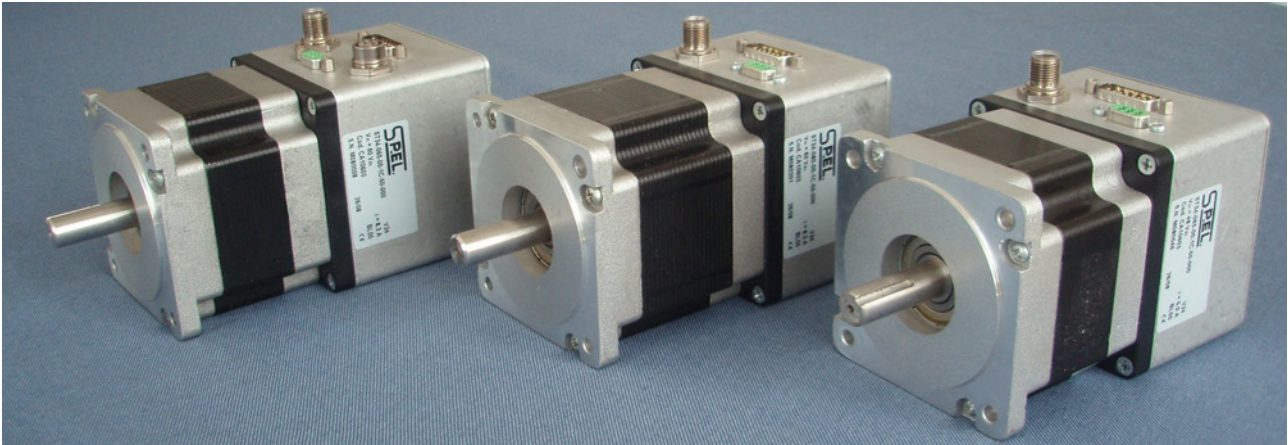


ST34

Integrated Step Motor



Integrated step motor represents ideal high tech low cost solution for industrial application designer which want the simplicity of the motor with on-board electronics. The integrated electronics simplifies cabling of machine, reducing problems due to electrical noise.

FEATURES

- Low cost.
- Bipolar chopper drive with microstepping facility.
- Open loop or closed loop control.
- Programmable step angle from 200 ppr (Full Step) up to 25600 ppr (1/128).
- Single power supply or dual power supply (optional).
- Clock/Dir or Bus communication control
- 6 Optocoupled input.
- 2 Open collector output (500 mA)
- Dedicated INPUT:
 - ✓ Clock.
 - ✓ Direction.
 - ✓ Enable.
- Protection :
 - ✓ Max. bus voltage.
 - ✓ Min. bus voltage.
 - ✓ Max. Temperature (electronic area).
 - ✓ Max. continuous over current (i^2t).
 - ✓ Following error (closed loop).
- RS485 or CanBus communication.
- Protocol : ModBus (RS485) or CanOpen (CanBus).
- Instruction list language (ModBus version) to create your programm (up to 512 instructions).
- Automatic current reduction.
- Firmware update by RS485.
- Special resident functions
 - ✓ Homing.
 - ✓ Rotary logic.
- EMI compliant.

GENERAL SPECIFICATIONS

Power Input voltage (+V)

Range..... +24 to +60 VDC

I/O

2 opto-coupled high speed digital inputs..... 400 KHz
 4 opto-coupled low speed digital inputs..... 5 KHz
 2 open collector output..... 500 mA
 Voltage range..... 0 to +24 VDC

Communication

Link..... RS485 / CanBus
 Protocol..... ModBus /CanOpen
 Baud Rate ModBus..... 19200 bps
 Baud Rate CanBus..... up to 1 Mb

Motion

Microstep resolution (open loop)..... up to 25600 step/rev.
 Optical encoder (closed loop)..... up to 5000 step/rev.

