*Line driver encoder viewer with thresholds*

Digital position controller with 5Vdc line driver encoder input. By means of its pulse correction coefficient, the instrument adapts each encoder pulse to the desired measure unit.
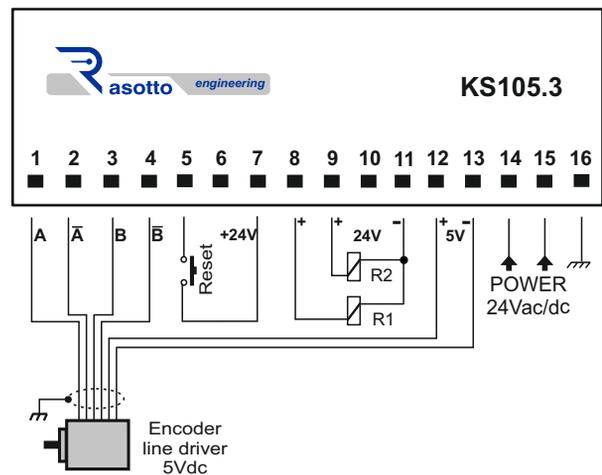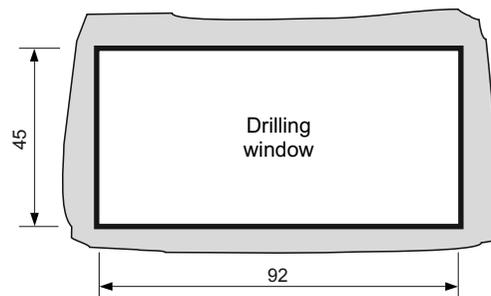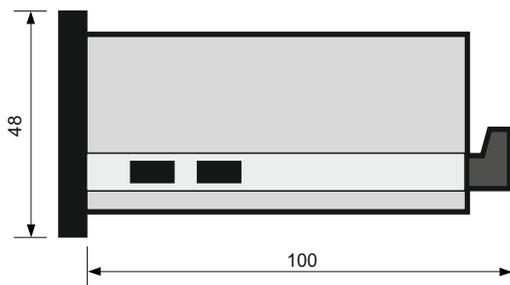
An important function is the absolute position value changing without performing machine zero: you can set the actual value from the keypad and store the new position with relative displaying.

The measurement can be reset from the terminal board with a remote command or by pressing simultaneously the two arrow keys on the front panel.

The instrument enables the relative outputs when the 2 sets are reached.
Data and parameters are stored on EEprom.

Operating mode

| Counting |
| OUT 1 |
| OUT 2 |

0   Set 1   Set 2   F.S.
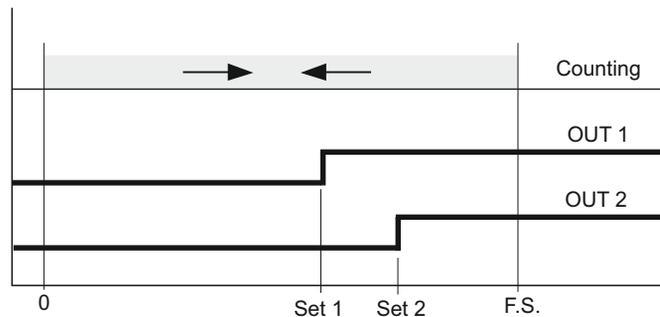
Technical features

Power supply	24Vac/dc +/- 10%
Absorption	4 VA nominal
Display	6 digits H= 13mm
Full scale max value	from -9.999 to 99.999 f.s.
Resolution	+/- 1 digit on f.s.
Count frequency	2100Hz on 4 fronts
Operation conditions	0.. +55°C / 20..90% R.U. without condensation
Storage conditions	-25.. +80°C / 20..90% R.U. without condensation
Mounting	recessed mounting
Container	Black ABS
Protection degree	IP30

Electrical connections

asotto *engineering*   **KS105.3**

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |

A   Ā   B   B̄   Reset   +24V   24V   5V

R2   R1   POWER 24Vac/dc

Encoder line driver 5Vdc

Dimensions

48

100

45

Drilling window

92

N°3143   N°IT-28601   asotto *engineering*

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Operation cycle

When switched on, after displaying the product name and the firmware version, the instrument shows the encoder position value stored when the instrument is switched off. When the set threshold values SET1-2 are reached, the respective OUT1-2 outputs are activated and remain active until the displayed value drops below the respective SET value.

