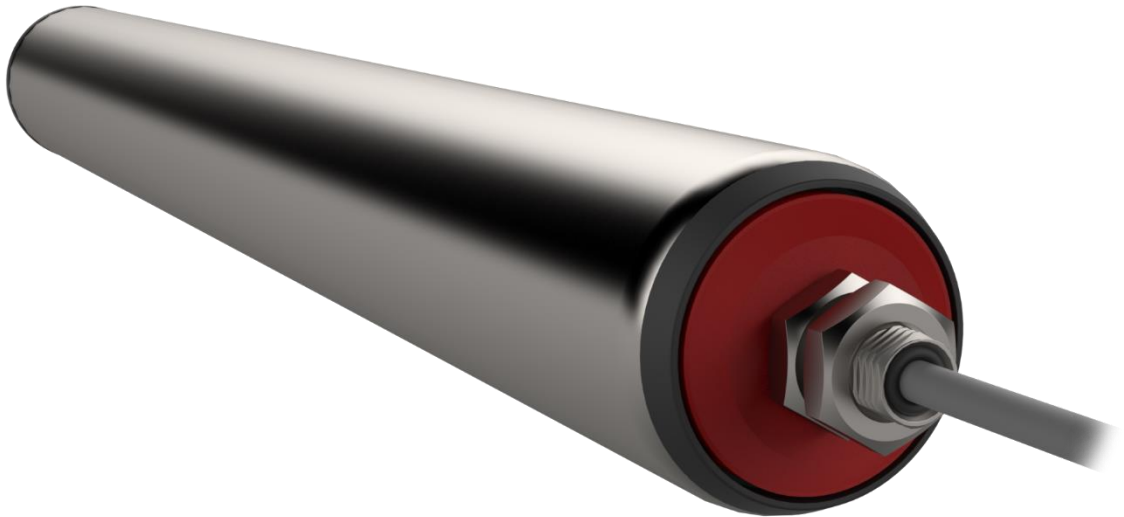


# *Motor roller* **HERMES 50**



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The HERMES 50 motor rollers come with very powerful, yet efficient, synchronous motors, which have been designed using the very latest calculation methods for the application in question. The version is gearless. Designed as a direct drive, the HERMES 50 achieves an extremely long service life as no wear parts are used. The motor rollers can be adapted to the respective application with regard to their connection dimensions and mechanical/electrical interfaces

## Characteristics

### Applications

- Package conveying technology for packages, standardised containers, crates, boxes
- Sorting applications (as the drive for the ejection device)
- Drive for roller conveyors
- Drive for the belt conveyor and other conveyors

### Features

- External rotor technology, gearless version
- Synchronous technology, outstanding energy efficiency
- Maintenance-free
- Reversible
- Increased protection standards

### General technical data Drum motor HERMES 50

Technical data	
Motor type	Synchronous motor
Insulation class of the motor winding	Class F
Voltage	24/48VAC
Protection type	IP54 (on request IP67)
Noise level	< 48dB (depending on the application)
Length of motor cable	500 / 1500 / 3000*
Clamping length	0 ... 900mm
Ambient temperature	0 to 40
Version A side	Axis M12 × 1, hexagon SW11
Version B side	Bead: a = 40mm, b = 30mm Round, poly V, smooth and bead Roller base antistatic with internal thread M8
Pipe wall thickness	Ø 50 x 1.5
Pipe material	Galvanised steel / stainless steel
Pipe sleeve	PVC hose, PU hose, rubber coating
Pipe	straight
Maximum load	Depending on pipe length



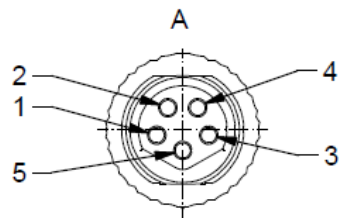
\*Dimensions and design can be adapted according to the customer.

