

FEATURES

- ❖ 2 channel isolated output
- ❖ On-board isolation transformer
- ❖ On-board EMI noise filtering
- ❖ Jumper selectable voltage/current output
- ❖ 4 to 20 mA output will source a 650Ω load
- ❖ Built-in over-current protection

APPLICATIONS

- ❖ 0-10V DC to 4-20mA signal splitting
- ❖ 4-20mA to 0-10V DC signal splitting
- ❖ 0-10V DC to 4-20mA signal sequencing
- ❖ 4-20mA to 0-10V DC signal sequencing
- ❖ 2 channel signal isolator
- ❖ Dual channel VFD driver

DESCRIPTION

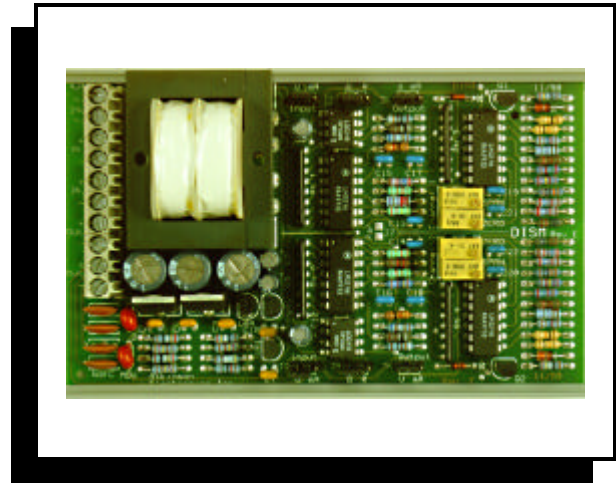
The DISM-E (Dual Isolated Signal Module) is a dual channel isolated output signal module that employs an on-board isolation transformer to power each of the two channel outputs independently. Each channel has optically isolated inputs and independent signal amplifier sections which make it possible to split analog signals or sequence these signals for HVAC control applications. The DISM-E accepts two 0 to 10V DC or 4 to 20mA input signals and outputs two isolated 4 to 20mA or 0 to 10V DC output signals which are jumper selectable.

OPERATION

The DISM-E is powered by a on-board 24V AC transformer with three 20V AC isolated secondaries. Separate bridge rectifiers and voltage regulators provide +20V DC to power the input section and both output sections. The input on each section consists of a voltage divider, noise filter, and linear optical isolation junction. The output from the optical isolator is scaled to a 0 to 10V DC signal output. This signals also drives a negative referenced 4 to 20mA signal output. EMI noise filtering has been added to both outputs to minimize the effects of noise radiated by some VFDs on the output electronics.

For signal splitting applications, the input signal 0-10V signal is connected to both inputs in parallel and then the output sections are scaled so that two independent output signals can be generated in sequence.

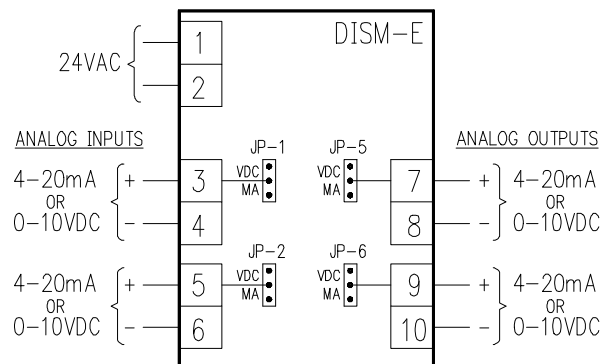
The mA output on the DISM-E is load independent and will source up to 650 ohms with over current protection provided on each channel.



SPECIFICATIONS

SIZE:	3" L x 5" W x 2" H
MOUNTING:	3" RDI snap-track (supplied).
POWER:	24V AC ± 10%, 50/60Hz, 2.5VA
INPUT SIGNALS:	4 - 20 mA, impedance 62Ω 0 - 10V DC, impedance 10KΩ custom 5KΩ potentiometers
OUTPUT SIGNALS:	4 - 20 mA maximum of 650Ω 0 - 10V DC ≥ 1KΩ
ACTION:	Dir./Rev. with 2Hz Filtering
ADJUSTMENTS:	ZERO & SPAN ± 20%
AMBIENT TEMP:	0 to 50°C

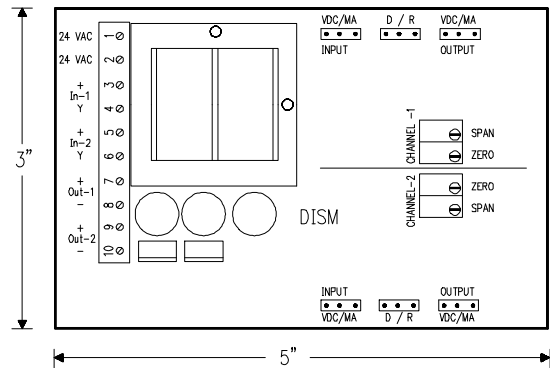
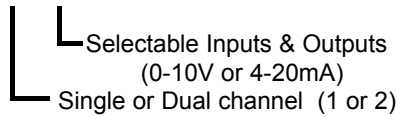
WIRING CONFIGURATION



ORDERING INFORMATION

PHYSICAL CONFIGURATION

DISM-E/X/SEL



ORDERING INFORMATION

DISM-E/1/SEL	DISM-E 1 ch. 0-10V or 4-20mA to 0-10V or 4-20mA module with both signal & transformer isolation .
DISM-E/2/SEL	DISM-E 2 ch. 0-10V or 4-20mA to 0-10V or 4-20mA module with both signal & transformer isolation .
DISM-E/1/SEQ/MA	DISM-E 1) 4-20mA input to two Sequenced 4-20mA outputs, with both signal & transformer isolation.
DISM-E/1/SEQ/V	DISM-E 1) 0-10V DC input to two Sequenced 0-10V DC outputs, with both signal & transformer isolation.
DISM-E/P2/SEL	DISM-E 2 ch. 5kΩ potentiometer to 0-10V or 4-20mA module with both signal & transformer isolation

FIELD SETUP & CALIBRATION

The DISM-E has a ZERO and SPAN potentiometers for each channel. These potentiometers are factory set during the input/output calibration procedure. These potentiometers can be used for field calibration of each channel of the DISM-E, to do so please perform the following steps.

1. Connect 24V AC to terminals 1 and 2.
2. Connect your 0 to 10V DC or 4 to 20mA signal to the desired input (or both).
3. Connect a volt meter across the input or current meter in series with one leg of the input to measure the voltage or current signal, and connect an other volt/current meter to the output terminals to measure the output signal.
4. Apply power to the DISM-E and voltage/current signal simulator or Smart 2 plus Controller.
5. Adjust the input for the minimum signal and adjust the ZERO pot. for 75% of the desired output minimum signal.
6. Then, adjust the input for maximum signal and adjust the SPAN pot. for 75% of the desired output maximum signal.
7. Repeat steps 5 & 6 until desired output is achieved.

NOTE: If you adjust the ZERO or SPAN pots for 100% of desired output signal in one step you will over shoot the desired output, and will have to re-adjust both the ZERO and SPAN pots. Always adjust 50 to 75% of the difference from where you are and where you want to be. If you are only correcting the output level, then adjust the ZERO pot to achieve the desired output.

The ZERO and SPAN potentiometers are slightly interactive. It may be necessary to repeat the above instructions several times to achieve the desired output.

Call for other calibration ranges and versions.