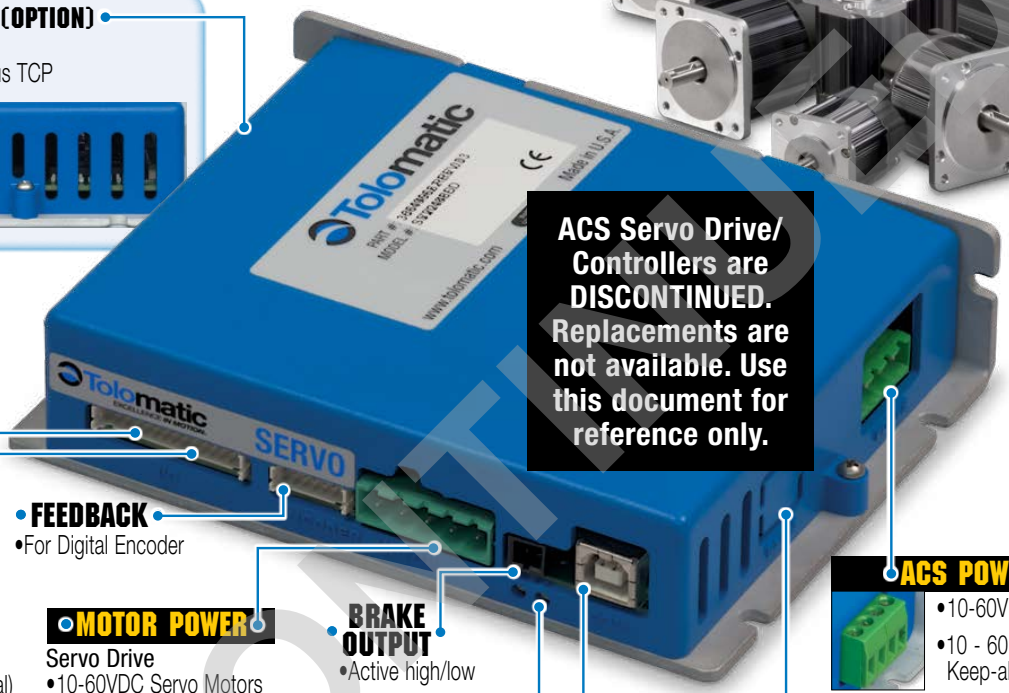
Tolomatic™
EXCELLENCE *IN MOTION*

ENDURANCE TECHNOLOGY℠

ACS SERVO DRIVE / CONTROLLER & SERVO MOTORS

ACS

The ACS is an extremely easy-to-use servo drive / controller and motor developed specifically to be used with electric actuators. Mounted, configured and tested as a complete motion system when ordered with any Tolomatic electric actuator. The ACS can be controlled with simple digital I/O, analog input or robust industrial ethernet.



ETHERNET (OPTION)
Protocols:
- EtherNet/IP
- Modbus TCP

DIGITAL I/O
- 8 Digital Inputs
- 4 Digital Outputs
- 24 VDC Opto-Isolated
- Sourcing or Sinking
- Configurable Inputs

ANALOG I/O
- 0-10 VDC or 4-20mA
- 1 Analog Input
- 1 Analog Output (optional)

FEEDBACK
- For Digital Encoder

MOTOR POWER
Servo Drive
- 10-60VDC Servo Motors
- 10 A Continuous / 20 A Peak

BRAKE OUTPUT
- Active high/low

LED INDICATORS
- Motor Power & Fault indicators

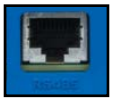
COM PORT
- USB Com Port

ACS Servo Drive/ Controllers are DISCONTINUED. Replacements are not available. Use this document for reference only.

