

Product Description — DSM-12

6:1 Digital Switching Matrix

Introduction

Dual 6-input Relay Matrix – A 19" x 22" x 3.5" rack mountable, dual 6-input binary relay tree matrix with a bandwidth of over 4GHz. This unit is intended to extend the input capability of the DTS-207X from 2 to 12 channels. The matrix can be controlled manually from the front panel or remotely via the RS-232C port at the back of the DTS. Remote control of the DSM-12 via GPIB commands to the DTS makes integration into an automated environment fast with no special hardware or software required. The DSM-12 is designed to be used as a 1 of 6 matrix to the DTS channel input (1 of 6 to channel 1, and 1 of 6 to channel 2 — See Figure 1). The DSM-12 includes an RS232C cable for connecting to the DTS-207X Series of Digital Time Measurement products.

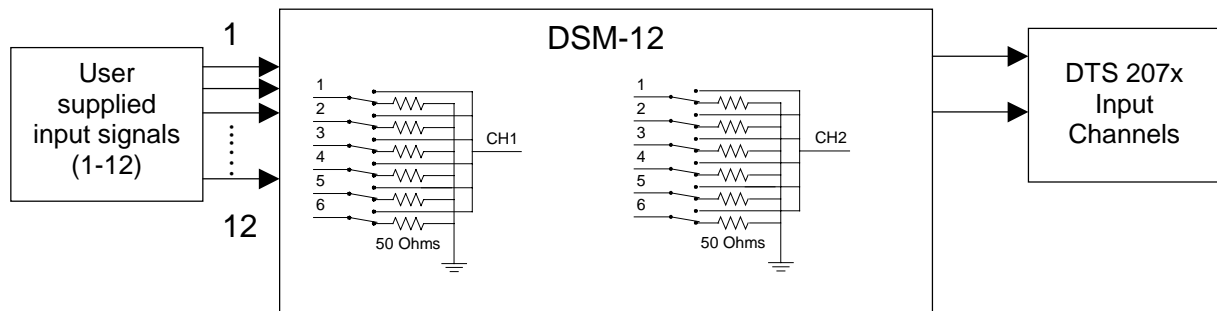


Figure 1

Performance Specifications

Frequency range.....	DC - 4GHz
VSWR.....	1.25 : 1 maximum
Insertion loss	1.1dB maximum
Isolation	100dB minimum
Skew to any path	± 10ps maximum
Impedance.....	50Ω nominal
Unused inputs.....	Terminated 50Ω to ground
Matrix switching time	<50ms
Relay control.....	RS232C
Front panel inputs.....	± 1.3 VAC maximum
Minimum relay life.....	5 million switches per channel (Max. input voltage must not exceed ± 1.3 VAC)

Power Requirements

Voltage requirements	90 to 260 VAC @ 50-60 Hz
Input current	0.125A maximum
Fuses.....	(2) 0.25a, 250VAC, 5 x 20 mm

Temperature Requirements

Storage	0 - 70° C
Operating.....	5 - 40° C

Humidity

Storage	80%, Non-condensing
Operating.....	80%, Non-condensing, up to 31° C

Safety

The DSM-12 is in compliance with the following standards:

- EN61010-1:1993 + A2:1995 Low Voltage Safety Directive.
- EN55022:1994 Class A Electromagnetic Emissions Compatibility
- EN55082-1:1992 Electromagnetic Immunity Compatibility

Intended Use of Equipment

The DSM-12 should be used only for its intended purpose as outlined in this manual. To avoid possible injury, the DSM-12 should not be operated with the top cover or other panels removed. Refer installation and maintenance to qualified service personnel. To avoid explosion, do not operate the DSM-12 in or near an atmosphere of explosive gases. It is essential to maintain the protective earth ground through the grounding connector of the power cord. A loss of the protective ground can cause electrical shock. The DSM-12 is a Class 1 LED product. When the DSM-12 is installed into a rack enclosure, the rear power switch and power cord must be accessible for proper power disconnect or a proper power disconnect must be provided.

Installation of the DSM-12

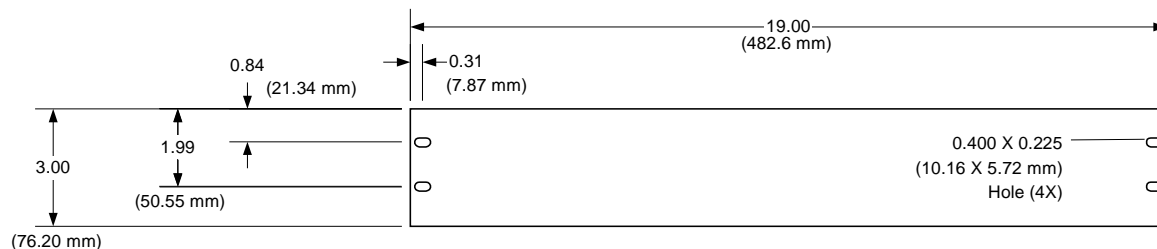


Figure 1 - Rack Mount Dimensions

1. Place the DSM-12 under the DTS unit.
2. Connect Channel 1 of the DSM to Channel 1 of the DTS.
3. Connect Channel 2 of the DSM to Channel 2 of the DTS.
4. Connect user inputs to appropriate DSM inputs.
5. Connect RS232C cable to RS232C port on the back of the DSM-12. Connect the other end of the cable to the back of the DTS-207X.
6. Connect power cord to unit and to AC power source.

User installation complete.

The DSM-12 front panel connections are only intended to be connected to signals where applied voltages will not exceed $1.3V_{pk-pk}$ AC (Installation Category I).

Fuse Replacement

The IEC plug-in at the back of the DSM-12 provides the input connection for the AC power cord. A small compartment on the IEC plug houses two 0.25A/250V fuses (5x20mm). The manufacturer's part number is

Wickmann IEC 19195-035. To gain access to the fuses, remove the power to the DSM-12 and disconnect the power cord. With a small screwdriver, pry open the fuse compartment on the IEC plug. Remove the fuse and install the new fuse prior to closing the compartment and reinstalling the power cord.

Cleaning

The outside of the DSM-12 should be cleaned with Isopropyl alcohol.

Remote Programming of the DSM-12

Refer to the GPIB Programming Guide, Section 8, Channel Commands, included with your DTS-2077 or 2075 for DSM-12 control commands.