

NEW
NAV 200



Product Information

Stay on course.
The Laser Positioning System
NAV 200



SICK

AGVs – automated guided vehicles



Reach your destination safely. On the route to improved cost-effectiveness: with NAV.

The demands made on modern goods transport and the optimum navigation of automated guided vehicles (AGVs) are rising. Commonly used conventional positioning systems, such as guide wire systems or magnetic track

guidance, mainly operate within an unchanging layout of routes. The requirement for flexible systems is, however, clearly on the rise. Thus in semi-automatic operation, for example, AGVs are temporarily taken

off set routes to carry out loading or unloading processes manually. Subsequently, AGVs are returned to automatic operation. Modern positioning systems such as the NAV 200 offer considerable

advantages here. The system provides maximum flexibility as a result of its unrestricted determination of position, via reflectors outside the work area. Even vehicles taken off track temporarily can find their own way back to their fixed route independently.

Performance features	
Reflector Memory	40 layouts of 32 reflectors each
Average reflector distance	3 m
Typ. positioning accuracy	4 mm
Typ. angular accuracy	0.1°
Measurement area	360°
Range to reflector marks	30 m
W ≥ 10 cm; H ≥ 50 cm	
Rotational frequency	8 Hz ±
Software Interface	Command Interface with XOR block check

min. of 3 reflectors per layout				
Accuracy for a layout with 6 reflectors with a smoothing depth of 4				
3 m	5 m	10 m	20 m	30 m
4 mm	8 mm	12 mm	15 mm	25 mm
0.1°	0.1°	0.1°	0.1°	0.1°
Positional data is calculated back to the time of transfer				
Command Interface with XOR block check				

Far-reaching advantages.

Safe arrival – even under harsh ambient conditions

The NAV 200 laser-supported positioning system from SICK has a range of up to 30 m. Accurate position measurements can be achieved even under harsh ambient conditions.

Measurably more accurate: The NAV 200's measurement principle

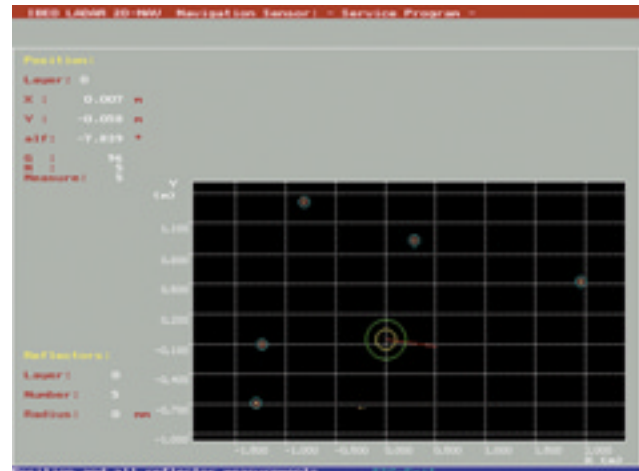
The NAV 200 operates on the same principle as optical radar. The scanning angle of 360° provides an all-round view and thus ensures detection of all reflectors within the particular operating environment. Unlike conventional laser measurement systems, the NAV 200 also measures the distance to the reflectors. The system is based on tried-and-tested time-of-flight measurement that is highly immune to interference. The NAV 200 supplies the on-board computer with information on the absolute vehicle position and orientation in relation to the absolute coordinate system of the surrounding area. Combination of distance values and the angle of detection of the reflectors ensures maximum accuracy.

Measurably rational: NAV 200 applications

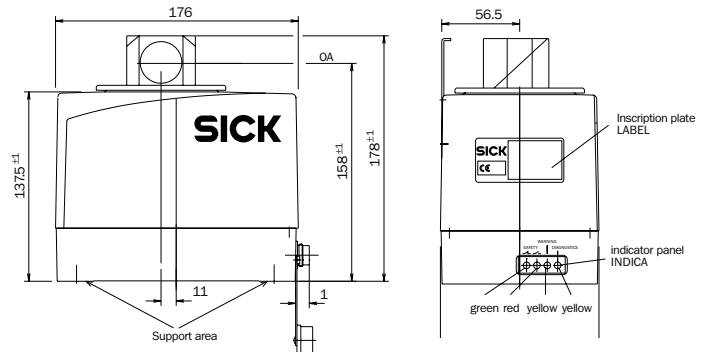
The NAV 200 can be employed for the support and control of docking processes without the need for supplementary auxiliary measures. The system operates completely autonomously.

Minimum costs

The NAV 200's positioning computer handles the evaluation of raw scanner data. Only the necessary positional data is transferred to the vehicle. Costly evaluation software is not required by the vehicle's computer. The system can thus be integrated into existing vehicle architectures without any problems.



User software for set-up and visualization. Actual display: Scanner and reflectors



NAV 200 scanner dimensions

NAV 200 used on an automated guided vehicle (AGV)
Below: S 3000 Safety Laser Scanner

The dialogue continues.

Copy, complete and fax.

Company

Name

Position/
Department

Address

Post code/
Town

Phone/Fax

Industry/Field
of application

Yes, I would like to know more about SICK's new NAV 200.

I am interested in a detailed consultation with one of your project consultants. Please arrange an appointment for me.

Other product information as downloads at www.sick.com

Australia

Phone +61 3 94 97 41 00
008 33 48 02 – toll free
Fax +61 3 94 97 11 87

Austria

Phone +43 22 36 62 28 80
Fax +43 22 36 62 28 85

Belgium/Luxembourg

Phone +32 24 66 55 66
Fax +32 24 63 35 07

Brazil

Phone +55 11 55 61 26 83
Fax +55 11 55 35 41 53

China

Phone +852 27 63 69 66
Fax +852 27 63 63 11

Czech Republic

Phone +42 02 57 81 05 61
Fax +42 02 57 81 05 59

Denmark

Phone +45 45 82 64 00
Fax +45 45 82 64 01

Finland

Phone +358 9 728 85 00
Fax +358 9 728 85 50 55

France

Phone +33 1 64 62 35 00
Fax +33 1 64 62 35 77

Germany

Phone +49 21 15 301-0
Fax +49 21 15 301-100

Great Britain

Phone +44 17 27 83 11 21
Fax +44 17 27 85 67 67

Italy

Phone +39 02 92 14 20 62
Fax +39 02 92 14 20 67

Japan

Phone +81 33 35 81 34 1
Fax +81 33 35 89 04 8

Korea

Phone +82 27 86 63 21/4
Fax +82 27 86 63 25

Netherlands

Phone +31 3 02 29 25 44
Fax +31 3 02 29 39 94

Norway

Phone +47 67 56 75 00
Fax +47 67 56 61 00

Poland

Phone +48 2 28 37 40 50
Fax +48 2 28 37 43 88

Singapore

Phone +65 67 44 37 32
Fax +65 68 41 77 47

Spain

Phone +34 9 34 80 31 00
Fax +34 9 34 73 44 69

Sweden

Phone +46 86 80 64 50
Fax +46 87 10 18 75

Switzerland

Phone +41 4 16 19 29 39
Fax +41 4 16 19 29 21

Taiwan

Phone +886 2 23 65 62 92
Fax +886 2 23 68 73 97

USA/Canada/Mexico

Phone +1 (952) 9 41 67 80
Fax +1 (952) 9 41 92 87

Branch offices and representatives in all major industrial countries.

