NEW

FAULHABER

Motion Control Systems

V3.0, 4-Quadrant PWM
with EtherCAT interface

76 mNm
32 W

MCS 3242 ... BX4 ET

Values at 22°C and nominal voltage			MCS 3242G024BX4 ..	
Power supply for electronic	U_P		12 ... 50	V DC
Power supply for motor	U_{mot}		0 ... 50	V DC
Nominal voltage for motor	U_N		24	V
No-load speed (at U_N)	n_0		4 900	min^{-1}
Peak torque (S2 operation for max. 1s)	$M_{max.}$		150	mNm
Torque constant	k_m		41,4	mNm/A
PWM switching frequency	f_{PWM}		100	kHz
Efficiency electronic	η		95	%
Standby current for electronic (at 24V)	I_{el}		0,06	A
Shaft bearings		ball bearings, preloaded		
Shaft load max.:				
– with shaft diameter		5		mm
– radial at 3 000 min^{-1} (5 mm from mounting flange)		50		N
– axial at 3 000 min^{-1} (push / pull)		5		N
– axial at standstill (push / pull)		50		N
Shaft play:				
– radial		≤ 0,015		mm
– axial		= 0		mm
Operating temperature range		– 40 ... + 85		°C
Speed range (up to 30V)		1 ... 6 200		min^{-1}
Housing material		aluminium, stainless steel		
Protection class, with option V ring		IP 54		
Mass		356		g

Rated values for continuous operation				
Rated torque	M_N		76	mNm
Rated current (thermal limit)	I_N		1,82	A
Rated speed	n_N		2 800	min^{-1}

Note: Rated values are calculated with nominal voltage and at a 22°C ambient temperature.

Interface	... ET
Configuration from MotionManager 6.0	RS232
Fieldbus	EtherCAT

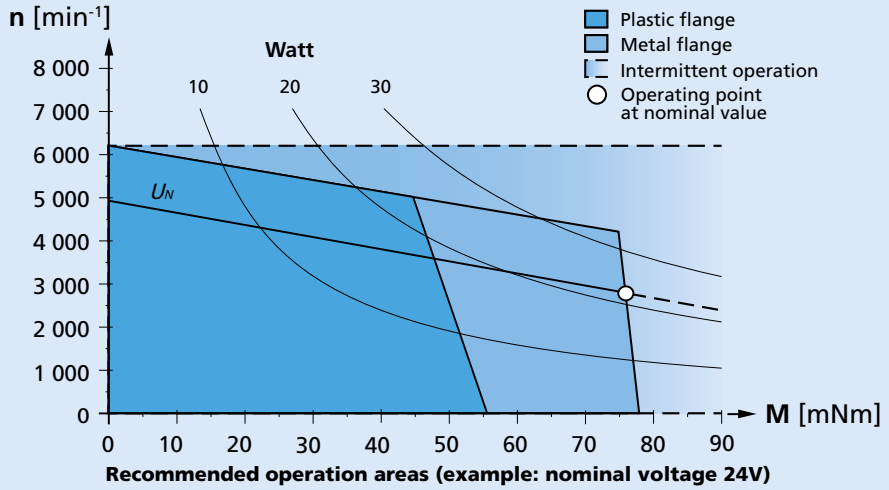
Range of functions	MCS
Operating modes	PP, PV, PT, CSP, CSV, CST and homing acc. to IEC 61800-7-201 or IEC 61800-7-301 as well as position-, speed- and torque control via analog setpoint or voltage controller
Speed range	see motor diagram
Application programs	Max. 8 application programs (BASIC), one of which is an autostart function
Additional functions	Touch-probe input, connection of a second incremental encoder, control of a holding brake
Indicator	LEDs for displaying the operating state Trace as recorder (scope function) or logger

Note:

The display shows the range of possible operation points of the drives at a given ambient temperature of 22°C.

The diagram indicates the recommended speed in relation to the available torque at the output shaft.
It includes the assembly on a plastic- as well as on a metal flange (assembly method: IM B 5).

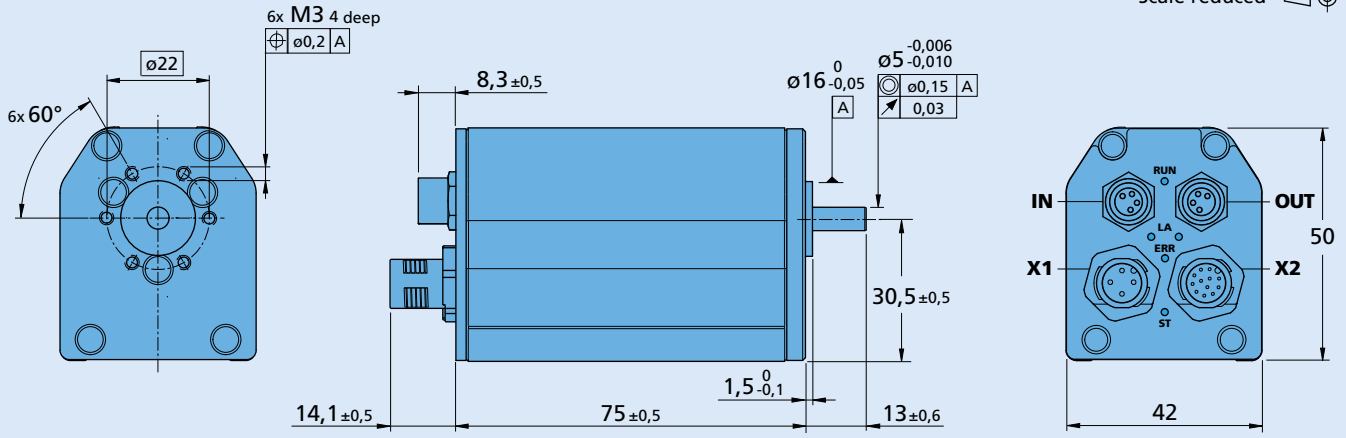
The nominal voltage linear slope describes the maximal achievable operating points at nominal voltage.
Any points of operation above this linear slope will require a supply voltage $U_{mot} > U_N$.



Recommended operation areas (example: nominal voltage 24V)

Dimensional drawing

Scale reduced



MCS 3242 G ... BX4 ET

Option, cable and connection information

Example product designation: **MCS3242G024BX4ET-5453**

Option	Type	Description
5452	Shaft seal	For use with oil emulsive substances
5453	Shaft seal	Splash water protected (IP54)

Connection

Name	Function	Inputs-outputs	Description
X1	Motor and electronic power supply		
X2	Inputs-outputs	DigIn1, DigIn2, DigIn3 DigOut1, DigOut2 AnIn1, AnIn2 U_{out} / GND	TTL or. PLC level max. 0,7A continuous current ± 10V against AGND 5V
IN	Fieldbus		EtherCAT IN
OUT	Fieldbus		EtherCAT OUT

Note: For details on the connection assignment, see device manual for the MCS.

Product Combination

Precision Gearheads / Lead Screws	Encoder	Drive Electronics	Cables / Accessories
32A 32/3 32/3S 38A BS32-2.0		Integrated	To view our large range of accessory parts, please refer to the “Accessories” chapter.