

### Specifications

		23S...-0	23M...-0	23L...-0	34M...-1	34L...-1
Input Power, Nominal ( $\pm 10\%$ )	VDC	14-48				
Input Power, Current Maximum	A	4.5				
Auxiliary Input Power, Nominal ( $\pm 10\%$ )	VDC	6-24				
Auxiliary Input Power, Maximum	W	1				
Resistance	ohm	0.75	0.75	1.2	0.35	0.49
Inductance	mH	2.2	3.1	6.2	3	5.4
Detent Torque	mNm	40	70	120	250	350
Overhang Load Limit	kg	0.6	1	1.5	2.7	3.8
Rotor Inertia	$g \cdot cm^2$	260	460	750	1850	2750
Continuous Output Current	A	4.5				
Peak Output Current (application dependent)	A	6.5				
Step Angle	deg	1.8				
Magnetic Encoder, Resolution	ppr	4096				
Circuit Loss	W	6				
Weight	kg	0.6	1.0	1.5	2.7	3.8
Connection Hardware Screw Size/Torque	Nm	3	3	3	5.2	5.2
Under-Voltage Trip, Nominal	VDC	Logic				
Over-Voltage Trip	VDC	Logic				

## Control

Feature	Specification	
<b>Operation Modes</b>	Selectable	Profile position, Velocity, Profile velocity, Profile torque, Homing, Cyclic synchronous position
<b>Display</b>		Bi-color LED
<b>Software Tools</b>	User Interface	ServoStudio Windows-based application
	Functions	Connection settings, Drive info, Power info, I/O configuration, Motion settings and tuning, Fault history/display
<b>Rotary Units</b>	Position	counts
	Velocity	rpm/100
	Acceleration/Deceleration	rpm/100/s

## Communication

Feature	Specification
<b>CANopen</b>	CANopen – CiA 301 application layer and CiA 402 device profile for drives and motion control Baud rate 10 kbps – 1 Mbps CAN ID 1 – 126 (Default 101) Heartbeat producer, SDO, PDO (variable mapping)

## Protection and environment

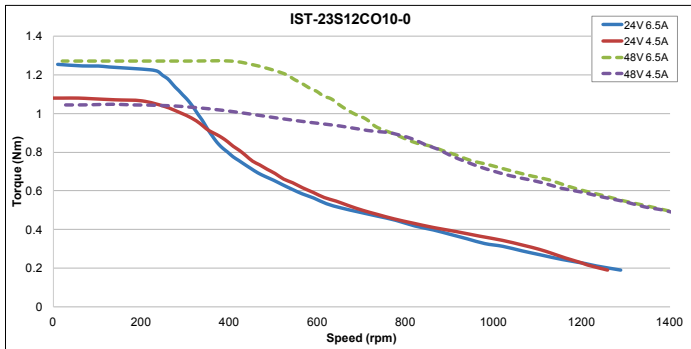
Feature	Specification
<b>Protective Functions</b>	I <sup>2</sup> T limit, Over-voltage, Under-voltage, Drive over-temperature, Over-speed, Velocity error, Position error, Magnet missing, Power stage fault, PLL lock lost, Position command error, Acceleration / deceleration violation
<b>Standards</b>	CE
	UL Pending
<b>Environment</b>	Ambient temperature: Operation 0 – 40°C, Storage 0 – 70°C Heat sink max. temperature: 100°C Motor max. temperature: 120°C
	Humidity: 10 – 90%
	Altitude: If in accordance with specified clearances, per IEC 61800-5-1, the stepIM is rated for use at altitudes up to 2000m
	Vibration: under review
<b>Operating Conditions</b>	Protection class: IP20 Pollution degree: 2 as per IEC 60664-1 Do not use where the following are present: corrosive gases, flammable gases, water, oil, chemicals, dust (including iron dust and salts)
<b>Configuration</b>	Flange mounting

