



# 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 dividable 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**

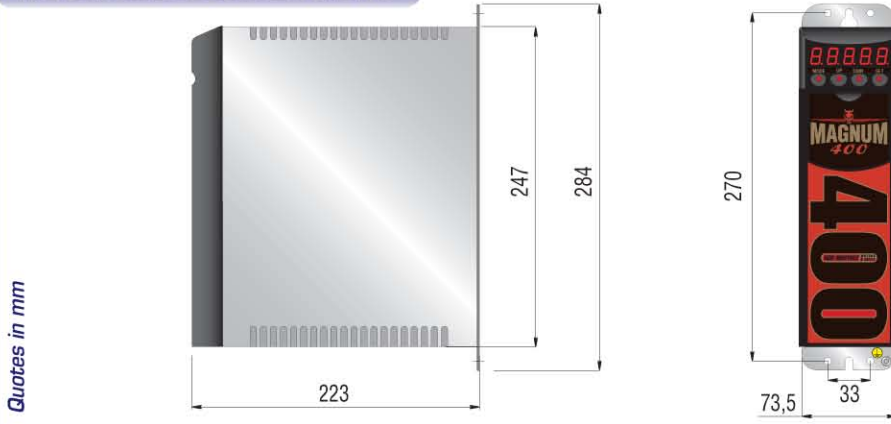
#### NOTE:

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

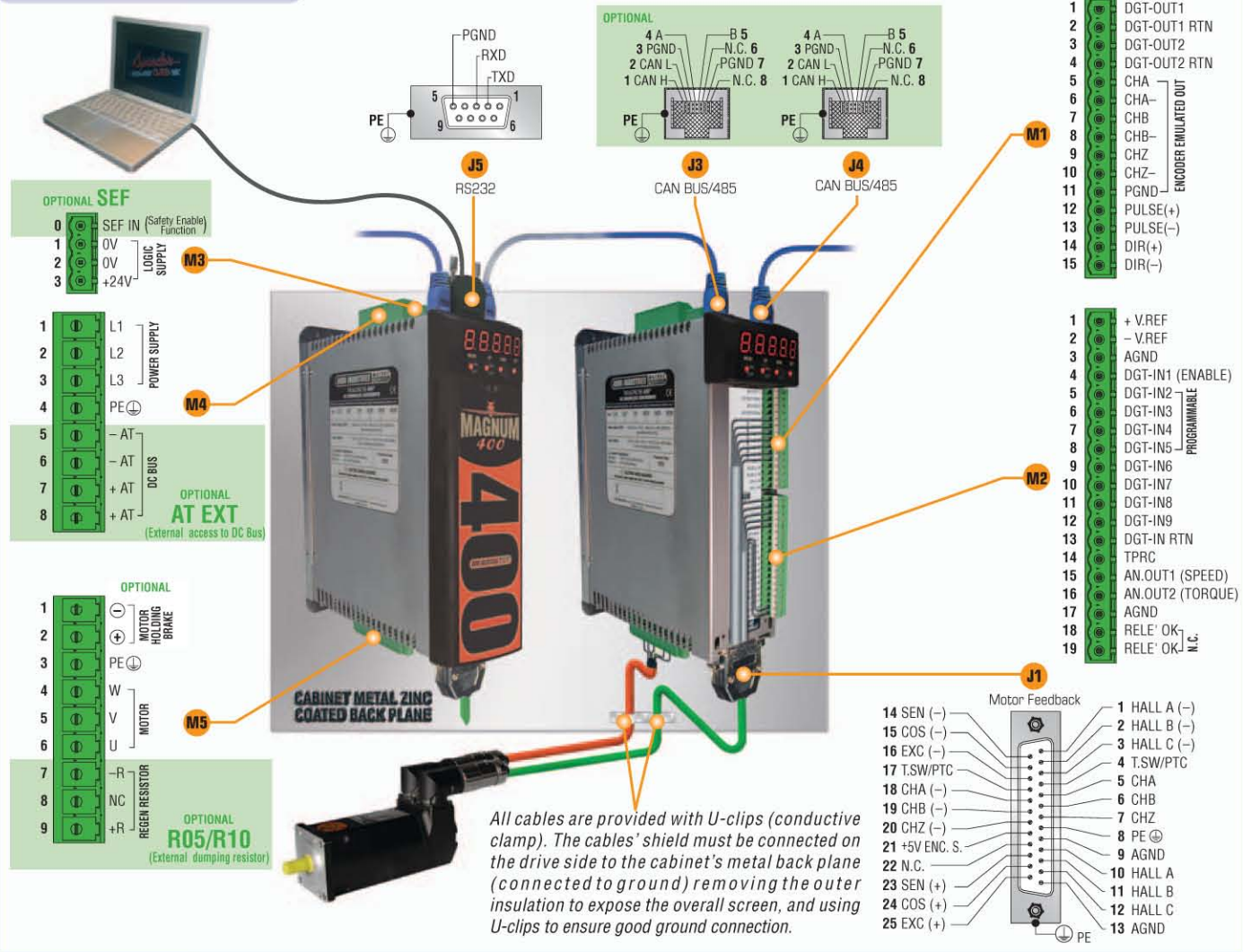
Drawings are not to scale

## MECHANICAL DIMENSIONS



REFERENCES	WEIGHT
<b>MAGNUM 400</b>	
<b>SIZE</b>	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)	
DUMPING SIZE:		CBMD CAN BUS+MULTIDROP		ADDITIONAL FEATURES:		AT EXT External DC Bus	
RXX = Internal standard resistor	R05 = 500W external resistor (opt)	1 = Present (opt)	0 = Not present (std)	0 0 0 0 0 0	1 = Present (opt)	0 = Not Present (std)	
66Ω (for 1.5 / 3 to 7 / 14 sizes)	33Ω (for 10 / 20 to 20 / 40 sizes)	RS485 Interface		HBD Holding Brake Drive		SPECIFIC NUMBER PRESENCE (opt):	
		1 = Present (opt)	0 = Not present (std)	1 = Present (opt)		S xxx	
R10 = 1000W external resistors (opt)	33Ω + 33Ω 500W (for 1.5 / 3 to 7 / 14 sizes)	RXDB Black Out dynamic brake function		SEF Safety Enable Function		001=999= specific number	
66 Ω // 66Ω 500W (for 10 / 20 to 20 / 40)		1 = Present (opt)	0 = Not present (std)	1 = Present (opt)			

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