

# Motion Control Systems

V3.0, 4-Quadrant PWM  
with RS232 or CANopen interface

76 mNm

32 W

## MCS 3242 ... BX4 RS/CO

Values at 22°C and nominal voltage	MCS 3242G	024BX4 RS/CO	
Power supply electronic	$U_P$	12 ... 50	V DC
Power supply 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 <sup>-1</sup>
Peak torque (S2 operation for max. 14s)	$M_{max.}$	150	mNm
Torque constant	$K_M$	41,4	mNm/A
PWM switching frequency	$f_{PWM}$	100	kHz
Efficiency electronic	$\eta$	95	%
Standby current for electronic (at $U_P=24V$ )	$I_{el}$	0,06	A
Speed range (up to 30V)		1 ... 6 200	min <sup>-1</sup>
Shaft bearings	ball bearings, preloaded		
Shaft load max.:			
– with shaft diameter	5		mm
– radial at 3 000 min <sup>-1</sup> (5 mm from mounting flange)	50		N
– axial at 3 000 min <sup>-1</sup> (push / pull)	5		N
– axial at standstill (push / pull)	50		N
Shaft play:			
– radial	≤ 0,015		mm
– axial	= 0		mm
Operating temperature range	-40 ... +100		°C
Housing material	aluminium, stainless steel		
Protection class, with option V ring	IP54		
Mass	340		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 <sup>-1</sup>

Interface / range of functions	... RS	... CO
Configuration from Motion Manager 6.0	RS232	CANopen
Fieldbus	RS232	CANopen
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  $U_{mot} > U_N$ .



