esiMot

Decentral Servo - Drive

- Brushless servo-motor with integrated electronics
- Positioning and speed-/torque regulator mode
- Digital 4-Q regulator
- Direct status- and diagnostics function through LED's
- Digital inputs and outputs (24V)
- RS232 for parameter setting
- 24 - 60V DC motor supply
- Separate logic supply 24V, wrong polarity protected

Order-Options:

- Set value analog
  - +/- 10V DC / 0 ... 10 V DC with direction signal
  - 0/4 ... 20 mA
- Recordable drive records (PLC-interface)
- Galvanically insulated fieldbus interface:
  - Profibus-DP
  - PROFINET
  - CANopen DSP402
  - EtherCAT CoE
  - RS485
  - Bus address and baud rate adjustable via switch

- Multiturn absolute encoder (built-in)
- Standstill brake
- ATEX114, Zone 2 and 22
- Planetary and worm-gearboxes

all-in-one
Servomotor
highly dynamic
120 - 600 W

ATEX 114

PROFIBUS®

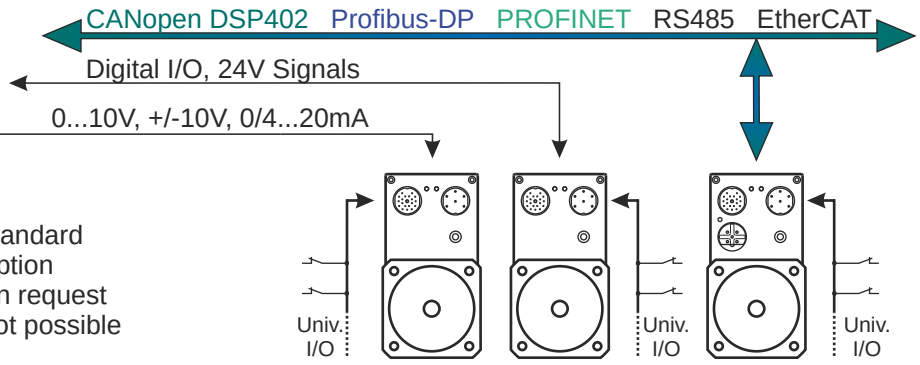
PROFINET®

CANopen®

EtherCAT®

14/17-089.164.07

esiMot Features



✓ = Standard
☐ = Option
✧ = On request
\- = Not possible

	esiMot-Type	Without Fieldbus esiMot x/x.1xx.xx Amplifiermode	Without Fieldbus esiMot x/x.2xx.xx Positioningmode	With Fieldbus esiMot x/x.3-7xx.xx All modes
Characteristics	Integrated servo-amplifier	✓	✓	✓
	Integrated positioning logic (position loop)	-	✓	✓
	Digital 4Q speed and torque regulator	✓	✓	✓
	Position acquisition			
	- Incremental encoder* (Standard with esiMot7)	☐	☐	☐
	- Absolute encoder Multi-Turn	☐	☐	☐
	Fieldbus RS485, CANopen, Profibus-DP, Profinet	-	-	☐
	Analog set value	✓	-	☐
	Digital inputs	4	8	4 / ✧6
	Digital outputs	1	2	2 / ✧4
	Encoder output A/B/0 24V	✓	-	✧
	Integrated ballast circuit and -resistor	✓	✓	✓
	Connection for external ballast resistor	✓	✓	✓
	Wrong polarity protection	✓	✓	✓
	Stand still brake	☐	☐	☐
	RS232 Programming interface (19,2kBaud)	✓	✓	✓

