SIEMENS

Siemens Energy & Automation, Inc.
Alpharetta, Georgia U.S.A.

Installation Instructions for Power Mod™ with QuickSystem™ Modular Metering Series WB, WEB, WS, WES, WTB, WET, WMM, WMT, WML and WMK

P/N 4819950 Rev.A

Installation Instructions



⚠ DANGER

Hazardous Voltage. Will cause death, serious injury or substantial property damage.

Turn off power supplying this equipment before working inside.

⚠ CAUTION

Remove all foreign matter from Meter Center and install all covers prior to energizing.

Note:
This instruction outlines the recommended general installation procedure. For installation by a qualified person, as defined by all local electrical codes and/or the National Electrical Code®.

Siemens Power Mod is compatible with the previous Siemens and Murray[1] modular metering devices. The SBJ (Single Bolt Joint) is interchangeable with the QC (QuickConnect™) method of connecting modules.

Step 1. Mount Alignment Rails (Supplied) for Entire Line-up.
Determine proper mounting height so that the meter heights in the line-up are in accordance with local codes. Mount alignment rails for entire line-up as shown in Fig. 1 (Mounting screws supplied by installer). See table on back page for dimension information for Power Mod units. Order part number MMZR60 for 60" long alignment rail if preferred.

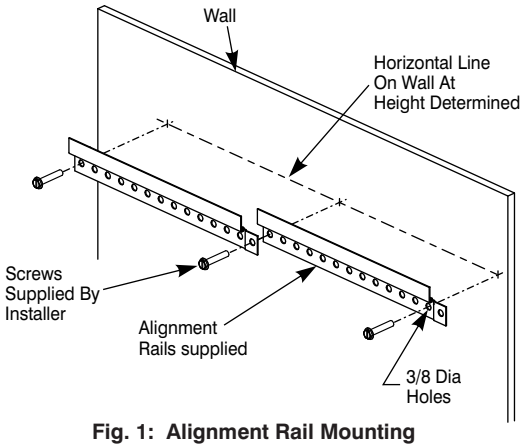


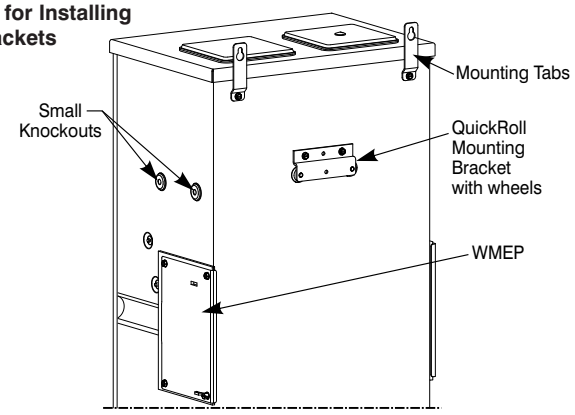
Fig. 1: Alignment Rail Mounting

Step 2. Prepare Main Module Unit.
Remove the plastic closure plate from side (or sides) of the Main Module Unit that will be joined with the other modules. (Retain plastic closure plate & hardware for future use.) For additional cover plate order part number WMEP. Position mounting tabs on the back of the Main Module Unit as needed, Reference Fig. 2.

Main Module Units with prefix WB, WEB, WS, WES, WTB, and WET feature QuickBolt, our captive, spring-loaded screws that replace the thread-in stud design. Captive screws are located on the right hand side of each module (when facing the enclosure). Once the cover plate is removed the screws will automatically protrude through the sidewall (see Fig. 3).

Main units with prefix WMC, WMTB and WMS use the double-ended stud design in place of the QuickBolt spring-loaded stud. Screw double ended studs into the right side of device. Connect to adjacent module using hardware provided (see Fig. 4). QuickBolts will fit through left side openings when modules are mounted to the left of main unit.

