



## esiMot XL

### 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 In- and Outputs (24V)
- RS232 for parameter setting
- Motor supply 230V AC or 400V AC, 50/60Hz
- 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 motion data (PLC-interface)
- Galvanically insulated fieldbus interface:
  - Profibus-DP
  - PROFINET
  - CANopen DSP402
  - RS485
  - EtherCAT CoEVia switch adjustable bus address/ baud rate
- Safe Torque Off Category 3 Performance Level e
- Multiturn absolute encoder
- Connection to External EnDAT2.2 encoder
- Standstill brake
- ATEX114 Zones 2 and 22
- Planetary and worm gearboxes

Mains power supply

1x 230VAC or

3x 400VAC

all-in-one

Servomotor

High Dynamic

0,8 - 3,2kW



ATEX 114

CANopen®

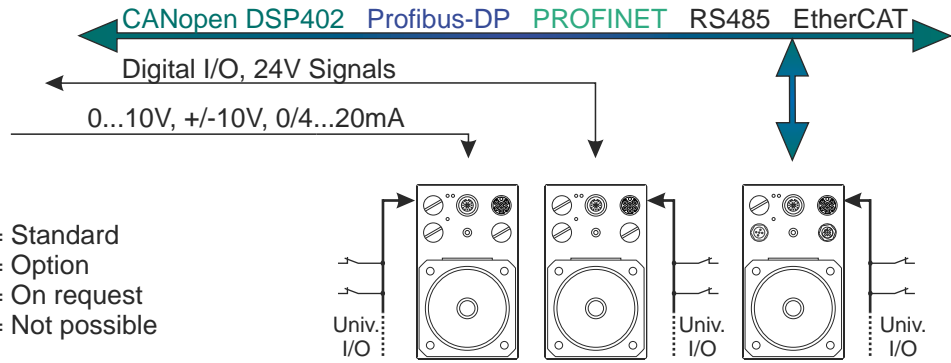
PROFI®  
BUS

PROFI®  
NET

EtherCAT®



# esiMot Features



- ✓ = Standard
- = Option
- ◇ = On request
- = Not possible

esiMot XL - Type	Without Fieldbus		With Fieldbus
	xx/x.1xx.xx Amplifier mode	xx/x.2xx.xx Positioning mode	xx/x.3-7xx.xx All modes
Integrated servo-amplifier	✓	✓	✓
Integrated positioning logic (position loop)	-	✓	✓
Digital 4Q speed and torque regulator	✓	✓	✓
Position acquisition**			
- Resolver	✓	✓	✓
- Absolute encoder Multi-Turn	-	□	□
Fieldbusses (see order code)	-	-	□
Analog set value	✓	-	◇
Digital inputs	4	8	8 / ◇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	✓	✓	✓
Safe Torque Off EN 13849-1 Cat. 3 PL e	□	□	□
Stand still brake	□	□	□
RS232 Programming interface (19,2kBaud)	✓	✓	✓

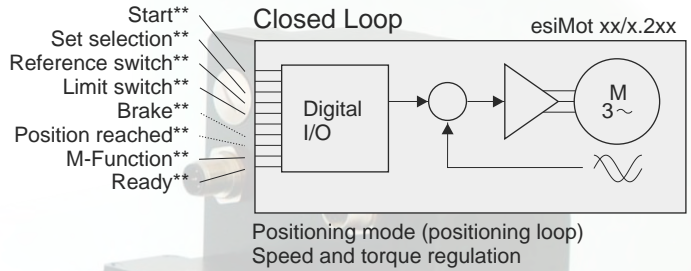
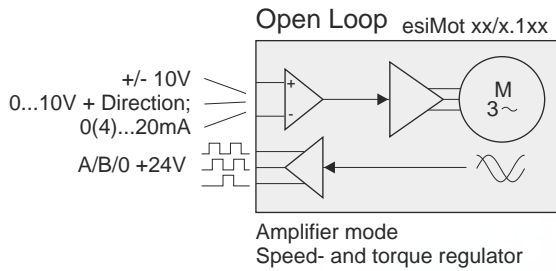
Functions and Programming	Programming/Parameter setting		
	via RS232 Interface	via Fieldbus	Position-Teach-In
Reference run management	-	✓	✓
Limit switch (Hard- and Software)	-	✓	✓
Automatic brake management	-	□	□
Free programmable move records	-	15	15
- velocity	-	✓	✓
- Acceleration/Deceleration (separate 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 <sup>2</sup> t)	✓	✓	✓	
- Motor temperature PTC	✓	✓	✓	
- Output stage temperature	✓	✓	✓	
- Ballast power internal	✓	✓	✓	
- Overvoltage/Undervoltage	✓	✓	✓	
- Elapsed hour meter	✓	✓	✓	
Elektronik type plate	✓	✓	✓	

