RP-7400 Series Roller Encoder

Replaced by the RP-700 series

RP-7400 series Roller Encoder



Overview

The Roller Encoders of Ono Sokki are highly precise and are well-received in line speed measurement or length measurement of film, paper, or steel plate produced at production line. This new RP-7400 series Roller Encoder, replaced by the RP-700 series, provide two-phase signal output as standard and are available for both clockwise pulse and counterclockwise pulse. Output type is selectable from emitter, collector, or open collector depending on your needs. Easy replacement from RP-721 series to RP-7400 series.

Application

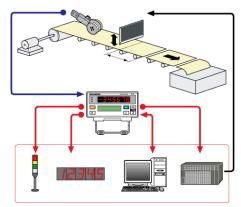
Cutting film, paper, steel plate in same size (length measurement)

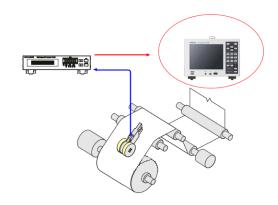
The RP-7400 series Roller encoder precisely measure length of object moving along the continual cutting line. Pulses measured by the PR-7400 series are calculated in the PLC to cut the object in same size. In this example, the RV-3150 Reversible Counter is used to calculate the pulses.

- RP-7400 200 P/R (Roller encoder)
- RV-3150 (Reversible Counter)
- RP-0182 (Signal cable)
- Analyzing line speed fluctuation (speed measurement)

Contact the RP-7400 series directly to the object and measure the line speed. Convert the measured line speed to voltage (10 V/F.S.) by the FV-1400. And then analyze the speed fluctuation by the CF-4500 (FFT Comparator) to obtain the speed fluctuation rate.

- RP-7400 1200 P/R (Roller encoder)
- FV-1400 (F/V Convertor)
- CF-4500 (FFT Comparator)
- MX-105 (Signal cable 5 m)
- RP-0182 (Signal cable 5 m)





Feature

RoHS,CE marking



Selectable pulse number (120, 200 or 1200 P/R)

→ 120, 1200 P/R:rotation speed (m/min) 200 P/R: length (mm)

4 output formats

→ Totem pole output (standard) Emitter output (RP-0701:option) Collector output (RP-0702:option) Open collector (RP-0703:option)



Specification

Electrical

Number of For rotation speed measurement: 120, 1200 output pulses For length measurement: 200

Output waveform 2-phase square waveform

Phase difference $90 \pm 45^{\circ}$

Hi level: 10 V or more Output voltage Lo level: 0.5 V or less

Totem pole (load resistance: 470 Ω or more)

 option RP-0701 Emitter output Output format RP-0702 Collecor output RP-0703 Open collector output

DC12V ±5%, 100mA or less Power supply

Mechanical

0 to 600 m/min Measurement

*Measurment speed range varies depending on a range measurement object

120 P/R: 0.1 m/min Measurement 1200 P/R: 0.01 m/min unit 200 P/R: 1 mm

Cored bar: alminium

Rubber:urethan printing (shore A90)

Roller circumferentia 200 mm le ngth

Roller material

Allowable shaft load radial: 20 N

Starting torque 1 mN · m 2

19.6 m/s²

Vibration X/Y/Z each direction (150 minutes each), resisntance

10 to 150 Hz sweep, 20-cycle

X/Y/Z each \pm both directions (6 directions), Shock resistance

3 times each (18 times in total)

Sine half-wave, 11 ms duration at 20 mm intervals

Mounting hole (position)

Ф10 mm x 2, 20 mm

Outer dimensions

approx. 180 mm (full length) x 47 mm (width)

approx.400g Weight

General

Operating 0 to 50 °C (with no icing or condensation) temperature

Storage -10 to 65 °C (with no icing or condensation) temperature

Operating 35 to 90 % RH (with no icing or condensation) humidity range

Protection class IP40 (when optional cable RP-0181, RP-0182 used.)

Instruction manual: 1 copy

Connector: 1 piece (RM12BPE-5S, HIROSE)

Option RP-0181: cable for RP-7400 series (5m, crimped terminal (M3)) RP-0182: cable for RP-7400 series (5m, one-end open)

ONO SOKKI

Accessory

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