Fig. 2: Detail for Installing Mounting Brackets



Main Module units with the prefix WTB and WS may be inverted for top or bottom feed (NEMA studs and incoming lugs face up for top feed and down for bottom feed). These invertible units come with (2) sets of QuickBolts on each side of the unit. The QuickBolts on the left side must be removed by removing (2) mounting screws on each QuickBolt assembly. Note that WSx1200BU (1200 amp switch) is bottom feed only.

Indoor/Outdoor Installation: Modular units are connected together by (4) studs and related hardware. Four additional attachment points are also available above and below the bus opening. **Remove small knockouts before hanging module** if used (see Fig. 2). Bolts and nuts for these are provided with each meter stack module in a plastic bag. These attachment points are for added rigidity and are not necessary to maintain a water-tight seal. Refer to Figures 3 and 4 for details.

Fig. 3: Mounting units with QuickBolt feature

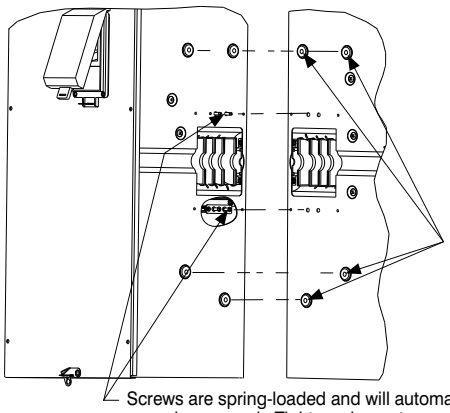
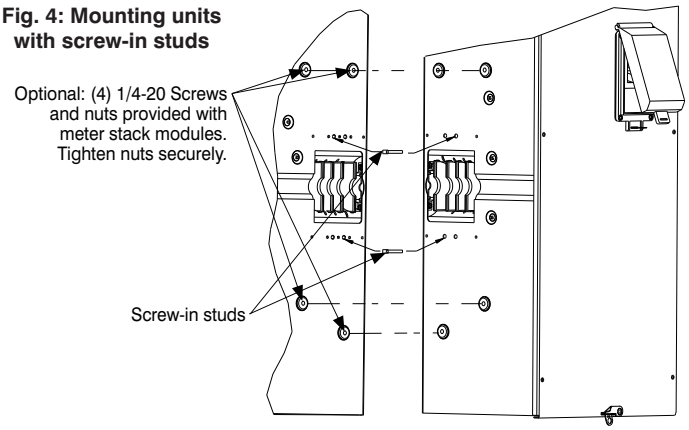


Fig. 4: Mounting units with screw-in studs



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[1] Murray products made by Crouse Hinds are not compatible.

® The National Electrical Code is a registered trademark of the National Fire Protection Association.

Step 3. Hang Main Module Unit by slipping the QuickRoll mounting bracket over the alignment rail as shown in Fig. 5.

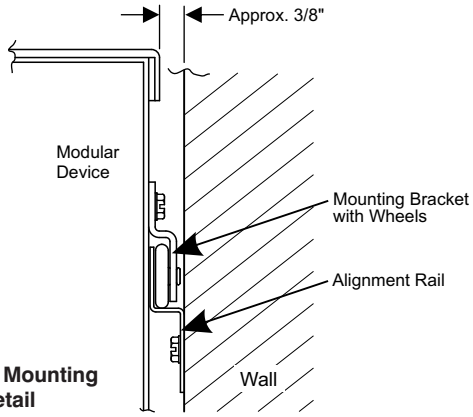


Fig. 5: QuickRoll Mounting Bracket detail

Step 4. Prepare next module as needed.
Position mounting tabs and remove small knockouts if used (see Fig. 2). Hang module by slipping the QuickRoll mounting bracket over the alignment rail as shown in Fig. 5.

Step 5. Join Main Module with adjacent module. The following outlines the steps required for mounting a module to the right or left hand side of the Main Module Unit.

Insert QuickConnect into the cross bus opening of the Main Module Unit (See Fig. 6) with the QuickTorque nut facing the front of the unit. The large bolt head on the QuickConnect should be installed behind the grounding bracket inside the enclosure (see Fig 6). The QuickConnect is supplied in all meter stacks and extension boxes. Additional QuickConnects are only needed if installing a WB, WS, or WTB on the load side of the utility service.

