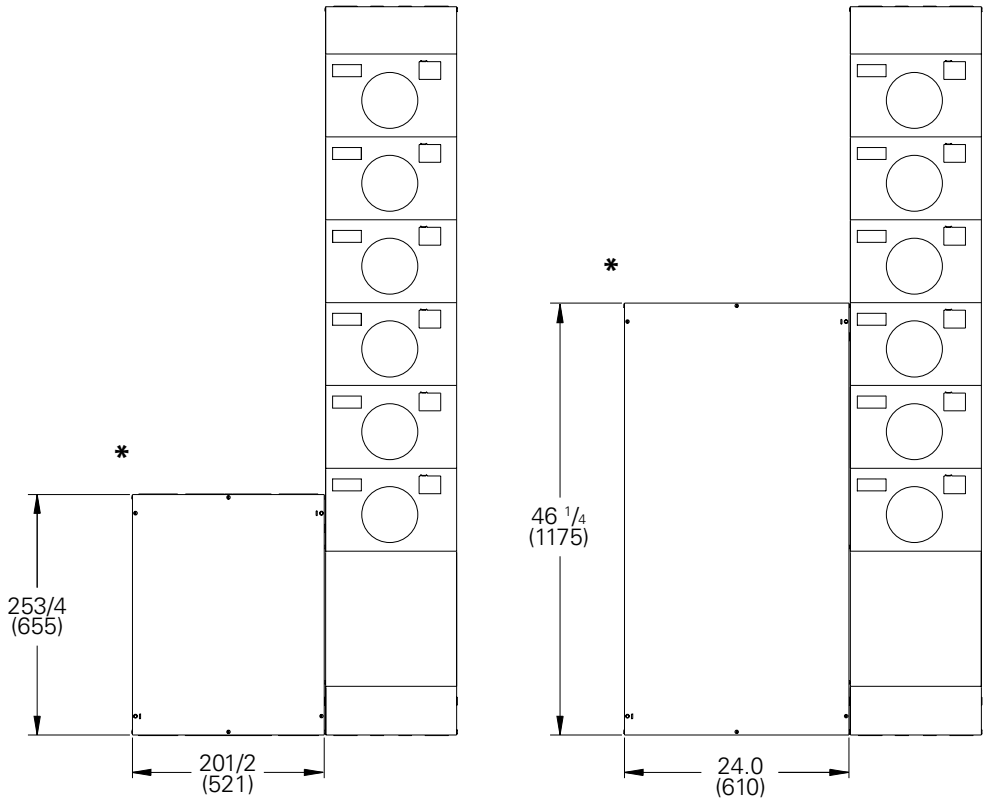
MLTB1-600
MLTB3-600

MLTB1-1200
MLTB3-1200

MTB-600



Feed Through Tap Boxes



MLTB1-600 FT
MLTB3-600 FT

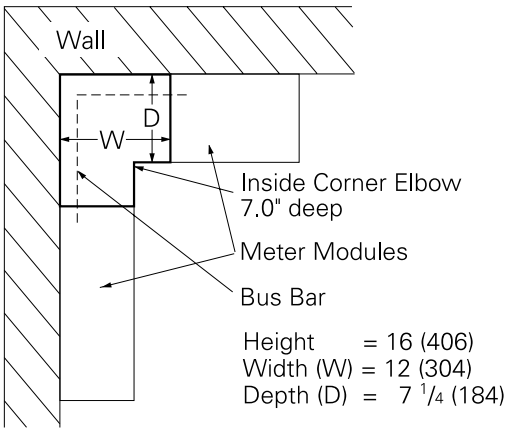
MLTB1-1200 FT
MLTB3-1200 FT

*** TAP Box available for installation on any one side only.**

Dimensions

