



MAGNUM 400®



STAND ALONE BRUSHLESS SERVODRIVE

MAGNUM 400®

Stand alone full digital servodrive 380÷480 Vac power supply range. Direct off-line. Driving motor ranges up to 32 Nm encoder or resolver feedback.

STANDARD FEATURES

- ✓ 380÷480 Vac power supply with EMC line filter and in-rush circuit on-board
- ✓ Regen circuit with internal power resistor
- ✓ **Speeder-One®** software interface (Windows 98/2000/XP based)
- ✓ Parameter setting by four keys on the front panel or RS232 (optoisolated)
- ✓ Optical isolation between power stage and signals
- ✓ Feedback modes: - resolver (2-4-6-8 poles) sw encoder emulation
- encoder (max 250 KHz) sw divideble encoder emulation

OPTIONS

- ✓ **CBMD CAN BUS** - CAN V2.0B (°) + RS232 to CAN BUS multidrop CAN OPEN protocol implementations: DS301-V4.02 - DSP402-V2.0
- ✓ **RS 485** interface, Mod Bus-RTU based (°), 230 kbps max
- ✓ **ER** Encoder and Resolver feedbacks (both)
- ✓ Boosted dumping resistors (external)
- ✓ **SEF** Safety Enable Function (according to EN954-1/cat.3)
- ✓ **RXDB** Black-out dynamic brake function (with internal power resistor)
- ✓ **HBD** Internal Holding Brake Drive Circuitry

SPECIFICATIONS

- ✓ Nominal switching frequency: 8 KHz
- ✓ Output frequency: 0 ÷ 500 Hz
- ✓ Current loop bandwidth: 2 KHz
- ✓ Velocity loop bandwidth: 200 Hz
- ✓ Operating mode
 - Velocity reference (differential): ±10 Vdc (15 bit resolution)
 - Pulse /direction (for stepper motor control)
 - Torque control
 - Position control
 - Encoder following
- ✓ 9 opto-isolated digital inputs: 24 Vdc - 7mA (PLC compatible)
- ✓ 2 opto-isolated digital outputs: 24 Vdc - 50mA max (PLC compatible)
- ✓ 2 analog outputs (programmable)
- ✓ Motor current monitor: ±10Vdc (at peak current)
- ✓ Motor speed monitor: ±10Vdc (at max speed)
- ✓ Relé ok output contacts: 30 Vac/dc - 500 mA max
- ✓ Ambient temperature
 - operating at rated data: 0 ÷ 45°C (no derating)
 - rated and peak current derating: 45 ÷ 55°C (2.5% / °C)
 - maximum operating: 55°C max
 - storage: -20 ÷ 55°C
- ✓ Humidity (w/out condensation): 85% max (operating & storage)
- ✓ Altitude A.M.S.L.
 - operating at rated data: 1000 m
 - rated and peak current derating: 1000 ÷ 2500 m (1.5 %/100m)
- ✓ Enclosure protection: IP20
- ✓ Storage duration: 1 year max*



Typical Applications are:
Conveyors, Medical, Textile Equipment, Packaging Machinery, Positioners, Converting Machinery, Feeders.

ACCESSORIES

(see specific data sheets for details)

- ✓ **SERVOMOTORS:**
 - SUPER SAX: 0.35÷30 Nm
- ✓ **MOTOR CABLES:**
 - CBLS: pre-assembled shielded power and feedback cables
- ✓ **MOTOR CHOKE:**
 - LXT: for power cable longer than 25 m
- ✓ **EXTERNAL REGEN RESISTORS**

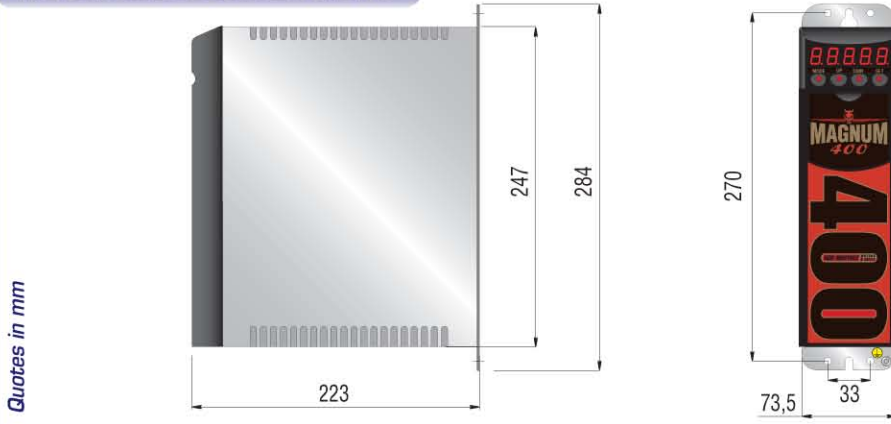
NOTE:

*: After 1 year storage duration the internal electrolytic power capacitors must be re-formed. Contact Axor's technical department for details.