## Electric connection motor roller HERMES 50

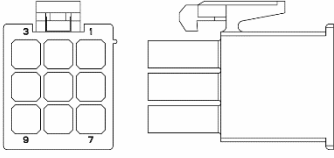
The following encoder systems are available for operating the motor rollers:

- Sensorless control
- Digital reverberation sensors

### Pin assignment sensorless control

Signal	Pin	Description	Wire colour	
U	1	Motor phase U	Brown	
V	2	Motor phase V	White	
W	3	Motor phase W	Black	
NP	4	Neutral point	Blue	
PE	5	Earth	Grey	
Cable specification:		Connector specification:		
Construction:		Type:		
Material:		Coding:		
Nominal voltage:		Gender:		
Outer diameter:		Number of pins:		
Temperature:		Manufacturer:		
unmoved:				
moved:				
Certification:				
Halogen free				

### Pin assignment for reverberation sensor (hybrid cable with combined motor and encoder cable):

Signal	Pin	Description	Wire colour	
U	2	Motor phase U	Grey	
V	1	Motor phase V	Brown	
W	3	Motor phase W	Black	
	4	n.c.		
GND	5	GND reverberation sensor	White	
5V	6	5V supply reverberation sensor	Brown	
H1	7	Reverberation sensor 1	Red	
H2	8	Reverberation sensor 2	pink	
H3	9	Reverberation sensor 3	Yellow	
Cable specification:		Connector specification:		
Construction:		Type:		
Material:		Gender:		
Nominal voltage:		Number of pins:		
Outer diameter:		Manufacturer:		
Temperature:				
unmoved:				
moved:				
Certification:				
Halogen free				



On request, the connection cables can be supplied with open ends or with pre-assembled connection plugs.

The following tables show motor variants with the corresponding power rating.  
Design variants motor roller HERMES 50

Performance data		HERMES 50
Nominal voltage	VDC	24VDC
Nominal current	A	4.36
Nominal torque	Nm	1
Nominal speed	rpm	400
Permissible peak current	A	10
Holding torque	Nm	2.5
Idling speed	Rpm,	950
Continuous power output	W	50
Maximum power output	W	670
Torque constant	Nm/A	0.25
Phase resistance	$\Omega$	0.579276
Connection inductance $L_q$	mH	0.834469
Connection inductance $L_d$	mH	0.776984
Winding connection		Star
Number of pole pairs		7



The maximum current (maximum torque) is limited to 6A for versions with M8 circular connectors.



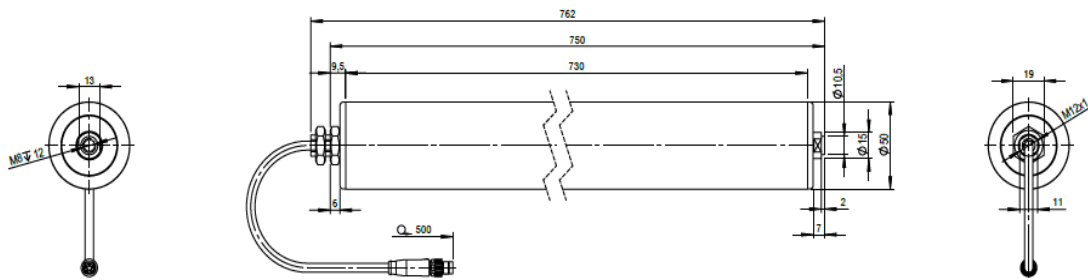
On request, further direct drives with higher torques or outputs are available.



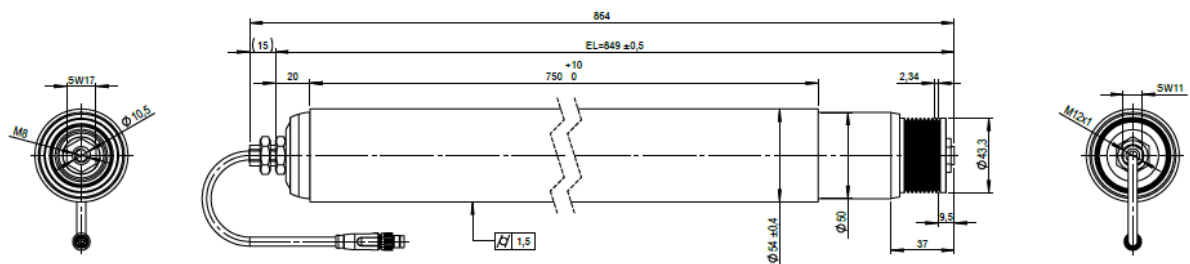
Depending on the motor type and operating voltage, sensorless control can lead to power losses of up to 10% compared to closed-loop control with reverberation sensors.

