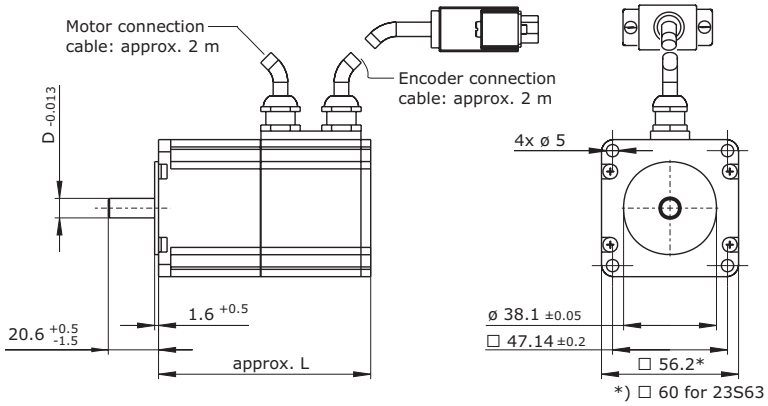
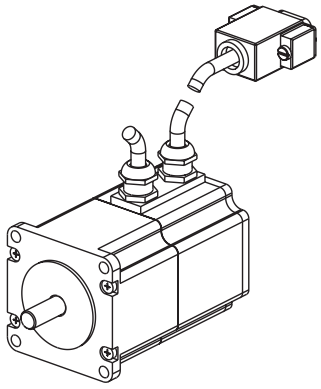
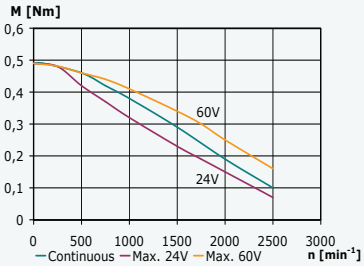


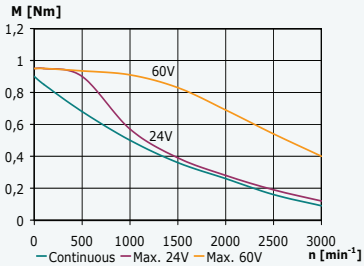


		Series 23S16-0560-805L7-52(200)	Series 23S21-0560-805L7-52(200)	Series 23S31-0650-805L7-52(200)	Series 23S41-0650-805L7-52(200)	Series 23S63-0650-805L7-52(200)
Rated Values						
Peak torque (c.d.f. 40%)*	[Nm]	0.50	0.95	2.00	2.80	4.0
Stall torque (c.d.f. 100%)*	[Nm]	0.50	0.90	1.70	2.20	3.8
Rated torque (c.d.f. 100%)*	[Nm]	0.30	0.52	0.70	1.38	1.8
Rated speed	[min^{-1}]	1500	1000	1000	500	750
Peak current (per phase) (c.d.f. 40%)*	[A_{RMS}]	5.6	5.6	8.5	8.5	6.9
Stall current (per phase) (c.d.f. 100%)*	[A_{RMS}]	5.6	5.6	6.5	5.8	6.2
Rated current (per phase) (c.d.f.100%)*	[A_{RMS}]	4.8	3.3	2.8	3.7	3.0
Max. DC link voltage	[V_{DC}]	60	60	90	90	90
* Mounting Flange Ø 130 mm / thickness 7.5 mm						
Technical Data Motor						
Motor constant (at 25 °C)	[$Nm/W^{1/2}$]	0.11	0.21	0.39	0.45	0.65
Torque constant	[Nm/A]	0.09	0.16	0.26	0.38	0.58
Voltage constant	[$V/1000min^{-1}$]	5.1	8.4	13.6	19.7	30.3
Winding resistance (at 25 °C)	[Ω]	0.30	0.32	0.23	0.38	0.45
Winding inductivity	[mH]	0.3	0.60	0.70	1.20	2.00
Maximum current per phase	[A_{RMS}]	5.6	5.6	8.5	8.5	8.0
Number of pole pairs		50	50	50	50	50
Motor inertia	[kgm^2x10^{-3}]	0.014	0.026	0.046	0.069	0.150
Insulation class		B, 130 °C				
Ambient temperature	[°C]	-20...+40				
Protection class		IP40, option: IP65 (shaft gland IP40)				
Max. axial load	[N]	80				
Max. radial load	[N]	100				
Max. axial load during assembly	[N]	150				
Mass	[kg]	0.5	0.8	1.0	1.75	1.9
Motor length (L)	[mm]	73	87	109	144	145
Shaft diameter (D)	[mm]	8	8	8	10	10

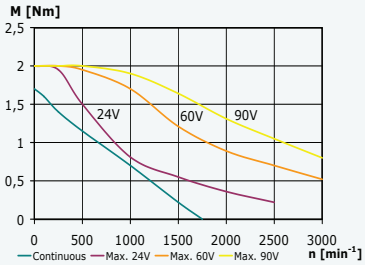
Characteristic 23S16 / ECOSTEP®100



Characteristic 23S21 / ECOSTEP®100



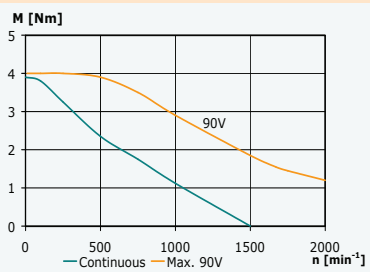
Characteristic 23S31 / ECOSTEP®200



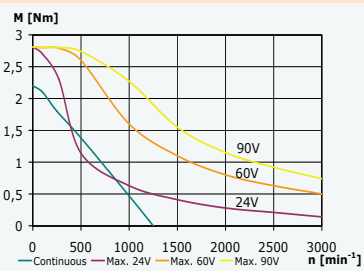
Technical Data Incremental Encoder		
Resolution	[inc/rev]	40 000
Operating voltage	[V]	5 (± 10%)
Current input	[mA]	100
Signal specification		RS 422

