

### Technical Data IRM-100

Power supply	24 VAC ± 15% 24 VDC ± 15%
Power consumption	< 1 W
Transformer sizing	1 VA

### Input

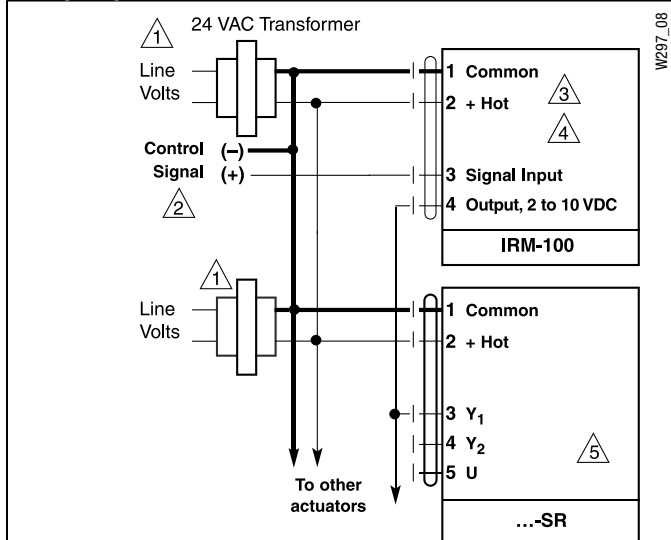
Voltage (max)	25 VDC
Zero (starting point)	0 to 18 VDC
Span adjustment	2.6 to 17 VDC
Impedance	400 kΩ
Current	0 to 20 mA
Impedance	500 Ω

### Output

Voltage	2 to 10 VDC
Current	15 mA max

Electrical connection	wire terminals, 14 gauge max
Ambient temperature	-20° F to 150° F [-30° C to 65° C]
Humidity	5 to 95% RH non-condensing
Mounting	Snap-Track (provided)
Dimensions	board 1-3/16" x 2-3/16" x 9/16" with Snap-Track 1-7/8" x 2-3/8" x 15/16"
Weight	0.9 oz.

### Wiring Diagram



- ① Provide overload protection and disconnect as required.
- ② The controller should be powered from a separate transformer.
- ③ The actuator and IRM-100 may be powered from the same transformer.
- ④ Consult controller instruction data for more detailed installation information.
- ⑤ To reverse control rotation, use the reversing switch.

### Application

The IRM-100 input rescaling module is designed to change non-standard voltage or current signal levels into a 2 to 10 VDC output to modulate Belimo ...SR type actuators. The IRM-100 is available for replacement of existing installations. The ...MFT product can replace 100% of the IRM-100 applications, more effectively.

### Operation

The IRM-100 is installed between a controller and a Belimo ...SR actuator. The module can be adjusted to work with a zero offset of 0 to 18 VDC and a span range of 2.6 to 17 VDC. The IRM-100 has a 2 pin jumper mounted to the circuit board. When the jumper is connected between these 2 pins, a 4 to 20 mA signal can be fed directly into the IRM. The result being the conversion of a wide range of analog control signals to a 2 to 10 VDC range.

**Jumper not connected to both pins for voltage applications (as shipped)**

**Jumper on both pins for 4 to 20 mA applications**

The IRM may also be used to sequence several actuators from one signal source. This is done by adjusting the IRM units to work at different in put ranges.

### IRM-100 Used as a Current Amplifier

In some applications, the capacity of a controller output may not have current available to control multiple end devices. An example would be a controller which has an output current of .5 mA maximum. If 10 AF24-SR US actuators have to be driven from the same output, the current requirement would be  $I = E/R = (10 \text{ volts})/(100000 \Omega) = .1 \text{ mA}$  for each actuator. For the 10 actuators, 1 mA of current would be necessary to properly control the actuators.

The IRM-100 may be used as an interface to provide a higher current capacity to the system. The IRM-100 has an output capacity of 15 mA. This higher level output can handle a greater number of actuators. By calibrating the IRM-100 for a 2 to 10 VDC input to achieve a 2 to 10 VDC output, IRM-100 provides this added capacity for the system.

The same circuit will also work if a 4 to 20 mA signal is used. A 500 Ω resistor is placed across terminal #1 and #3 which converts the 4 to 20 mA to 2 to 10 VDC.