## Dimensions

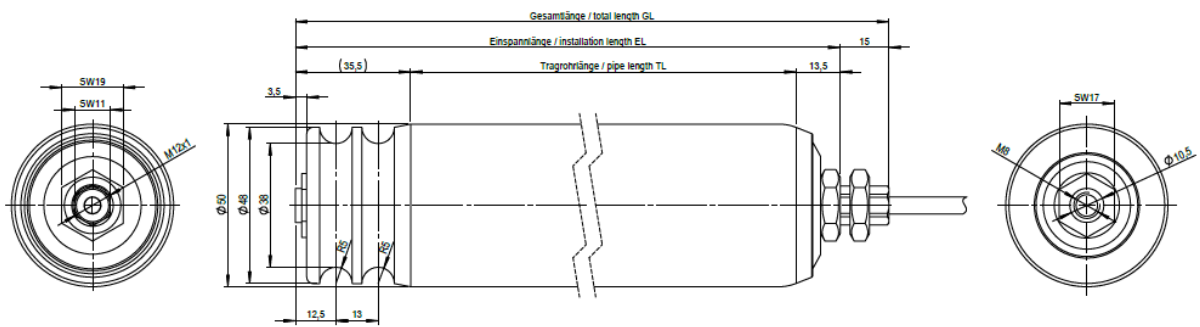
### Smooth version



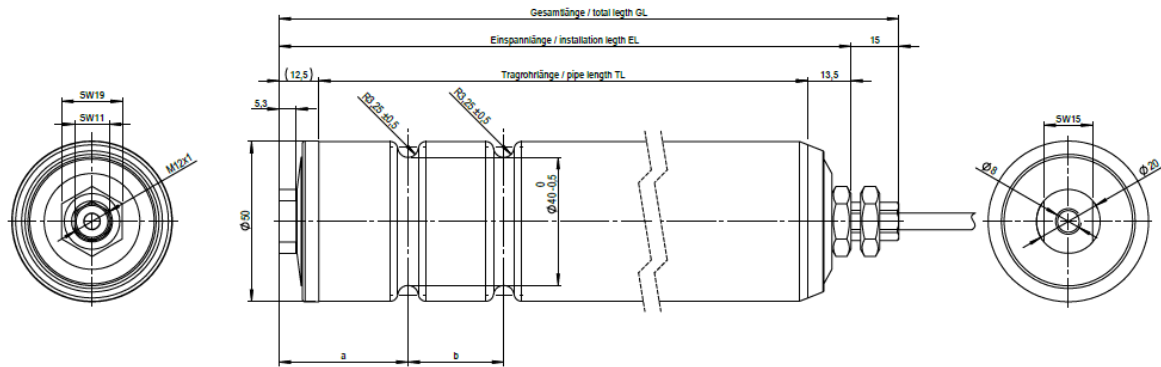
### Poly-V version



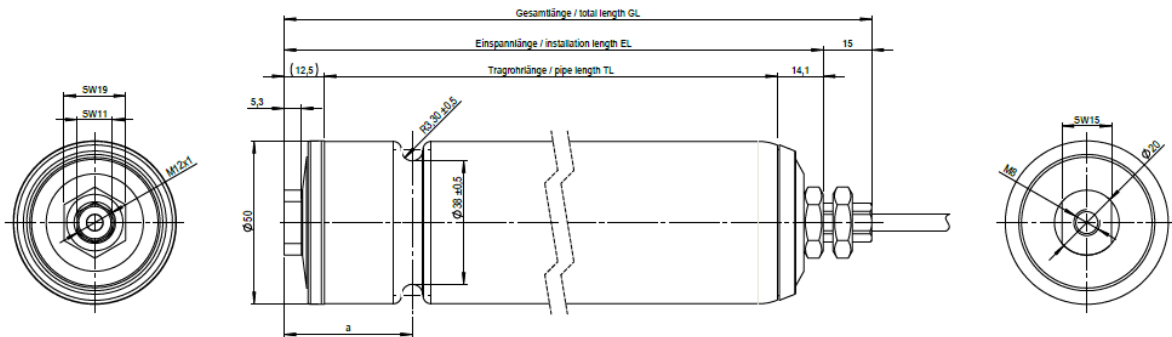
### Round belt version



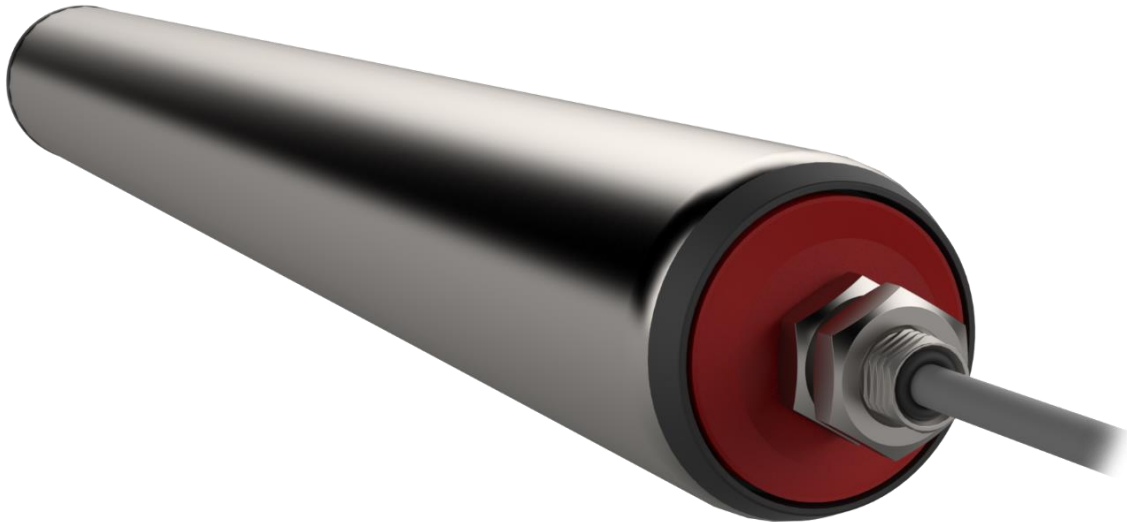
Double bead version



Single bead version



# *Motor roller* **HERMES 60**



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The HERMES 60 from MTA Systems are motor rollers with an outer diameter of 60mm in a gearless version. The motor is a brushless synchronous motor. This motor roller works almost noiselessly and without wearing parts. The field of application for the motor roller with outer diameter of 60mm are conveying systems for zero-pressure conveying operation as well as for shuttle, belt conveyors and sorting systems. Due to the gearless model very compact designs are possible. Reverberation sensors are available for motor commutation.

## Characteristics

### Power package

High torques and short acceleration times are achievable. Ideal for sorter applications with short ejection times.

### Low noise development

Currently the quietest drum motor available on the market in this performance class. No noise from gears or other transmission components.

