

Stepper Motors

85 mNm

Two phase, 48 steps per revolution

Series AM3248

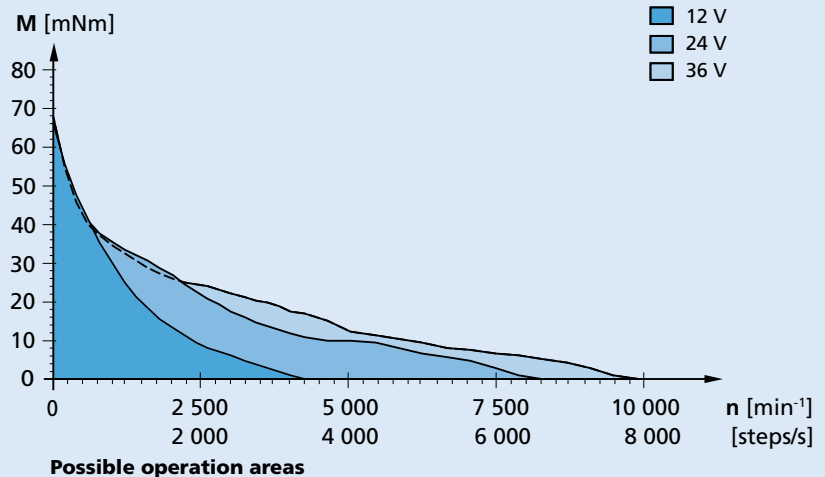
Values at 20°C	AM3248	0700	
Nominal current per phase (both phases ON)		0,7	A
Boosted current per phase (both phases ON)		1,4	A
Phase resistance		1,9	Ω
Phase inductance (1 kHz)		5,2	mH
Holding torque (at nominal current in both phases)		85	mNm
Holding torque at boosted current		152	mNm
Residual torque, typ.		16	mNm
Back-EMF amplitude		7,8	V/k step/s
Electrical time constant	2,7		ms
Rotor inertia	$900 \cdot 10^{-9}$		kgm ²
Step angle (full step)	7,5		°
Angular accuracy	± 12		%
Angular acceleration, max.	$169 \cdot 10^3$		rad/s ²
Resonance frequency (at no load)	49		Hz
Thermal resistance	3,4 / 9		K/W
Thermal time constant	19 / 900		s
Operating temperature range	-35 ... +70		°C
Winding temperature, max.	+130		°C
Shaft bearings ^{1) 2)}	ball bearings, preloaded (Bearing code: 2R)		
Shaft load max.:			
– with shaft diameter	5		mm
– radial at 5 000 min ⁻¹ (13 mm from bearing)	50		N
– axial at 5 000 min ⁻¹	10		N
– axial at standstill	140		N
Shaft play:			
– radial	0,015		mm
– axial	0		mm
Housing material	aluminium, black anodized		
Mass	160		g
Magnet material	NdFeB		

¹⁾ Special lubricant options available on request.

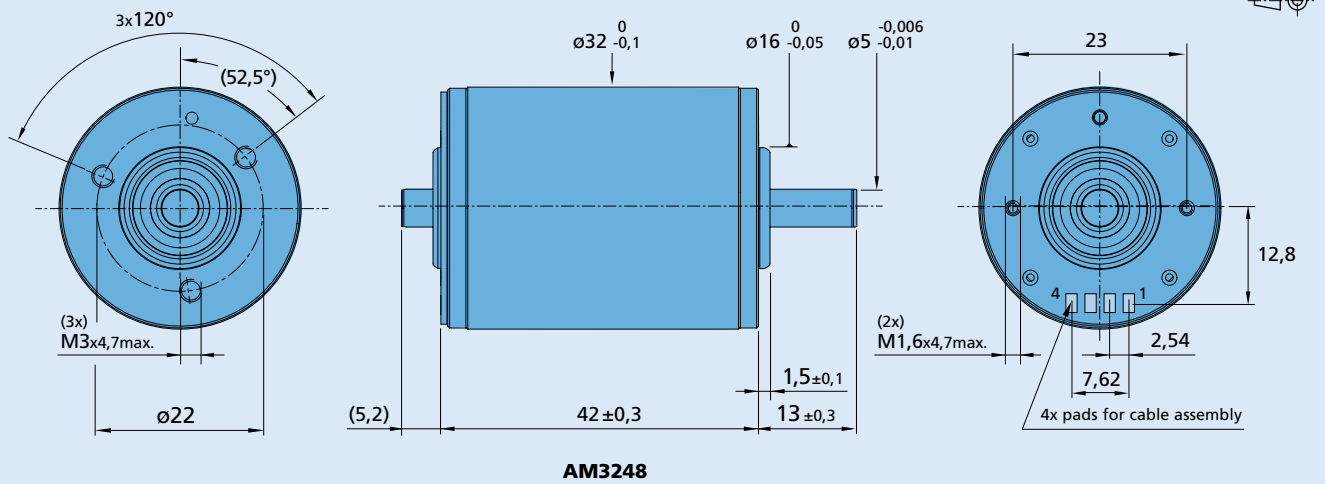
²⁾ 2 preloaded ball bearings available on request for vacuum / low temperature (bearing code: RC).

Driver settings

Curves measured with a load inertial of $1.49 \cdot 10^{-5}$ kgm² on the AM32482R070000 motor using a Trinamic TMC2130 controller with 256 micro-steps per full step and RMS current of 700mA.



Dimensional drawing



Options and connection information

Example product designation: **AM32482R070010**

Motor executions		Front shaft description	Connection	
front shaft	double shaft		No.	Function
00		Plain shaft (in case of a combination with encoder IE3-1024 an additional motor cable is mandatory)	1	Phase A +
10		Plain shaft for gearheads 32GPT and Linear Actuator 32L (in case of a combination with encoder IE3-1024 an additional motor cable is mandatory)	2	Phase A -
			3	Phase B +
			4	Phase B -

Option	Description
Single leads	PTFE single leads length 50/100/150/300 mm
Connector	PVC single leads length 50/100/150/300 mm or ETFE/PTFE single leads length 150 mm with connector Molex 51021-0400

Product combination

Precision Gearheads / Lead Screws	Encoders	Drive Electronics	Cables / Accessories
32GPT 32L ... TL 32L ... ML 32L ... SB 32L ... PB	IE3-1024	MCST 3601	Detailed cable options can be found in Application Note AN 010 to be downloaded on FAULHABER website.