WDG135x

Compact high performance for powerful AGV drives.

Applications

The WDG135x closes the gap between gearless direct drives and heavy-duty systems.

It combines high torque reserves with a very compact design and thus enables high-performance vehicle designs without major structural adjustments. Ideal for applications where more power is required but installation space remains limited.



Features & Benefits

- **More load and pulling power** without increasing the size of the vehicle platform
- **Compact installation length** facilitates integration into existing designs
- **High power density** for dynamic transport processes
- **Reduced design effort** through integrated overall system (motor + gearbox)
- **Flexible system integration** through optional electronics
- **Increased operational safety** thanks to integrated holding brake
- **Safe motion functions** (with integrated Motor Controller) for safe human-robot interaction
- **Suitable for scalable AGV and AMR platforms**

Technical data

		WDG135I-BAA with integrated Motor Controller	WDG135E-BWW without integrated Motor Controller
Rated voltage	VDC	48	48
Rated power	W	413	700
Speed	m/s	0 - 2.0	0 - 2.0
Rated torque	Nm	14	23.6
Maximum torque	Nm	70.0	75.0
Rated current	ADC	10.2	-
Maximum current	ADC	57	-
Rated current	Arms	-	19.0
Maximum current	Arms	-	68.4

WDG135x with Motor Controller

		WDG135x with integrated Motor Controller
Max. wheel load*	kg	500
Wheel diameter	mm	135
Ambient temperature	°C	0 … 40
Relative humidity		< 80%, non-condensing
Temperature sensor		PTC
Feedback		2 magnetic encoders
Supply voltage	VDC	integrated in the Motor Controller
Motor commutation signals		
Resolution	Bit	14
brake		integrated motor brake
Braking torque	Nm	75
Voltage	VDC	integrated in the Motor Controller

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

Connections supply voltage

Pin	Description	Presentation
1	Supply 48 VDC	 M16 / 3-pin (3x2)/male
2	Supply GND	
3	n.c.	

EtherCAT In connections

Pin	Description	Presentation
1	RX-	 M8 A-coded 4-pin/male
2	RX+	
3	TX-	
4	TX+	

EtherCAT Out connections

Pin	Description	Presentation
1	RX-	 M8 A-coded 4-pin/female
2	RX+	
3	TX-	
4	TX+	

WDG135x without Motor Controller

		WDG135x without integrated Motor Controller
Max. wheel load*	kg	500
Wheel diameter	mm	135
Ambient temperature	°C	0 … 40
Relative humidity		< 80%, non-condensing
Temperature sensor		PTC
Feedback		1 magnetic encoder (optional 2)
Supply voltage	VDC	5
Motor commutation signals		BiSS-C / asynchronous / serial / PWM / SSI / SPI
Resolution	Bit	14
brake		Spring-applied brake
Braking torque	Nm	75
Voltage	VDC	24

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

Motor cable connections

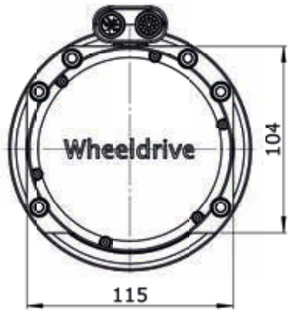
Pin	Description	Presentation
1	U	 M16 / 3-pin (3x2)/male
2	V	
3	W	

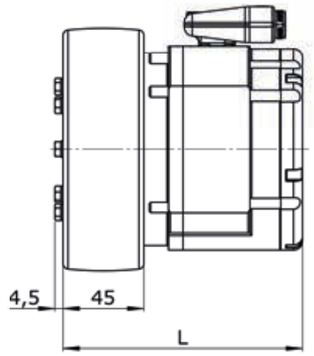
Sensor cable connections

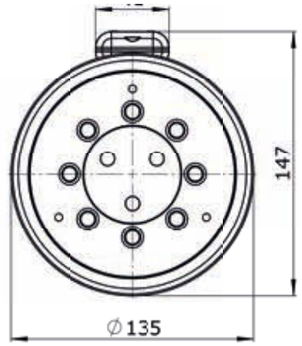
Pin	Description	Presentation
1	0 VDC	 M16 / 18-pin/male
2	+5 VDC	
3	I-	
4	I+	
5	B-	
6	B+	
7	A-	
8	A+	
9	PWM-	
10	PWM+	
11	Temp-	
12	Temp+	
13	Brake (GND)	
14	Brake (24 V)	
15-18	n.c.	

Dimensions

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without Motor Controller	133.3
with Motor Controller	149.3







WDG135x

Modular and flexibly configurable

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

