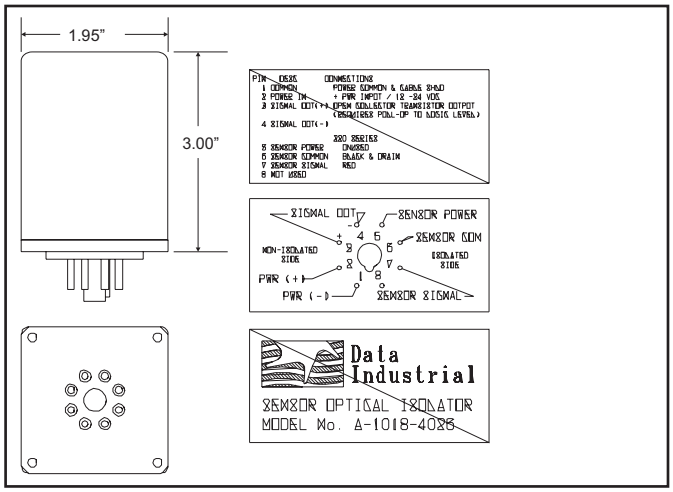
Model A-1018-4026	Product Type	Technical Brief

For several years Data Industrial has produced the Model A-1018 Opto-Isolator; and an enhanced version the Model A-1018-4026. The P.C. board for these products was recently upgraded permitting both to be offered at the same reduced price. Since the A-1018-4026 is superior with its three way isolation it is now being offered as the standard. The purpose of this bulletin is to explain the differences between the two products, and to explain why we are recommending that most orders be converted to the superior A-1018-4026. Both versions permit a flow sensor signal to be shared with two input devices without concern about interaction between the devices. (For example, a Flow Monitor and a PLC). In the A-1018 version, Power Supply Common, and Signal Out (-) share a single connection. In the past, for applications where the power supply had to be kept separate from the signal we provided the Model A-1018-4026 at a premium.

In the A-1018-4026, signal output isolation is achieved by using a small amount of the signal to power the output stage. From a signal standpoint, in most applications the only difference between the two versions is that the Signal Out (-) wire is connected to Pin #1 in the A-1018; and Pin#4 in the A-1018-4026. For almost any application where the A-1018 is acceptable, the versions can be made interchangeable by connecting Pin#1 to Pin#4.

The only cases where an A-1018 must be used are the following:
1. Sensor input is from a Low Frequency Square Wave devices such as our Series 4000. Where the true square wave output could remain low for extended periods, eventually causing the output to toggle high due to loss of output control voltage.
2. Any non-Data Industrial device that would be affected by 100KΩ of parallel resistance.

MECHANICAL
Both the A-1018 and the A-1018-4026 install into a standard Octal Relay Socket (not provided).
One example of this type socket would be a POTTER-BRUMFIELD # 27E122.



ELECTRICAL SPECS:
Power Supply:
12-28VDC @ 65mA

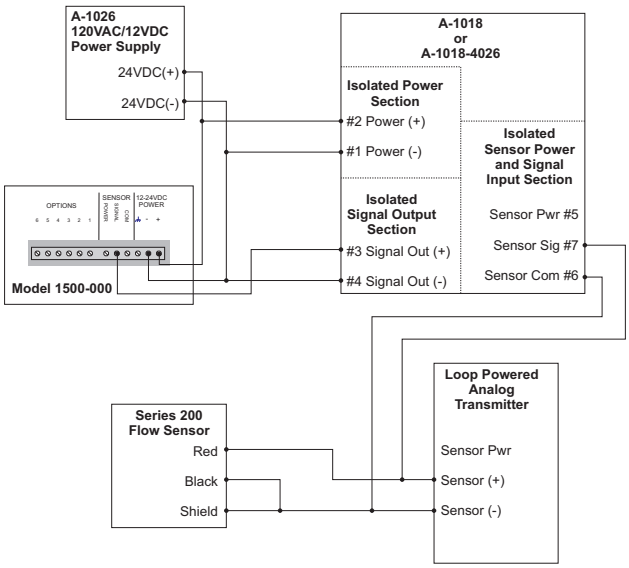
Sensor Power Out Pin#5 (Ref to Pin#6):
14VDC @ 15mA Max.

Sensor Input Threshold Voltage:
V Low = 2.0VDC
V High = 6.0VDC

Signal Out (Pin#3):
Open Collector Current Sink:
30mA Max .
Maximum applied Open Circuit Voltage:
28VDC

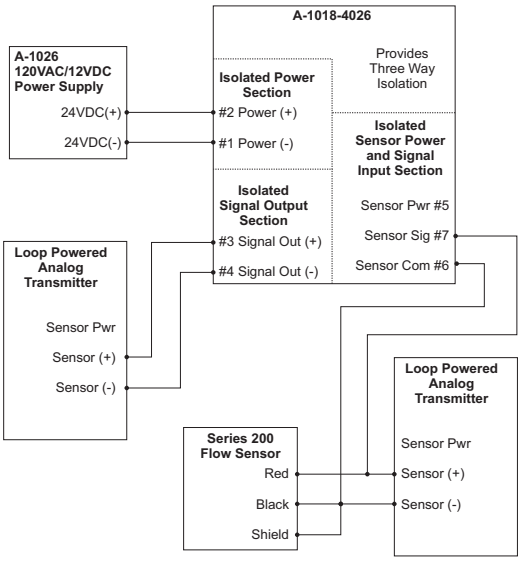
For A-1018-4026 version only, Signal Out (Pin#3)
Leakage Current (V High-State):
80uA @8VDC
(100K OHMS Signal(+) to Signal(-) after initial 10uF capacitor charge)

Adding a Model 1500 to an existing Model 310-10 or Model 500-10



Adding a second Loop Powered Analog Transmitter to an Existing Analog Transmitter where all Power Supplies and Sensor Signals must be isolated from each other.

NOTE:
The Model A-1018-4026 must be used in this application due to the isolation requirements of Loop Powered Transmitters.



Data Industrial®

Please see our website at **www.badgermeter.com** for specific contacts.

Due to continuous research, product improvements and enhancements, Badger Meter reserves the right to change product or system specifications without notice, except to the extent an outstanding contractual obligation exists.

BadgerMeter, Inc.
6116 E. 15th Street, Tulsa, Oklahoma 74112
(918) 836-8411 / Fax: (918) 832-9962
www.badgermeter.com