

# **Motion Control Systems**

## V2.5, 4-Quadrant PWM with RS232 or CANopen interface

## 25 mNm

13 W

2250 BX4 CxD					
Values at 22°C and nominal voltage	2250 S		012 BX4 CxD	024 BX4 CxD	
Power supply electronic	UB/UEL		8 30	8 30	V DC
Power supply motor <sup>1)</sup>	/U <sub>B</sub>		0 30	0 30	V DC
Nominal voltage for motor	UN		12	24	V
No-load speed (at $U_N$ )	no		5 500	5 700	min <sup>-1</sup>
Peak torque (S2 operation for max. 1s/2s)	Mmax.		44	50	mNm
Torque constant	kм		19	36,9	mNm/A
PWM switching frequency	fрwм		78	78	kHz
Efficiency electronic	η		95	95	%
Standby current for electronic (@ UN)	Ie/		0,04	0,04	A
Speed range (up to 24V / 30V)			1 8 500	1 7 500	min <sup>-1</sup>
Shaft bearings		ball bearings, preloaded			
Shaft load max.:					
<ul> <li>with shaft diameter</li> </ul>		3			mm
<ul> <li>radial at 3 000 min<sup>-1</sup> (5 mm from mounting flange)</li> </ul>		20			N
– axial at 3 000 min <sup>-1</sup> (push / pull)		2			N
<ul> <li>axial at standstill (push / pull)</li> </ul>		20			N
Shaft play:					
– radial		≤ <b>0,015</b>			mm
– axial		= 0			mm
Operating temperature range		-25 +85			°C
Housing material		stainless steel			
Mass		117			g
					-
		<b>、</b>			

<sup>1)</sup> Only available for option 2993 (separate power supply)

### Rated values for continuous operation Rated torque МN 25 mNm 22 Rated current (thermal limit) 1,38 0,77 А IN Rated speed 3 900 4 500 min<sup>-1</sup> пN

Interface / range of functions	CSD	COD	
Configuration from Motion Manager 5.0	RS232	CANopen	
Fieldbus	RS232	CANopen	
Operating modes (CSD)	Position/speed/torque control via interface or analogue set value specification. Operati-		
	on as servo amplifier in voltage controller mode.		
Operating modes (COD)	Profile Position Mode (PP), Profile Velocity Mode (PV), Homing Mode, Cyclic Synchro-		
	nous Position Mode (CSP)		
Speed range	see motor diagram		
Application programs, (CSD)	Command sequences from movement and control commands can be placed directly into		
	the controller as user programs.		
	Enables stand-alone operation without a connected communication interface.		
Additional functions	Overload protection for electronics and motor, self-protection from overheating, over-		
	voltage protection in generator mode.		
	the controller as user programs. Enables stand-alone operation without a connected communication interface. Overload protection for electronics and motor, self-protection from overheating, over-		

### Note:

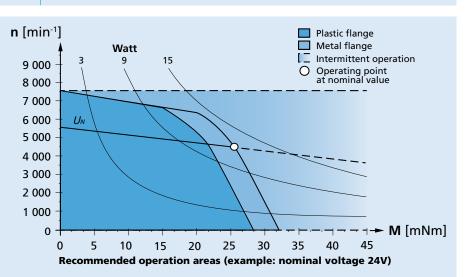
The display shows the range of possible operation points of the drives at a given ambient temperature of 22°C.

The diagram indicates the recommended speed in relation to the available torque at the output shaft.

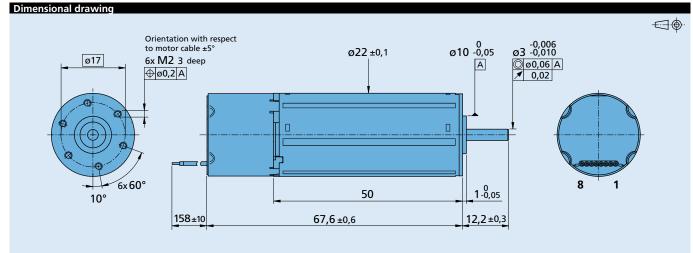
It includes the assembly on a plastic- as well as on a metal flange (assembly method: IM B 5).

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  $U_{mot} > U_{N.}$ 







## 2250 ... BX4 CSD/COD

## Option, cable and connection information

Example p	Example product designation: 2250S024BX4CSD-2993						
Option	Туре	Description	Connection				
			No. Function				
3830	Connector	AWG 26 / PVC ribbon cable with connector MOLEX Microfit 3.0, 43025-0800, recommended mating connector 43020-0800	1     Connection No. 3       2     Us       3     GND       4     Analog input       5     Analog GND				
2993	Supply	Separate voltage supply for motor and electronics	6         Fault output           7         RS232 RXD / CAN_L           8         RS232 TXD / CAN_H				
			<b>Standard cable</b> PVC ribbon cable 8 x AWG 26, 1,27 mm				
			<b>Note:</b> For details on the connection assignment, see device manual MCS.				

Product combination								
Precision Gearheads / Lead Screws	Encoders	Drive Electronics	Cables / Accessories					
22GPT 22/7 26A 32GPT 22L ML 22L PB 22L SB 32L ML 32L PB 32L SB 32L TL		Integrated	To view our large range of accessory parts, please refer to the "Accessories" chapter.					