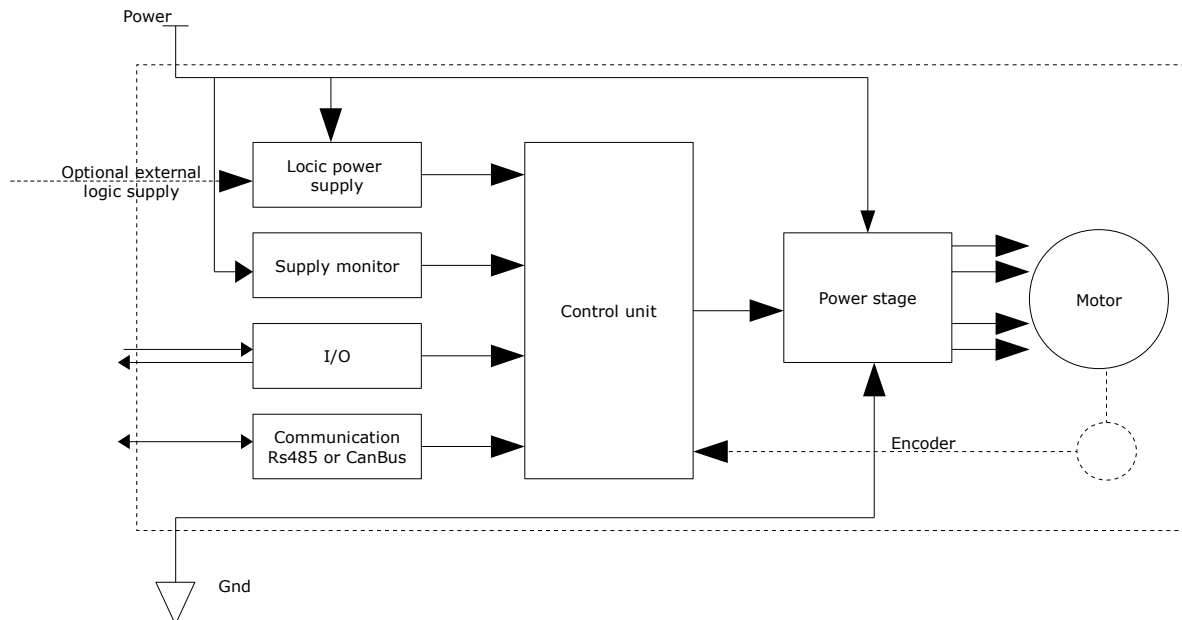
Protection

Over voltage..... 85 VDC
 Under voltage..... 18 VDC
 Over Temperature..... 85°C
 Motor Protection..... i^2t

Thermal consideration

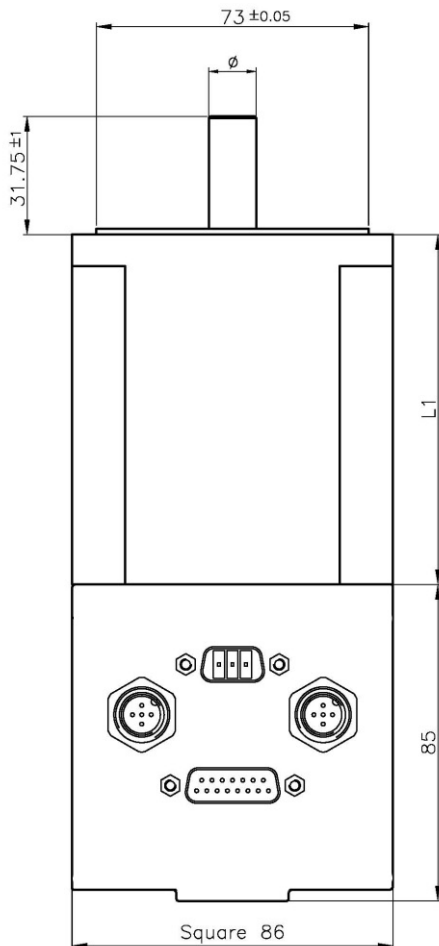
Working temperature depends on the thermal exchange between motor flange and mounting plate. For more information contact manufacturer

