

# VDC motor.

## VDC-49.15-K4

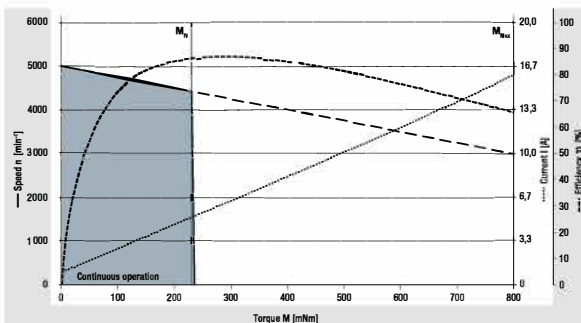


- 3-phase external rotor motor with EC technology
- High-poled motor structure for optimum power density.
- Drive with completely integrated K4 operation and control electronics
- Integrated speed, torque and position control
- Selection of operating modes and parameter setting via RS485
- Interface with analog and digital control inputs
- Integrated brake chopper
- Robust mechanical design in IP 54 for industrial applications
- Electrical connection via cable with free wire ends

Nominal data		VDC-49.15-K4-B00	VDC-49.15-K4-D00
Type			
Nominal voltage ( $U_N$ )	V DC	24	48
Nominal speed ( $n_N$ )*	min <sup>-1</sup>	4 000	
Nominal torque ( $M_N$ )*	mNm	235	300
Nominal current ( $I_N$ )*	A	5.20	3.20
Nominal output power ( $P_N$ )*	W	99	126
Starting torque ( $M_{max}$ )	mNm	705	900
Permissible peak current ( $I_{max}$ )**	A	15.6	9.60
Speed at no-load operation ( $n_l$ )	min <sup>-1</sup>	5 000	
No-load current ( $I_l$ )	A	0.40	0.25
Recommended speed control range	min <sup>-1</sup>	0 ... 4 000	
Rotor moment of inertia ( $J_R$ )	kgm <sup>2</sup> x10 <sup>-6</sup>	108	
Overload protection		integrated	
Permissible ambient temperature range ( $T_U$ )	°C	0 ... +40	
Weight	kg	0.59	
Order no. (cable type)***	IP 54	937 4915 400	937 4915 402
Subject to alterations	* At $T_U$ max. 40°C ** Permissible time for peak current: max. 1 sec. – to be repeated only after complete cool down *** Classification of protection class refers to installed state with sealing on the flange side		

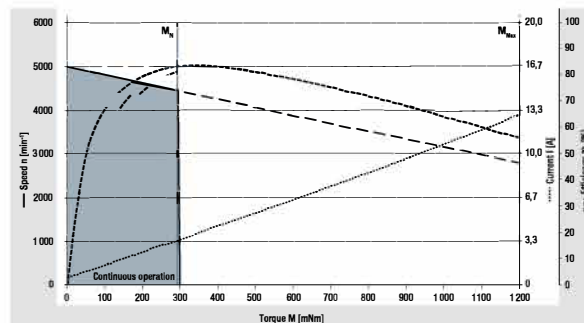
### Characteristic curve

VDC-49.15-K4-B00 (at 25°C)

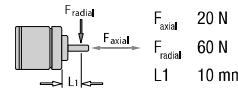
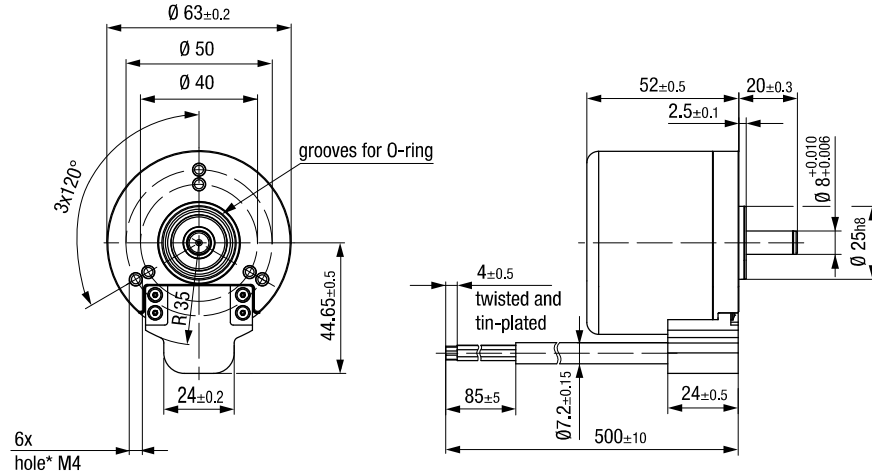


<sup>1)</sup> Nominal data, see table

VDC-49.15-K4-D00 (at 25°C)



<sup>1)</sup> Nominal data, see table



Permissible shaft load at nominal speed and life expectancy  $L_{10}$  (nominal operation) of 20 000 h (at  $T_u$  max. 40°C)

$F_{radial}$	20 N
$F_{axial}$	60 N
$L1$	10 mm

\* For thread-rolling screws according to DIN 7500

Electrical connection / cable with open wires

	Wire color	Configuration	Function	Recommended AWG
Signal	white	D-IN-A	NPN 24 V	24
	brown	D-IN-B	NPN 24 V	
	green	D-IN-1	NPN 24 V	
	yellow	D-IN-2	NPN 24 V / analog 0 ... 10 V / brake	
	gray	D-OUT-1	PNP 24 V	
	pink	D-OUT-2	PNP 24 V	
	blue	—	Must not be used	
	red	A-IN-1	0 ... 10 V (differential)	
	black	A-GND	GND for analog IN 1 (differential)	
	violet	RS485 A (+)	Progr. bus	
	gray / pink	RS485 B (-)	Progr. bus	
Power	red / blue	$U_{Logic}$	Logic power supply (24 V)	16
	gray	Ballast	Ballast resistor	
	brown	$U_{ZK}$	Power supply	
	black	GND	Power / signal GND	

Modular construction kit

