

Automation using reliable, intelligent and flexible position measurement

## MAGNETOSTRICTIVE LINEAR POSITION SENSOR WITH A MEASURING RANGE OF UP TO SEVERAL HUNDRED METERS

Our new intelligent magnetostrictive linear position sensor is designed for applications where the absolute position of an object needs to be determined over great distances and with high accuracy. When used with our rugged position measuring system, it provides precise and reliable position information over a measuring range of up to several hundred meters. This makes the system ideal for typical applications on traveling cranes, overhead cranes, avoidance controls, as well as crane and trolley movement.

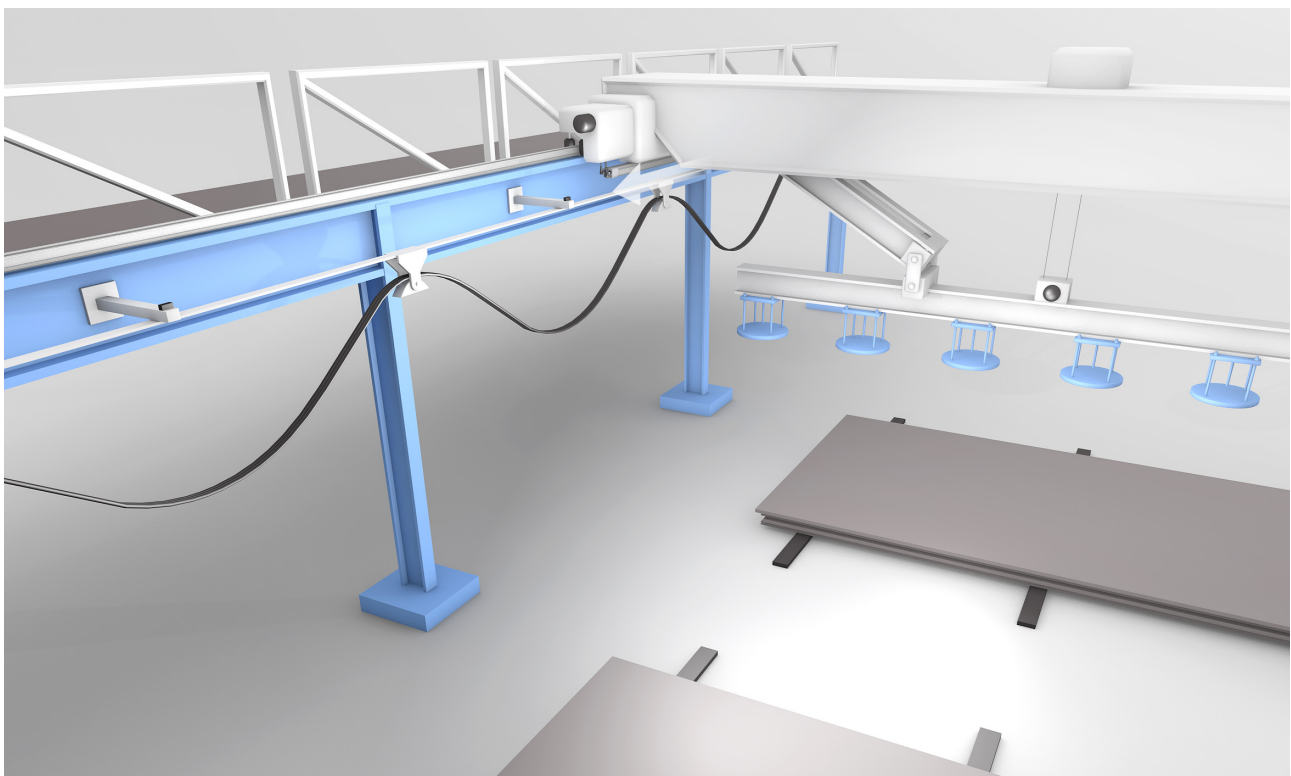
The measuring system is also available with a failsafe operating option – with redundant markings along the measuring track –, so that the efficiency, reliability and quality of your application is even more enhanced.

How does such precise position measurement work over long distances? The position measuring system includes magnetic markers installed along the track of the crane and whose position is read by the magnetostrictive sensor installed on the crane. Information about the position of the markings relative to the sensor are sent to the controller, which, in turn, calculates the absolute coordinates of the crane position with high accuracy. Reliability is, therefore, always ensured.

The position measuring system consists of a magnetostrictive sensor with a Profinet interface, several magnets and a software function block for incorporating it into a Siemens controller.

### Features

- Absolute linear position measuring system with a measuring range of up to several hundred meters
- High reliability and low maintenance with a non-contact and wear-free operating principle
- Resistant to harsh industrial environments (IP67)
- System automatically adjusts to the magnetic marking
- Repeat accuracy up to  $\pm 0.5$  mm



MAGNETOSTRICTIVE  
LINEAR POSITION SENSORS  
IN PROFILE DESIGN



CONFIGURABLE SET	BTL7-V50T-M_ _ _ _-P-SA447-C003/LXXA						
Application distance <sup>1</sup>	0...15 m	0...30 m	0...50 m	0...75 m	0...100 m	0...140 m	0...250 m
Sensor measuring range	2000 mm	2500 mm	3000 mm	3500 mm	4000 mm	4500 mm	4500 mm
Max. number of magnets <sup>2</sup>	20	30	39	49	57	69	121
Style	Profile series						
Mounting	Mounting clamps						
Housing material	Aluminum						
Connection 1	M8, 4-pin						
Connection 2	M12, 4-pin, D-coded						
Connection 3	M12, 4-pin, D-coded						
Interface	Profinet Encoder Profil V4.1						
Operating voltage U <sub>b</sub>	10...30 V DC						
Ambient temperature	-40...85 °C						
IP rating	IP67						
Approval/conformity	CE, cULus, EAC						

<sup>1</sup> Application distance > 250 m on demand. Please contact in this case our sales or service department.

<sup>2</sup> The number of the required position magnets results from the specific application distance and the measuring range of the sensor.

ACCESSORIES



	BAM014T	BAM01N3
Principle of operation	BTL magnets, floating	BTL control arm
Material	POM	Aluminum, anodized
Distance to Sensor	5...15 mm	

CONNECTIVITY



	BCC02N5	BCC0JFC	BCC0JF0
Connection 1	M8 female, straight, 4-pin, A-coded	M12 male, straight, 4-pin, D-coded	M12 male, straight, 4-pin, D-coded
Connection 2		M12 male, straight, 4-pin, D-coded	RJ45 male, straight, 4-pin
Cable	PUR shielded black, 2 m, drag chain compatible	PUR shielded green, 2 m, drag chain compatible	PUR Shielded Green, 2 m, Drag chain compatible