

RM4 Rackmount Kit Instructions

Kit description

This document supports Tektronix 4 Series MSO instruments. The rackmount kit is a collection of parts that, once installed, configure the instrument for mounting into a standard 19-inch equipment rack.

For warranty information visit tek.com/warranty-status-search.

Products

This rackmount kit supports all 4 Series MSO instruments.

Minimum tool and equipment list

| Required tools and equipment | Part number |
|------------------------------|---------------|
| Screwdriver, Phillips, #2 | Standard tool |
| Wrench, 3/8" | Standard tool |
| Screwdriver, T-20 Torx | Standard tool |
| Screwdriver, T-10 Torx | Standard tool |

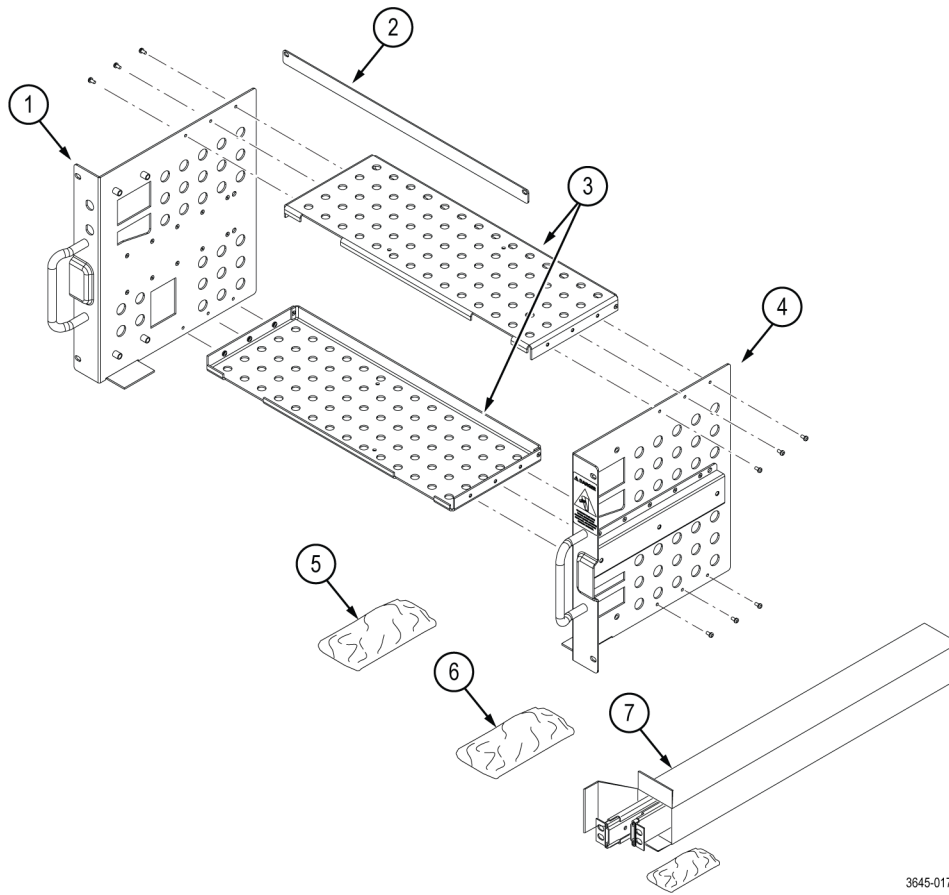
Kit parts lists

The following tables list the parts for the RM4 rackmount kit; not all of the parts will be needed for your instrument setup.

