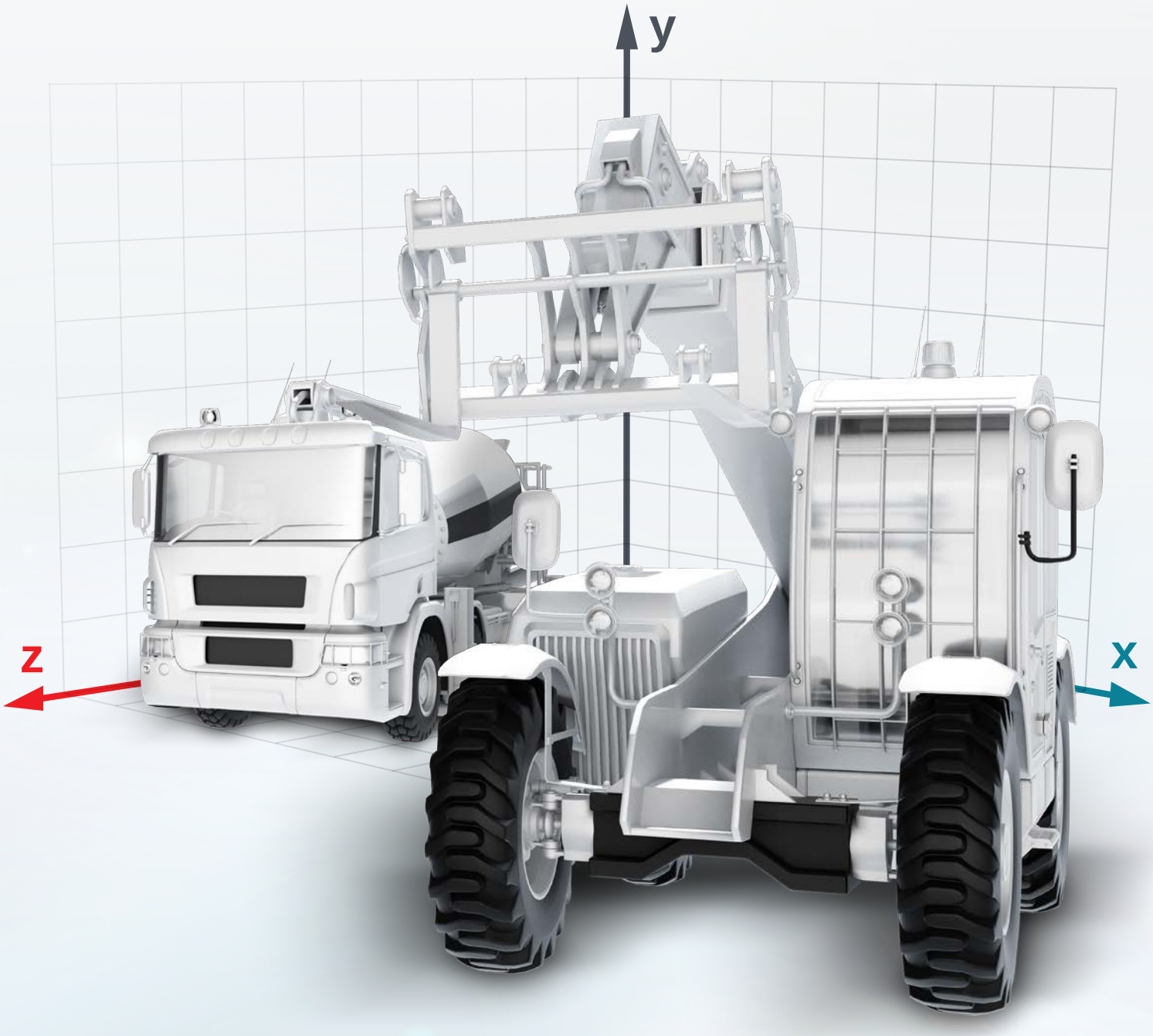
HYDAC INTERNATIONAL

Position sensors for mobile machine automation: **Linear position, angle, inclination**



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Discover our product range

Linear position sensors

Our wear-free linear position sensors can be integrated into cylinders, offering high mechanical robustness. The sensors are available in different measuring lengths and with optional increased functional safety.