⚠ CAUTION

HAZARD OF ELECTRICAL OVERLOAD. Can result in personal injury or property damage. Mains that exceed 1200 Amps must be installed in the middle of the panelboard lineup with a maximum of 1200 amps exiting either side of the main device.

To connect a module to a Main Module Unit, slide the module toward the Main Module Unit guiding the cross buses into the QuickConnect and also aligning the openings on the side of the enclosure with the protruding screws on the side of the main module unit.

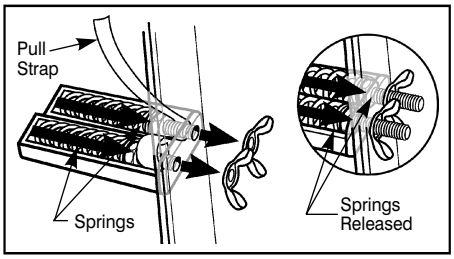
From inside the meter stack module, install flat washers, lock washers, and wing nuts over the ends of the protruding screws on the left side. Hex nuts are also provided in the hardware bag to be used instead of the wing nuts if preferred. Tighten the nuts, pulling the units together until the gaskets around the openings of the cross bus are compressed to approximately one half of their original thickness. A maximum of 1/8" gap should be present between modules. Install bolts and nuts at additional attachment points, if used.

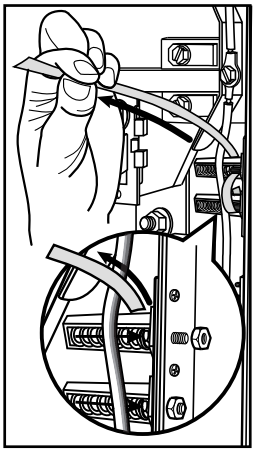
Tighten hex nut on QuickConnect to 400-440 lb-in (35-36 lb-ft) torque or until QuickTorque indicating nut breaks off.

Additional modules may still use the old screw-in or "double ended" stud (in place of the QuickBolt assembly), which can be used with Power Mod and QuickBolt. Please refer to the instructions included with those modules for more information.

QuickBolt Strap

The black strap in all meter stacks holds the QuickBolt spring loaded bolts in place until additional modules are installed. This strap MUST BE REMOVED PRIOR TO ENERGIZING. Once the strap is removed, the screws will automatically protrude through the sidewall.





Step 6. If Additional Modules Are to be Added, repeat Steps 4 and 5 as required.

When connecting meter stacks with prefix WMM, WMT, WML, and WMK, the pull strap must be removed prior to connecting units to release the spring-loaded QuickBolt.

Step 7. Close the Cross Bus Opening On The Last Module In The Line-Up by using the plastic end closure plate and hardware that was removed from the Main Module Unit earlier. Order Siemens No. WMEP for extra or replacement plastic closure plates.

Optional: Install Screws (Supplied by the Installer) into the mounting tabs at the top and bottom of each module to secure the modules to the wall.

Step 8. Grounding. The ground path for modular metering units is provided through the bracket mounted in the QuickConnect opening where stacks are connected. See close-up of the QuickConnect in Fig. 6 for location of the ground bracket.

Grounding in Main-Pull Box combinations. Devices designed for use in EUSERC regions (WES and WEB units) have a separate channel for pulling ground wires. This channel features a removable cover (with pull ring) and knock-outs on the bottom endwall that line up with the channel for exiting ground wires.

Grounding in Main Devices when Neutral and Ground must be separate (not Service Entrance) When main devices are used in non Service Entrance applications, the bonding strap must be removed to separate the electrical connection between the ground and neutral. All breaker-pull box combinations (WEB), all fusible switch-pullbox combinations (WES), and standard breaker devices (WB) 1400 - 2000 amps are service equipment only.