Table 1: Rackmount kit

| Item | Quantity | Part number | Description |
|------|----------|-------------|---|
| ---- | 1 each | 071-3645-xx | RM4 RACK MOUNT KIT INSTRUCTIONS |
| 1 | 1 | 441-2922-xx | BRACKET, LEFT, RACKMOUNT KIT |
| 2 | 1 | 407-6190-xx | FRONT FILLER PLATE, RACKMOUNT KIT |
| 3 | 2 | 407-6188-xx | BRACKET, TOP AND BOTTOM RACKMOUNT KIT |
| 4 | 1 | 441-2923-xx | BRACKET, RIGHT, RACKMOUNT KIT |
| 5 | 1 | 016-2142-xx | KIT, HARDWARE RACKMOUNT KIT This kit includes the hardware required to assemble the rackmount kit and attach it to the instrument. See Table 2 on page 2 for the hardware list |
| 6 | 1 | 016-2116-xx | KIT, HARDWARE RACKMOUNT KIT This kit includes the hardware required to mount the assembled instrument and rack kit to the instrument rack. See Table 3 on page 2 for the hardware list |
| 7 | 1 | 351-1095-00 | SLIDE ASSY; PAIR, W/STD HARDWARE KIT AND REAR BRACKET, SAFETY CONTROLLED |

The numbers in the illustration correspond with the item numbers in the preceding tables. Hardware in 016-2116-xx and 016-2142-xx kits are not pictured in the illustration.



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Figure 1: Rack mount kit parts

Table 2: Hardware kit 016-2142-xx

| Item | Quantity | Part number | Description |
|------|----------|-------------|--|
| H1 | 12 | 211-1584-xx | SCREW, MACHINE, M3X0.5X6MM PAN HEAD, TORX T10 |
| H2 | 8 | 211-1694-xx | SCREW, MACHINE, M4X0.7X16MM PAN HEAD, TORX T20 |
| H3 | 6 | 211-1695-xx | SCREW, MACHINE, M4X0.7X6MM PAN HEAD, TORX T20 |

Table 3: Hardware kit 016-2116-xx

| Item | Quantity | Part number | Description |
|------|----------|-------------|--|
| H4 | 14 | 210-0833-xx | WASHER, RECESSED; 0.42 ID X 0.112 THK, STL NI PLATED, 0.588 OD |
| H5 | 14 | 210-1061-xx | WASHER, FLAT; 0.203 ID X 0.625 OD X 0.062, ZINC PLATED STEEL |
| H6 | 14 | 210-1548-xx | WASHER, FLAT 12 OD X 6.4 ID X 1.6THK |
| H7 | 14 | 211-1218-xx | SCREW, M6 X 16MM OVAL HEAD, PHILLIPS |
| H8 | 14 | 211-1219-xx | SCREW, M5 X 16MM OVAL HEAD, PHILLIPS |
| H9 | 14 | 212-0591-xx | SCREW, MACHINE; 10-32X.750 OVAL HEAD, POZI |

Table continued...

| Item | Quantity | Part number | Description |
|------|----------|-------------|--|
| H10 | 14 | 213-0199-xx | SCREW, MACHINE; 12-24 X 0.75, OVH, STL NP, POZ |

Warranted characteristics

When the instrument is installed according to the instructions in this document, the rackmounted instrument meets all warranted requirements listed in the instrument specification. Instruments mounted using methods other than those described in these instructions might not meet their warranted requirements.

For tables of the warranted characteristics, see *Specifications* in the specification and performance verification manual that applies to your instrument model.



CAUTION: The rack is more susceptible to tipping when the instrument is installed. To prevent the rack from tipping, ensure that the rack is stable before accessing rear panel of the instrument. Do not leave the instrument extended in the rack.

The ambient temperature inside the instrument rack will vary depending on the location of the instrument within the instrument rack. Tektronix recommends that you measure the ambient temperature in the desired rack location before you install the instrument to ensure the operating temperature does not exceed the rated ambient temperature limit. If necessary, refer to the Environmental Specifications in your product documentation for the operating temperature limits.



CAUTION: The instrument might be damaged due to overheating. When installing multiple instruments in an instrument rack, the ambient temperature may go up. You assume the responsibility to provide adequate cooling to meet the ambient temperature requirements listed in the specifications.

Clearance requirements

The rack in which the individual instrument is mounted must provide the following clearance requirements:

- At least 310 mm (12.25 in) of vertical space or 7 RU (rack units) of vertical space
- A minimum width of 488 mm (19.2 in) between the left- and right-front rails in the rack. If possible, consider allowing at least 50.8 mm (2.0 in) on the right side and rear of the instrument for adequate airflow.
- A minimum inside depth of at least 254 mm (10 in) depth (from rack mounting ear to back of instrument). Airflow enters from the back of the instrument and exits on the right of the instrument when viewed from the front.



