

Digital Counter-Controller

OC 7171A-3D

- ✓ Quadrature Counter, Up-Down Counter
- ✓ Tachometer-Frequency Counter
- ✓ Three Displays 5 Digits each
- ✓ 0.003 Hz-500 kHz Frequency Range
- ✓ Four Set Point Relays
- ✓ Two Analog Outputs
- ✓ RS232 and RS485 addressable
- ✓ Various Display Functions



Model OC7171A-3D is a programmable counter with three displays. It can be programmed as a Quadrature bi-directional Counter, Up-Down Counter and Tachometer-Frequency Counter for industrial applications in connection with digital encoders, magnetic pick-ups and other industrial pulse sources. Integrated excitation is available for supplying of external sensors.

The three displays can be select for functions as Up-Down Counter, Batch Counter or Frequency Counter or their combinations. The two lower displays can show the peak and the valley of the measurement or to display the Set Points.

The Scale, the Preset, the Filter, the Measuring Time, the Reset Time, the Password and the two Set Points can be programmed with the front keys. Optionally two analog outputs, two serial data ports and additional two Set Points are available.

Incremental-Quadrature Counter is designed for fast positioning applications by using two 90° phase shifted A and B signals from linear or rotative incremental resolvers.

The display increments with each edge of A and B signals.

Up-Down Counter can be used for bi-directional counting applications. The pulses to be counted are connected to the input A. The logic signal at the input B determines the counting direction up or down. In the Up-Down Dual mode the display counts up when the pulses are connected to the input A and counts down when the pulses are connected to the input B.

Tachometer - Frequency Counter is used for RPM, speed or frequency measurements or other dynamic applications at which frequency is the input. With incremental resolvers connected, the display can measure RPM bi-directionally, indicating the direction.

Floating Point Arithmetic permits practically unlimited display capacity. The programmed decimal point is automatically positioned to the higher decade when the display arrives at the full capacity. The display switches automatically into exponential expression when the full capacity with decimal point behind the LSD is achieved.

Preset with 5 digits, decimal point and sign can be inserted into the display as offset. The display starts counting at the Preset.

Scale of the measurement will be achieved by using multiplying and dividing constants thus the display can be programmed in required process unit such as mm, inch, LPM or other.

Averaging Filter can be used for non-stable signals such as from vibrating resolvers or signal sources at noisy environments.

Last Reading is automatically stored when the instrument is switched-off. The display continues counting at the stored value when switched-on again.

Two Analog Outputs, two serial Data Ports and additional two Set Points are options. They increase the capability of the instrument in many industrial applications as a process controller.

Soft Manager is available for communication under Windows. The soft manager permits data transfer to a PC in download mode and parameter setting from the PC in the upload mode.

MENU

The keypad opens the menu and the parameters can be programmed:

PASS Password permits entering the menu and programming of the instruments parameters.

PRESET is a 5 digit additive constant (Offset) with decimal point and sign.

SCALE is a 5 digit multiplicative constant with decimal point and sign.

DSCALE is a dividing constant selectable from :1 to :10000.

ORDER determines the display resolution by placing the decimal point from X.XXXX to XXXXX.

FBASE is activated in the Tachometer-Frequency Counter mode. It determines the measuring time from 300ms to 320 sec.

OBASE is activated in the Tachometer-Frequency Counter mode. It determines the time between two consecutive input pulses prior the display resets to zero. The reset is programmable from 1.2 to 320 sec.

PASSWORD permits setting of the password as one of 20 firm memorized combinations.

ANALOG outputs 0/4-20mA and $\pm 10V$ are generated simultaneously.

FILTER with averaging character has constants programmable from OFF to 99.

DATA BUS RS232 and RS485 permits connection of up to 31 instruments on one RS485 data bus.

SPECIFICATIONS OC7171A-3D

Upper Display -99999 ... +99999, red 10 mm

Lower Displays -99999 ... +99999, red 7.5 mm

Inputs

DC-500kHz, positive logic 5V protected to 28V.

Preset

Additive constant (offset) is programmable from 0 to 99999 with decimal point and sign.

Reset

The display can be set to zero with the front key or with an external positive signal 5 ... 28V.

Analog Output Isolated (Option)

Voltage: 0 ... $\pm 10V$

Current: 0/4-20mA.

Resolution: 12bit, Isolation 250V rms.

Data Outputs Isolated (Option)

RS232 and RS485 (4 wire), 8 bit, No Parity, 1 Start, 1 Stop, 600-19200 bd, Addresses 00 - 31.

Set Points

Standard: SP1, SP2 with 5A-230VAC Relays.

Option: SP3, SP4 Relays 5A-230VAC or

NPN open collectors 60V/100mA.

Excitation

Adjustable 5-24V/40mA.

Instruments with DC Supply can optionally have non isolated excitation adjustable from 2V to max. used DC supply voltage.

Supply

115/230V $\pm 10\%$, 50-60Hz, 9VA.

Option: 9 - 36 V DC, 4 W.

Cabinet IP65 from the front

DIN 48x96mm, 100mm depth behind the front.

Panel cut-out 45x90 mm.

Pluggable screw terminals

TERMINALS