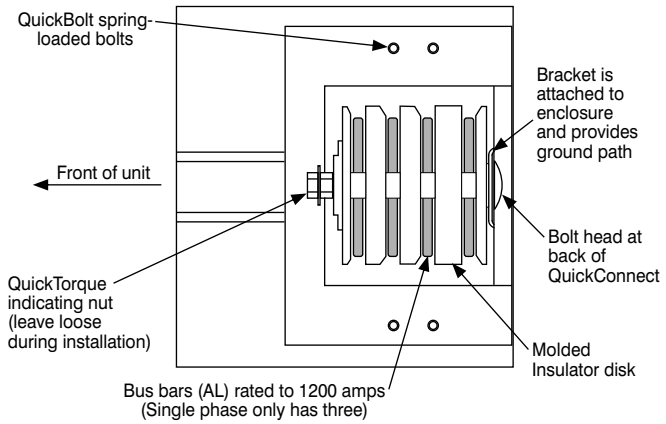


Fig. 6: QuickConnect Detail

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RESIDENTIAL METER STACKS

Applies to WMM Series Residential Meter stacks

Phasing Instruction for QuickPhase

Factory installed phasing is AB, BC, AC top to bottom. Thus, in a four position stack, FACTORY phasing is as seen in Fig. 7.

Each meter socket can be phased AB, BC, or AC by repositioning the line bus straps as seen in Figures 8 and 9. If a different phase arrangement is needed, loosen hex nuts and reconnect one or both line bus straps, then retighten the hex nuts to 60-65 lb.-in. Tighten hex nut at meter socket FIRST, then tighten hex nut on vertical phase bus. For replacement QuickPhase Strap, order part number ECMFPS.

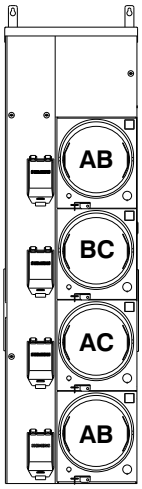


Fig. 7: Factory Phasing

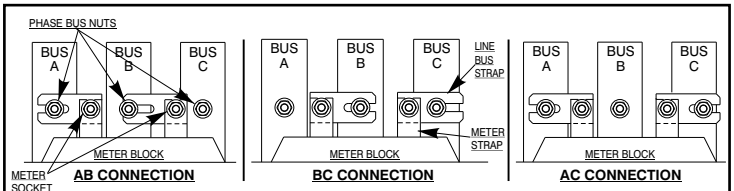


Fig. 8: Field Phasing Detail with vertical bussing

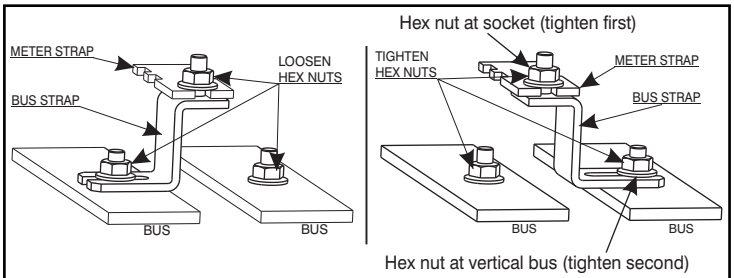


Fig. 9: Field Phasing Detail

Positioning of 5th Jaw

The fifth jaw comes installed on 3 phase in/single phase out devices in the 9 o'clock position. To change to the 6 o'clock position, loosen the 5th Jaw Mounting Screw, push on 5th Jaw Locking Tab and remove 5th jaw assembly. Hook forked end of 5th jaw assembly under 5th Jaw Mounting Screw and snap 5th jaw assembly in 6 o'clock position. Tighten 5th Jaw Mounting Screw to 15-20 lb-ins. See Fig. 10.