CAUTION: Adhering to these requirements mounts the rack-adapted instrument with enough clearance for air circulation and accommodation of the power cord and mounting hardware. Failure to provide these clearances can result in overheating and can cause the instrument to operate improperly or fail.

Important safety information

This manual contains information and warnings that must be followed by the user for safe operation and to keep the product in a safe condition.

To safely perform service on this product, see the *Service safety summary* that follows the *General safety summary*.

Service safety summary

The *Service safety summary* section contains additional information required to safely perform service on the product. Only qualified personnel should perform service procedures. Read this *Service safety summary* and the *General safety summary* before performing any service procedures.

To avoid electric shock

Do not touch exposed connections.

Do not service alone

Do not perform internal service or adjustments of this product unless another person capable of rendering first aid and resuscitation is present.

Disconnect power

To avoid electric shock, switch off the product power and disconnect the power cord from the mains power before removing any covers or panels, or opening the case for servicing.

Use care when servicing with power on

Dangerous voltages or currents may exist in this product. Disconnect power, remove battery (if applicable), and disconnect test leads before removing protective panels, soldering, or replacing components.

Verify safety after repair

Always recheck ground continuity and mains dielectric strength after performing a repair.

Terms in this manual

These terms may appear in this manual:



WARNING: Warning statements identify conditions or practices that could result in injury or loss of life.



CAUTION: Caution statements identify conditions or practices that could result in damage to this product or other property.

