Motion Control Systems

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

71 mNm
73 W

3564 ... B Cx

Values at 22°C and nominal voltage	3564 K		024B Cx	
Power supply electronic	U_B/U_{EL}		12 ... 30	V DC
Power supply motor [1]	--/U_B		0 ... 30	V DC
Nominal voltage for motor	U_N		24	V
No-load speed (at U_N)	n_0		11 000	min^{-1}
Peak torque (S2 operation for max. 3s)	$M_{max.}$		142	mNm
Torque constant	k_M		20,2	mNm/A
PWM switching frequency	f_{PWM}		78	kHz
Efficiency electronic	η		95	%
Standby current for electronic (at U_B=24V)	I_{el}		0,055	A
Speed range (up to 30V)			1 ... 14 000	min^{-1}
Shaft bearings		ball bearings, preloaded		
Shaft load max.:				
– with shaft diameter		4		mm
– radial at 3 000 min^{-1} (5 mm from mounting flange)		112		N
– axial at 3 000 min^{-1} (push only)		50		N
– axial at standstill (push only)		131		N
Shaft play:				
– radial		≤ 0,015		mm
– axial		= 0		mm
Operating temperature range		-30 ... +85		°C
Housing material		motor: aluminium, black anodized; controller housing: zinc		
Mass		510		g

[1] Only available for option 2993 (separate power supply)

Rated values for continuous operation				
Rated torque	M_N		71	mNm
Rated current (thermal limit)	I_N		3,75	A
Rated speed	n_N		7 700	min^{-1}

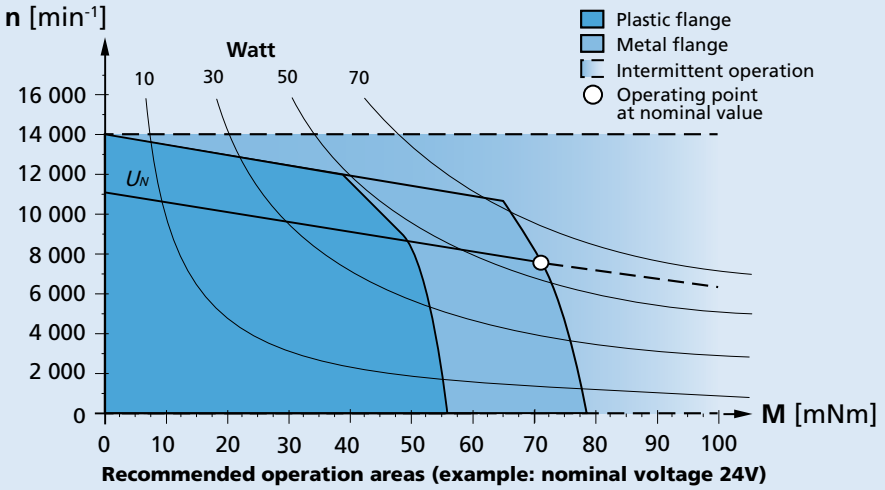
Interface / range of functions	... CS	... CC/CO
Configuration from Motion Manager 5.0	RS232	CANopen
Fieldbus	RS232	CANopen
Operating modes (CS/CC)	Position/speed/torque control via interface or analogue set value specification. Operation as servo amplifier in voltage controller mode.	
Operating modes (CC/CO)	Profile Position Mode (PP), Profile Velocity Mode (PV), Homing Mode.	
Speed range	see motor diagram	
Application programs, (CS)	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, overvoltage protection in generator mode.	

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).

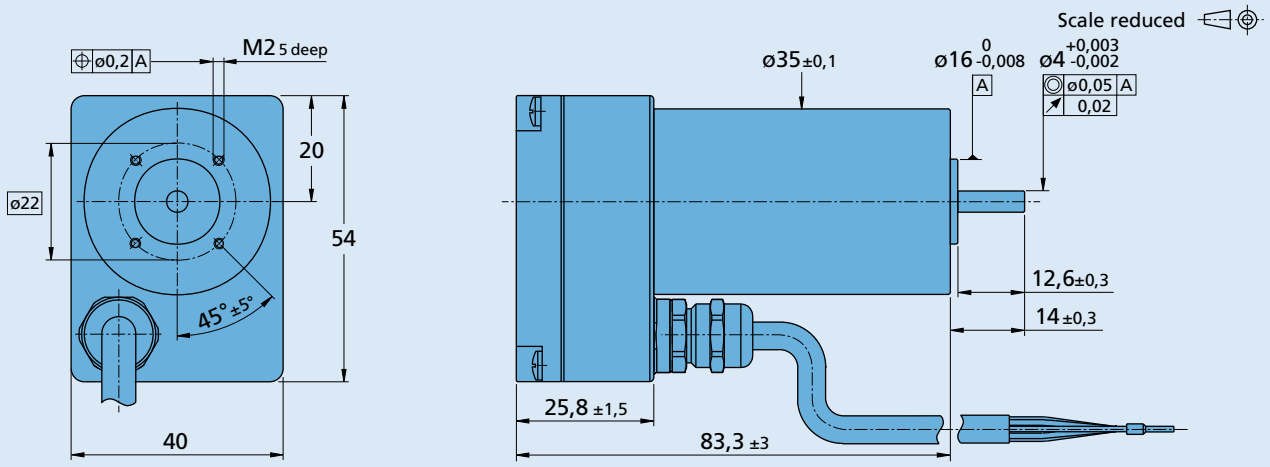
The nominal voltage linear slope describes the maximal achievable operating points at nominal voltage.
Any points of operation above this linear slope will require a supply voltage $U_{mot} > U_N$.



Recommended operation areas (example: nominal voltage 24V)

For notes on technical data and lifetime performance refer to "Technical Information".

Dimensional drawing



3564 ... B CS/CC/CO

Option, cable and connection information

Example product designation: **3564K024BCS-2993**

Option	Type	Description
2993	Supply	Separate voltage supply for motor and electronics

Connection

Wires	Function
blue	GND
pink	U_B
brown	Analog input
white	Fault output
grey	Analog GND
yellow	RS232 RXD / CAN_L
green	RS232 TXD / CAN_H
red	Connection No. 3

Standard cable
PVC-cable, 8-conductors AWG 24, length 1 meter

Caution:
Connect motor supply terminals to the correct polarity. Electronics are protected against polarity reversal by an internal fuse. In case of damage, this internal fuse can only be replaced at the factory.

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

Product combination

Precision Gearheads / Lead Screws	Encoders	Drive Electronics	Cables / Accessories
30/1 30/1 S 32A 32ALN 32/3 32/3 R 38/1 38/1 S 38/2 38/2 S BS32-2.0		Integrated	To view our large range of accessory parts, please refer to the “Accessories” chapter.