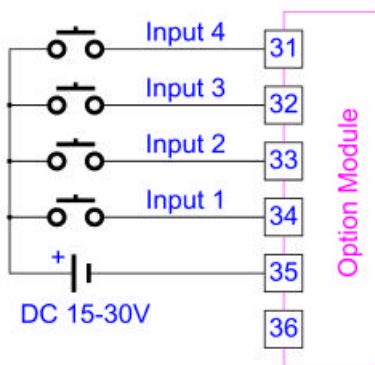


MultiCube Option Module Digital Input / Output plus MODBUS® Comms

A retro-fit Option Module which adds 4 digital inputs, 3 digital outputs and RS422/485 MODBUS® communications to any **MultiCube**. This allows the **MultiCube** to act as a remote I/O port to any SCADA system and as a remote Pulse Input for an Energy Management System., etc.

Inputs

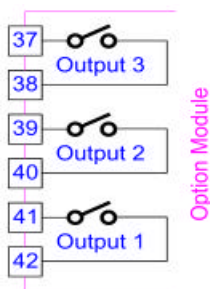


Four Digital Inputs are provided. These may be used to monitor Status – with standard MODBUS® commands reading whether any contact is open or closed. Alternatively, they can be used for Pulse Counting; four independent 32-Bit registers (max count 4,294,967,296) are provided which accumulate input pulses and store them in non-volatile memory. Each register may be read and/or written as registers in a MODBUS® data table.

Pulse Counting applications include providing a remote pulse count interface for other meters (Electric, Gas or Water) with dry-contact output. Status applications include remote monitoring of Alarm contacts.



Outputs



Three independent Digital Outputs are provided – each may be used as control inputs to external switching relays. Each output is individually isolated (50V between outputs, 2.5kV between outputs and the measurement circuit) and takes the form of a normally open volt free contact pair. These outputs are non-latching and will be reset to the OFF state in the event of a loss of auxiliary power to the meter.

Using normal MODBUS® commands, the status of each output may be set and/or read.

Communication

Use of a dedicated processor assures fast MODBUS® communications. Data from up to 20 **MultiCube** Meters can be read in one second. Standard MODBUS® protocol is used, ensuring compatibility with most computer systems. All **MultiCube** parameters are available – in particular for **MultiCube** Types 1, 2 & 3 all **MultiCube-4** parameters can be read.

Specification

The specification below applies only to the Digital Inputs and Outputs. All other aspects are identical to the specification of the **MultiCube** MODBUS® Option Module.

Digital Inputs	
Minimum ON Voltage	10V dc.
Maximum Input Overload	30V dc. Max 60V max 2 seconds
Input Load	10mA @ 24V DC
Isolation	2.5kV Inputs to All Other Circuits
Pulse ON Time	25ms Minimum
Pulse OFF Time	25ms Minimum
Pulse Rate	20hz Maximum

Digital Outputs	
Function	Status Controlled by MODBUS functions 5 and 15 Status Read by MODBUS function 2
Type	Non-Holding, Volt free N/O contacts. Optically isolated BiFETs
Contacts	100mA AC/DC max. 100V AC/DC max
Isolation	2.5kV Outputs to All Other Circuits 50V Output to Output