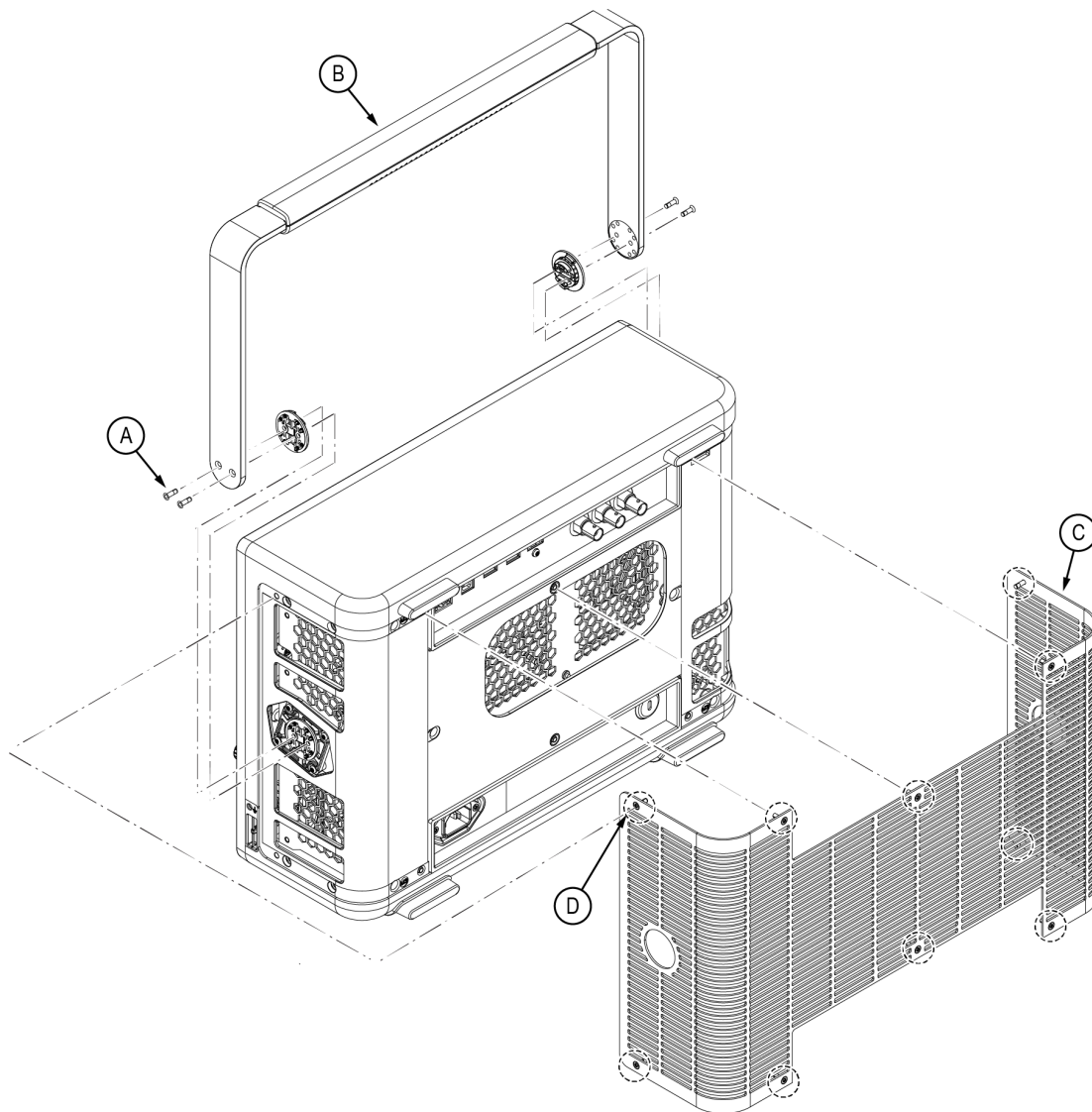
Installation instructions

These instructions are for qualified service personnel who are familiar with servicing the product. To avoid personal injury, do not perform any servicing unless you are qualified to do so. If you need further details for disassembling or reassembling the product, refer to the appropriate product manual. Contact your nearest Tektronix, Inc., Service Center or Tektronix Factory Service for installation assistance.

Assemble the rack mount on the instrument

Item numbers referenced in the assembly steps refer to the parts list in [Table 1](#) on page 1 and [Table 2](#) on page 2.

1. Remove the instrument handle, hubs, and grill. Save the parts and hardware for future use.
 - a. Remove the four TORX T10 screws from the handle.
 - b. Remove the handle and the two handle hub couplers from the instrument.
 - c. Remove the ten TORX T10 screws from the grill.
 - d. Remove the grill from the back of instrument.



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Figure 2: Prepare the instrument

2. Install the left and right mounting plates.

- a. Use four TORX T20 screws (item H2) to install the left mounting plate (item 1) to the instrument.
- b. Use four TORX T20 screws (item H2) to install the right mounting plate (item 2) to the instrument.

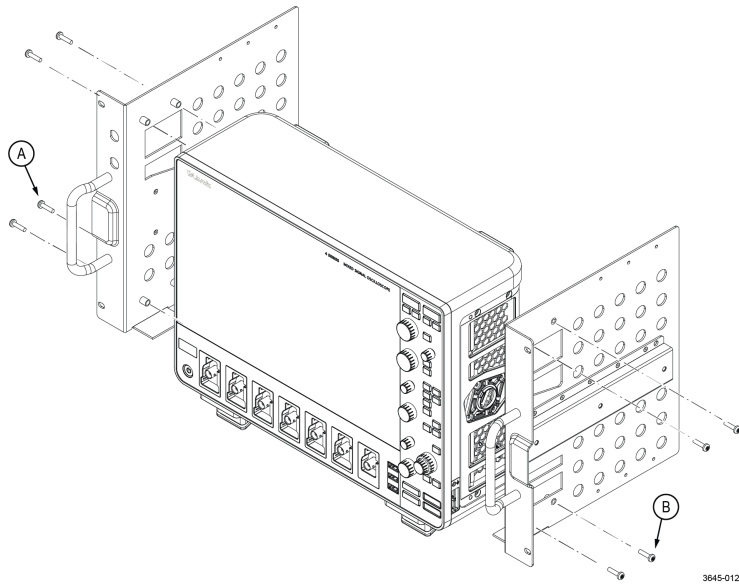


Figure 3: Mounting plate installation

3. Install the top and bottom support plates.

- a. Use six TORX T10 screws (item H1) to install the top support plate (item 3) to the mounting plates.
- b. Use six TORX T10 screws (item H1) to install the bottom support plate (item 3) to the mounting plates.

