



## Datascan 7327 Reed Relay Measurement Processor Module



### Main Features

- Direct Sensor connection for DC Voltages, thermocouples and 4-20mA converters
- In built Cold Junction compensation
- 16 bit measurement performance with 0.625uV sensitivity
- Reed relay differential inputs
- **Fully isolated to 200V channel to channel, channel to ground**
- 16 inputs on board expandible locally to 128 channels using 7027 modules (1000 over network)
- Individual channel programming of sensor type and speed
- Compact DIN Rail Mounting
- Serial Port and Network port both isolated to 500Vdc

### General Description

The Datascan 7000 range is a series of intelligent, distributed input/output modules designed for Real-Time Measurement, Data Collection and communication. Ideal for factory, industrial and scientific applications, the Datascan 7300 series combine the cost saving benefits of Distributed I/O with the flexibility of local channel expansion.

The 7300 series is designed to provide 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 by means of a standard serial port.

The 7300 series can be used autonomously 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. It can also become part of a distributed network of up to 1000 channels over 1.2km. Each 7300 module incorporates a programmable 16 bit ADC, an isolated serial interface, an isolated token passing network interface, on board volatile memory for storing unit configurations and an expansion port for channel extension. The 7327 module has 16 inputs on board. The unit is packaged in a compact DIN Rail mounted carrier making it simple to install.



# 7327 Technical Specification

Specification	Model Type	No of Inputs	Sensor Types	Resolution	Input Impedance
The 7327 is a reed relay analog input measurement processor. The 7327 is a 16 channel unit providing 200 volts isolation.	<b>7327</b>	16 (3 pole)	DC Voltage, Thermocouple, 4-20mA	16 bits @ 40 readings/sec	1M ohm
Internal Cold Junction Compensation and linearisation provides direct measurement in degrees C and degrees F.	Sensor	Range	16 bit	14 bit	Accuracy
	DC Voltage	10V 1.3V 150mV 20mV Auto	320uV 40uV 5uV 0.625uV	1.28mV 160uV 20uV 2.5uV	+/-0.02%rdg+0.01%range+2bit +/-0.02%rdg+0.01%range+2bit +/-0.02%rdg+0.01%range+2bit +/-0.02%rdg+0.01%range+10uV
<b>Calibration Period 12 months. Calibration temperature 20°C. All quoted errors are worst case.</b> Temperature coeff <30ppm/°C (CJC error 0.5°C)					
Each channel can be individually programmed for specific sensors and measurement range.	<b>Sensor Type Thermocouple</b>	<b>Ranges</b>		<b>Sensitivity 16bit resolution</b>	<b>Limits of Error</b>
The high performance 16bit ADC offers sensitivities as high as 0.625uV	<b>K type</b>	-100 to 500°C 500 to 1200°C 1200 to 1600°C		0.02°C 0.20°C 0.20°C	0.4°C 0.7°C 4.5°C
The integrating technique of conversion provides very high immunity to mains borne noise.	<b>J type</b>	-50 to 360°C 360 to 800°C		0.02°C 0.20°C	0.4°C 0.6°C
A facility is provided to configure analog channels as digital inputs.	<b>N type</b>	-200 to -100°C -100 to 580°C 580 to 1300°C		0.10°C 0.05°C 0.10°C	0.8°C 0.6°C 0.8°C
Channels can be mixed and matched under software control.	<b>T type</b>	-150 to 400°C		0.02°C	0.4°C
Number of 7027's able to be plugged into 7327 module is 7.	<b>R type</b>	0 to 1600°C		0.10°C	1.8°C
<b>Software Support</b>	<b>S type</b>	0 to 1700°C		0.10°C	2.0°C
Can be used with a wide variety of standard software products available from several third party vendors.	<b>E type</b>	-50 to 290°C 290 to 1000°C		0.02°C 0.10°C	0.4°C 0.9°C
<b>Other Details</b>	<b>B type</b>	200 to 1600°C		0.50°C	4.5°C
Overload Protection = +/-100V continuous	<b>4-20mA</b>	4-20mA			+/- 0.15%
<b>RS232 Interface</b> Baud rates: 4800, 9600, 19k2, 38k4 Isolation : 500V	<b>Common/Series Mode rejection</b> DC Common mode : 110dB AC Common mode : 140dB AC Series mode : 60dB @ 50 or 60Hz +/- 0.1%		Common Mode range (channel to channel) +/- 200V Peak Common Mode range (channel to ground) +/- 200V Peak		
<b>Network</b> Electrical Specification : RS485 Media : Twisted Pair	<b>Power</b>	<b>Dimensions</b>	<b>Weight</b>	<b>Op Temp</b>	<b>Humidity</b>
Max. Network Length : 1.2km Data Rate : 1000 results/sec Isolation : 500Vdc Total Channels per Network : 1000	24Vdc supply <2W @24V consumption	W 230mm H 123mm D 105mm	750g	-10 to 60°C storage -20 to 80°C	RH 90% Non-Condensing

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