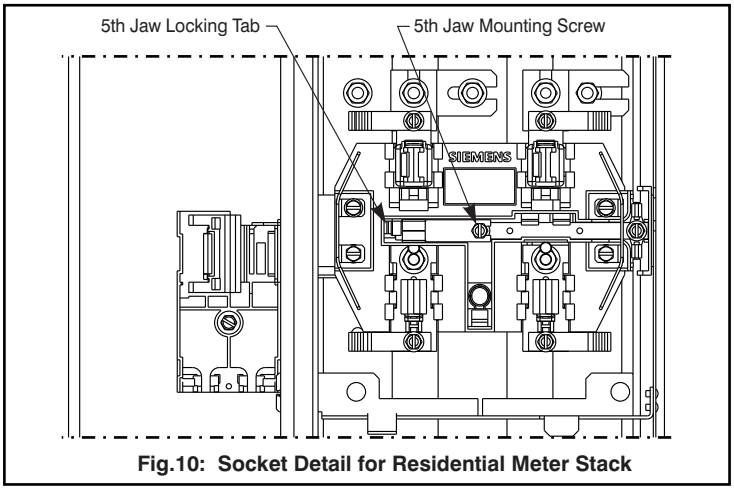


Fig.10: Socket Detail for Residential Meter Stack

For replacement part and accessory part numbers see wiring diagram inside of unit.

Neutral and Ground Provisions

Each meter stack Ground Lug Assembly can be relocated to top of the meter stack by removing the Ground Lug Assembly from its factory installed bottom location and moving it to the top location, as seen in Figure 11.

The Neutral Lug can also be moved from its factory installed location below the cross bus to an alternate location above the cross bus. Remove (2) 1/4-20 screws (3/8" hex), relocate Neutral Lug to alternate location and reinstall. Tighten screws to 30-35 lb-in. See Fig. 12.

Additionally for 4-6 position stacks only: Remove the 1/4-20 nut (7/16" drive) on the Neutral Bus Bar and the 1/4-20 screw (3/8" drive) mounting extended Connection Bus to the red Support Block, and remove the extended Connection Bus with the lugs on. Relocate red Support Block to top position (thread onto existing 1/4-20 screw). Reinstall extended Connection Bus with lugs in top position. Tighten 1/4-20 nut (7/16" drive) to 60-65 lb-in. Tighten 1/4-20 screw (3/8" drive) to 30-35 lb-in. See Fig. 12.

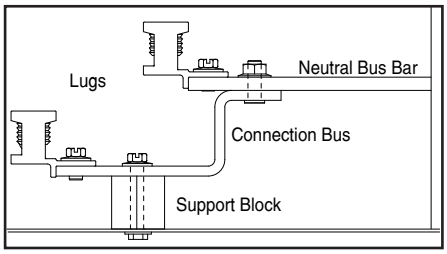


Fig. 12: Neutral assembly detail

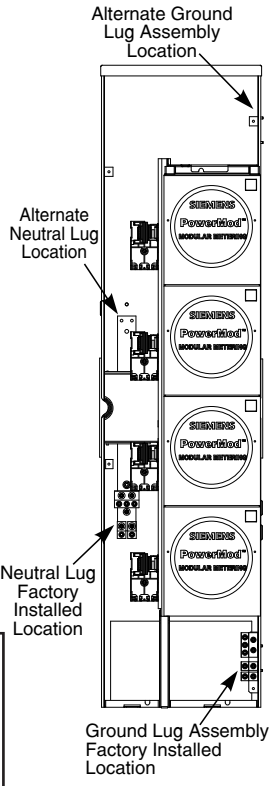


Fig. 11: Position of Ground and Neutral Lugs

Each meter stack has N+1 ground positions and N neutral positions, where N is the number of meter positions. For additional Neutral Lug Kits, order ECMFN125 for 125 amp, and ECMFN225 for 225 amp meter stacks. For Ground Lug Kits, order ECMFN125 for 125 amp and 225 amp meter stacks.

See the wiring diagram inside the unit for acceptable wire ranges and torque specifications.

At the end of the line up, the QuickBolts will remain in the retracted position due to the plastic closure plate. The QuickBolt strap MUST be removed prior to energizing.

COMMERCIAL METER STACKS

Applies to WMT, WML AND WMK Series Commercial Meter stacks

Refer to device wiring diagrams for meter phasing and neutral/ground information.