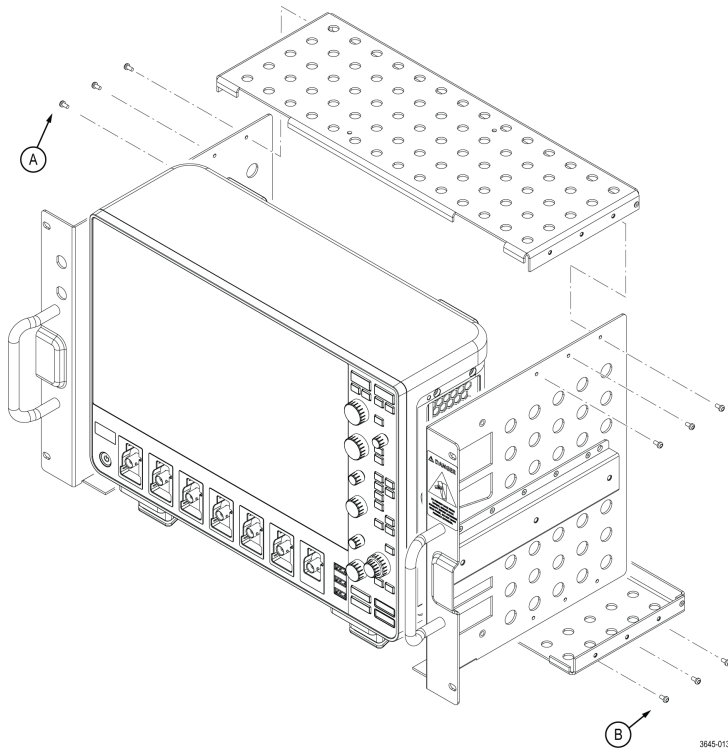


Figure 4: Support plate installation

4. Install the left-side and right-side slide mounts.
 - a. Use three TORX T20 screws (item H3) to install the instrument-side portion of the slide (item 6) to the right mounting plate.
 - b. Use three TORX T20 screws (item H3) to install the instrument-side portion of the slide (item 6) to the left mounting plate.

