Alpha 630

COUNTER, PHASE AND STATUS INPUT MODULE

What is the Alpha 630 Counter, Phase and Status Input Module?

The 630 module provides six digital inputs for counting, frequency or status measurements. Counting and frequency measurements on these channels support inputs to 15KHz. They can also be configured as three phase decoder channels each with two-phase inputs. Fourteen additional opto-isolated channels for medium speed counting, low frequency and digital status measurement are included. Ten of these channels support counting and frequency measurements to 1KHz .

A further option supported by the module is 5 auxiliary channels – These, if included, are normally an optoisolated status input and 4 relay outputs. They are intended for local functions, perhaps under the direct control of the module rather than from the host computer. However they can be controlled from the host and used as additional general-purpose channels. These auxiliary channels are available on the 630A product version.

Specific operation can be easily programmed for custom applications.

PRIMARY COMMUNICATIONS INTERFACE

An RS485 multi-drop interface is provided for normal operation with other Alpha series modules and a host computer. It can operate at speeds up to 230KB.with cable lengths of up to 1.2Km..

LOCAL SERIAL INTERFACE

As with most other modules in the Alpha series, a local serial interface can be used to program and monitor operation locally independent of the communications on the RS485 network. This can be very convenient during installation or used later to diagnose application problems at the measurement site. Alternatively it could be used with a permanent local process display. Customised display output can be provided. All programming can be stored in secure non-volatile flash memory.

Features

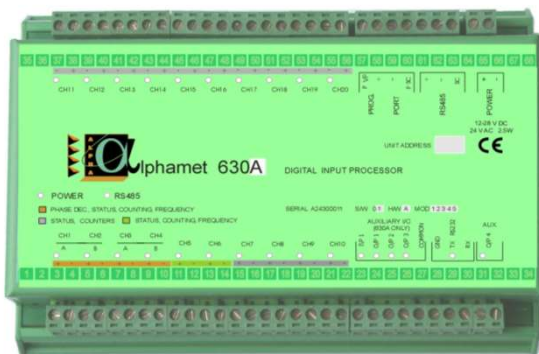**Counting, Phase, Status in compact DIN rail module**

Frequency measurements

Quad phase decoder channel pairs

Programmable Measurement Types

Auxiliary I/O (630A option)

Second local diagnostic serial interface
4 High speed comms 230KB (460KB)

Specifications Details

Number of channels	6
Input threshold	3.5V
Input operating range	3.5-12V
Input count rate	15KHZ
Isolation	Each channel is individually isolated

Phase Decoder Channels

Number of phase decoder inputs	3 pairs (using the 6 freq channels)
Input threshold	3.5V
Input operating range	3.5-12V
Resolution	Two pairs offer discrimination of each edge 4 counts per pulse pair
	Third channel operates at 1 count per two pulses
Input count rate	15KHZ
Minimum width/gap	10uS
Isolation	Each channel is individually isolated
Time base accuracy	Typically 0.03%

Status Counter Channels

Number of status channels per module	14
Measurement functions	Status, counting, frequency
Max count rate	1000/sec each channel (4 channels)
	100/sec on each channel (6 channels)
Input threshold	4V
Input operating range	4-24V
Isolation	Each channel is individually isolated
Update rate – counters or status function	1000/sec 4 channels
	100/sec 14 channels

Auxiliary Channels (Option – 630A)

Number of opto-isolated inputs	1
Number of relay outputs	4
Relay output rating	48V 2A, Fused
Isolation	Note the input and 3 of the Outputs share a common terminal

Status LED's

Colour	Red
Functions	Power
	RS485 Communications
	RS232 Communications
	Channel 1-20 – Status level present
	Status of Auxiliary channels if fitted

Module Dimensions

Dimensions	180x120x65mm
	DIN rail mounting
Weight	0.6Kg

Communications

RS485 Communications Interface	Baud rates to 230KB supported (460KB is available for some applications)
Measurement throughput of link	10,000/sec (depends on application) 2000-4000/.module type
Local RS232 interface	Baud rates to 38K4 supported

Calibration

Software – no internet access required

Environmental

-20 to 60°C ambient. 0-90%RH

Power Requirements

12-36V DC or 24V AC

630 - Power <3W
630A – Power <5W

Issue 2 DS630A02 . All Specifications subject to change without notice. Correct at time publication.