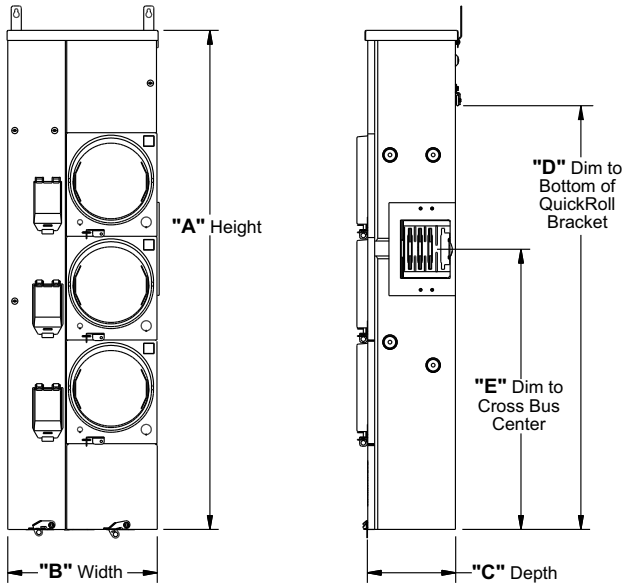
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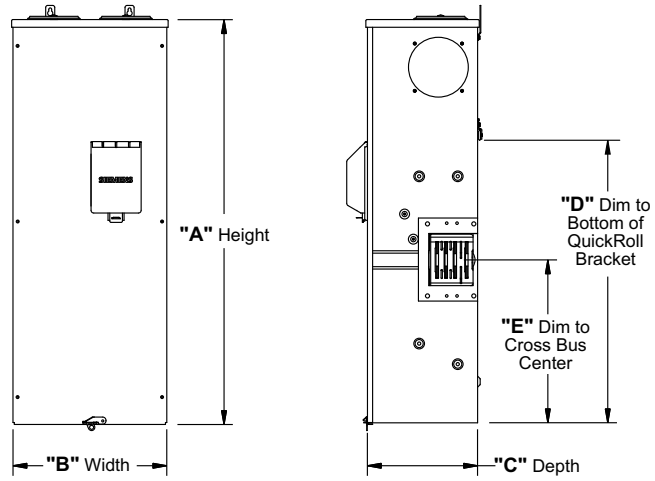
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Power Mod™ Modular Metering Dimension Table

Typical Dimension Example for Meter Stacks
(Residential Meter Stack Shown)



Typical Dimension Example for Mains
(Standard Breaker Main Shown)



