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Data Sheet

August 13, 2026

RIGOL

Rigol MC3648 MATRIX Module

Rigol MC3648 4 by 8 Two Wire Matrix Switch for M300 The MC3648 is a 4×8 two-wire matrix switch module for the Rigol M300 data acquisition / switch system. It provides 32 two-wire crosspoints that can connect any combination of inputs and outputs at the same time, routing multiple instruments to multiple DUT points. Signals connect through the M3TB48 terminal block. The module does not connect to the MC3065 DMM module. Ratings are 300 Vrms, 1 Arms, 50 VA, 1 MHz bandwidth, closed resistance less than 1 ohm, isolation greater than 10 GOhm. The MC3648 is a 4×8 two-wire matrix switch module for the Rigol M300 data acquisition / switch system. It provides 32 two-wire crosspoints that can connect any combination of inputs and outputs at the same time, routing multiple instruments to multiple DUT points. Signals connect through the M3TB48 terminal block. The module does not connect to the MC3065 DMM module. Ratings are 300 Vrms, 1 Arms, 50 VA, 1 MHz bandwidth, closed resistance less than 1 ohm, isolation greater than 10 GOhm. Connecting multiple sources and meters to multiple DUT nodes



MODEL

Rigol MC3648

CALIBRATION

Available on request

CONDITION

Used

STATUS

In stock

RFQ / SKU

MC3648

LISTING

<https://aumictechlabs.com/products/mc3648-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 · 811210 · 541380

This unit

The Rigol MC3648 MATRIX Module is a 4×8 two-wire matrix switch module engineered for flexible signal routing and switching within the Rigol M300 DAQ System Mainframe. It delivers 32

two-wire crosspoints capable of simultaneous input/output connections, supporting data acquisition, signal processing, and multi-point device testing. The module's architecture permits expansion through cascading - multiple matrix switches can be connected to form larger configurations (8×8, 4×16) up to a maximum of 160 total crosspoints. With a bandwidth of 1 MHz and channel isolation rated at 300 VRMS, the MC3648 accommodates signals up to 300 VRMS and 1 A RMS, dissipating up to 50 VA. Open/close switching occurs at 200 channels/s, enabling rapid reconfiguration between measurement points.

Technical Specifications Switch Configuration: 4×8 matrix (32 two-wire crosspoints) Bandwidth: 1 MHz Maximum Input Voltage:

300 VRMS (DC, AC RMS) Maximum Input Current: 1 A RMS Maximum Power Dissipation: 50 VA

Channel-to-Channel Isolation: 300 VRMS Channel-to-Earth Isolation: 300 VRMS Open/Close

Speed: 200 channels/s Expandability: Supports cascading to 160 maximum crosspoints

Key Features Simultaneous multi-point connection capability across all 32 crosspoints Modular

expansion supports custom matrix dimensions Rapid electromechanical switching at 200

channels/s Integrated M3TB48 terminal block interface for signal connections 300 VRMS isolation

between channels and to earth Compact form factor: 17.00 in × 9.00 in × 6.00 in

Typical Applications Multi-channel data acquisition systems Automated test equipment with distributed

signal routing Device characterization requiring flexible switching matrices Control system

integration with simultaneous signal paths

Compatibility & Integration The MC3648 integrates directly into the Rigol M300 DAQ System Mainframe via golden edge connector interface. Signal

connections use the M3TB48 terminal block. The host M300 mainframe provides RS232, USB,

LAN (LXI-C), and GPIB control interfaces for remote operation and system integration.

MC3648 Characteristics / Specifications

PARAMETER	VALUE
Model	MC3648
Manufacturer	Rigol
Instrument Type	4 × 8 two wire matrix switch module
Alias	MC 3648; RIGOL MC3648; MATRIX MC3648
Host Mainframe	M300 series data acquisition / switch system
Matrix Size	4 × 8 two wire
Crosspoints	32 two wire
Wiring Mode	2 wire
Connect to DMM Module	no
Scanning Speed	not applicable
Open Close Speed	200 channels/s
Maximum Voltage	300 Vrms DC or AC rms
Maximum Current	1 Arms DC or AC rms
Maximum Power	50 VA
Isolation Voltage	300 Vrms channel to channel and channel to earth
Offset Voltage	5 uV
Closed Channel Resistance	less than 1 ohm
Isolation Resistance	greater than 10 GOhm
Bandwidth	1 MHz
Crosstalk at 1 MHz	minus 18 dB (50 ohm load)
Capacitance HI LO	100 pF
Capacitance LO Earth	200 pF
Volt Hertz Limit	1e8
Thermocouple Cold Junction	not applicable
Switch Life No Load Typical	100 million

PARAMETER	VALUE
Switch Life Rated Load Typical	100 000 (resistive)
Operating Temperature	0 C to 55 C
Storage Temperature	minus 20 C to 70 C
Humidity	40 C / 80 percent RH non-condensing
Terminal Block	M3TB48
Sibling Mux 32 ch	MC3132 (connects to DMM, 60 Ch/s scan)
Mainframe Slots	5 on M300
Max Switch Channels Per Mainframe	up to 320 class Notes Specs from Rigol M300 Series Data Acquisition/Switch System datasheet. MC3648 does not connect to MC3065. Confirm M3TB48 terminal block and 300 V / 1 A / 50 VA limits.

General Specifications & Supplementary Characteristics

PARAMETER	VALUE
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Full OEM specifications

Complete technical content extracted from the manufacturer datasheet. Sparse OEM tables are reconstructed as tables below; other text is preserved as paragraphs.

Specifications	
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Wiring Mode	2 wire
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Scanning Speed	not applicable
Open Close Speed	200 channels/s
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Maximum Current	1 Arms DC or AC rms
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Notes
Specs from Rigol M300 Series Data Acquisition/Switch System datasheet. MC3648 does not connect to MC3065.
Confirm M3TB48 terminal block and 300 V / 1 A / 50 VA limits.

Available from Aumictech

Used and refurbished unit evaluated in-house. Calibration: Available on request. Used · In stock.

Request a quote: sales@aumictech.com · +1 (484) 841-9341

Aumictech

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NIST-traceable calibration · SAM registered ·
30-day returns
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Technical content from manufacturer specifications. Unit photo/stock from Aumictech listing when available. Specifications subject to OEM documentation and unit condition.