ACS POWER

- 10-60VDC
- 10 - 60 VDC Keep-alive Power
- 24 VDC Brake Power

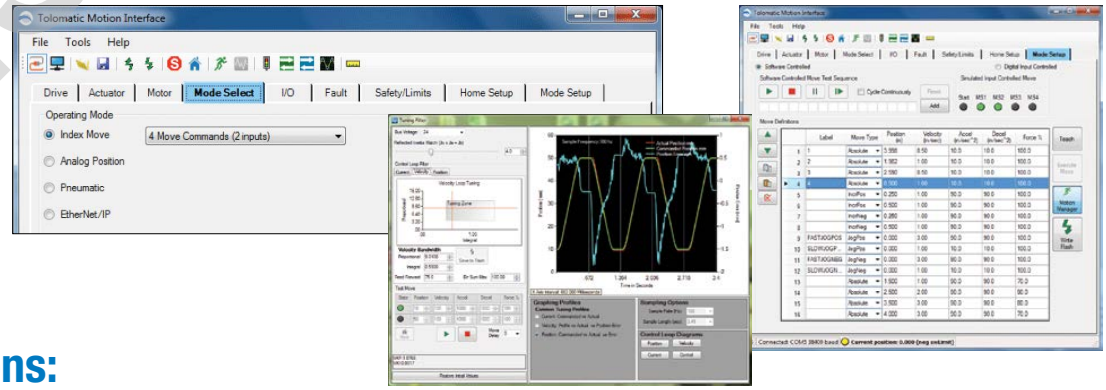
RS485 COM PORT



- Modbus RTU (Base Model)

Easy to Use Operating Modes & Configuration Software

OPERATING MODES
- Index position via digital I/O
- Pneumatic Logic
- Analog Position
- Ethernet
  - EtherNet/IP
  - Modbus TCP
- Supports rotary actuator: position and velocity moves



Available Options:

Cables
3m, 5m or 10m lengths

Planetary Gearboxes
Available ratios - 3:1, 5:1, 10:1

Power Supply
48 VDC; 5 Amp or 10 Amp

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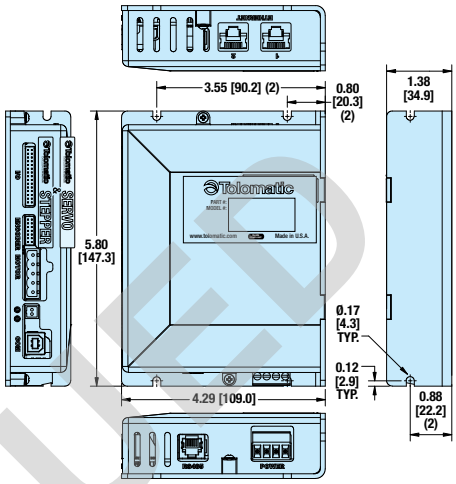
Drive Specifications

DRIVE POWER	
Current - Continuous (Max)	10A
Current - Peak (Max)	20A
Voltage Nominal	10V - 60V
Over Voltage	65V
Under Voltage	9V
Absolute Maximum Voltage	70V
Logic Current Draw (24V)	200 mA

OPERATING CONDITIONS	
Ambient Temperature	25°C Nominal
Operating Temperature	0 - 40°C
Storage Temperature	0-70°C
Humidity	0 - 90% non-condensing
Weight	0.27 kg

See ACS Hardware and Installation Guide (Servo #3604-4181) for more details.

Dimensions



Motor Specifications

Servo Motors	Units	NEMA 23			NEMA 34	
		AMV2C1A1	AMV2C2A1	AMV2C3A1	AMV2D1A1	AMV2D2A1
Continuous Torque	N-m	0.30	0.50	0.81	0.68	1.12
Peak Torque	N-m	0.59	1.00	1.73	1.36	2.23
Resistance	Ohms	0.23	0.205	0.616	0.25	0.208
Inductance	mH	0.244	0.305	0.915	0.325	0.399
Torque Constant (Kt)	N-m/A	0.034	0.058	0.100	0.078	0.129
Back EMF Constant (Ke)	V/kRPM	3.570	6.06	10.5	8.190	13.5
Max. Continuous Current	Amps	10	10	9.32	10	10
Max. RPM	RPM	6,000	6,000	6,000	5,000	5,000
Rotor Inertia	kg-mm^2	7.02	14.05	14.05	70.53	148.37
Motor Weight	kg	0.63	0.93	0.93	1.41	2.09
Motor Poles		8				
Max Case Temp		85°C				
Encoder		Differential 500 lines/rev (2000 counts per rev)				

See ACS brochure (#3600-4185) for dimensions and more details.

3D CAD available at www.tolomatic.com
Always use configurated CAD solid model to determine critical dimensions

MADE IN U.S.A.

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