Device Type	Position/ Amperage	"A" Dim Height	"B" Dim Width	"C" Dim Depth	"D" Dim Mounting	"E" Dim Bus
WMM 125 Amp Residential Meter Stacks	2 position	34 5/16	12 31/32	8 3/32	27	15 3/8
	3 position	43 5/16	12 31/32	8 3/32	36	24 3/8
	4 position	52 5/16	12 31/32	8 3/32	36	24 3/8
	5 position	61 5/16	12 31/32	8 3/32	36	24 3/8
	6 position	70 5/16	12 31/32	8 3/32	36	24 3/8
WMM 225 Amp Residential Meter Stacks	2 position	34 5/16	16 3/32	8 3/32	27	15 3/8
	3 position	43 5/16	16 3/32	8 3/32	36	24 3/8
	4 position	52 5/16	16 3/32	8 3/32	36	24 3/8
	5 position	61 5/16	16 3/32	8 3/32	36	24 3/8
	6 position	70 5/16	16 3/32	8 3/32	36	24 3/8
WB Standard Main Breaker Devices	200-600 Amps	39 3/16	15 7/32	11 1/32	27 15/32	15 25/32
	700-1200 Amps	61 3/16	24 3/16	11 1/32	29 15/32	17 27/32
	1400-2000A Btm Feed	72 1/16	31 11/32	14 21/32	48 21/32	37 1/32
	1400-2000A Top Feed	72 1/16	31 11/32	14 21/32	46 21/32	35 1/32
WEB Main Breaker PullBox combinations Devices	200-600 Amps	54 7/8	28 9/32	13 1/16	44 29/32	33 9/32
	700-1200 Amps	59 11/32	34 7/32	12 15/32	44 7/8	33 1/4
WS Standard Main Fusible Switch Devices	400-800 Amps	50 1/8	15 3/16	16 5/16	34 11/16 ①	23 1/16 ①
	1200 Amps	50 1/16	20 7/32	16 1/16	35 1/8	23 1/2
WES Main Fusible Switch PullBox combination Devices	400 Amps	54 1/16	29 3/16	15 15/16	42 1/8	30 1/2
	600-800 Amps	54 1/16	29 3/16	15 15/16	42 1/8	33 9/32
	1200 Amps	68 31/32	34 1/4	13 15/32	44 7/8	33 1/4
WTB Standard Tap (main lug) Devices	400-800 Amps	40 1/8	12 7/32	13 3/16	37 3/16 ②	25 9/16 ②
	1200 Amps	47 1/8	15 7/32	13 5/16	44 3/16 ②	32 9/16 ②
	1600 Amps	49 3/32	25 3/32	13 13/16	46 5/32 ②	34 1/2 ②
WET Tap PullBox combinations (main lug) Devices	400 Amps	46 3/16	17 5/8	8 9/16	42 3/8	30 3/4
	800 Amps	50 3/16	27 1/8	11 3/8	46 3/8	34 3/4
	1200 Amps	50 3/16	35 3/16	11 3/8	46 3/8	34 3/4
WML Lever bypass Commercial Stacks 100 Amp 3in/3out	1 position	27 3/4	23 1/2	9	24 13/16	13 3/16
	2 position	40 3/4	23 1/2	9	37 13/16	26 3/16
	3 position	49 3/4	23 1/2	9	37 13/16	26 3/16
	4 position	62 3/4	23 1/2	9	37 13/16	26 3/16
WML Lever bypass Commercial Stacks 225 Amp 1in/1out, 3in/1out	1 position	27 3/4	19 1/2	9	24 13/16	13 3/16
	2 position	40 3/4	19 1/2	9	37 13/16	26 3/16
	3 position	49 3/4	19 1/2	9	37 13/16	26 3/16
	4 position	62 3/4	19 1/2	9	37 13/16	26 3/16
WML Lever bypass Commercial Stacks 225 Amp 3in/3out	1 position	27 3/4	23 1/2	9	24 13/16	13 3/16
	2 position	40 3/4	23 1/2	9	37 13/16	26 3/16
	3 position	49 3/4	23 1/2	9	37 13/16	26 3/16
	4 position	62 3/4	23 1/2	9	37 13/16	26 3/16
WML Lever bypass Commercial Stacks 400 Amp	1 position	44	9 11/16	16 5/16	37 13/16	26 3/16
	2 position	70 3/8	9 11/16	23	37 13/16	26 3/16
WMK K Base Commercial Stacks 400/600 Amp	1 position	54	10	19 1/4	36 13/16	25 3/16
	2 position	72 7/8	11	27	37 13/16	26 3/16
WMT Test block bypass Commercial Stacks 225 Amp 1in/1out, 3in/1out	1 position	40 1/2	9	21 1/2	37 5/16	25 11/16
	2 position	46	9	21 1/2	37 5/16	25 11/16
	3 position	65 1/2	9	21 1/2	37 5/16	25 11/16
WMT Test block bypass Commercial Stacks 225 Amp 3in/3out	1 position	40 1/2	9	25 1/2	37 5/16	25 11/16
	2 position	46	9	25 1/2	37 5/16	25 11/16
	3 position	65 1/2	9	25 1/2	37 5/16	25 11/16

① Bottom Feed dimension. When device is inverted for Top Feed, "D" Dim= 38-11/16, "E" Dim= 27-1/16
② Bottom Feed dimension. When device is inverted for Top Feed, "D" Dim= 26-3/16, "E" Dim= 14-9/16

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