



esiMot M

Decentral Servo Drive

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

Order options:

- Set value analog
+/- 10 V 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
Modbus RS485
Bus address and baud rate adjustable via switch

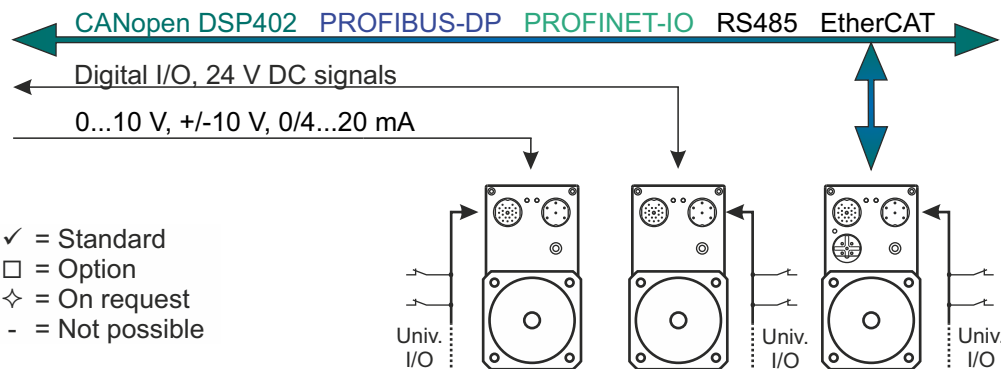
- Safe Torque Off (STO) Cat. 3 Performance level e
- Multiturn absolute encoder (built-in)
- Standstill brake
- ATEX114, Zone 2 and 22
- Planetary and worm gearboxes



ATEX 114



esiMot Features



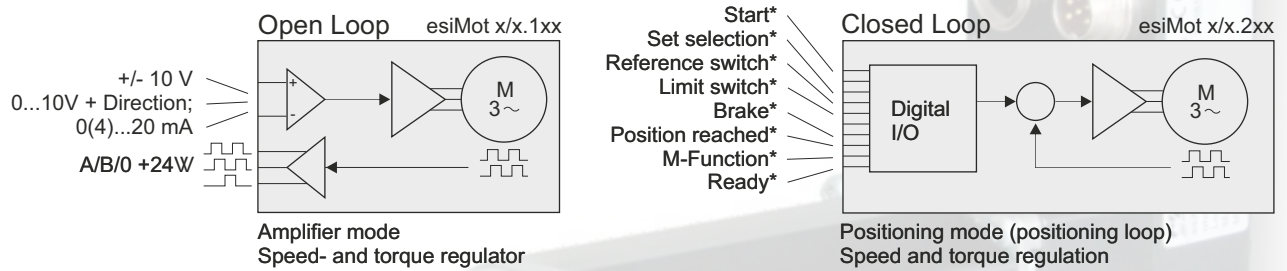
	esiMot M - Type	Without Fieldbus		With Fieldbus
		esiMot x/x.1xx.xx Amplifiermode	esiMot x/x.2xx.xx Positioningmode	esiMot x/x.3-7xx.xx All modes
Characteristics	Integrated servo-amplifier	✓	✓	✓
	Integrated positioning logic (position loop)	-	✓	✓
	Digital 4Q speed and torque regulator	✓	✓	✓
	Position acquisition			
	- Incremental encoder* (standard with esiMot7)	□	□	□
	- Absolute encoder Multi-Turn	□	□	□
	Fieldbuses (see order code)			
	Analog set value	✓	-	□
	Digital inputs	4	8	8 / ◇6
	Digital outputs	1	2	2 / ◇4
	Encoder output A/B/0 24 V	✓	-	◇
	Integrated ballast circuit and -resistor	✓	✓	✓
	Connection for external ballast resistor	✓	✓	✓
	Wrong polarity protection	✓	✓	✓
	Safe Torque Off EN13849-1, category 3, PL e	□	□	□
	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)	✓	✓	✓

