

MODEL 2511

SIGNAL PROCESSOR

Non-Contact

“PROTECT DOPPLER” VELOCITY-LENGTH METER



Wide Speed Range, **include "0" Velocity**

High accuracy on length measuring

Velocity monitoring and control for

production line. Drip-proofed sensor

Offering to improve old production-

line, of course also for new line



Outline

MODEL-2511 is a non-contact velocity meter using Laser Doppler method, which is suitable for measuring the velocity and length in production lines such as iron, nonferrous metals, construction materials, fibers, and the films.

There is a domination point of high accuracy in non-contact method compared with the traditional contact type, when this measuring instrument is used for the velocity determination and the velocity control of production line. In addition, MODEL-2511 is suitable for high accuracy length measurement.

And, to use it at ease in the production line, it has environment-proof of measures and various state watch outputs of the sensor.

Moreover, it has the interpolation function when beam is shut out while measuring.

In addition, the operation is easy, and is reasonable priced.

Features

1. It is a non-contact measuring. The velocity determination and the length measurement can be done in high accuracy.
2. There is neither slipping nor wear-out for the non-contact measuring. Therefore, it is possible to use it in the field in the large range because it is not worried that the product is damaged.
3. The sensor has splash-proof construction for heavy-duty uses as air purge unit (option) etc. are available.
4. The sensor and the signal processing machine have the state monitoring function under the measurement. Moreover, it has the interpolation function when light is shut out while measuring it. The security precaution that is appropriate for the case used to control the manufacturing device is given.
5. It is suitable to make to high accuracy and high efficient, and to make not only use to new production line but also the old one. Replacing it with the rotary encoder of the production line can raise the performance more.

Specifications

Doppler Sensor MODEL 1511	
Method	Laser Doppler system: Back-scattering differential type
MODEL 1511 L=200mm as standard	Focal distance Optimal position at 200 ± 8 mm
	Measurement range ±900m/min Also -200 to +1400m/min as optional (at SF=4)
Accuracy	Within ±(0.2%+0.1m/min)
Power supply	Supplied from MODEL 2511
Laser power	Class 3B : 40mWmax·CW·Laser Diode 780nm
Beam spot size	Approx: 2mm wide by 3mm wide, oval
Dimensions, Weight	100(W)×50(H)×160(D), excluding projections Approx, 1.4kg

Condition Monitoring System	
Interpolation	
Material monitor	
velocity monitor function	
Other condition output	Laser active, Abnormal temperature in a sensor, Material, Tracking ON, Interpolating, Healthy, Doppler level :1 to 5, Velocity monitoring.,
Others	Panel pre-set: Can store and recall with 10 settings.

General Specification	
Power supply	AC100—200V ±10%, 50/60Hz 200VAmx
Operating temperature range	0 to 40°C, without condensation
Storage temperature range	-10 to 60°C, without condensation
Dimensions and weights (MODEL -2511)	300(W) × 148(H) × 300(D)mm approx, 5.4kg

Signal Processor MODEL 2511 <Velocity Measuring Section>		
Velocity indication	Digital indication in 5 decimal digits	
	Min. resolution 0.001 (m/min)	
	Unit m/min	
	Cycle 0.2sec, 1sec	
	Averaging 2 to 16 times moving average	
Wow Flutter	Calculated from the maximum and the minimum value in the display cycle.	
Velocity output	D/A output	
	Output Voltage 0 ± 10V, 12bit D/A output Full scale adjustable	
	Accuracy With in ± 1% at full scale	
	Sampling rate 2ms, 5ms, 10ms	
	Min. resolution 0.001m/min(at 10ms)	
	Averaging 2 to 256times (2 ⁿ) moving average	
	Output impedance	1kΩ
Digital output	Output type 20bit binary + 1bit additional out. Open collector 30V, 50mA	
	Sampling rate 2ms, 5ms, 10ms; inhibit output	
	Min. resolution 0.001m/min	
	Averaging 2 to 256times (2 ⁿ) moving average	
Length measurement	Length measurement rang	± 0.9mm ~ 999999.9m Digital indication in 7decimal digits
	Pitch pulse output	0.1mm ~ 100mm A, B 90° Phase difference output. Open collector 30V, 50mA
	Gate for length measurement	Material signal or external gate input signal. Signal slope: selectable.