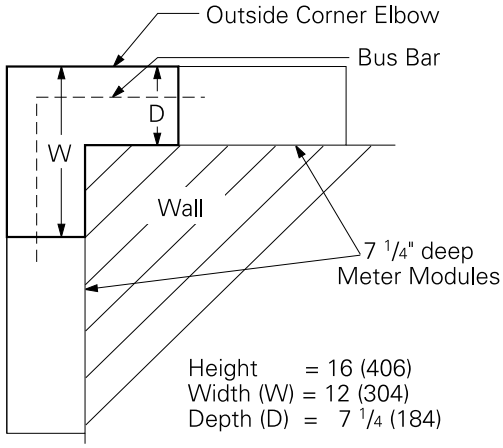
Corner Elbow Modules

Inside = MEL1-IN-6/12
MEL1-IN-6/12



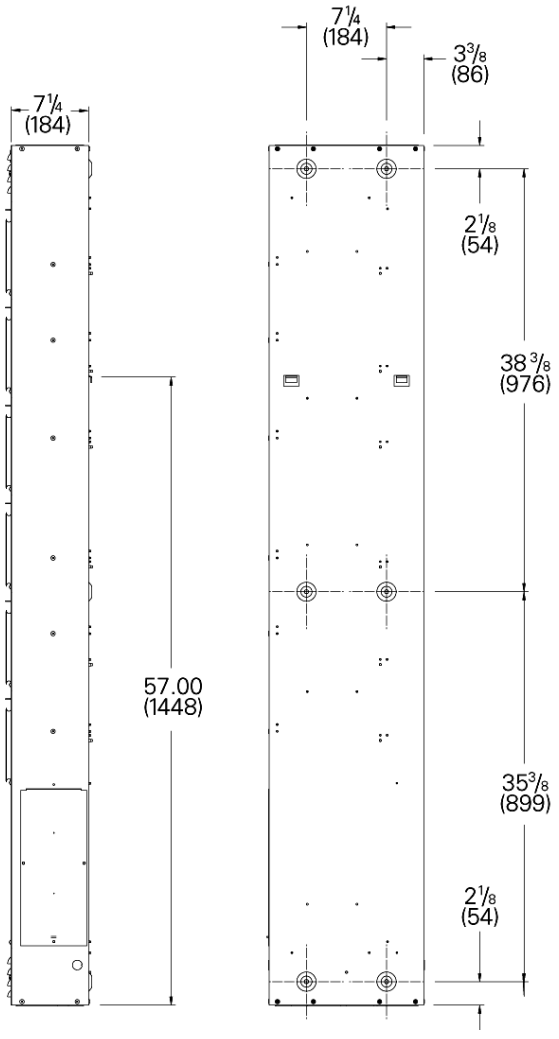
Height = 16 (406)
Width (W) = 12 (304)
Depth (D) = 7 1/4 (184)

Outside = MEL1-OUT-6/12
MEL1-OUT-6/12



Height = 16 (406)
Width (W) = 12 (304)
Depth (D) = 7 1/4 (184)

