



MINI MAGNUM 400®

SMALL PACKAGE BRUSHLESS SERVODRIVE



MINI MAGNUM 400®

Very compact full digital servodrive 380÷480 VAC power supply range. Driving motor ranges up to 7.5 Nm, encoder or resolver feedback.

STANDARD FEATURES

- ✓ On-board 3 PH, power supply 380÷480 VAC with EMC line filter and in-rush circuit
- ✓ Regen circuit with internal power resistors
- ✓ **Speeder-One®** software interface (Windows 98/2000/XP based)
- ✓ Parameter setting by four keys on the front panel or RS232 (optoisolated)
- ✓ Shielding cable connection directly to the front panel
- ✓ Optical isolation between power stage and signals
- ✓ Two motor feedback modes:
 - from resolver (2-4-6-8 poles) with encoder emulation (software)
 - from encoder (max 250 KHz) with dividable encoder emulation (software)

OPTIONS

- ✓ Motor-holding brake controlled directly by servodrive (logic enable only)
- ✓ CAN BUS - CAN V2.0B standard (° Optocoupled)
CAN OPEN protocol implementations:
 - part of the DS301-V4.02
 - part of the DSP402-V2.0
- ✓ RS 485 interface, Mod Bus-RTU based (° Optocoupled), 230 kbps max
- ✓ Slot for expansion card (many additional features available)
- ✓ Multidrop interface RS232 to CAN BUS
- ✓ Boosted dumping resistors (external)
- ✓ Safety Enable Function
- ✓ RXDB Black-out dynamic brake function (with internal power resistor)

SPECIFICATIONS

- ✓ Nominal switching frequency: 8 ÷ 16 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 controls)°
 - Torque control
 - Position control
 - Encoder follower°
- ✓ 4+5° opto-isolated digital inputs: 24 Vdc - 7mA (PLC compatible)
- ✓ 1+1° 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÷7.5 Nm
- ✓ **MOTOR CABLES:**
 - CBLs: pre-assembled shielded power and feedback cables
- ✓ **MOTOR CHOKE:**
 - LXT: for power cable longer than 25 m
- ✓ **EXPANSION CARDS**

NOTE:

- *: After 1 year storage duration the internal electrolytic power capacitors must be re-formed. Contact Axor's technical department for details.
- : Additional features with optional "M3" connector.

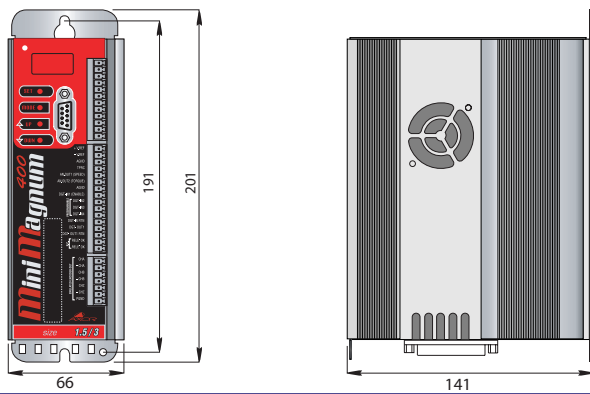
MODEL	MINI MAGNUM 400		
SIZE	1.5 / 3	3.5 / 7	5 / 10
Rated Current (Arms)	1.5	3.5	5
Peak Current (Arms) x 5 sec.	3	7	10
F1: Supply Line Fuses (T-type = time-lag)	4A / 500V	6A / 500V	10A / 500V
Power Supply (VAC) (3PH) (grounded systems only)	3 x 380 VAC (-10%) ÷ 480 VAC (+10%) 50/60 Hz		
Logic Supply (from insulating transformer)	24 Vdc (-0% +15%) - 1 Adc		

