

CEM 416A CHANNEL EXPANSION MODULE

1. FUNCTION

CEM 416A is mainly used to increase the number of input sensors for datalogger series including HL20, DT12, CR10X, CR1000, CR800 and others. The CEM416A is located between datalogger and sensors. By using the relay switch features, it sequentially scans and processes each incoming signal of sensors and transmits the signal to datalogger, which is same as other relay-switched multiplexers of worldwide makers'.

According to different type of sensors (including single-ended or differential with or without excitation voltage), each CEM416A can multiply the maximum sensor numbers as follow:

- a. Up to 16 Geokon's or Sinco's or other vibrating wire sensors through one vibrating wire interface, and 32 Geokon's or Sinco's or other vibrating wire sensors through two vibrating wire interfaces.
- b. Up to 16 single-ended or differential sensors which require excitation voltage including full bridge and half bridge sensors.
- c. Up to 32 single-ended or differential sensors that require two wires (e.g. thermistors, half bridges).
- d. Up to 48 single-ended sensors which require excitation voltage including some half bridge sensors including 111N temp. probes or potentiometers, etc.
- e. Up to 32 gypsum block or watermark soil moisture.

2. PHYSICAL DESCRIPTION

The CEM416A is housed in a 23 cm * 13 cm * 5.6 cm anodized aluminum case. The aluminum case is intended to reduce temperature gradients across the CEM416A's terminal strips. This is typically important when thermocouples are being wired and multiplexed to CEM416A. The CEM416A can be easily to mount on any plate without removing any screw of the case, and the bottom of case supports room for user to mount the CEM416A on any plate.

3. THE FRONT VIEW OF CEM 416A CHANNEL EXPANSION MODULE