For further encoder options see reverse side

Characteristic 23S63 / ECOVARIO®214



Characteristic 23S41 / ECOSTEP®200



JAT JENAER ANTRIEBSTECHNIK

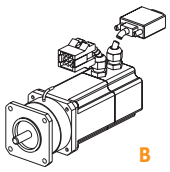
23S16 — 0560
23S21 — 0560
23S31 — 0650
23S41 — 0650
23S63 — 0650

8 _ _ _ 7 — _ _ — (_ _ _)

Motor and Encoder Cable Length	
10	10 cm
30	30 cm
200	200 cm

Note:
The wire colours of the encoder cable correspond to cable type ENC47 (see below).

Holding Brake	
0	none
B	1,5 Nm braking module fixed



With holding brake fixed, motor length (L) increases by 43.9 mm.

The weight of the motors with holding brake increases by 0.8 kg.

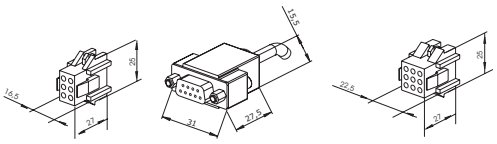
Encoder Type	
5J	Incremental encoder with a resolution of 8 000 inc/rev
5L	Incremental encoder with a resolution of 40 000 inc/rev
5N	Incremental encoder with a res. of 80 000 inc/rev *
5P	Incremental encoder with a res. of 160 000 inc/rev **
8X	SINCOS encoder, programmable resolution, max. 128 000 inc/rev, servo amplifier ECOVARIO®114/214
7W	Absolute value encoder with a resolution of 17 bit/rev and 12 bit revolutions, servo amplifier ECOVARIO®114/214

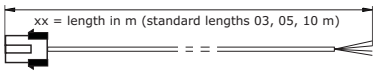
* maximum speed : 3000 rpm ** maximum speed: 1500 rpm

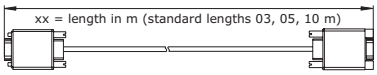
With absolute value encoder, motor length (L) increases by 13.5 mm.

Connectors und Mechanical Options	
55	Motor cable and encoder cable with connectors - Motor: RSV1.6 - Encoder: D-Sub or HD-Sub connector,
52	Encoder cable with D-Sub or HD-Sub connector, motor cable non-assembled
28	connectors same as 55, however with additional retaining bracket for connectors
84	Connectors for ECOMiniDual - Motor: Molex MiniFit Jr 6-polig - Encoder: Molex MicroFit 10-polig
Choice of mechanical options:	
	Mechanical option A-shaft with key
	Mechanical option long shaft
	Mechanical option bearing flange with solid shaft
	Mechanical option bearing flange with hollow shaft with locking ring
	Protection class IP65

Further options on request.







Coupling Set 70.040 (for motors without holding brake: „mating connector set" for cable extensions made by customer)		
1	Motor: RSV1.6, 6-pole socket	
2	Incremental Encoder: DSub, 9-pole socket	
Coupling Set 70.044 (for motors with holding brake: „mating connector set" for cable extensions made by customer)		
3	Motor: RSV1.6, 9-pole socket	
4	Incremental Encoder: DSub, 9-pole socket	
Cable Assemblies		
5	Motor cable extension MOT43-132-721-0xx-000	Ø 6.4 mm; trailing capability from bend radius > 35 mm
6	Motor/brake cable extension MOT45-132-722-0xx-000	Ø 8.1 mm; trailing capability from bend radius > 45 mm
7	Incremental Encoder cable extension ENC47-491-495-0xx-000	Ø 6.2 mm; D-Sub 9-pole socket, trailing capability from bend radius > 35 mm
8	Absolute Encoder cable extension ABS47-300-301-0xx-000	Ø 6.2 mm; HD-Sub 15-pole socket, trailing capability from bend radius > 35 mm

5

Connection	Motor cable wire	Motor conn. pin	Cable extension wire
Phase A	black	3	black
Phase /A	orange	1	orange
Phase B	red	4	red
Phase /B	brown	2	brown
PE	gn/ye	6	gn/ye
Shield	bare	5	bare

6

Connection	Motor/brake cable wire	Motor conn. pin	Cable extension wire
Phase A	black	3	black
Phase /A	orange	1	orange
Phase B	red	4	red
Phase /B	brown	2	brown
Brake +	brown	5	green/brown
Brake -	black	6	green/blue
PE	gn/ye	9	gn/ye
Shield	bare	8	bare

7

Connection	Incremental encoder cable wire/ Cable extension wire	Pin DSub 9-pole
+5 V	red	1
GND	blue	6
Channel A	white	2
Channel /A	brown	7
Channel B	green	3
Channel /B	yellow	8
Channel N	grey	4
Channel /N	pink	9
Shield	bare	Shr.

8

Connection	Absolute encoder cable wire/ Cable extension wire	Pin DSub 15-pole
+Up	red	1
GND	blue	6
CLK	green	14
/CLK	yellow	15
S-	pink	11
S+	grey	12
DAT	white	4
/DAT	brown	9
Shield	bare	Shr.

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