DIGITAL I/O MODULE

Datascan
Counter Timer Module
7041

General Description

The Datascan is a series of intelligent distributed input/ output modules designed for real time measurement, data collection and communication. The products are ideal for factory, industrial and scientific applications. The Datascan series combines the cost saving benefit of distributed I/O with the flexibility of local channel expansion.

Main Features

- 3.5 KHz Input counting
- Input status monitoring
- Period measurement
- 3.5 KHz frequency measurement
- High speed event timing
- Rugged DIN rail mounted design
- Isolated to 240V RMS
- Variable de-bounce
- On board 5V energisation for contact closure

The **Datascan** series is designed to provide a simple reliable accurate and cost effective means of connecting plant sensors to standard computers for real time monitoring and data acquisition. The Datascan can be used universally with any type of computer as the data interface is by means of a standard serial port.

The **Datascan** series can be configured in local clusters of channels or alternatively as part of a total distributed network. Each 7300 can support up to 256 channels of local inputs or outputs using the units local expansion bus. Alternatively it can become part of a distributed network of up to 1000 channels spanning a distance of up to 4 Km (15000 ft).

Model Type	No of Channels	Input Threshold	Max Input Voltage	Input Isolation	Debounce Options
7041 Counter Timer Module	16	1V<Vt<4V	24V DC	240 V AC RMS 354 V DC	0.2 msec 5 msec 50 msec

The 7041 is a 16 channel counter/timer module designed to operate with the Datascan series. Packaged in a DIN rail-mounted module, it connects directly to the Datascan network through the RS485 network interface. Inputs are individually isolated to 240 VAC RMS or 354 VDC, channel to channel and channel to ground. Contact bounce is eliminated by software programmable debounce algorithm.

The first 8 channels may be programmed individually for a range of fast digital functions including counting, event timing, frequency and period measurement. In addition the remaining 8 channels may be configured for digital status monitoring or counting at up to 10Hz with an on-board power supply providing energisation for volt free contacts.

The 7041 will count digital pulses with debounce at rates up to 3.5 KHz into a 24 bit counter. Frequency may also be measured at up to 3.5 KHz with variable gate intervals. The 7041 will measure on-period, off-period or total period on any timer interval between 20 msec and 2000 sec with a resolution of 128 µs. An event timing mode is also provided allowing timings between one event and another to be measured with a resolution of 128 µs. Plug-in screw terminal connectors make for easy sensor connection and re-connection.

Digital Inputs (Channels 1 - 16)	
Modes	Normal, Inverted

Counter Input (Channels 1 - 8)	
Maximum input rate	3.5 KHz
Minimum hold time	128 µs
Count length	24 bit

Counter Input (Channels 9 - 16)	
Maximum input rate	10 Hz
Count length	16 bit

Period Measurement (Channels 1 - 8)	
Modes	Period High Period Low
Min measurement period	20 ms
Resolution	0.128 µs

Frequency Measurement (Channels 1 - 8)	
Maximum input frequency	3.5 KHz
Minimum hold time	128 µs
Gate intervals	0.1 sec, 1 sec
Automatic retrigger	

Event Timing (Channels 1 - 8)	
Trigger modes	Trigger on High Trigger on Low
Capture modes	High to low Low to High
Maximum event duration	2000 sec
Resolution	0.128 µs

Power	Dimension	Weight	Operating Temperature	Humidity
1W max at 24V	W 230mm H 123mm D 80mm	750 gms	-10 to + 60 °C Storage -20 to + 80 °C	RH 90% Non-condensing

PARTNERSHIP COURTYARD,
RAMPARTS ROAD,
DUNDALK, IRELAND
TEL: +353 42 9332399

SALES@MEASURESOFT.COM

13380 SOUTH GESSNER,
MISSOURI CITY,
TX 77489, USA
TEL: +1 281 969 7529

WWW.MEASURESOFT.COM