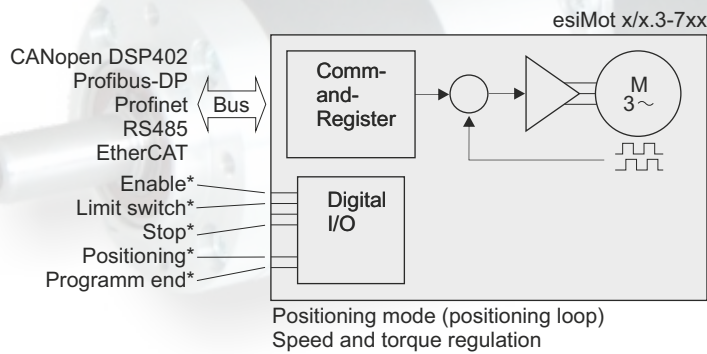
Monitoring	Status LEDs	2	2	3
	Signalling e.g. for:			
	- Motor temperature (I ² t)	✓	✓	✓
	- Motor temperature PTC (at esiMot7)	✓	✓	✓
	- Output stage temperature	✓	✓	✓
	- Ballast power internal	✓	✓	✓
	- Overvoltage / undervoltage	✓	✓	✓
	Elapsed hour meter	✓	✓	✓
Accessories	Electronic type plate	✓	✓	✓
	Programming and parametrizing PC software ServoLink	□	□	□
	Assembled feed cable	□	□	□
	Fitted gear boxes	□	□	□
	RS232 adapter	□	□	□

**Resolution see motor data

Without Fieldbus



With Fieldbus



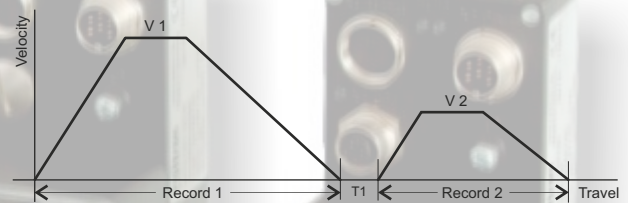
*Example connection;
other I/O-Functions are assignable.

Sample-Driveprofile:

On-the-fly record change

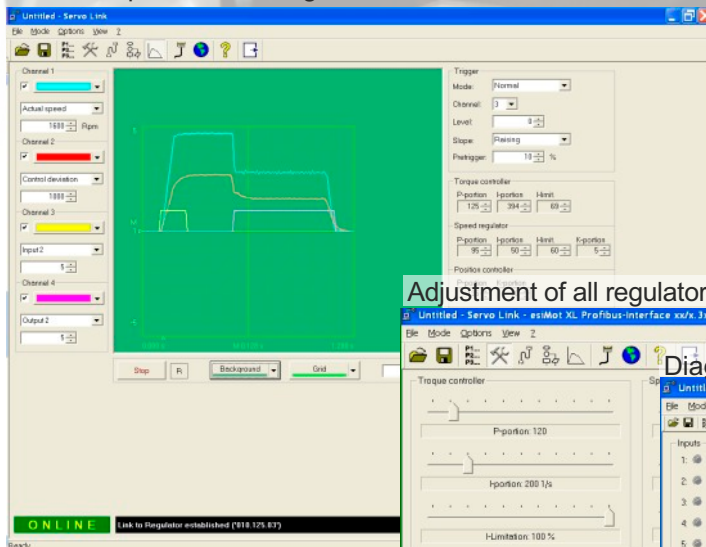


Record change with intermediate stop



PC software:

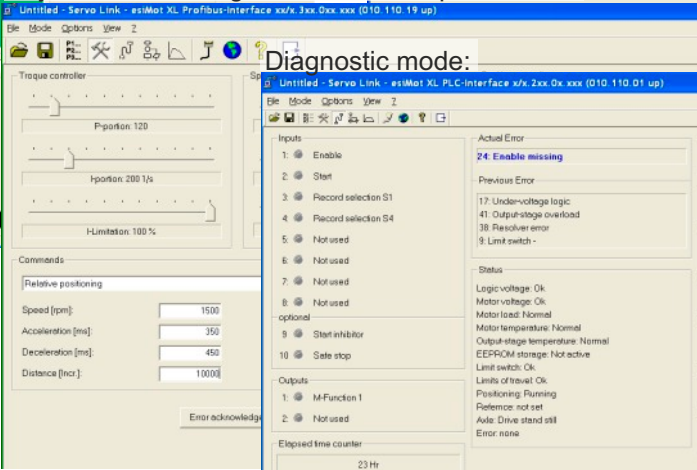
Oscilloscope / user settings



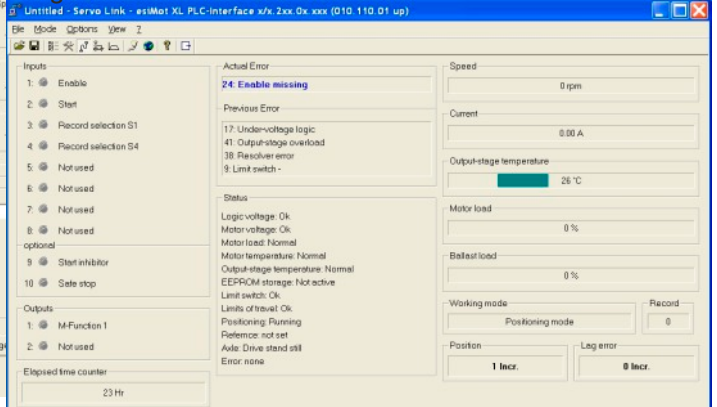
I/O configuration



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

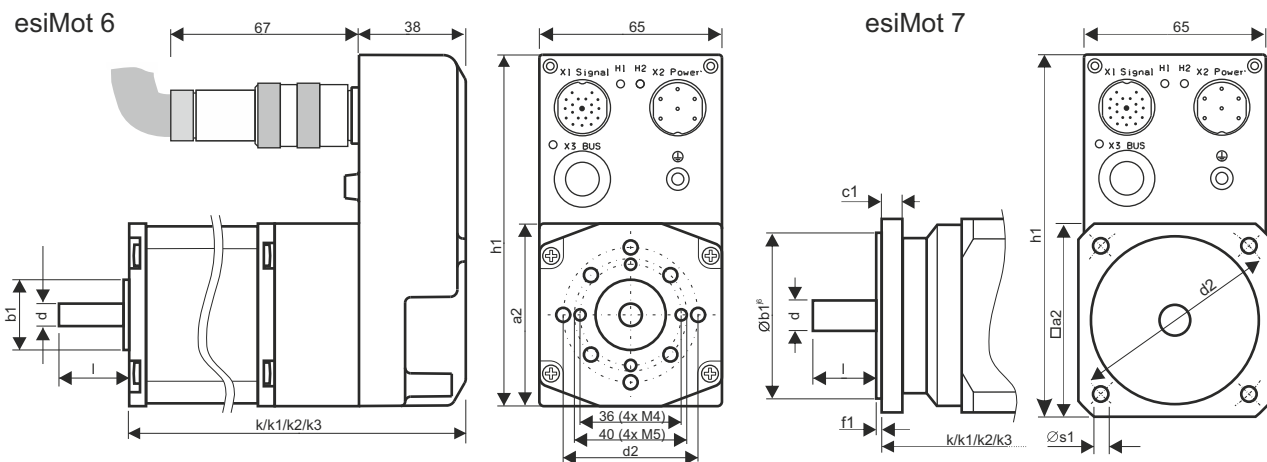
Subject to changes

Technical data:

		24 V		48 V			60 V	
esiMot M 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
Rotative inertia	[gcm ²]	71,6	128	172	530	530	530	530
Inertia with brake	[gcm ²]	95,3	151,7	195,7	720	720	720	720
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 (0,3 A)	[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
Brake holding torque*	[Nm]	1,0	1,0	1,0	4,5	4,5	4,5	4,5
Protection class (mounting specific)		IP 64	IP 64	IP 64	IP 64	IP64	IP64	IP64
Weight approx.	[kg]	1,37	1,8	2,3	2,3	2,3	2,3	2,3
Weight with brake approx.	[kg]	2,0	2,4	2,9	2,9	2,9	2,9	2,9

*In run-in condition

Dimensions:



Size	a2	b1	c1	d	d2	h1	s1	l	k	k1	k2	k3
esiMot 5/2	55	40	7	9	63	125	5,5	20	178	223	191	236
esiMot 6/1	65	25	-	5	48 (4xM5)	125	-	20	148	188	188	on request
esiMot 6/2	65	25	-	5	48 (4xM4,66)	125	-	20	173	213	213	on request
esiMot 7/x	70	60	8	11	75	128	6	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.xxX.XXX — Omitted in standard design

Size (see technical data)	Custom specific options
Basic version	Safety functions = Without (standard) 1 = STO Cat.3 PLe (EN ISO 13849-1)
Amplifier-Mode, 4/1 dig. I/O = 1	Address switches (only with fieldbus) 0 = Without (standard) 1 = With address switches
PLC-Interface, 8/2 dig. I/O = 2	Input options (only with fieldbus) 0 = 8/2 digital I/Os (standard) 1 = 6/4 digital I/Os 2 = 6/2 dig. I/Os + Analog input 3 = 4/1 dig. I/Os + analog in. + incr. out.
Profibus-DP, 8/2 dig. I/O = 3	Standstill brake 0 = Without brake (standard) 1 = With standstill brake
CANopen, 8/2 dig. I/O = 4	
RS485, 8/2 dig. I/O = 5	
EtherCAT CoE, 8/2 dig. I/O = 6	
Profinet, 8/2 dig. I/O = 7	
Position feedback	
Hall sensors = 1	
Incremental encoder = 2	
Absolute encoder = 5	

All data in this folder have an informative character without warranty of characteristics. Changes without previous announcement reserved.

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