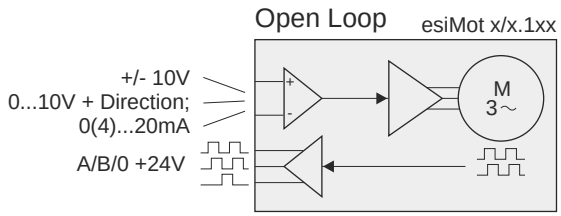
Functions and Programming	Programming/Parameter setting			
	- via RS232 Interface	✓	✓	✓
	- via Fieldbus RS485, CANopen, Profibus-DP, Profinet	-	-	✓
	- Position-Teach-In	-	✓	-
	Reference run management	-	✓	✓
	Limit switch (Hard- and Software)	-	✓	✓
	Automatic brake management	☐	☐	☐
	Free programmable move records	-	15	15
	- Velocity	-	✓	✓
	- Acceleration/Deceleration (separate adjustable)	-	✓	✓
	- On-the-fly record change	-	✓	✓
	- Dwell time	-	✓	✓
	- Set outputs (M-functions)	-	✓	✓
	Regulating modes			
	- Electronic shaft/electronic gear	-	✓	✓
	- Speed / Torque (PI-Regulation)	✓	✓	✓
	- Absolute, Relative, Modulo Position (P-Regulation)	✓	✓	✓

Monitoring	Status LEDs	2	2	3
	Signalling e.g. for:			
	- Motor temperature (I^2t)	✓	✓	✓
	- Motor temperature PTC (at esiMot7)	✓	✓	✓
	- Output stage temperature	✓	✓	✓
	- Ballast power internal	✓	✓	✓
	- Overvoltage/Undervoltage	✓	✓	✓
	Elapsed hour meter	✓	✓	✓
	Electronic type plate	✓	✓	✓

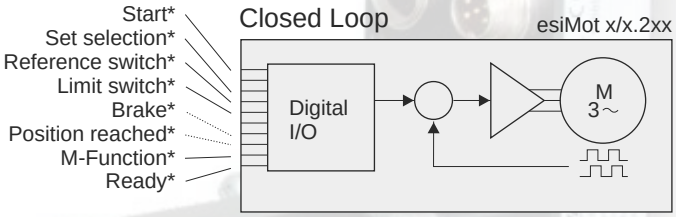
Accessories	Programming and parametrizing PC-software ServoLink	☐	☐	☐
	Assembled feed cable	☐	☐	☐
	Fitted gear boxes	☐	☐	☐
	RS232-Adapter	☐	☐	☐

* Resolution see motor-data

Without Fieldbus

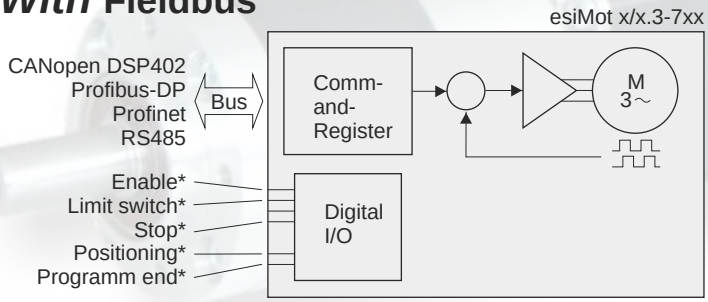


Amplifier mode
Speed- and torque regulator



Positioning mode (positioning loop)
Speed and torque regulation

With Fieldbus

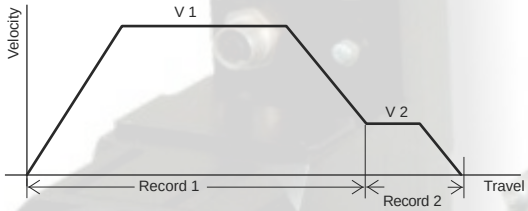


Positioning mode (positioning loop)
Speed and torque regulation

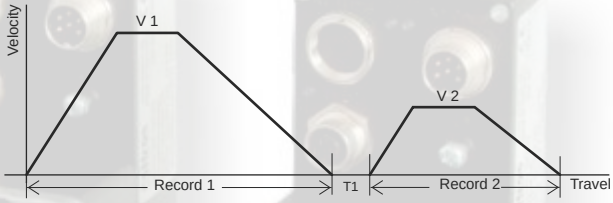
*) Example connection;
other I/O-Functions are assignable.