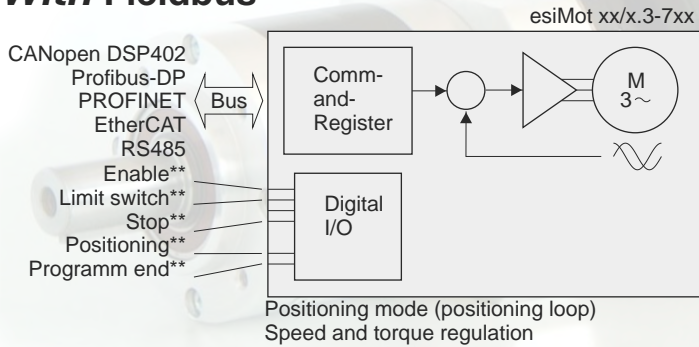
Accessories	Programming and parametrizing PC-software ServoLink	□	□	□
	Assembled feed cable	□	□	□
	Fitted gear boxes	□	□	□
	RS232-Adapter	□	□	□

\*\* Resolution see motor-data

# Without Fieldbus



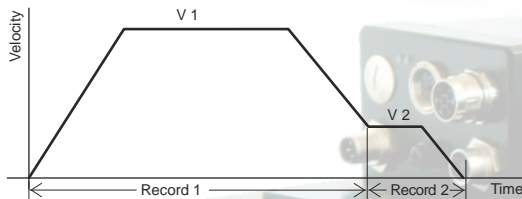
# With Fieldbus



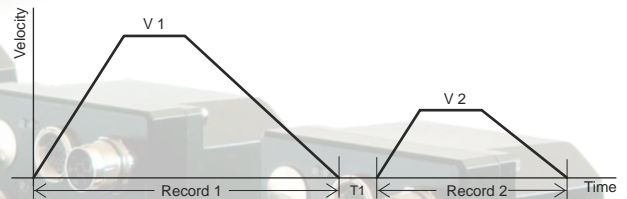
\*\*) Example connection;  
other I/O-Functions are assignable.

## Sample-Driveprofile:

On-the-fly record change

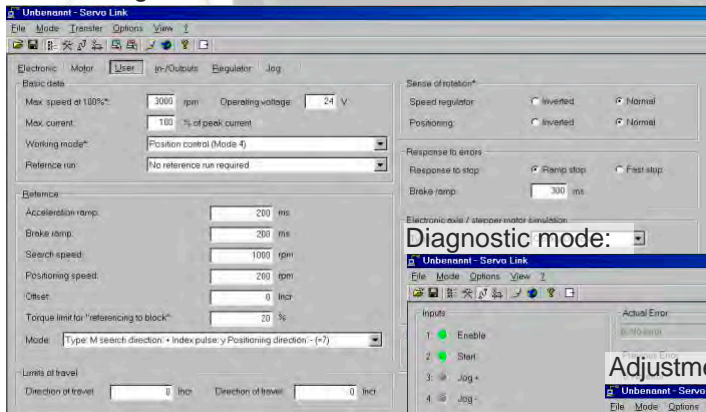


Record change with intermediate stop

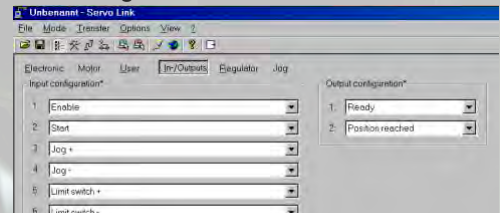


## PC-Software:

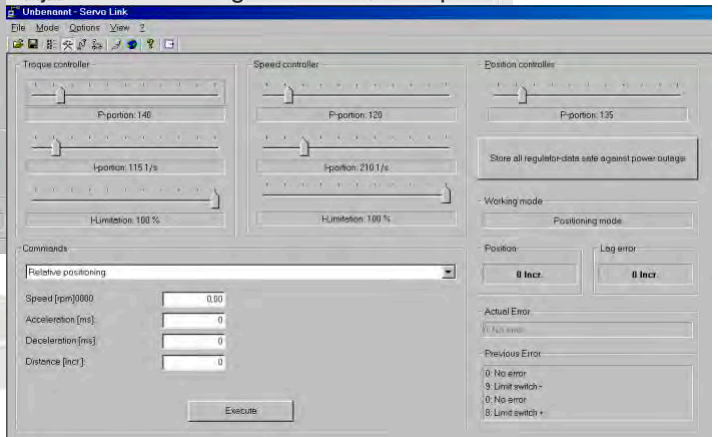
User settings



I/O-Configuration



Adjustment of all regulator and motor parameters



Other features:

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

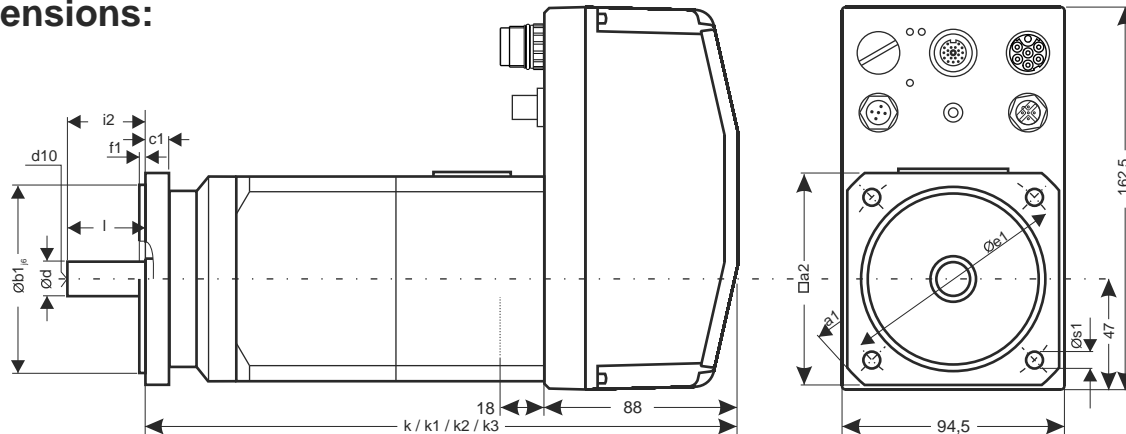
## Technical Data:

esiMot XL 230V	size	21/3	22/3	31/3	32/3	33/2	41/2
Motor power (S3, 25%) 230V	[kW]	0,78	1,35	0,96	1,82	1,47	1,21
Rated power (S1)	[kW]	0,58	0,84	0,73	1,05	1,05	0,84
Rated speed	[min <sup>-1</sup> ]	3500	3500	3500	3000	2000	2000

esiMot XL 400V	size	421/6	422/6	431/6	432/6	433/4	441/4
Motor power (S3, 25%)	[kW]	1,38	2,38	1,69	3,20	2,49	2,06
Motor power (S1)	[kW]	1,00	1,44	1,25	2,00	1,78	1,42
Rated speed	[min <sup>-1</sup> ]	6000	6000	6000	6000	3400	3400

Impulse torque < 5 s	[Nm]	4,5	6,2	5,7	8,0	14,0	10,4
Rated torque (S3, 25%)	[Nm]	2,2	3,8	2,7	5,1	7,0	5,8
Rated torque (S1)	[Nm]	1,6	2,3	2,0	3,2	5,0	4,0
Inertia	[10 <sup>-3</sup> kgm <sup>2</sup> ]	0,058	0,099	0,08	0,16	0,24	0,28
Rated current	[A]	2,9	4,2	3,4	5,2	5,1	4,1
Logic supply (0,3A)	[VDC]	24	24	24	24	24	24
Axis Resolution	[lpr]	4096	4096	4096	4096	4096	4096
Protection class (mounting specific)		IP 65	IP 65	IP 65	IP 65	IP 65	IP 65
Weight ca.	[kg]	2,9	4,1	4,4	5,7	7,0	7,5

## Dimensions:



esiMot	a1	a2	b1 <sub>6</sub>	c1	d	d10	e1	f1	i2	k	k1	k2	k3	l	s1
(4)21/3	90	70	60	8	11	M4	75	2,5	23	226	274	252	301	23	6
(4)22/3	90	70	60	8	11	M4	75	2,5	23	266	314	292	341	23	6
(4)31/3	115	90	80	9	14	M4	100	3	30	230	274	248	292	30	6,5
(4)32/3	115	90	80	9	14	M4	100	3	30	270	314	288	332	30	6,5
(4)33/2	115	90	80	9	14	M4	100	3	30	310	354	328	372	30	6,5
(4)41/2	150	115	110	10	24	M8	130	3,5	50	246	301	266	301	50	9

k = Resolver  
k1 = Resolver + Brake  
k2 = Absolute encoder  
k3 = Absolute encoder + Brake

## Order code:

esiMot x xx/x.xxx.xxx.xxx

<b>Motor supply</b> 230V AC = 400V AC = 4 <b>Size</b> (see technical data) <b>Basic version</b> Amplifier-Mode, 4/1 dig. I/O = 1 PLC-Interface, 8/2 dig. I/O = 2 Profibus-DP, 8/2 dig. I/O = 3 CANopen, 8/2 dig. I/O = 4 RS485, 8/2 dig. I/O = 5 EtherCAT CoE, 8/2 dig. E/A = 6 Profinet, 8/2dig. I/O = 7 <b>Position aquisition</b> Resolver = 4 Multiturn Absolute encoder = 5 Resolver(Motor) + EnDat2.2(external)* = A *) not with CANopen or EtherCAT interface	Custom specific options <b>Safety functions</b> 0 = None (Standard) 1 = Safe Torque Off Category 3 Performance Level e (EN ISO 13849-1) <b>Address switches</b> (only with fieldbus) 0 = Without (Standard) 1 = With Address switches** **) not with external encoder (Pos.acquis.=A) <b>I/O - Options</b> (only with fieldbus) 0 = None (Standard = 8 DI, 2 DO) 1 = 6 DI, 4 DO 2 = 6 DI, Analog input, 2 DO <b>Standstill brake</b> 0 = Without Brake (Standard) 1 = With standstill brake
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All data in this folder have an informative character without warranty of characteristics. Changes without previous announcement reserved.

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