WOG2

Highly integrated wheel/steering drive with Safe Motion and fully integrated controls for maximum freedom of movement.

Applications

The WOG2 is designed for demanding mobile robotics applications where maximum maneuverability, compact integration and fully integrated drive and steering control are required. By combining driving and steering functions in one system, the drive enables true omnidirectional vehicle movements including 360° endless rotation.

Typical areas of application are omnidirectional AGVs and AMRs, flexible transport systems and vehicles with high requirements for maneuverability, precision and dynamic driving movements. The complete freedom of movement shows its strengths, especially in confined environments. The integrated safe motion functionality as well as the complete drive and steering control enable use in safety-critical applications in intralogistics and industrial automation. Communication takes place entirely via EtherCAT or Safety over EtherCAT and allows seamless integration into modern control architectures.



Features & Benefits

- **Fully integrated wheel and steering drive** in a system
- **Integrated Motor Controller** for driving and steering
- **360° endless rotation** for maximum freedom of movement, high dynamics and precise vehicle guidance
- **Integrated safe motion functions** (e.g. STO, SBC, SS1)
- **Safety-compliant motion control** up to Performance Level e
- **Communication via EtherCAT and Safety over EtherCAT**
- **Reduced integration effort** through highly integrated system architecture
- **Optimized for omnidirectional AGVs and AMRs**
- **Patented system solution** for fully integrated driving and steering functions

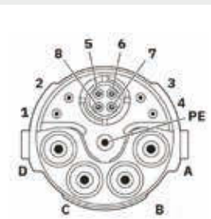
Technical data

		WOG2	
Drive		Steering drive	Wheel drive
Rated voltage	VDC	48	48
Rated power	W	121	594
Speed	°/s / m/s	0 - 250.0	0 - 2.0
Rated torque	Nm	61.6	20.0
Maximum torque	Nm	135.0	70.0
Rated current	ADC	7.3	13.5
Maximum current	ADC	20.0	45.0

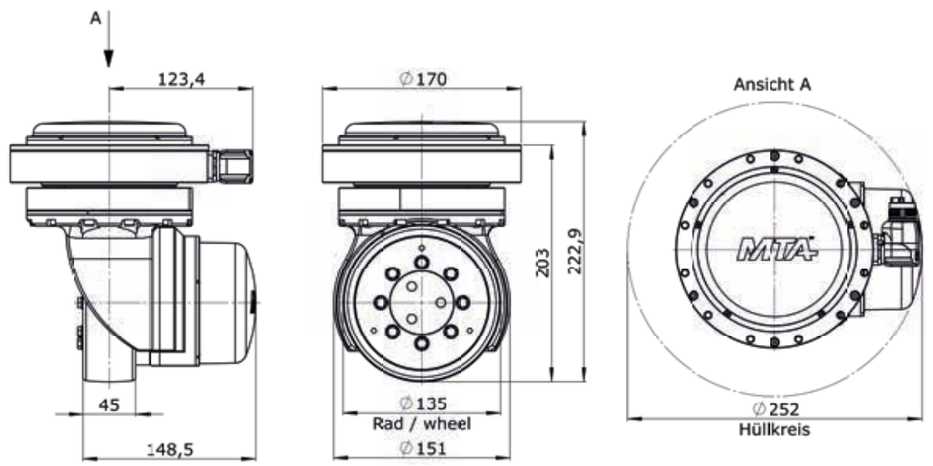
		WOG2
Max. wheel load*	kg	500
Wheel diameter	mm	135
Gear steering		Harmonic Drive i=80
Gear driving		Planetary gearbox i=10
Ambient temperature	°C	0 … 40
Relative humidity		< 80%, non-condensing
Temperature sensor		PTC
Feedback		
Resolution	Bit	up to 20 bits
Brake		
Braking torque	Nm	75
Voltage	VDC	48, holding voltage 4.5 V
Envelope diameter	mm	252

* Base 20,000 h, duty cycle = 60%, with combined radial and axial force.

Connections supply line and EtherCAT connection

Pin	Description	Presentation
A	GND	 4+4+4+PE
B	48 VDC	
C	GND	
D	48 VDC	
1	n.c.	
2	n.c.	
3	n.c.	
4	n.c.	
5	RX-N	
6	RX-P	
7	TX-N	
8	TX-P	

Dimensions



WOG2

Modular and flexibly configurable

The drive platform can be optimally adapted to different vehicle and integration requirements.