Sample-Driveprofile:

On-the-fly record change

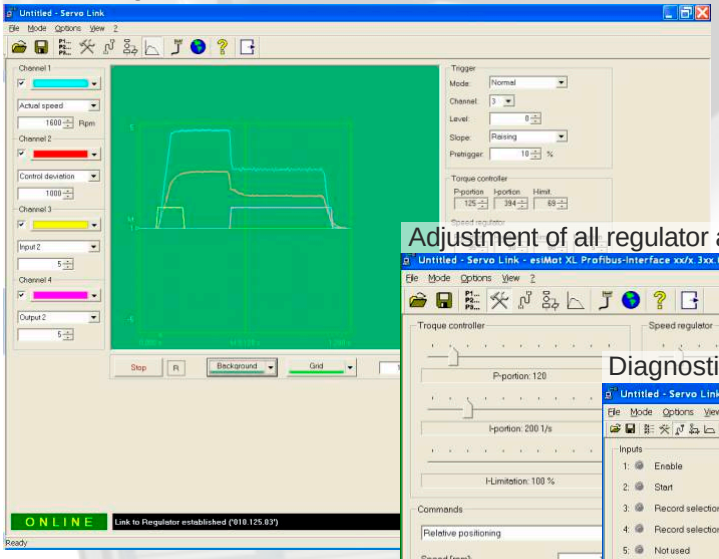


Record change with intermediate stop

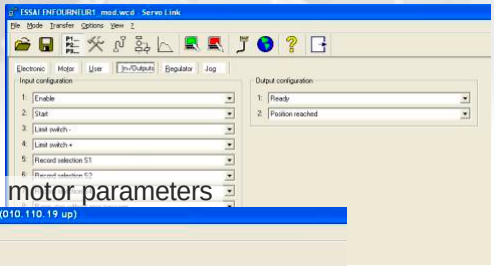


PC-Software:

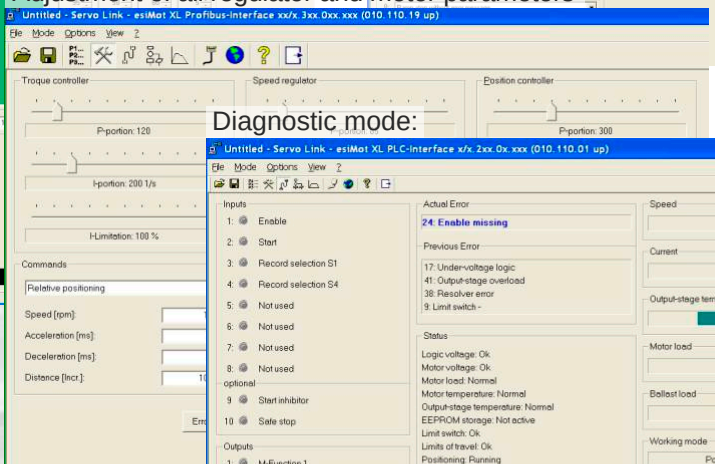
User settings



I/O-Configuration



Adjustment of all regulator and motor parameters



Diagnostic mode:

Other features:

- Display units mm, °, ...
- Project management
- Password protection
- User settings
- Oscilloscope
- Language selection German/English

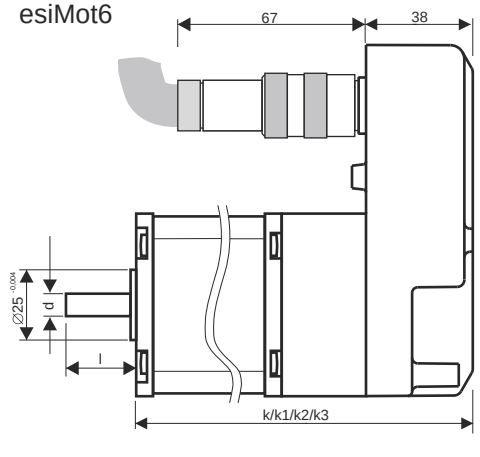
Subject to changes

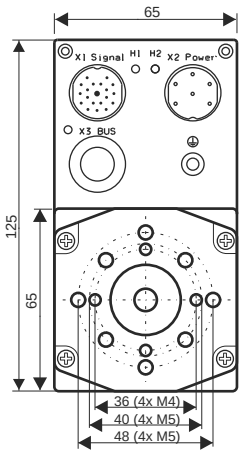
Technical Data:

		24V		48V			60V	
esiMot size		6/1	6/2	6/5	7/1	7/2	7/1	7/2
Motor power (S3)	[W]	120	180	260	500	400	600	480
Rated power	[W]	70	110	200	340	300	430	380
Nominal torque	[Nm]	0,22	0,35	0,65	1,1	1,8	1,1	1,8
Impulse torque	[Nm]	0,50	0,70	1,2	1,6	2,3	1,6	2,3
Rated speed	[min^{-1}]	3000	3000	3000	3000	1600	3750	2000
Inertia	[gcm^2]	71,6	128	172	530	530	530	530
Motor-supply	[VDC]	24	24	48	48	48	60	60
Rated current	[A]	4,0	5,6	3,5	9,0	8,0	9,0	8,0
Peak current	[A]	14	14	14	14	14	14	14
Logic supply (0,3A)	[VDC]	24	24	24	24	24	24	24
Resolution without incr.-enc.	[lpr]	30	30	30	-	-	-	-
with integrated incr.-enc.	[lpr]	2048	2048	2048	4096	4096	4096	4096
with integrated absolute enc.	[lpr]	4096	4096	4096	4096	4096	4096	4096
Protection class (mounting specific)		IP 64	IP 64	IP 64	IP 64	IP64	IP64	IP64
Weight ca.	[kg]	1,37	1,8	2,3	2,3	2,3	2,3	2,3

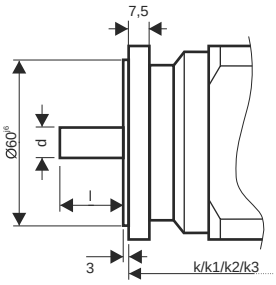
Dimensions:

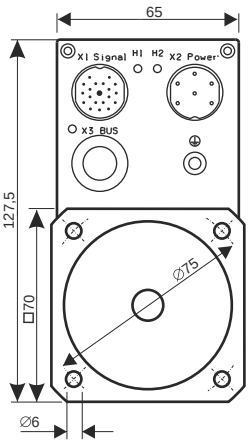
esiMot6





esiMot7





esiMot	d	l	k	k1	k2	k3
6/1	5	20	148	188	188	on request
6/2	5	20	173	213	213	on request
6/5	8	25	198	238	238	on request
7/x	11	20	186	236	199	249

k = Hall sensors / incremental encoder
k1 = Hs / incr. encoder + brake
k2 = Absolute encoder
k3 = Absolute encoder + brake

Order code:

esiMot x/x.xxx.xx.xxx

Size
(see technical data)

Basic version
Amplifier-Mode, 4/1 dig. I/O = 1
PLC-Interface, 8/2 dig. I/O = 2
Profibus-DP, 4/2 dig. I/O = 3
CANopen, 4/2 dig. I/O = 4
RS485, 4/2 dig. I/O = 5
EtherCAT CoE, 4/2 dig. I/O = 6
Profinet, 4/2 dig. I/O = 7

Position feedback
Hall sensors = 1
Incremental encoder = 2
Absolute encoder = 5

Standstill brake
0 = Without brake (Standard)
1 = With standstill brake

Input options (only with fieldbus)
0 = 4/2 digital I/Os (Standard)
1 = 6/2 digital I/Os
2 = Analog input + 4/2 dig. I/Os

Address switches (only with fieldbus)
0 = Without (Standard)
1 = With address switches

Custom specific options

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