				
Family	HLT 1100	HLT 700	HLT 1300	HLT 2150
Characteristics	can be fully integrated	can be fully integrated	can be fully integrated	can be partially integrated
Length (mm)	50 … 2500/4000	50 … 400	50 … 2500/4000	50 … 4000
Resolution (mm)	0.1	0.1	0.1	0.1
Interface	Analogue, CANopen CANopen Safety	Analogue, CANopen	CANopen CANopen Safety	Analogue, CANopen, SSI
Safety (optional)	PL d / SIL 2		PL d / SIL 2	

Inclination sensors

To determine the orientation in space, our inclination sensors have MEMS-based acceleration sensors.
Two fusion filters are available to compensate for large dynamics. As an option, the sensors are also available in a functionally safe version with PL d / SIL 2.

			
Family	HIT 500	HIT 1000	HIT 1500
Characteristics	Compact housing with choice of M12 or DEUTSCH® DT04 3-axis acceleration +/- 3 g and angular velocity +/-250°/s compensated for dynamic measurements	3-axis acceleration +/- 3 g non-compensated for static measurements	3-axis acceleration +/- 3 g and angular velocity +/-250°/s compensated for dynamic measurements
Measuring range	Longitudinal +/-180°, lateral +/-90°	Longitudinal +/-180°, lateral +/-90°	Longitudinal +/-180°, lateral +/-90°
Signals	Static inclination 2 axes Dynamic inclination 2 axes Acceleration 3 axes Angular velocity 3 axes	Static inclination 2 axes Acceleration 3 axes	Static inclination 2 axes Dynamic inclination 2 axes Acceleration 3 axes Angular velocity 3 axes
Resolution	0.01°	0.01°	0.01°
Interface	CANopen, SAE J1939	CANopen, CANopen Safety SAE J1939	CANopen, CANopen Safety SAE J1939
Safety (optional)		CAT 2/3, PL d/SIL 2	CAT 2/3, PL d/SIL 2

Angle sensors

All angle sensors are based on the wear-free Hall principle, measure absolute and cover an angle range of up to 360°. They are also available in an optional functionally safe version with PL d / SIL 2.

				
Family	HAT 1200	HAT 1436	HAT 1425	HAT 3836
Diameter (mm)	36	36	25	36
Resolution	12 bit	14 bit	14 bit	18 bit
Interface	Analogue 4 ... 20 mA	CANopen CANopen Safety SAE J1939	CANopen CANopen Safety SAE J1939	CANopen CANopen Safety
Safety (optional)	PL d / SIL 2	PL d / SIL 2	PL d / SIL 2	PL d / SIL 2

How the technologies compare

HYDAC offers you a comprehensive product range for position detection tasks.
We provide the most suitable sensor technology for more demanding technical requirements.

optimal • good	Linear position	Angle	Inclination
High accuracy requirements	●	●	●
Harsh environmental conditions	●	●	●
High dynamic requirements	●	●	●
Increased requirements for functional safety	●	●	●
Simple mechanical integration	○	●	●
Easy to integrate into software	●	●	○
Special requirements such as levelling or bending	●	●	●

Find the optimal solution for your mobile machines

We use sound analysis methods to help you select technologies.
Find out more on the web by scanning the QR code or at
www.hydac.com/shop/en/sensors or contact us about your project directly.

Contact our team of experts: support.electronic@hydac.com

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NOTE

The information in this brochure relates to the operating conditions and applications described.
For applications and/or operating conditions not described, please contact the relevant technical department.
Subject to technical modifications.

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