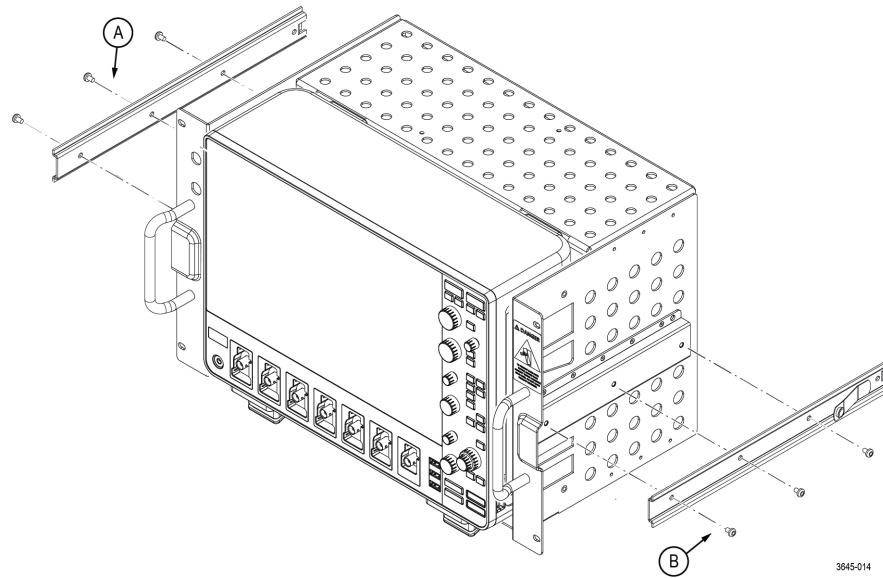


Figure 5: Slide mount installation

Install the instrument into the rack

1. Use the hardware from [Table 3](#) on page 2 to install the rack slides in your equipment rack.

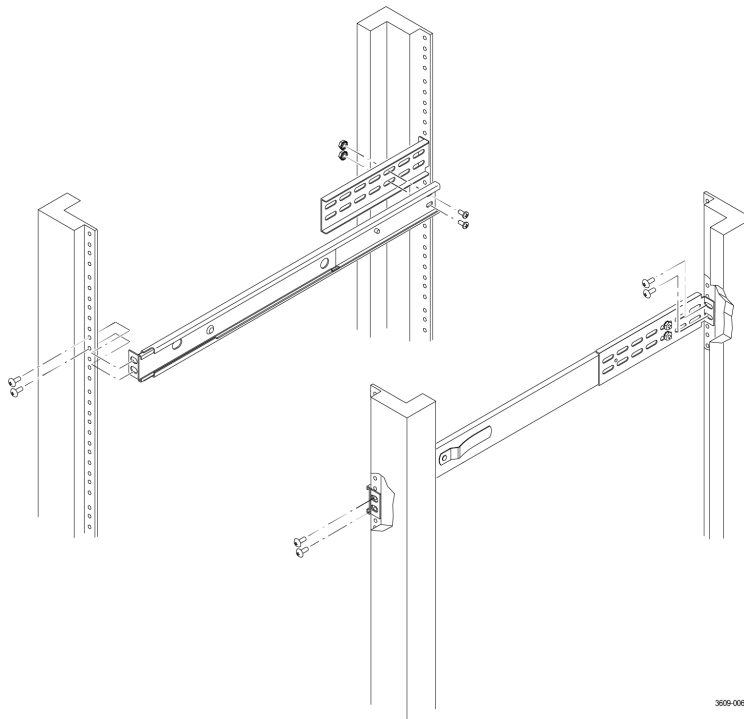


Figure 6: Installing the rail slides

2. Install the instrument in your equipment rack by inserting the rack mounts into the slides.

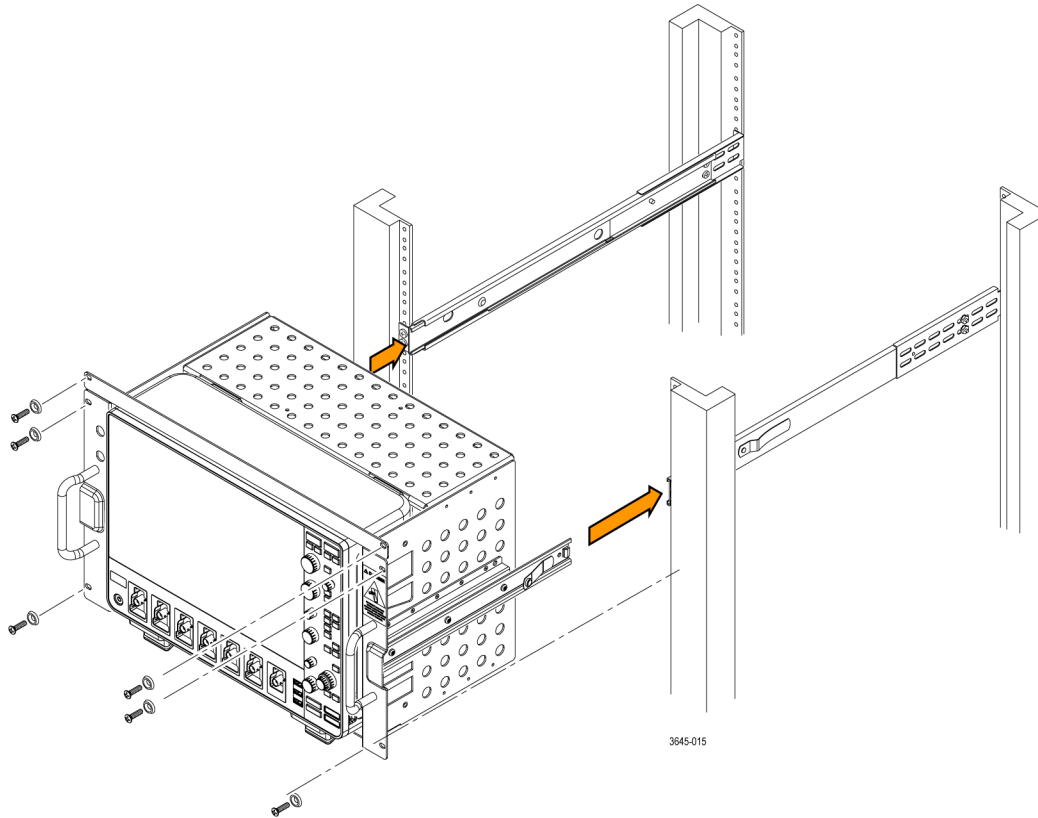


Figure 7: Installation of rack mounted instrument assembly into a rack



WARNING: To avoid personal injury and prevent the instrument from tipping or dropping, use two or more people to install this instrument into the rack cabinet. After completing the installation procedure, verify that the instrument and the rack cabinet will not tip forward while the instrument is in the extended position. Do not leave the instrument extended when finished accessing the instrument.

3. Install the power cord. Provide access to a power plug or mains disconnect switch for turning the instrument on/off.
4. Optionally install any cables you need connected to the instrument rear panel.
5. Slide the instrument into the equipment rack, and secure the instrument to the rack using standard rack hardware.
6. Install the front filler plate on the rack above the instrument using standard rack hardware.

