

SINGLE WHEEL SPRING TYPE INCREMENTAL ENCODER

“High Accuracy, Long Service Life”

ATE 10



GENERAL FEATURES

- Suitable for measuring the length and speed of the target moving with its wheeled structure
- Output waveform according to measurement distance, suitable for international measurement units
- Spring system to compensate for uneven parts of the measuring surface
- Wide variety of mounting possibilities thanks to the spring lever
- 250 or 256 mm wheel circumference
- 3000 RPM operating speed
- 300 kHz response frequency
- High accuracy
- Robust structure, long service life
- Easy mounting

APPLICATIONS

- Measuring position, velocity and path in linear motion applications
- Various packing machines
- Sheet manufacturing
- Textile machinery and general industrial machinery
- Conveyor bands
- Wood industry

TECHNICAL FEATURES

Electrical Specifications

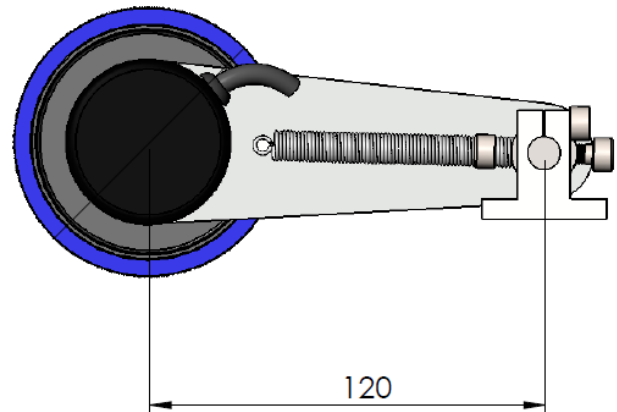
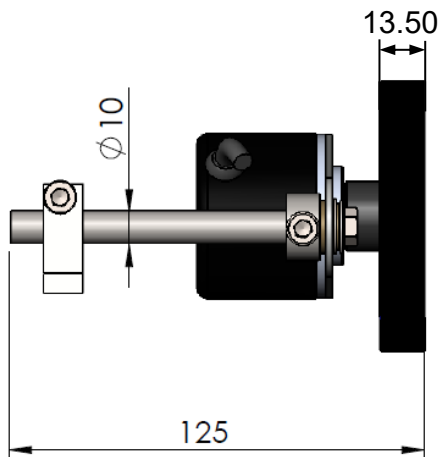
Resolution	Refer to resolution table (page 2)						
*Electrical Interface		PP	TTL	HTL	HPL	OCL	OCP
	Supply	10...30 VDC	5 VDC	10...30 VDC	5...30 VDC	The supply signal should not be lower than the output signal	
	Output	10...30 VDC PP	5 VDC TTL	5 VDC TTL	5...30 VDC PP	NPN Open Collector	PNP Open Collector
*Output Signals	A, /A, B, /B, Z, /Z						
Response Frequency	300 KHz						
Current Consumption	50 mA nominal						
Output Current	100 mA max. (per channel)						
*Electrical Connection	5 or 8x0,14 mm ² shielded cable M16 / 8 pin male connector						

Mechanical Specifications

Wheel Circumference	250 mm	256 mm
Wheel Diameter	79,6 mm	81,5 mm
Starting Torque	Depend on coefficient of friction	
Operating Speed	3000 RPM max.	
Operating Temp.	-25...+85 °C	
Storage Temp.	-40...+100 °C	
Ambient Humidity	%35...%85 RH	
Material	Encoder: Aluminum	
	Wheel: NBR (outer part) + POM (body)	
Protection Class	IP54	

Note: The specifications indicated by (*) vary according to the model selected. The detailed code table for product selection is shown on page 2.

MECHANICAL DIMENSIONS (mm)

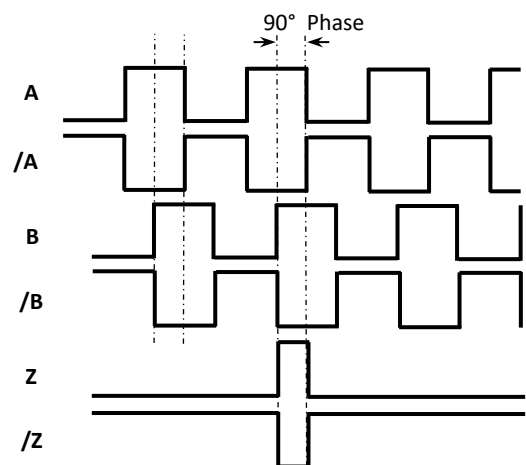


RESOLUTION

The Number of Encoder Pulse	Gear Ratio	Wheel Circumference	Resolution (Moving distance per 1 pulse)
5000 pulse	1:1	250mm	0,05mm/pulse
2500 pulse	1:1	250mm	0,1mm/pulse
1000 pulse	1:1	250mm	0,25mm/pulse
500 pulse	1:1	250mm	0,5mm/pulse
250 pulse	1:1	250mm	1mm/pulse
50 pulse	1:1	250mm	5mm/pulse
25 pulse	1:1	250mm	10mm/pulse
10 pulse	1:1	250mm	25mm/pulse
1 pulse	1:1	250mm	250mm/pulse
1024 Pulse	1:1	256mm	0,25mm/pulse
512 Pulse	1:1	256mm	0,5mm/pulse
256 Pulse	1:1	256mm	1mm/pulse

ELECTRICAL CONNECTIONS

SIGNAL	M16/8 PIN MALE CONNECTOR PIN NO	CABLE COLOR
A	1	YELLOW
/B	2	WHITE
+V	3	RED
0 V	4	BLACK
/A	5	BLUE
B	6	GREEN
/Z	7	GREY
Z	8	PINK



The table above shows the cable colors of the sensor output signals. If the control circuit is suitable in the Line Driver sensors of the not output signals (/A, /B, /Z) have to be added to the system. If it is not suitable /A, /B, /Z signal cables must be fixed as insulated separately. Don't forget that these edges have electricity too.

ORDER CODE

Model	Wheel Circumference	Resolution	Supply and Output	Output Signals	Electrical Connection	Cable Direction
ATE-10	250 : 250 mm 256 : 256 mm	<u>For 250 mm wheel circumference:</u> 5000: 0,05mm/pulse 2500: 0,1mm/pulse 1000: 0,25mm/pulse 500: 0,5mm/pulse 250: 1mm/pulse 50: 5mm/pulse 25: 10mm/pulse 10: 25mm/pulse 1: 250mm/pulse <u>For 256 mm wheel circumference:</u> 1024 : 0,25mm/pulse 512 : 0,5mm/pulse 256 : 1mm/pulse	PP : 10...30 VDC Supply : 10...30VDC Output TTL : 5 VDC Supply : 5 VDC TTL RS422 Line Driver Out. HTL : 10...30 VDC Supply : 5 VDC TTL RS422 Line Driver Out. HPL : 5...30 VDC Supply : 5...30 VDC Push-Pull Output OCL : NPN Open Collector OCP : PNP Open Collector	2 (A,B) 3 (A,B,Z) 4 (A,/A,B,/B) 6 (A,/A,B,/B,Z,/Z)	3M : 3m cable (std) 5M : 5m cable 10M : 10m cable S16 : M16/8 pin male connector *Ask for other options.	A : From backside Y : From side

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