PRELIMINARY



Drawings are not to scale

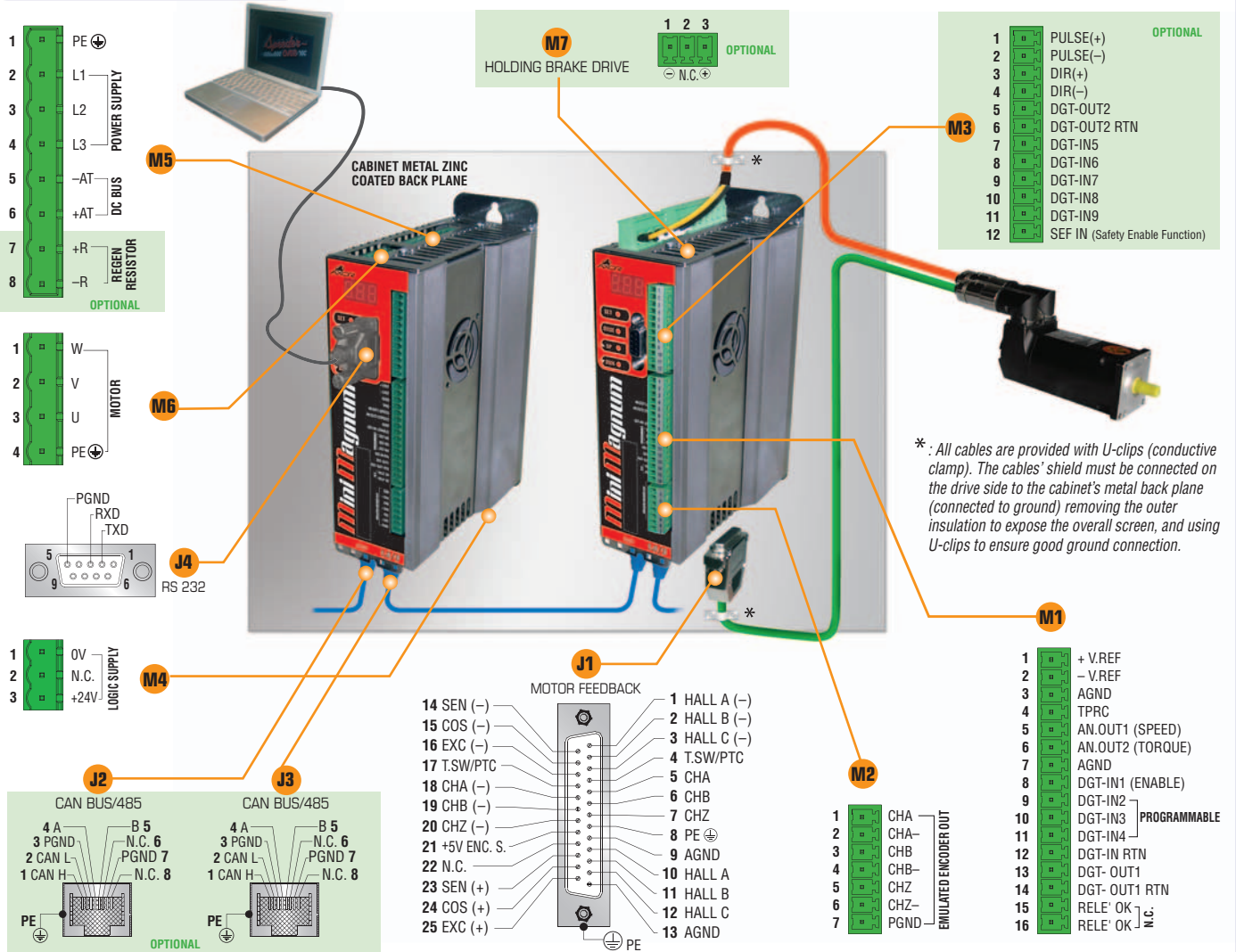
MECHANICAL DIMENSIONS



Quotation on mm

REFERENCES	WEIGHT
MINI MAGNUM	kg
SIZE	
1.5 / 3	1.750
3.5 / 7	
5 / 10	

CONNECTION DIAGRAM



PROBING

ORDERING CODE

Example:

MINI MGM 400 - 3.5 / 7 - RXX - S-RO - 0000X - 0X - Sxxx 00000 / 00000

HARDWARE

SOFTWARE

NAME: Ac Brushless Drives

SIZE: 1.5/3 3.5/7 5/10

DUMPING SIZE:

RXX = Internal standard resistor

R5 = 500W-66Ω external resistor (opt)

R10 = 1000W-33Ω + 33Ω 500W external resistors (opt)

PROTECTION:

S= Standard

T= Tropicalized

FEEDBACK:

RO = Resolver

EC = Commutation encoder

ADDITIONAL FEATURES:

0 0 0 0 X

CBMD: CAN BUS+ MULTIDROP Interface
1= Present (opt)
0= Not present (std)

RS485 Interface
1= Present (opt)
0= Not present (std)

RXDB: Black Out dynamic brake function
1= Present (opt)
0= Not present (std)

Additional Connector M3
1= Present (opt)
0= Not Present (std)

SEF: Safety Enable Function
1= Present (opt)
0= Not Present (std)

EXPANSION CARDS:

0 X

Not in use
Holding Brake Drive:
1= Present (opt)
0= Not Present (std)

SPECIFIC NUMBER PRESENCE (opt):

S xxx

001-999= specific number

FIRMWARE VERSION

SETTING FILE

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