Meter Stack Mounting Dimensions

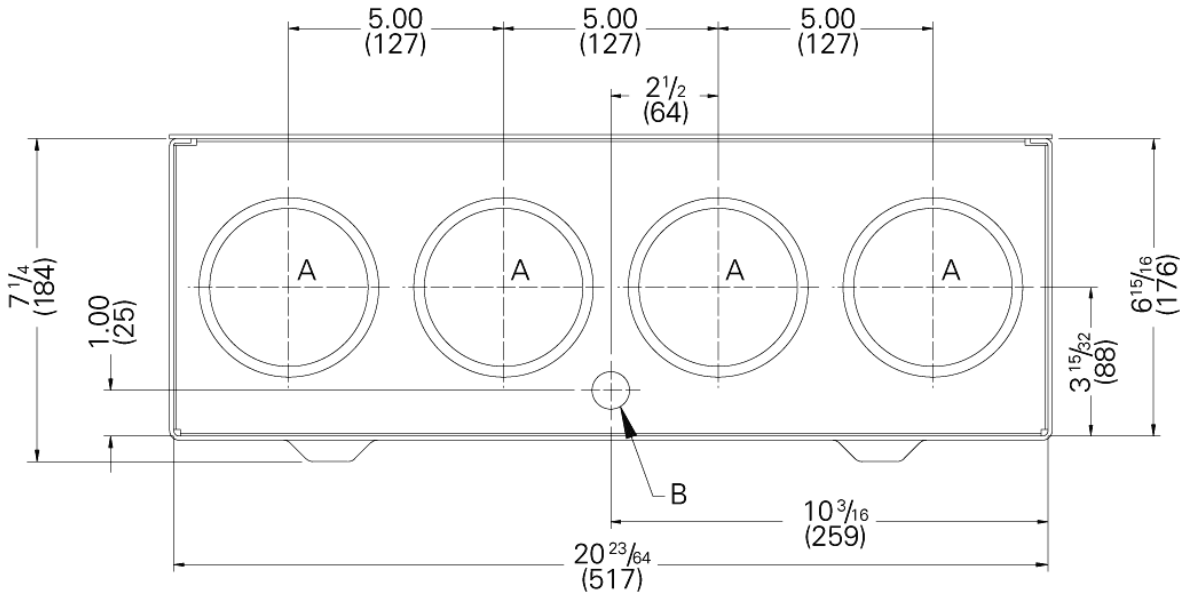


1 PH	3 PH
MMC1	MMC3

Modular Meter Centres

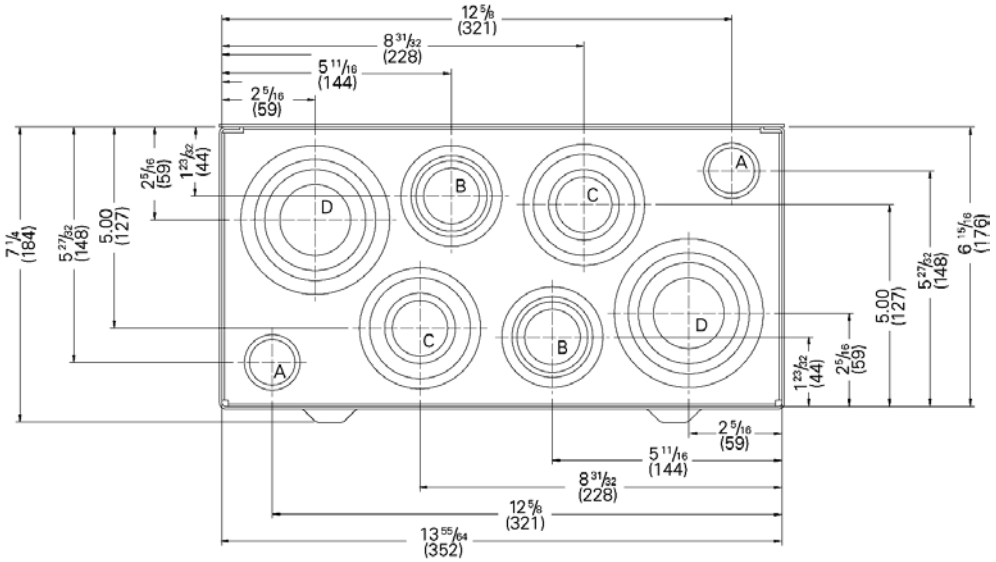
Knock Out Data

Tap Boxes



D	1 1/4 - 2 - 2 1/2 - 3
C	1 1/4 - 2 - 2 1/2
B	1 1/4 - 1 1/2 - 2
A	3-3 1/2
Ref.	Trade Size

Meter Stack



1 1/4 - 2 - 2 1/2 - 3	D
1 - 1 1/4 - 2 - 2 1/2	C
1 - 1 1/4 - 1 1/2 - 2	B
3/4 - 1	A
K.O. Trade Size	Ref.

1 PH	3 PH
MMC1 MMC14-6125	MMC3 MMC35-6125