Technical parameters programming

To enter programming press the **F** key, the message **PASS** appears, press ⇨ and using the keys ↑ ↓ enter the password **569** , confirm with the key ⇨ and it will be displayed **dP**

dP represents the decimal point. To change the decimal point position, press the key ⇨ and using the keys ↑ ↓ , put the decimal point in the desired position.

As soon as a key is released, the set DP value will flash; to continue with the programming press the key ⇨ and it will be displayed **COEFF** representing the multiplication coefficient of the encoder pulses.

To change the coefficient value press the key ⇨ and use the keys ↑ ↓ to enter the desired coefficient value. As soon as a key is released, the set coefficient value will flash; to continue with the programming press the key ⇨ and it will be displayed **POS** representing the current position that is shown on the display. To change the current position value, press the key ⇨ and using the keys ↑ ↓ enter the desired position value. As soon as a key is released, the set position value will flash; to continue programming, press the key ⇨ and you will return to the programming beginning ie **dP**

If you wish to end programming, wait for the display to stop flashing.

Set programming

To change the threshold values, press the key ⇨ on the display will appear **Set1** , press again ⇨ and the stored Set1 value will be shown on the display. To change the Set1 value use the keys ↓ ↑ when the desired value is reached, press ⇨ on the display will be shown **Set2** , press again ⇨ and the stored Set2 value will be shown on the display. To change the Set2 value use the keys ↓ ↑

and when the desired value is reached, wait for the display to stop flashing to exit programming.

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Technical parameters description

dP   **Decimal point** : decimal point that can be positioned in the six display digits.

COEFF   **Coefficient** : multiplication value of encoder pulses according to the following formula:

Coefficient = number of encoder revolution pulses X 100 X dP / revolution quota (min 0.01 max 655.30).

Number of encoder revolution pulses: pulses generated by the encoder in one revolution (see encoder technical data)

Revolution quota: measurement carried out by the machine in one encoder revolution (measured on the machine)

dP : based on the set decimal point position, dP can have the following values
1 if you set the decimal point on the first digit on the right
10 if you set the decimal point on the second digit from the right
100 if you set the decimal point on the third digit from the right
1000 if you set the decimal point on the fourth digit from the right
10000 if you set the decimal point on the fifth digit from the right

With a 1.00 coefficient, the instrument displays the encoder pulses.

POS   **Actual position** : current position shown on display modifiable with the arrow keys (min -99999 max 999999)

Set1   **Output1 activation threshold** : position at which output OUT1 will be activated. (min -99999 max 999999)

Set2   **Output2 activation threshold** : position at which output OUT2 will be activated. (min -99999 max 999999)

Pressing the arrow keys   ⬆ ⬇   together brings the displayed value to zero.

Automatic coefficient calculation

To enter programming press the key   **F**   the message   **PASS**   is displayed, press the key ⬌

and using the keys ⬆ ⬇ enter the password **375** , confirm with the key ⬌ and it will be displayed **PoSIZ.1**

PoSIZ.1   represents the machine starting position. Move the machine to a known position and then press ⬌ .

It will be displayed **dP** again ⬌ and using the keys ⬆ ⬇ move the decimal point to the desired position.

Press ⬌ it will be displayed **qUotA1** again ⬌ and using ⬆ ⬇ enter the initial quota value,

again ⬌ and it will be displayed **PoSIZ.2** . Move the machine to a second known position and then with ⬌

the message **qUotA2** will come out, again ⬌ and using the keys ⬆ ⬇ enter the final quota value, press ⬌

and it will be displayed **CALc.CO** again ⬌ and wait for the automatic coefficient calculation; at the end you will see the

new coefficient value, confirm with ⬌ and you will exit the automatic coefficient programming menu.

ATTENTION: if, at the end of the coefficient calculation, the **Er.coEF** message will be shown, it means that the calculated value

is not between 0.01 and 655.30 (min and max coefficient values). In this case, check if you followed the procedure correctly

and/or check the encoder selection or the quotas to be displayed.

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