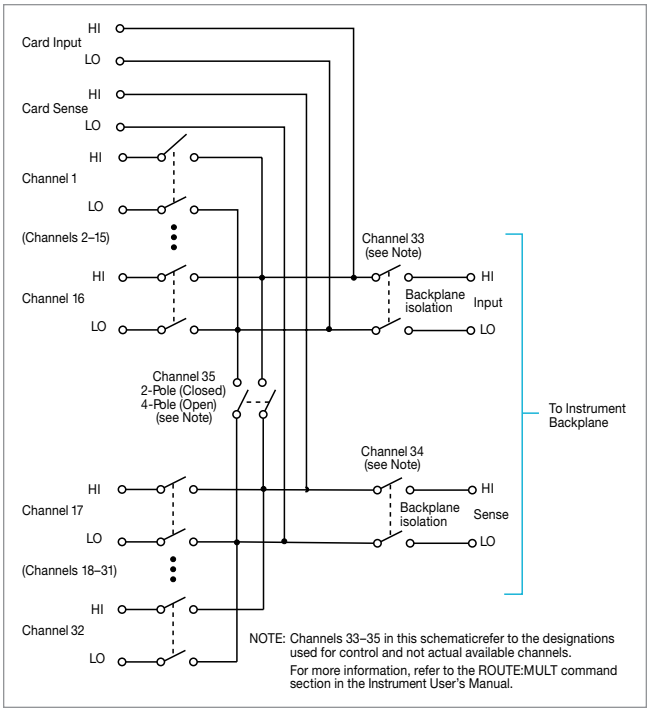
7703 32-channel, High Speed, Differential Multiplexer Module

Datasheet

The 7703 plug-in module offers 32 channels of 2-pole or 16 channels of 4-pole multiplexer switching that can be configured as two independent banks of multiplexers. The non-latching reed relays provide high speeds and are designed for 300 volt, 500 mA; 10 VA. The relay closures are stored in onboard memory. The 7703 is ideal for RTD and thermistor temperature applications.

Key Features

- 32 channels for general purpose measurements
- Relay actuation time of less than 1ms for high-speed scanning
- Two- or four-wire measurement
- Two 50-pin female D-sub connectors are standard for secure hook-up and quick teardown



Specifications

Capabilities

Channels 1–32	Multiplex one of 32 2-pole or one of 16 4-pole signals into DMM.

Inputs

Maximum Signal Level	
Channels (1–32)	300 V DC or rms, 0.5 A switched, 10 W maximum.
Contact Life (typ.)	>5×10⁴ operations at max. signal level. >10⁸ operations cold switching.
Contact Resistance	<1 Ω at end of contact life.
Contact Potential	<±3 µV typical per contact, 6 µV max. <±3 µV typical per contact pair, 6 µV max.
Offset Current	<100 pA.
Connector Type	50 pin D-sub ×2.
Relay Drive Current	20 mA per channel.
Isolation Between Any Two Terminals	>10⁹ Ω, <200 pF.
Isolation Between Any Terminal and Earth	>10⁹ Ω, <400 pF.
Cross Talk (1 MHz, 50 Ω Load)	<–40 dB.
Insertion Loss (50 Ω Source, 50 Ω Load)	<0.35 dB below 1 MHz. <3 dB below 2 MHz.
Common Mode Voltage	300 V between any terminal and chassis.

General

32 Channels	32 channels of 2-pole relay input. All channels configurable to 4-pole.
Relay Type	Reed.
Actuation Time	<1 ms.
Environmental ans Safety	
	Operating Environment: Specified for 0° to 50°C. Specified to 40% R.H. at 35°C.
	Storage Environment: –25° to 65°C.
	EMC: Conforms to European Union EMC Directive.
	Safety: Conforms to European Union Low Voltage Directive
	RoHS: Conforms to European Union RoHS Directive
Weight	0.8 kg (1.75 lbs).

Supplied Accessories

7703-306A	50-pin D-Sub Male Shell Connector Kit, quantity 2

Available Accessories

7705-MTC-2	50 Pin Male to Female D-sub Cable, 2 m (6.6 ft).
7788	50-pin D-Sub male connector kit, quantity 2
7790	50-pin male, 50-pin female, 25-pin male D-shell IDC connectors

Available Services

7703-3Y-EW	1-year factory warranty extended to 3 years from date of shipment

Ordering Information

7703	32-channel, High Speed, Differential Multiplexer Module
Warranty	1 year

Tektronix®

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