### Maintenance-free

The drive is maintenance-free. No wearing parts included, therefore extremely long service life.



## Technical data

The technical performance data of the motor rollers are as follows:

Technical data		
Nominal voltage	VDC	48
Mechanical continuous power output	W	125
Maximum power output	W	510
Maximum torque	Nm	14.5
Nominal speed	rpm	600
Noise level	dB	< 50dB (depending on the application)
Length of motor cable	mm	500*
Clamping length	mm	1500*
Ambient temperature	°C	0 to 40
Version A side		SW15 / M8x15
Version B side		SK11 / M12x1
Bearing flange A-side and B-side		Wheel body aluminium, labyrinth plastic
Pipe wall thickness	mm	Ø 60 x 3
Pipe material		Galvanised steel, stainless steel
Pipe sleeve		PVC hose, PU hose, rubber coating
Maximum load		Depending on pipe length





\*Dimensions can be adapted according to the customer.

The connection cable is designed as follows

Signal	Description	Wire colour
U	Motor phase U	Grey
V	Motor phase V	Brown
W	Motor phase W	Black
GND	GND reverberation sensor	White
5V	5V supply reverberation sensor	Brown
H1	Reverberation sensor 1	Red
H2	Reverberation sensor 2	pink
H3	Reverberation sensor 3	Yellow