BLOCK DIAGRAM

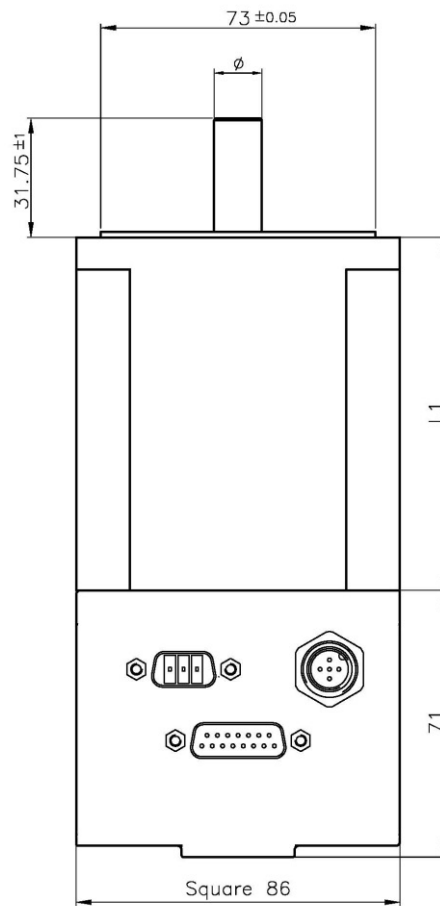


INTEGRATED MOTOR SPECIFICATIONS

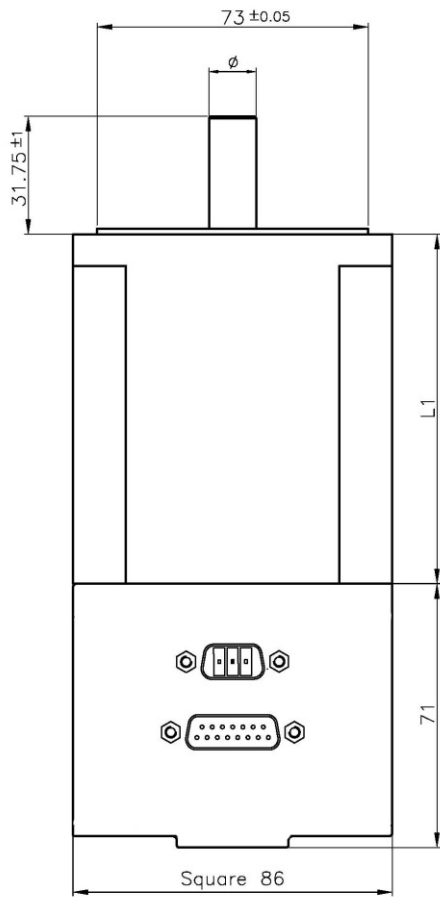
Motor type		065	080	096	156
Step angle		1,8°			
Step angle accuracy	%	±5%			
Max. radial force		220N @ 20mm from the flange			
Max. axial force		60N			
Detent Torque	Nm	0,08	0,12	0,20	0,36
Holding Torque	Nm	3,4	4,6	7	12,2
Rotor inertia	gr-cm ²	1000	1400	1600	4000
L1 = Length	mm	65	80	96	156
Ø = Shaft diameter	mm	12	12	12	15



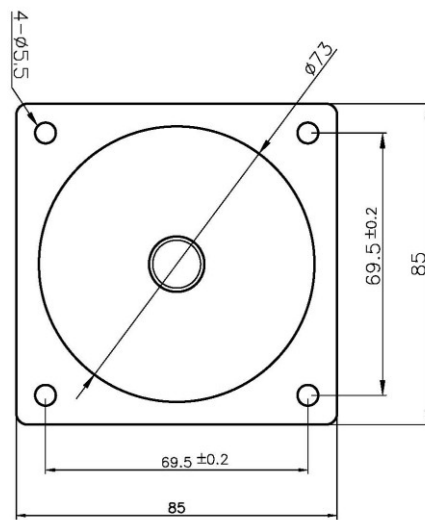
**2 canbus connectors
open/closed loop**



