ALULINEARTECHNIK AG

Corrosion resistant aluminum rail guide with integrated measuring system

Aluminum rail guide system with integrated measuring system
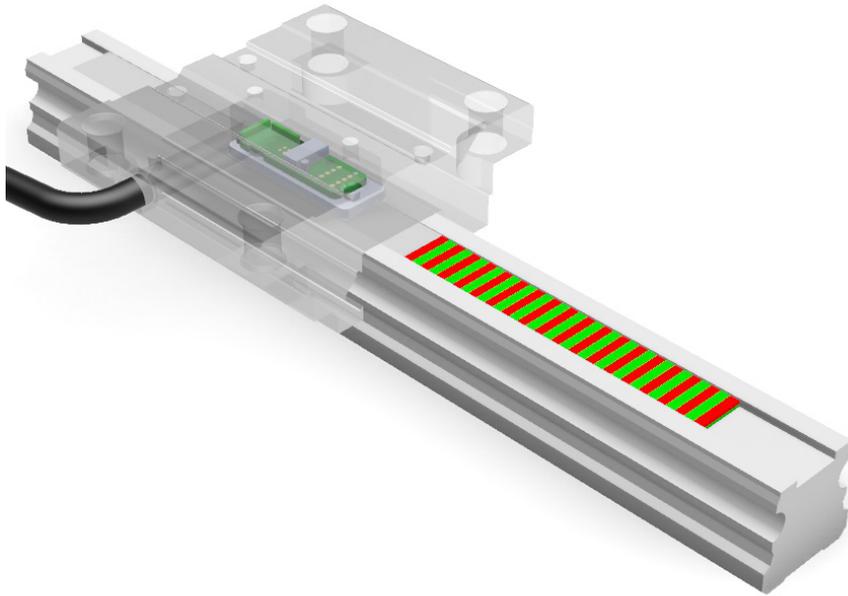
- Wear-free and based on a contactless magnetic measuring principle
- High positioning resolutions and good repeatability
- Very compact, the sensor is integrated in the carriage
- Position recording directly on the linear guide
- Very robust and insensitive to pollution (degree of protection IP67)
- Easy handling and complete integration into the measuring sensor
- Full implementation of the measuring sensor and the magnetic tape into the Aluminum rail guide system, no further add-on pieces are needed
- Maintenance-free operation due to the lifetime lubrication
- Measuring system in compact design and integrated position sensor in the carriage
- Easy mounting
- Fast and easy exchange of the battery
- Protected by fuses to prevent polarity reversals

compact measuring system FNS-2500-F8P with indication without external power supply

- Measuring system in compact design and integrated position sensor in the carriage
- Easy mounting
- Fast and easy exchange of the battery
- Protected by fuses to prevent polarity reversals

Mechanical data

Display	LCD; 6-digits
Digit height	10 mm
Display area	-999999; 999999
Sensor	
Housing	Aluminum, powder coated
Cabel	cable length: 0,3 or 2 m (fixed mounted)
Resolution	10 µm; (on request, 1 µm and 100 µm)
Repeatability	± 0,1 mm
System precision	± 0,1 mm / per meter
Speed	max. 2,5 m/s
Adjustable functions	direction of counting, measuring unit (mm, inch); decimal point programming and multiplication factor; nominal and actual value, chain and offset function;
Keyboard	3 function keys, individual operable
Measurement system	measuring system integrated in guide rail / magnet tape 5mm
Operating temperature	0 - 50 °C
Relative humidity	35 - 85 %
Electromagnetic compatibility	2004 / 108 / EC
Degree of protection	Display IP 54, Sensor IP 67

Electrical data

Voltage	½ AA 3,6 V Batterie (Lithium-thionylchlorid)
Battery durability	approx. 4 years

Mounting enclosure
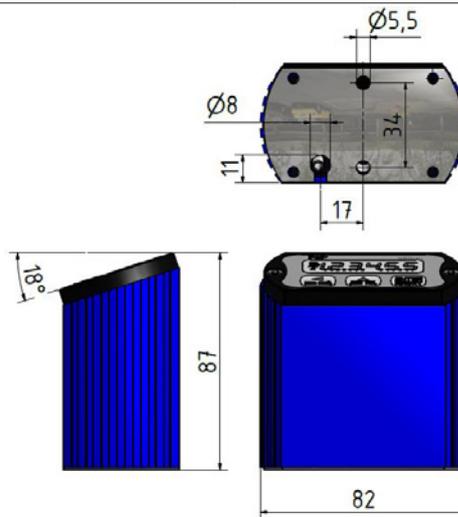
Battery-opearted – price list Alulineartechnik AG

