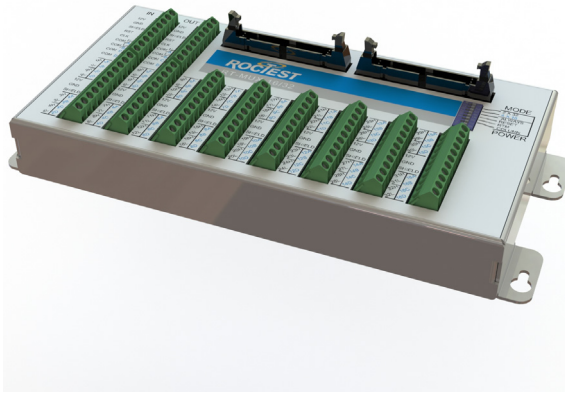
RT-MUX 16/32 - Signal Multiplexer

Multiplexer



UP TO 32 CHANNELS
RELIABLE AND COST EFFECTIVE
VERY LOW POWER CONSUMPTION

The RT-MUX is a Compact, Robust and Reliable Signal Multiplexer. The Cost effective RT-MUX can be used in daisy-chain configuration for additional economy

Description

The RT-MUX-16/32 Signal Multiplexer is a cost effective way to expand the amount of channels a single datalogger can handle. The use of this multiplexer enables the user to lower the overall cost of a telemetry system on a project by maximizing the use of a single datalogger and minimizing the amount of cable required when used in a junction box.

It can multiplex up to 32 sensors (with 2 conductors each) or 16 sensors (with 4 conductors each). Its modular design offers the possibility to add an effective surge protection that will protect every channel against lightning or EMI/RFI.

The compact size of the **RT-MUX-16/32** allows the user to save space within a switchbox or within an Automatic Datalogging System (ADAS), and its low power consumption won't drain a standalone battery-powered data acquisition system.

RT-MUX-16/32 can be used in daisy-chain configuration. They can operate in a serial layout; An economic feature to minimize the cable length required to link multiple multiplexers to the same datalogger.

The **RT-MUX-16/32** is the champion of low power consumption with a quiescent current of less than 20uA. When powered to take a measurement, the **RT-MUX-16/32** has the capability to power multiple pairs of sensors individually or the full multiplexer.

Key Features

- Reliable & Compact
- 16 channels (4 wires) or 32 channels (2 wires)
- Compatible with most electrical signals (including VW, 4-20mA, etc.)
- Daisy-chain compatible
- Modular surge protection (optional)
- Very low power consumption
- Maximum power distribution
- Tested on +2km of cable from the datalogger to the Multiplexer
- Can be used with heavy power consuming sensors since sensor can be powered separately

Applications

- Dams
- Geotechnical applications
- Tunnels and excavations
- Structural Health Monitoring

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Specifications

Number of Channels	16 channels (4 wires) or 32 channels (2 wires)
Initial contact resistance	0,1Ω
Max. switching current	500 mA at 30VDC
Max. switching voltage	110VDC
Insulation resistance	> 1000MΩ
Contact Life	> 5 x 10^5 operations
Max. relay actuation time	50ms
Reset and Clock signals	TTL level (5,5 V maximum)
Power	10—16 VDC (unregulated)
Max. Current per 12V output	250 mA
Max. Current all 12V output	1A
Quiescent Current	<20uA
Active Current	<25mA
Operating T°	-40°C to +70°C
Storage T°	-40°C to +70°C
Humidity	0-95% RH, non condensing
Dimension Weight	57 x 126 X 273 mm / ≈1 kg

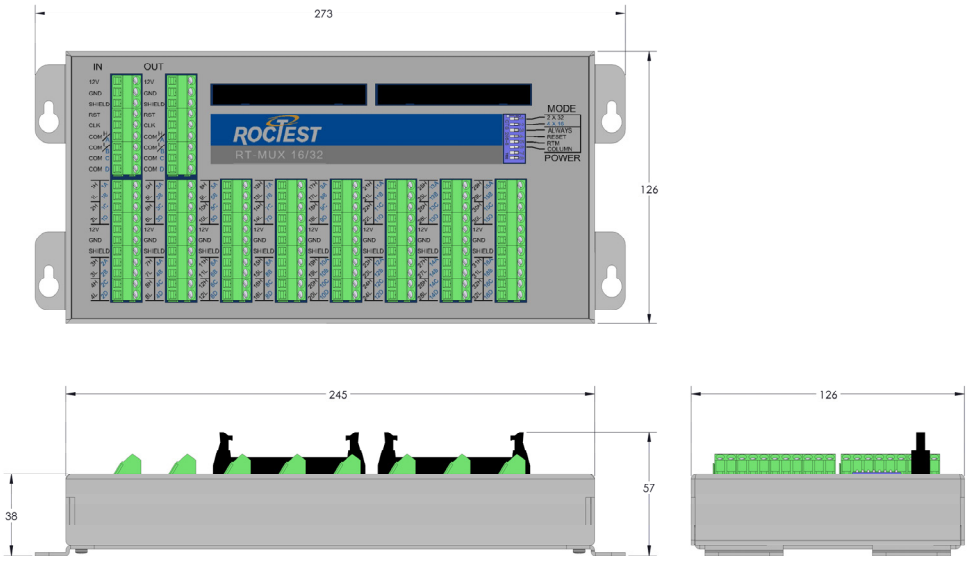
No Protection[1]	Standard model Reverse protection on power(12V) TVS 1500W on Clock and reset input/ouput
Gaz tube protection[2]	All features above plus 230V 5kA 1pF on all input signals
Full protection[3]	All features above plus 6 elements protection Gaz tube , TVS and inductance 10 uH inductor to limit inrush surge current TVS 36V 1500W on all input signals

Note :

[1] Does not affect the input signal

[2] Offers protection with almost no signal effects

[3] Not recommended to read low resistance signal and high voltage (higher than 25V)



Ordering information

- Optional gas tube surge protection
- Optional full surge protection
- Rotary switch connectors

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