**1 canbus connectors
open/closed loop**



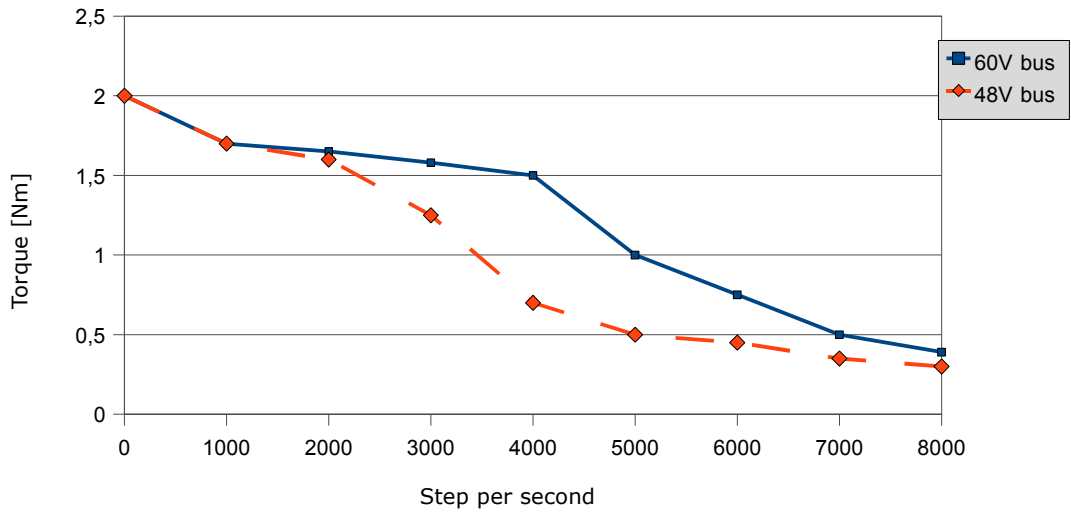
Modbus open/closed loop



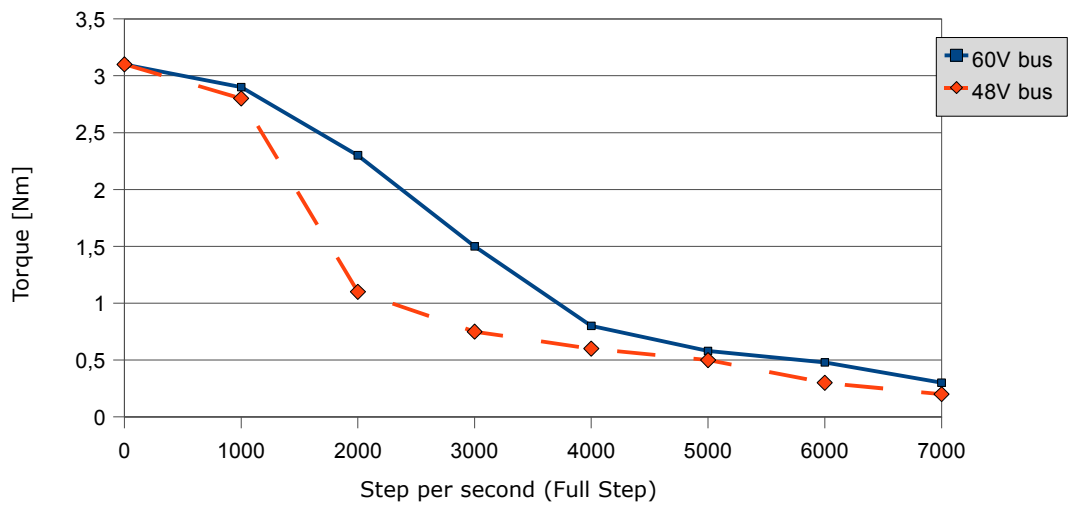
Flange

PULL OUT TORQUE CURVE

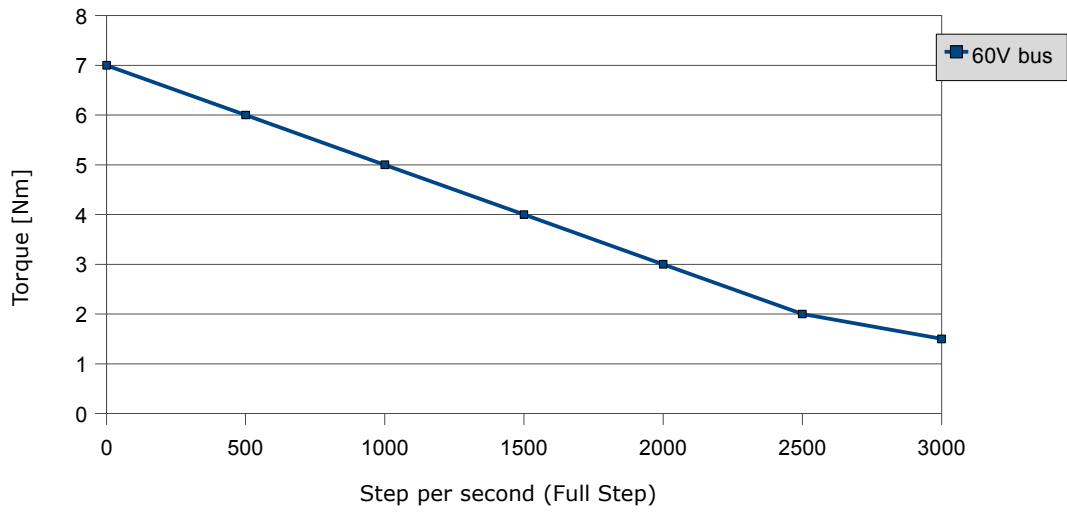
065



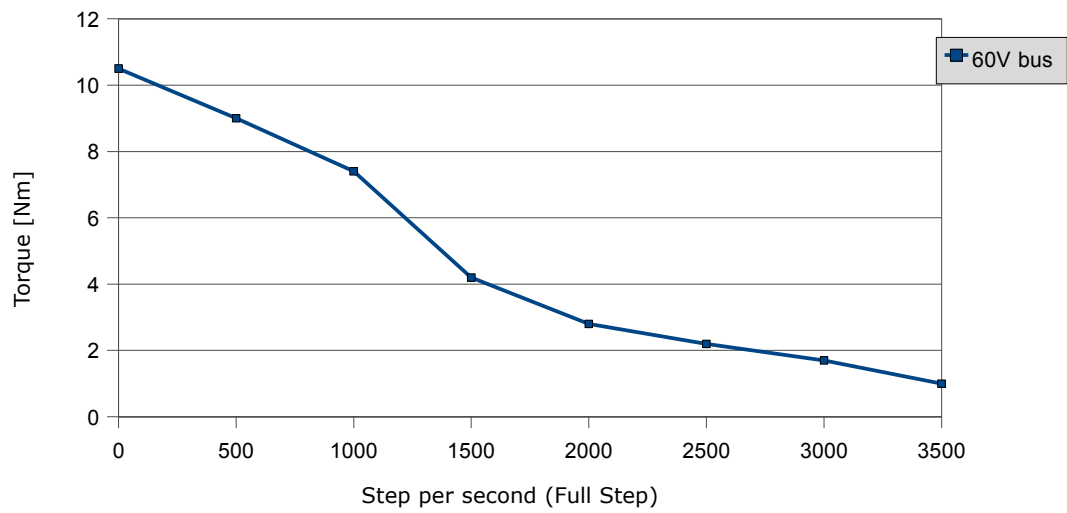
080



096



156



ORDERING INFORMATION

ST 34 065 00 3 C 000

Nema Size :

23 = 57 mm
34 = 86 mm

Motor type

Type of feedback :

00 = No feedback
01 = magnetic encoder 256 ppr
04 = optical encoder 400 cpr
05 = optical encoder 500 cpr
12 = optical encoder 1250 cpr

Special solution

Working voltage :

C = 60 VDC

Type of protocol :

1 = ModBus clk-dir + profiles
2 = ModBus with Instruction List
3 = CanOpen
4 = CanOpen + clk-dir
.....

N.B.

SP.EL. reserves the right to make changes without further notice to any products herein.