Large Displays - Counters

- ✓ 6 digit display ± 999999
- ✓ Tachometer, Frequency Counter
- ✓ Up- Down Counter
- ✓ Quadrature Counter
- ✓ Absolute Code Gray, binary, SSI, EnDat, RS485 serial
- ✓ Options: Analogue Outputs
  Excitation
  Four Set Point Relay
  RS232, RS485
- ✓ Supply 115/230VAC

Large Displays OC57-COUNT, OC100-COUNT and OC125-COUNT are instruments with programmable counter functions. They are designed for industrial applications and can be ordered with 4 or 6 digits and 57mm, 100mm or 125mm display size.

Inductive, capacitive, optical, mechanical sensors, incremental or absolute coded linear or rotative sensors and other pulse sources can be directly connected to the instruments.

The display can be programmed for following functions:

- ❑ Up-counter with Preset
- ❑ Up- counter with Enable Input
- ❑ Tachometer-Frequency Counter
- ❑ Thermometer for sensors with frequency output signal
- ❑ Up-Down counter with controlled counting direction
- ❑ Quadrature Counter for incremental resolvers
- ❑ Absolute Code Counter for sensors with Gray, binary, SSI or EnDat Data Bus.

FUNCTION

The input signal is conditioned in an attenuator and an adaptive filter and applied to the microcontroller. With the keyboard at the rear panel the display can be scaled by using a multiplicative and/or dividing constant and a digital offset. The results are displayed in desired process units such as RPM, m/sec., litre/min., or mm, µm, angle etc..

They displays are manufactured as process monitors without any control function, or as process controllers, generating control outputs.
Depending on the application, the control outputs can be two or four set point relay or open collector transistors, two analogue outputs and two serial data ports.

The menu can be entered with the keyboard at the instrument's rear and contains the selection of the scale, preset, set points, analogue outputs, serial ports, sampling and reset, display resolution and filter.

The menu contains following parameters:

Scale is a 6 digit multiplicative and dividing constant with decimal point and sign.
Preset is an additive constant programmable from 0 to ±999999. The display starts counting at the selected preset value. The preset can be entered with the keyboard or with external logic signal.
Set Points are programmable within the entire display range ±999999. They activate four open collector transistors or four mechanical relay. Each set point has a programmable delay and a hystereze.
Two Serial Data Ports RS232 and RS485 are available at the output. The RS485 has a programmable address and permits up to 31 instruments to communicate on a data bus.
Analogue Outputs 0...±10V and 4-20mA are simultaneously generated. With the keyboard they can be assigned to any two desired display values. The outputs are isolated.

Input Level is adjustable for bipolar signals 100mV to 48V and permits connection to practically any industrial signal source or sensor.

Digital Filter with an adaptive characteristic permits steady display of noisy input signals or raw environments

Soft manager at a diskette is available for WIN applications. The counter can communicate in bidirectional mode with a supper-vising controller or PC.
Usual Windows-file operations are available. The instrument's parameters can be programmed from the PC or read from the instrument and stored in PC.

The set parameters remain stored in a non-volatile memory also when the instrument is switched-off from the supply.

The last reading memory can be activated in the incremental counting mode of operation. The display stores the last value when the power is switched-off.

SPECIFICATIONS

DISPLAY
0 ... ± 999999, 7 Segments red LEDs, 57, 100 or 125mm with decimal point and sign.

INPUTS
Frequency counter
0.001Hz to 800 kHz
Incrementing Up-Down Counter
DC ... 500 kHz
Absolute Coded Sensors
Parallel Gray or binary data outputs with 8 to 14 bit.
Serial Gray or binary data outputs with up to 32 bit SSI, EnDat, RS485 or other data sources, single turn or multi turn operation.
Digital Integrator
For time integration of analogue signals 100mV, 1V, 10V or 0/4-20mA. Other ranges are available.

INPUT SIGNAL CONDITIONER
Adjustable level for input signals from ±100mV to ±48V.

KEYBOARD
At the rear panel has five keys for parameter settings: UP, DOWN, ACK, MENU and SET.

***Option:* ANALOGUE OUTPUT**
4-20mA / < 390 Ohm max.
0 ... ± 10V / >10kOhm
Resolution 12 bit. Option16 bit.
Isolation 250V r.m.s.

***Option*: OUTPUT PORTS**
RS 232 and RS 485, with 8 bit, no parity, 1 start, 1 stop, 300 to 19200 bd. The address 0 activates RS232. One of addresses 01-31 activates RS485.

FILTER
Adaptive averaging filter with programmable number 0 to 99 of measuring samples

***Option*: SET POINTS**
Two or four 6 digit set points with 60V/100mA open collector NPN transistors or mechanical relay 5A-230VAC. Selectable within ±999999 with DP and sign.
Hystereze
Individually selectable in each set point between 0 and 99.
Delay
Is in each set point selectable from 0 to 3900 ms.

RESET TIME
In the function of digital tachometer-frequency counter the reset time can be set from 50msec to 1000sec. The longest reset time determines the lowest possible measured frequency.

SAMPLING TIME
In the function frequency counter-tachometer the sampling time can be set from 25msec to 3sec.

EXCITATION
Adjustable from 5 to 24V-40mA.

SUPPLY
115/230V ±10%, 48 - 60Hz.

CABINET-Alu (IP65-front)

OC57:	4 and 6 digits 112x368x80mm.
OC100-4:	4 digits: 173x458x80mm
OC100-6:	6 digits: 173x644x80mm
OC125-4:	4 digits: 229x535x80mm
OC125-6:	6 digits: 229x748x80mm

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