

Mitutoyo

# ST34C

## SERIES 579 Exposed Linear Encoder

**NEW**



**High-accuracy  
Exposed Linear Encoder  
for High-speed Motion!**

### FEATURES

- High response speed of 1.2m/sec.
- High-accuracy glass scale.
- Compact detector and interface box require minimum installation space.
- Simultaneously outputs the main 4 $\mu$ m pitch sine wave signals and 0.02 $\mu$ m resolution (down to) pulse signal.
- Outputs scale reference point signal.
- Provides LED alarm indication for easy diagnostics.

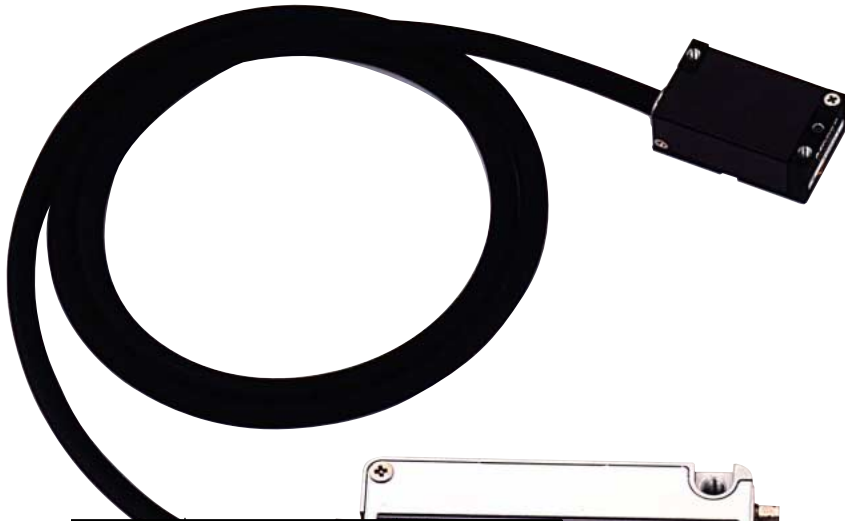
### APPLICATIONS

- High-accuracy positioning stages (ex. linear motor driven stages)
- Semiconductor equipment (wire bonding stages, die bonding stages)
- Measuring instruments and testing machines

### SPECIFICATIONS

Scale	Graduation	8 $\mu$ m
	Material	Glass, Thermal expansion coefficient: $8 \times 10^{-6}/^{\circ}\text{C}$
Accuracy (at 20 $^{\circ}\text{C}$ )		$\pm 0.5\mu\text{m}$ (0 to 300mm), $\pm 1\mu\text{m}$ (350 to 500mm), $\pm 2\mu\text{m}$ (600 to 1000mm)
Output signal		Two-phase sine waves with a phase difference of 90 $^{\circ}$ (4 $\mu\text{m}$ pitch), Vpp: 2V A/B quadrature with a phase difference of 90 $^{\circ}$ (resolution: 0.1/0.05/0.02 $\mu\text{m}$ selectable), conforming to RS-422A Scale reference point (up to 75mm: at the center, over 100mm: at the center and every 50mm from the center) Alarm signal
Effective range		10 to 1000mm, refer to the back page.
Max. response speed*		Two-phase sine waves: 1200mm/sec (at -3dB) Pulse signal of 0.1 $\mu\text{m}$ resolution: 720mm/sec Pulse signal of 0.05 $\mu\text{m}$ resolution: 360mm/sec Pulse signal of 0.02 $\mu\text{m}$ resolution: 150mm/sec (*minimum edge interval: 125nsec)
Power supply		5V $\pm 5\%$
Power consumption		250mA maximum
Operating temperature		0 $^{\circ}\text{C}$ to 40 $^{\circ}\text{C}$

## Dimensions

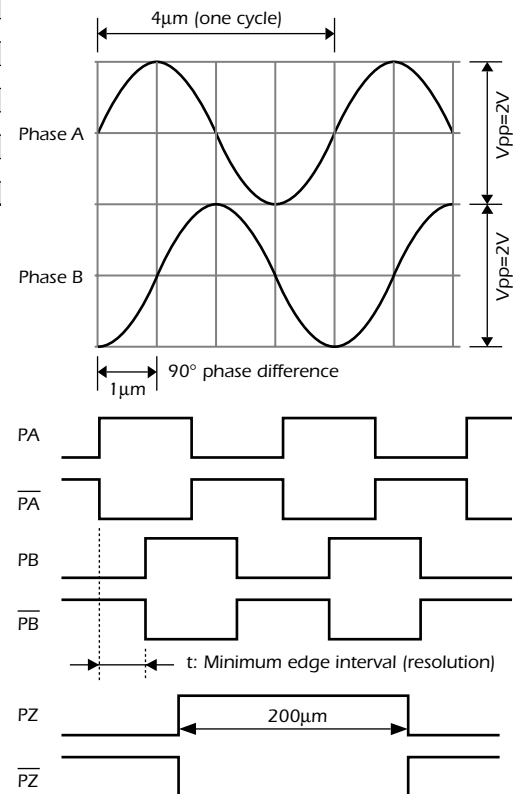


Model No.	Effective measuring length L1	Overall length L2
ST34C-10	10mm (.39")	30mm (1.18")
ST34C-25	25mm (.98")	45mm (1.77")
ST34C-50	50mm (1.97")	70mm (2.76")
ST34C-75	75mm (2.95")	90mm (3.54")

Model No.	Effective measuring length L1	Overall length L2	Scale fixing pitch L3	Spring fixture A	Spring fixture B
ST34C-100	100mm (3.93")	140mm (5.51")	50mm (1.97")	1 pc.	2 pcs.
ST34C-150	150mm (5.91")	190mm (7.48")	75mm (2.95")	1 pc.	2 pcs.
ST34C-200	200mm (7.87")	240mm (9.45")	100mm (3.94")	1 pc.	2 pcs.
ST34C-250	250mm (9.84")	290mm (11.41")	60mm (2.36")	1 pc.	4 pcs.
ST34C-300	300mm (11.81")	340mm (13.39")	75mm (2.95")	1 pc.	4 pcs.
ST34C-350	350mm (13.78")	390mm (15.35")	85mm (3.35")	1 pc.	4 pcs.
ST34C-400	400mm (15.75")	440mm (17.32")	100mm (3.94")	1 pc.	4 pcs.
ST34C-450	450mm (17.72")	490mm (19.29")	75mm (2.95")	1 pc.	6 pcs.
ST34C-500	500mm (19.69")	540mm (21.26")	80mm (3.15")	1 pc.	6 pcs.
ST34C-600	600mm (23.62")	640mm (25.20")	100mm (3.94")	1 pc.	6 pcs.
ST34C-700	700mm (27.56")	740mm (29.13")	85mm (3.35")	1 pc.	8 pcs.
ST34C-800	800mm (31.50")	840mm (33.07")	100mm (3.94")	1 pc.	8 pcs.
ST34C-900	900mm (35.43")	940mm (37.01")	90mm (3.54")	1 pc.	10 pcs.
ST34C-1000	1000mm (39.37")	1040mm (40.94")	100mm (3.94")	1 pc.	10 pcs.

Unit: mm (inch)

## Signal Output



Specifications are subject to change without notice.

# Mitutoyo

PRECISION IS OUR PROFESSION



FM25828  
ISO 9002

Mitutoyo Corporation

20-1, Sakado 1-chome, Takatsu-ku, Kawasaki-shi,  
Kanagawa 213-0012, Japan

Phone (044)813-8230 Fax (044)813-8231

<http://www.mitutoyo.co.jp>