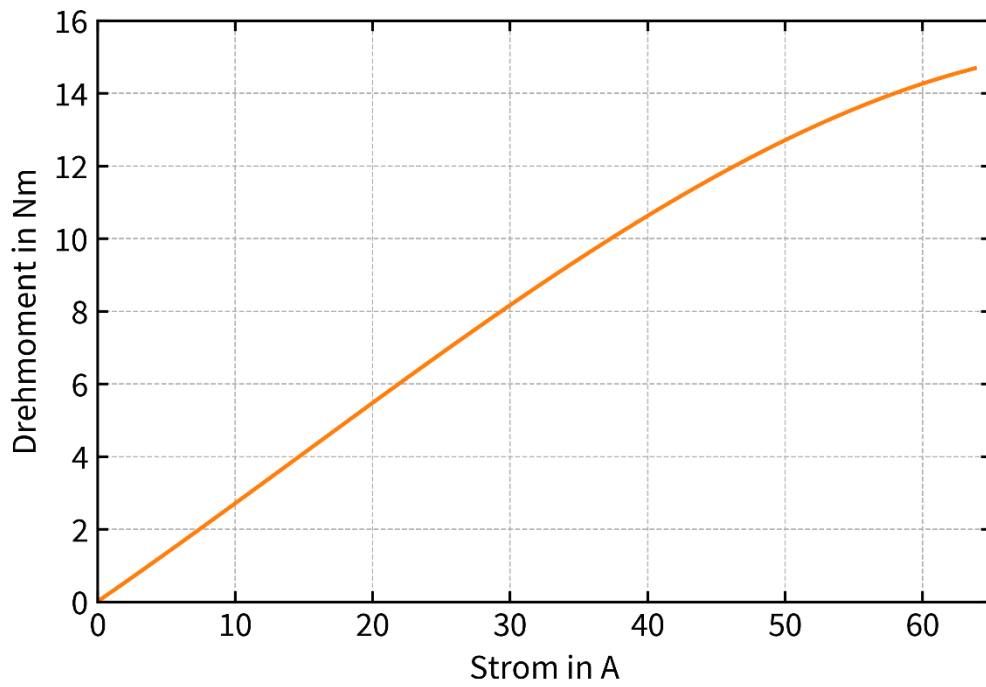
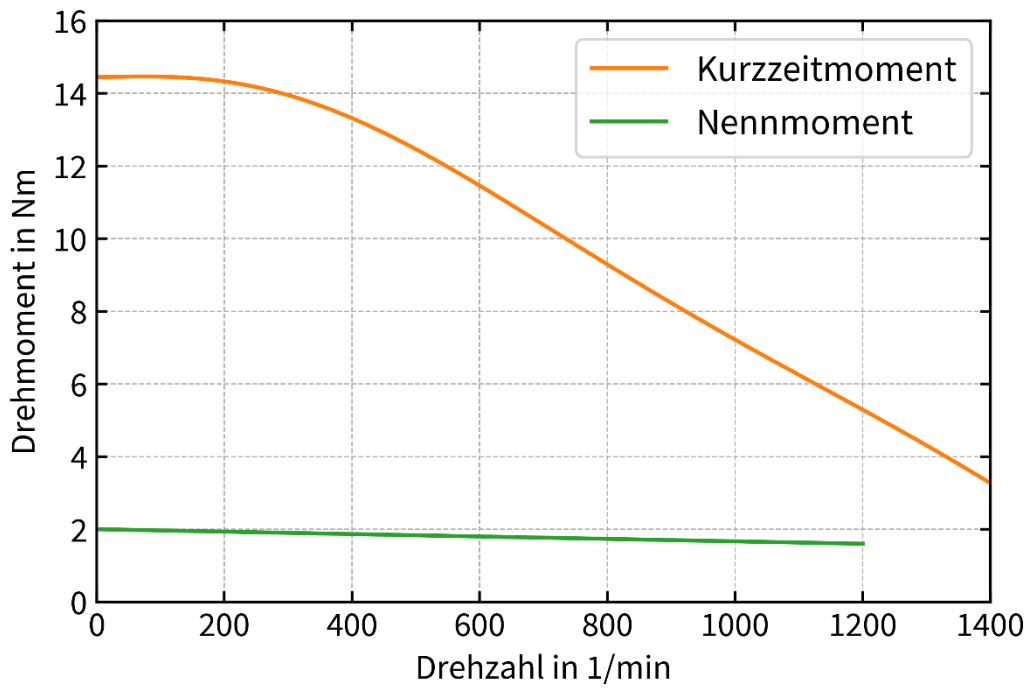
The connection cable of the motor roller HERMES 60 is a hybrid cable. Motor connection and encoder signals are run in one cable.