Measuring display incl. sensor (set) and housing 0,3 m - 100 µ	FNS-2500-F8P-10003	Resolution 100 µm
incl. carriage FNS-2500 special version		
incl. dHk clamping unit dHk 2500		
Measuring display incl. sensor (set) and housing 0,3 m - 10 µ	FNS-2500-F8P-01003	Resolution 10 µm
incl. carriage FNS-2500 special version		
incl. dHk clamping unit dHk 2500		
Measuring display incl. sensor (set) and housing 2,0 m - 100 µ	FNS-2500-F8P-10020	Resolution 100 µm
incl. carriage FNS-2500 special version		
incl. dHk clamping unit dHk 2500		
Measuring display incl. sensor (set) and housing 2,0 m - 10 µ	FNS-2500-F8P-01020	Resolution 10 µm
incl. carriage FNS-2500 special version		
incl. dHk clamping unit dHk 2500		
linear rail type B25, 100 – 4000mm	M1B25PM5DB01-	
Magnetic tape PM5, 5mm pole pitches, 100 – 4000mm	(100-4000mm or more) length	
Cover strip 0,1 thick, 100 – 4000mm		

compact measuring system FNS-2500-EP3 for control systems with external power supply and optional display

- Measuring system in compact design and integrated position sensor in the carriage
- Resolution
- Digital audio signal
- Reverse polarity protection
- Optional measurement display with interface RS485 or RS232
- In integral or surface mountable housing

Pin configuration
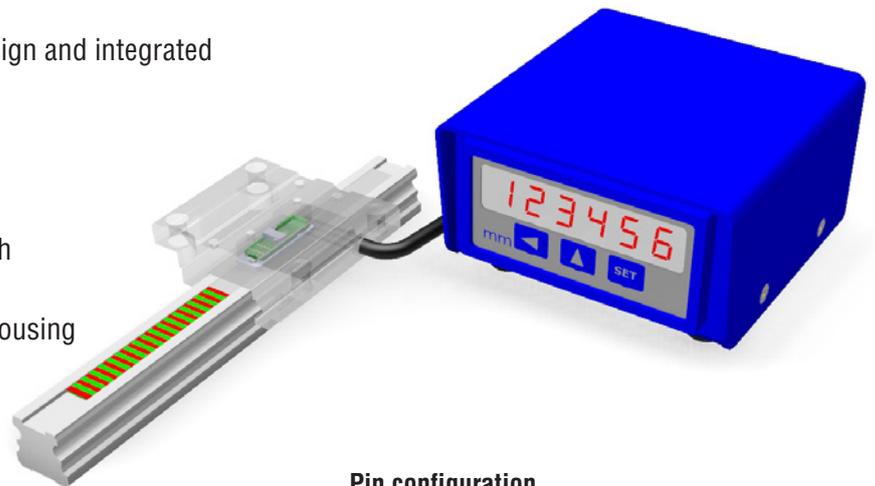
Mechanical data

Pole pitch	2+2 mm
Resolution	10; 1 µm (on request)
Quadrature signals	DIN 66259
Reference Index	I = pole period (2 mm)
Repeatability	± 1 Inkrement / 0.01 mm
System precision	± 0,025 mm / each meter
Phase angle A-B	90°
Rerminating resistor	120 Ohm
Edge distance	120 ns (on request)

Electrical data

Output signal	LINE DRIVER
Voltage supply	5 VDC ±5 % (24 VDC on request)
Power consumption	typ.35 mA, max. 50 mA
Traverse speed	max. 5 m/s
Protection class	IP 67
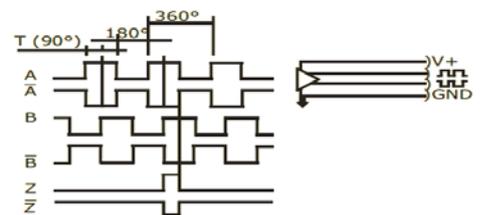
Line Driver / Diff.

A	pink
$\overline{A}$	grey
B	green
$\overline{B}$	yellow
Z	white
$\overline{Z}$	brown
V+	red
V-	blue
	shield

External voltage without display – price list Alulineartechnik AG

Magnetic sensor EHP2KA-10-I-TTL-5-C08/M12-0,3 m (cable length) -290 ns incl. carriage FNS-2500 special version	FNS-2500-EHP210	Resolution 10 µm
Magnetic sensor EHP2KA- 1-I-TTL-5-C08/M12-0,3-290 ns incl. carriage FNS-2500 special version	FNS-2500-EHP201	Resolution 1 µm
Linear rail type B25 100 – 4000 mm	M1B25PM2DB01- (100 – 4000mm or more) length	
Magnetic tape PM2 2 mm pole pitches / 100 – 4000 mm		
Cover strip 0,1 thick / 100 – 4000 mm		

Display

Measuring display inside installation housing, connection clamps (RS232/USB = pluggable)	
Measuring display EP2-I-LD5-24-RS485	MA1-EP2-RS485
Measuring display EP2-I-LD5-24-USB	MA1-EP2-USB
Measuring display EP2-I-LD5-24-RS232	MA1-EP2-RS232
Measuring display EP2-I-LD5-24-RS485	MA1-EP2-RS485-AG
Measuring display EP2-I-LD5-24-USB	MA1-EP2-USB-AG
Measuring display EP2-I-LD5-24-RS232	MA1-EP2-RS232-AG
Connection cable 2 m, plain cable head, Female	ALK-2
Connection cable 5 m, plain cable head, Female	ALK-5
Extension cable 3 m, Male/Female	VLK-3
Extension cable 5 m, Male/Female	VLK-5