



Linearizer - Controller OC7040A-LIN

- ✓ $\pm 100\,000$ true Increments
- ✓ 6 digit Display ± 999999 scalable
- ✓ Inputs 1V, 10V, 4-20mA
- ✓ 20mV range for Strain Gauges
- ✓ Excitation 5 - 24V
- ✓ 105 Linearizing Points
- ✓ Four Set Points
- ✓ Analogue Outputs 4-20mA, 0-10V
- ✓ RS 232 and RS 485
- ✓ Mains or DC Supply



Orbit Controls OC7040A-LIN is a programmable 6 digit controller with 100000 true measuring points and selectable input signal conditioner. It is mainly designed for connection of strain gauges, pressure transducers and weighing bridges. Linear signals can be calibrated and assigned to required display reading in two points by using the keypad. Non linear signals can be linearized in up to 105 points. The menu contains the selection of the linear input characteristic or the linearizing function, setting of two or four set points, analogue outputs, serial data ports and other display parameters.

Two Set Points SP1 and SP2 can be selected within the entire display range ± 999999 . They activate two open collector transistors or two mechanical relay each with a closing contact. Each set point has a programmable hysteresis. Additional two set points with

changing contacts can be optionally ordered.

Digital Filter averages the input signal prior it is shown at the display. The filtering constant can be selected from 0 to 99.

Tara will set the display to zero. The Tara value remains memorized also when the instrument is switched-off from the power. The Tara can be canceled at any time causing the display to return to show the original signal.

Analogue Outputs 0 ... $\pm 10V$ and 4-20mA are generated simultaneously and can be assigned with the keyboard to any two display values.

Serial Ports RS232 and RS485 are available. The RS485 has a programmable address and permits a bus operation of up to 31 instruments.

Peak & Valey memory stores automatically the maximum and the minimum display readings during required measuring period. With UP and DOWN keys the both values can be recalled at the display or erased.

Password can be used to protect a non-authorized entry into the menu. Without the password only the Set points can be entered and changed.

Excitation is available for supplying of external sensors and strain gauges and is adjustable inside the instrument with a potentiometer.

SOFT MANAGER for Windows is communication software for programming of the instrument from a PC, setting of parameters and reading the display memory and storing the data in a Windows file.

SPECIFICATIONS OC 7040A-LIN

DISPLAY

0 ... ± 999999, 7 segment red LED, 14.5 mm with sign and decimal point.

INPUT RANGES

20mV, 0/4 – 20mA, 1V, 10V for display of max. 100 000.

Other ranges are available upon request.

ADC - CONVERTER

Resolution: 19bit, ± 100 000 increments

Conversion Time: 66ms.

ACCURACY

± (0.1 from value + 1 digit).

TEMPCO

± 10ppm/K.

ANALOGUE OUTPUTS

Current: 0/4-20mA

Voltage: 0... ±10V

Resolution: 12 bit - standard.
16 bit - option.

TARA

The Tara has three modes: OFF, TARA and TARA-ONLY. In the mode TARA the display will forced to zero with the key SET. When the key is pressed for second time, the display shows **notArA** and follows the original input signal. In the mode TARA-ONLY will the display reset to zero after each pressing of the key SET.

The Tara remains memorized also when the instrument is switched off from the supply.

FILTER

Averaging filter is programmable from 0 to 99.

SET POINTS

SP1, SP2 are adjustable within the range ±999999. The set points activate two output relays with closure contacts 5A-230VAC. Option: Two additional set points SP3 and SP4 relays with changing contacts 5A-230VAC.

HYSTEREZE

Programmable from 0 to 99.

SERIAL PORTS

RS232 and RS485: 8 bit, No Parity, 1 Start and 1 Stop.

Baud Rate: 300 to 19200 bd.

The RS 485 port has a programmable address from 01 to 31 which permits operation of the instrument in a data bus.

EXCITATION

Adjustable from 5 to 24V/40mA.

SUPPLY

115V/230V +/-15%, 48 - 60 Hz.

Option: 9-32VDC, 4W.

TERMINALS

Plugable Screw Terminals.

CABINET

DIN 48 x 96 x 100 mm (HxWxD),

Panel cut-out 45 x 90 mm.

LINEARIZING

Non linear signals can be linearized in up to 105 points with the keypad at the instruments front or via the serial data port from a PC. Two consecutive linearizing points are automatically linear interpolated.

The display values of the measured input signal can also be overwritten directly from the keypad. Linear signals can be displayed as non linear readings, non linear signals as linear readings or non linear signals as non linear readings.

Linearizing with a polynom 6th or 7th degree is also available as a software option.

$$\text{DISPLAY} = \pm \text{Coef } 0x10^{\pm 0} \pm \text{Coef } 1x10^{\pm 1} \pm \text{Coef } 2x10^{\pm 2} \pm \text{Coef } 3x10^{\pm 3} \pm \text{Coef } 4x10^{\pm 4} \pm \text{Coef } 5x10^{\pm 5} \pm \text{Coef } 6x10^{\pm 6}$$

A software package OrbCom permits communication with PC and setting linearizing parameters from a PC.

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