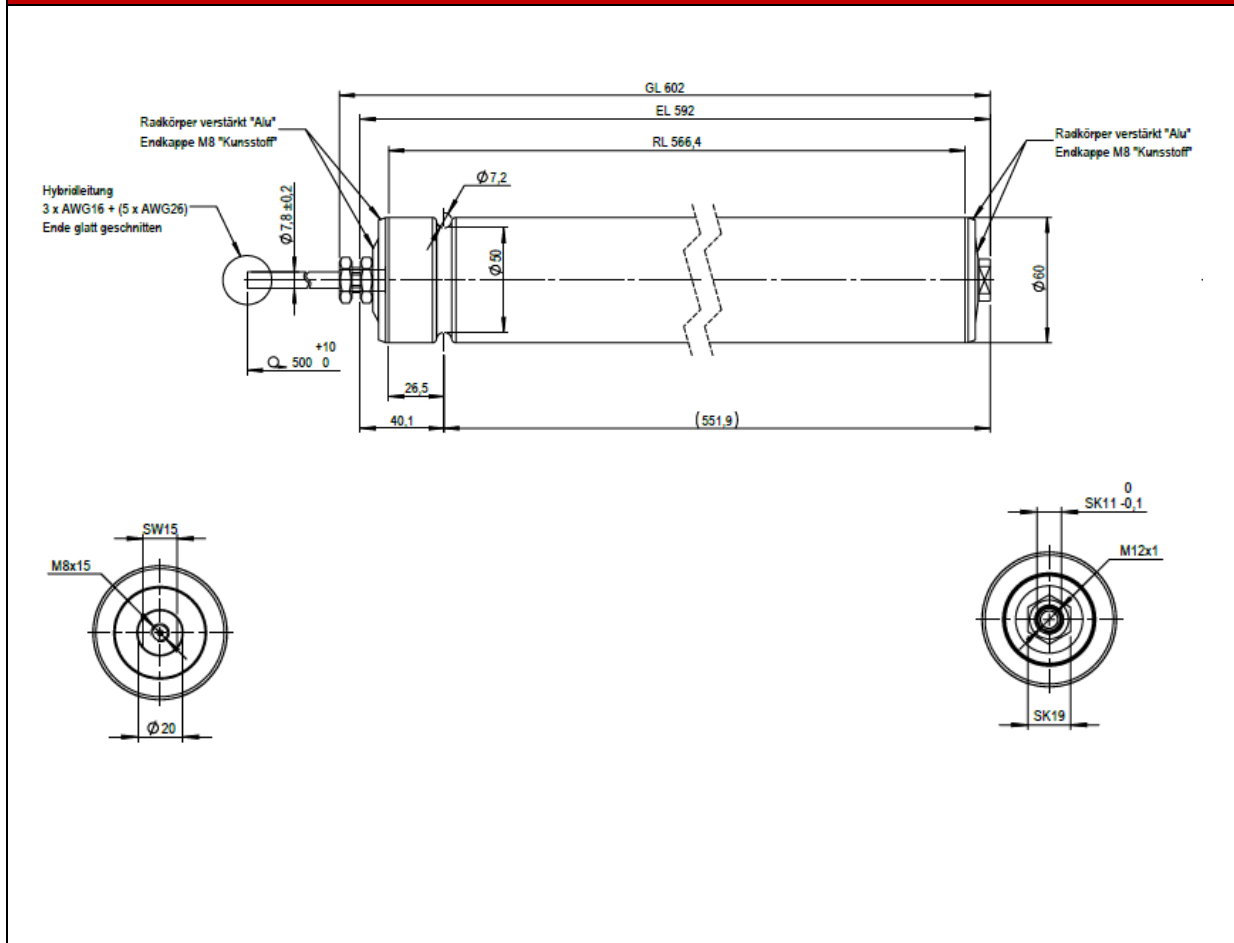
The HERMES 60 connection cable is supplied with open connection ends. On request, the delivery can be made with pre-assembled connectors.

Performance data		HERMES 60
Nominal voltage	VDC	48
Nominal current	A	11A
Nominal torque	Nm	2
Nominal speed	rpm	600
Permissible peak current	A	60
Holding torque	Nm	14.5
Idling speed	rpm	1700
Continuous power output	W	125
Maximum power output	W	510
Torque constant	Nm/A	0.27
Phase resistance	$\Omega$	0.15
Connection inductance $L_q$	mH	0.272
Connection inductance $L_d$	mH	0.225
Winding connection		Star
Number of pole pairs		7

Motor characteristic



## Dimensions



### Drive controller:

The HERMES 60 can be driven by the following drive controllers from MTA.

	PROMETHEUS-2-40	PROMETHEUS-1-40
HERMES 60	✓	In preparation