Front panel dimensions

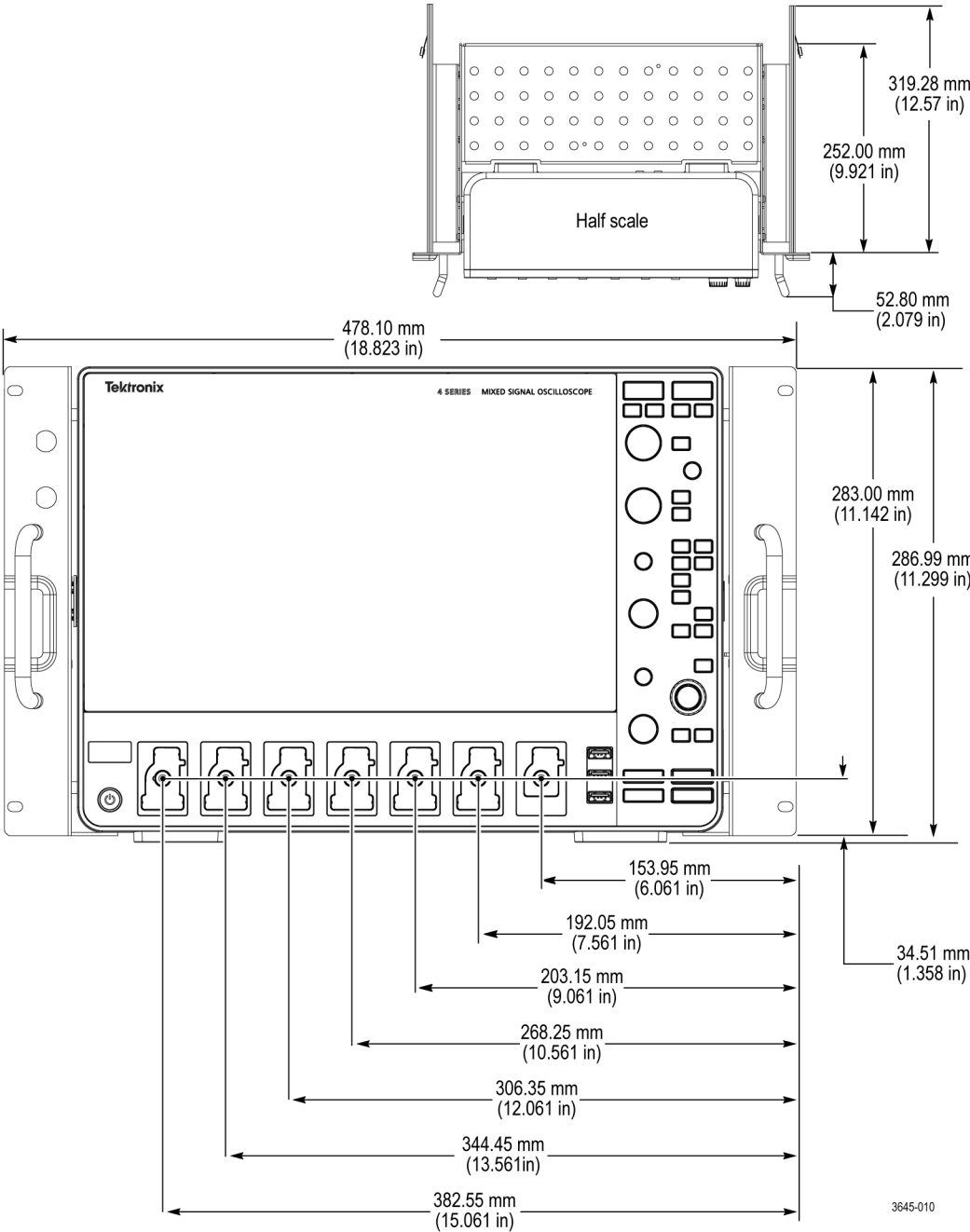


Figure 8: RM4 and 4 Series MSO front panel dimensions

