ElecSpecforLVDIM

The MDIM was indeed designed for use specifically with our Pulse/Totalizer but the LVDIM was designed for use with any generic switch contact or open collector output.

Mechanical DIM and Low Voltage DIM for BIR

The MDIM contains a half-wave rectifier that was designed to accept 115 VAC as an input and generate a 160 VDC output. This high voltage DC is then sent through an intrinsically safe barrier that is mounted in the dispenser to a pulser that is mounted on the volume section of the mechanical computer. Our pulser/totalizer kit provides the barrier and the totalizer which contains a pulser that is rated to operate with 160 VDC.

1. The MDIM does not support 230 VAC.

2. The pulser/totalizer kit is designed to mount only on Veeder-Root mechanical computers. The MDIM could operate with another manufacturer's pulser, as long as it can handle 160 VDC and our intrinsically safe barrier is used.

3. The LVDIM is designed to operate on any voltage from 5 to 24 VDC. The LVDIM actually supplies 12 VDC, but an external source can be used instead. We have qualified the LVDIM with the PetroVend system, which means that we have verified its proper operation. The LVDIM could be expected to work with other systems, but we have not had the opportunity to test any of them, so we do not list them as "approved applications".

LV DIM PULSE SPEC.

The LVDIM can be operated in two different modes, as selected by the switch on the module. It can supply the voltage (+12 VDC) for a switch to interrupt, or it can accept a voltage input from another device. As stated on the module's bracket, the input voltage cannot exceed 30 Volts.

You can use either 10 or 100 pulses per liter, but the minimum pulse width must be at least 20 milliseconds.

The LVDIM should work fine with a minimum pulse voltage at 2 or 3 volts,
and will certainly work at 5 volts.

If you put the switch on the LVDIM in the "Internal" position, it will put +12 VDC on the "Pin_B" circuit node and ground on the "Pulser_Common" node. An external open collector can then be connected across each of the pulser inputs, and it will see a 3.24K pullup resistor, through a protective diode, to 12V. So the current through the external transistor will be about 11V/3.24K=3.4mA. It sounds like everything will work properly.

The hardware filter on the LVDIM is about 3 mSec. Adding that to the software filter of 5 mSec, the pulse has to remain high or low for at least 10 mSec. Total pulse time is then 20 mSec, or 50 pulses per second. Adding another 10 mSec to the high and low pulse width, to account for the line capacitance, means that the total pulse time would come to 40 mSec, or 25 pulses per second. At 10 pulses per liter this would allow 2.5 liters per second or 150 liters per minute.