

VD motor.

VD-49.15-K1

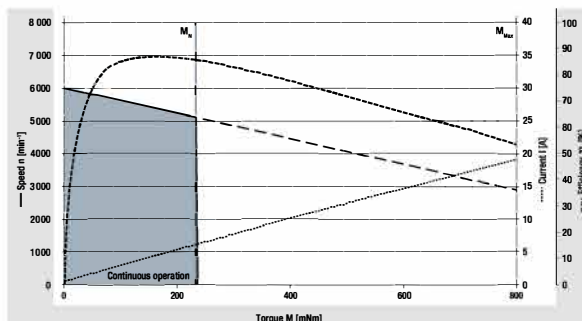


- 3-phase external rotor motor with EC technology
- High poled motor structure for optimum power density
- Basic motor with electronic module K1 for operation on external control electronics
- Very good synchronization characteristics
- Robust mechanical design in IP 54 for industrial applications
- Long lifetime by using precision ball bearings
- Insulation class E
- Electrical connection via cable

Nominal data			
Type		VD-49.15-K1-B00	VD-49.15-K1-D00
Nominal voltage (U _N)	V DC	24	48
Nominal speed (n _N)*	rpm	4 500	5 300
Nominal torque (M _N)*	mNm	235	245
Nominal current (I _N)*	A	6.10	3.40
Nominal output power (P _N)*	W	110	135
Starting torque (M _{max})	mNm	1 150	1 300
Permissible peak current (I _{max})**	A	30.0	18.5
Speed at no-load operation (n _L)	rpm	6 000	
No-load current (I _L)	A	0.47	0.36
Recommended speed control range	rpm	0 ... 6 000	
Rotor moment of inertia (J _R)	kgm² x10 ⁻⁶	108	
Motor constant (K _E)	mVs/rad	41.0	80.7
Connection resistance (R _V)	Ω	0.23	0.62
Connection inductance (L _V)	mH	0.17	0.62
Overload protection		To be implemented via the control electronics	
Permissible ambient temperature range (T _U)	°C	0 ... +40	
Weight	kg	0.59	
Order no. (cable type)***	IP 54	937 4915 000	937 4915 001
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			

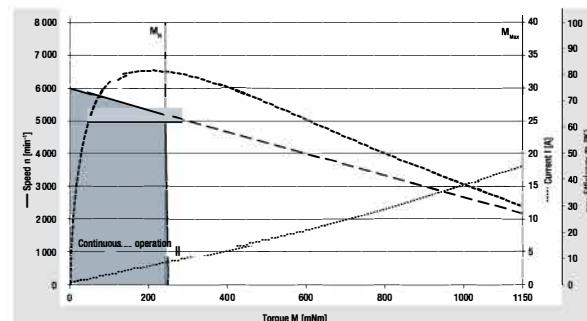
Characteristic curve

VD-49.15-K1-B00 (at 25°C)



1) Nominal data, see table

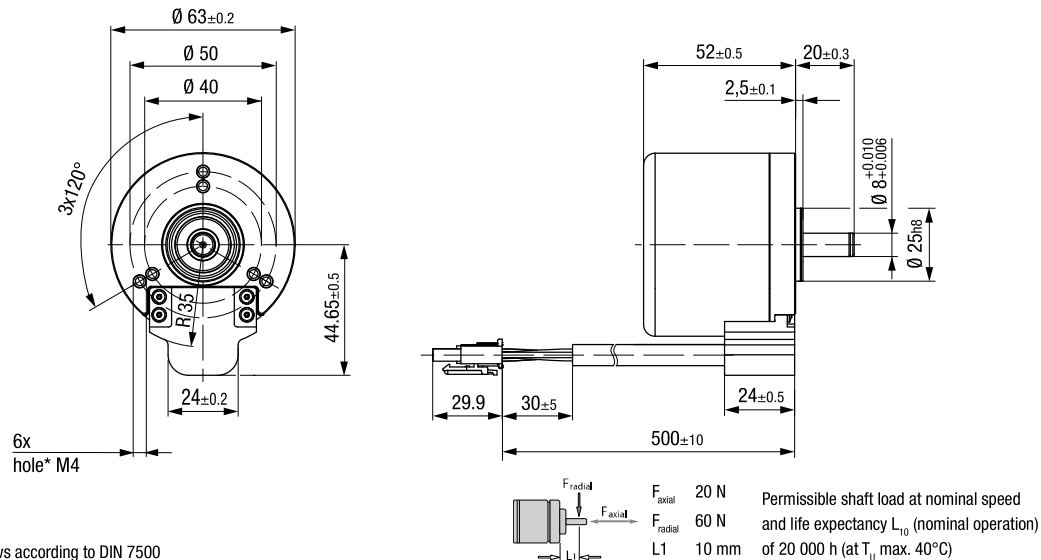
VD-49.15-K1-D00 (at 25°C)



1) Nominal data, see table

Technical drawing

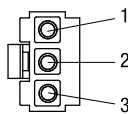
All dimensions in mm



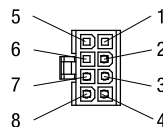
Electrical connection

Supply wire

No.	Color	Function
1	yellow	Phase W
2	violet	Phase V
3	brown	Phase U



Molex plug
no. 39-03-6035



Molex plug
no. 39-01-2085

Signal wire

No.	Color	Function
1	—	—
2	red	+12 V
3	white	Hall B
4	green	Hall A
5	—	—
6	—	—
7	black	GND
8	gray	Hall C

Modular construction kit

Recommended external control electronics

VTD-XX.XX-K3	Speed (page 34)
VTD-XX.XX-K4S	Position (page 36)
VTD-60.13-K5SB	Position (page 38)

Basic motor



Planetary gearheads

NoiselessPlus 63 (page 44)
Performax® 63 (page 46)
Performax®Plus 63 (page 48)



Crown gearheads

EtaCrown® 75 (page 50)
EtaCrown®Plus 63 (page 52)



Spur gearheads

Compactline 91 (page 56)
Flatline 85 (page 60)