Rear panel dimensions

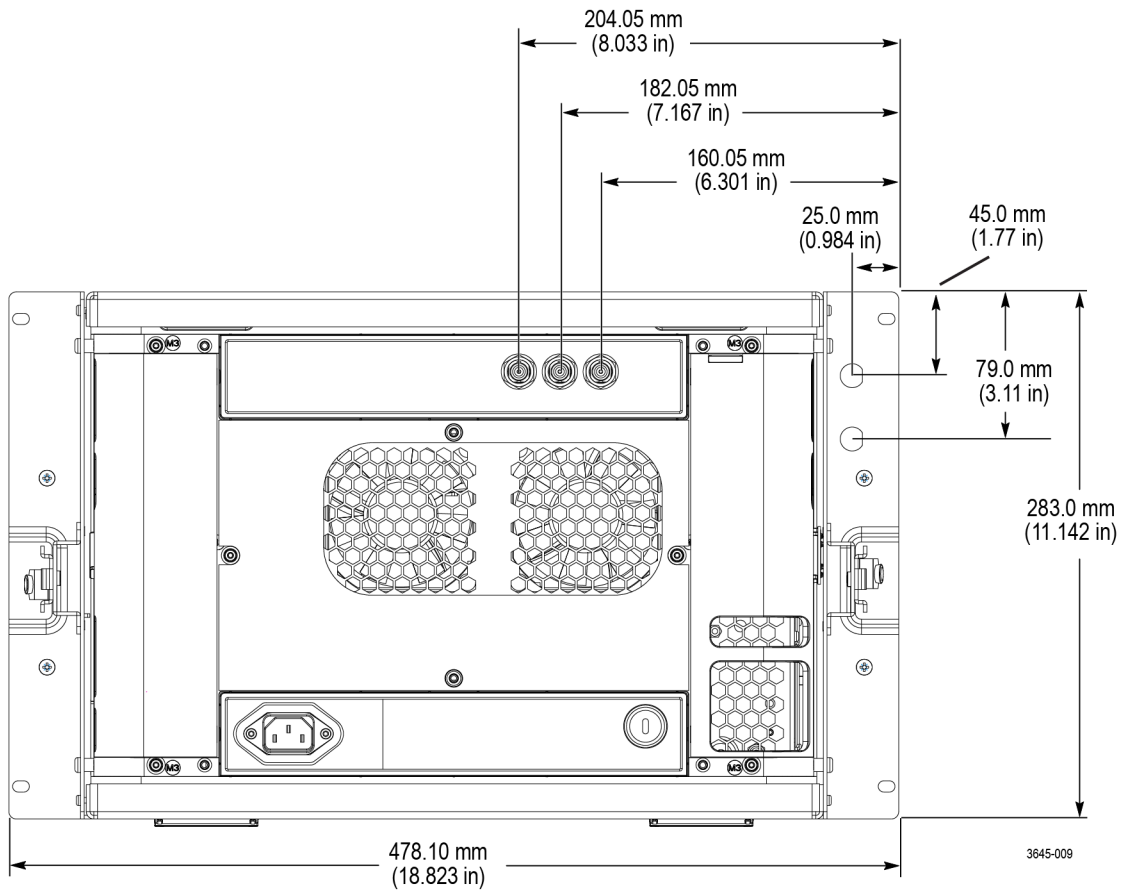


Figure 9: RM4 and 4 Series MSO rear panel dimensions