MODEL	MAGNUM 400					
SIZE	1.5 / 3	3.5 / 7	7 / 14	10 / 20	14 / 28	20 / 40
Rated Current (Arms)	1.5	3.5	7	10	14	20
Peak Current (Arms) x 5 sec.	3	7	14	20	28	40
F1: Supply Line Fuses (T-type = time-lag)	4A / 500V	6A / 500V	8A / 500V	10A / 500V	16A / 500V	20A / 500V
Power Supply (3PH) (grounded systems only)	3 x 380 VAC (-10%) ÷ 480 VAC (+10%) 50/60 Hz (single-ph 230 Vac permitted for setup only)					
Logic Supply (from insulating transformer)	24 Vdc (-0% +15%) - 1 Adc (3 Adc with brake)					

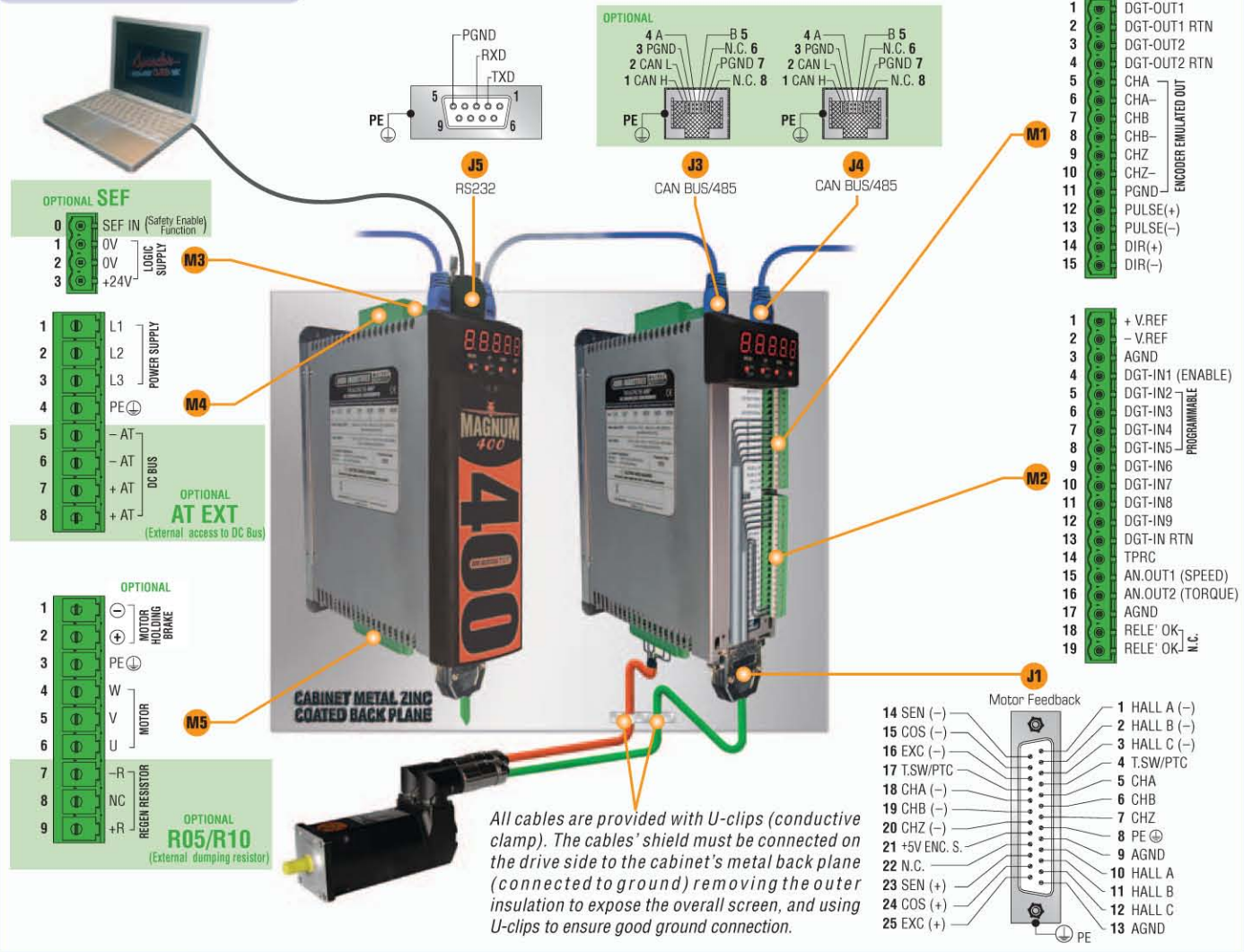
Drawings are not to scale

MECHANICAL DIMENSIONS



REFERENCES	WEIGHT
MAGNUM 400	
SIZE	kg
1.5 / 3	4.2
3.5 / 7	
7 / 14	
10 / 20	4.6
14 / 28	
20 / 40	

CONNECTION DIAGRAM



ORDERING CODE

Example: **M 400 - 20/40 - RXX - S - RO - 000000 - XX - Sxxx 00000/00000**

NAME: Drive model		PROTECTION:		FEEDBACK:		EXPANSION CARDS:	
SIZE: see table on reverse		S = Standard	T = Tropicalized	RO = Resolver	EC = Encoder	XX = Not present (std)	
		ER = Encoder or Resolver (both)		ADDITIONAL FEATURES:		FIRMWARE VERSION	
		DUMPING SIZE:		CBMD CAN BUS+MULTIDROP		SETTING FILE	
		RXX = Internal standard resistor		1 = Present (opt)		SPECIFIC NUMBER PRESENCE (opt):	
		R05 = 500W external resistor (opt)		0 = Not present (std)		S xxx	
		66Ω (for 1.5 / 3 to 7 / 14 sizes)		RS485 Interface		001=999= specific number	
		33Ω (for 10 / 20 to 20 / 40 sizes)		1 = Present (opt)			
		R10 = 1000W external resistors (opt)		0 = Not present (std)			
		33Ω + 33Ω 500W (for 1.5 / 3 to 7 / 14 sizes)		HBD Holding Brake Drive			
		66Ω // 66Ω 500W (for 10 / 20 to 20 / 40)		1 = Present (opt)			
				0 = Not Present (std)			
				RXDB Black Out dynamic brake function			
				(available for 1.5/3 to 7/14 sizes)			
				1 = Present (opt)			
				0 = Not present (std)			
				SEF Safety Enable Function			
				1 = Present (opt)			
				0 = Not Present (std)			

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Part number D.S./03.03./M400/06