## Inputs/Outputs

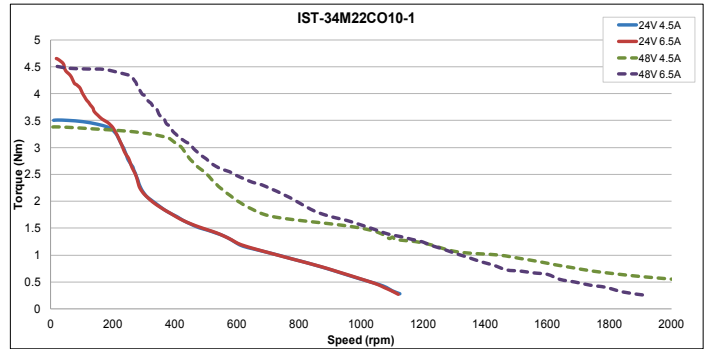
Feature	Specification		
<b>1x Analog Input</b>	Signal	Analog ±10 VDC differential	
	Functions	User define	
	Input Resolution	12 bit	
	Input Impedance	94 kΩ	
	Bandwidth (-3 db)	8 KHz	
<b>4x Digital Input</b>	Signal	Configurable opto-isolated. User defined compatibility with sinking output or sourcing output.	
	Functions	Homing, limit switch, remote enable, start motion command for profiled position operation mode	
	Voltage High Level Input	30 V	
	Min. High Level Input VIH	11 V	
	Max. Low Level Input VIL	5 V	
	Input Resistance	2.2 kΩ	
	Max. Input Frequency	1 kHz	
	Isolation Voltage	2500 Vrms	
	Max. Input Current	According to max. voltage level, input current is not limited, drive limits the input current	
	Propagation Delay Time	1 ms	
	<b>2x Digital Output</b>	Signal	Configurable open collector. User defined compatibility with either opto-isolated sinking output or sourcing output.
		Functions	Motor speed set, Current, Motor speed set clear, Regen resistor control, Motion completed, In position, Zero speed, Software position limit switch, Active, User selectable.
Voltage		30 V	
Max. Current		500 mA	
Min. Load Resistance		60 Ω	
Output Voltage (VO)		0.25 V	
Min. Propagation Delay Time		1 ms (may be longer if load current is lower)	

### Speed/torque charts

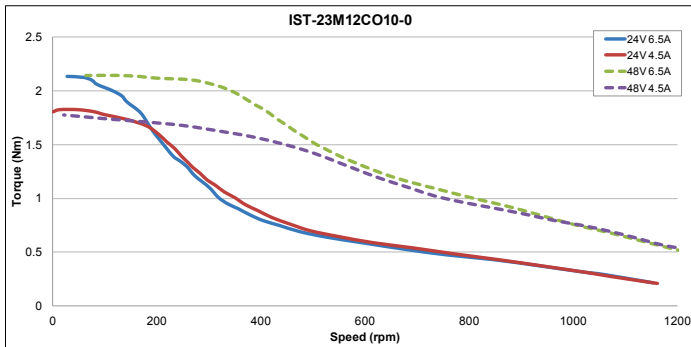
#### NEMA 23 Short



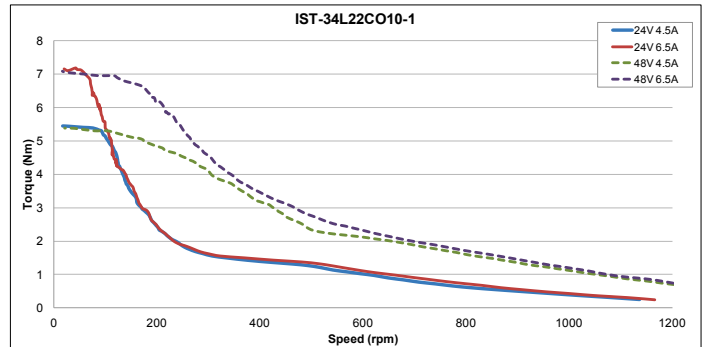
#### NEMA 34 Medium



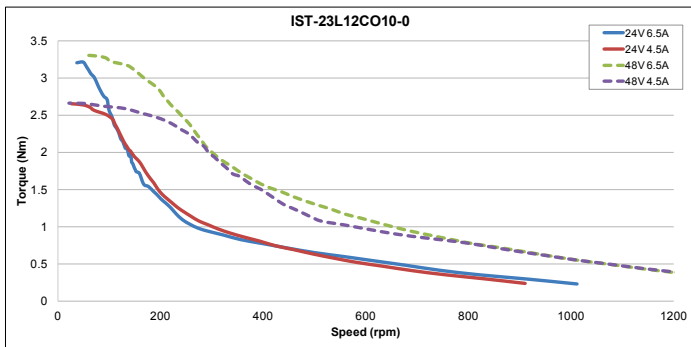
#### NEMA 23 Medium



#### NEMA 34 Long



#### NEMA 23 Long



### Ordering information

