

Compatible Multiplexer

DIGITAL ADVANCED SENSORS **DAS**

MUX1632

Multiplexer MUX1632 is a compatible multiplexer for Campbell Scientific data logger CR1000, CR1000X, CR10X and multiplexer AM16/32B. MUX1632 provides excellent performance and price-competitiveness for every engineering and data logging projects.

- Perfectly compatible with Campbell Scientific's devices.
- Multiplexes up to 32 sensors at a time.
Connects many sensors to single data-logger.
- Supports many types of sensors including inclinometer, vibrometer, thermistor, potentiometer and more.
- Decreases the cost of cabling individual sensors.
- Protects the equipment from electrical surges and shocks.
- Compact size and price-competitiveness.



Overall

Multiplexer is a device to extend data-logging channels to make single data-logger can log many sensors. Multiplexer logs data by switching operations of mechanical relays.

With using multiplexer, additional input channels and controlling ports of the data-logger are unnecessary.

Maximum channels able to added by MUX1632 depends on sensor type. In case of identical types of sensors, MUX1632 has a extendability as following :

- 64 single-ended sensors.
- 32 single-ended or differential sensors that required 2 wires. (e.g. half bridges)
- 32 vibrating wire sensors or 16 vibrating wire sensors including temperature signal.
- 16 single-ended or differential sensors that required 4 wires (e.g. full bridges)

Compatibility

Multiplexer MUX1632 is designed for compatible with Campbell Scientific's static datalogger CR1000, CR1000X, CR10X and dataloggers which compatible with them either.

General Specifications

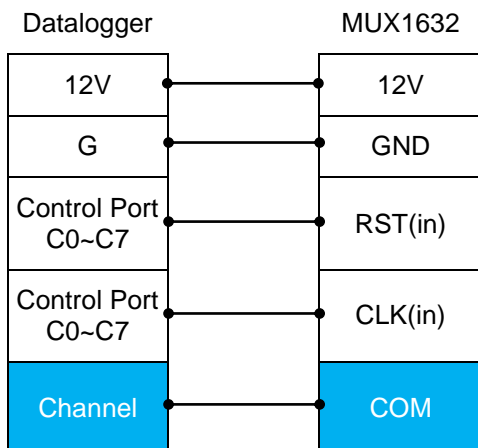
- Power : 9.6 ... 16VDC
- Current Consumption @12VDC
 - Sleep mode <1mA
 - Active <25mA
- Scanning rise section of over 5ms clock signal at below 1.5Vdc and above 3.5Vdc.
- Reset within 3.5...16Vdc continuous signal. Deactivate below 0.9Vdc.
- Relay Operation : BBM (Break Before Make)
- Maximum Switching Voltage : 50Vdc
- Maximum Switching Current : 500mA
 - ✓ Contact resistance may increased when switching current is more than 30mA. It may cause negative effect for low voltage multiplexing.
- Relay Durability : over 10⁸ times mechanically over 2 x 10⁵ times electrically
- Operating Temperature : -20 ... +85 celsius
- Dimensions : W212 x D102.6 x H25.6mm
- Weight : 490 grams

Applications

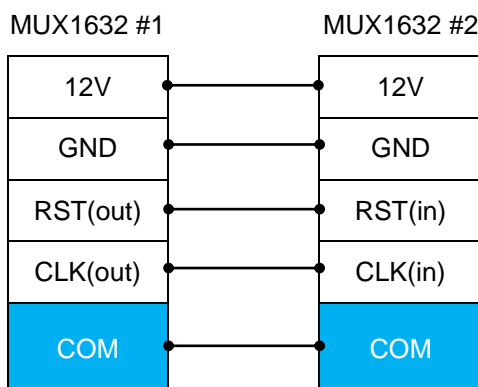
- Measurements of civil works
- Geotechnical engineering
- Geostuctural monitoring
- Meteorological observations
- Water level/quality monitoring and more

Wiring Connections

Wiring connections between datalogger and multiplexer MUX1632 as following :



Wiring connections between numbers of multiplexer MUX1632 as following :



Summary

Datalogger operates multiplexer by its reset (RST) channel. Multiplexer idles as deactivation below 0.9Vdc signal and activating within 3.5 to 16Vdc continuous signal.

During clock pulse input to the multiplexer on activation mode, terminals of COM and each channels are connected gradually from A to D at 4 wires 16 channels mode.

And from AB to CD at 2 wires 32 channels mode.

Other wiring connections and programming for data-logging are same as Campbell Scientific's.

NOTES

- 1) Check wiring connections before use.
- 2) To stable data logging, room temperature (steady temperature) and low humidity environments are recommended.
- 3) In case of operating in low voltage or high temperature environments may cause degradation of relay performance and it causes delay of data logging.
- 4) In case of using nonstandard power source may cause damages to the product.
- 5) 12 months warranty is provided after released. Warranty provided only in case of using for designed purpose correctly.
- 6) Specifications, design and components can be changed without prior notice to improve its performances.

DAS Co., Ltd.

128 Bibong-ro, Bibong-myeon,
Hwaseong-si, Gyeonggi-do, 18284

Republic of Korea

TEL : +82 31) 356-3541

email : das@das-co.com

Web : <http://das-co.com>