
DRIVES AND CONTROLS

Motion control packages e-Series motors

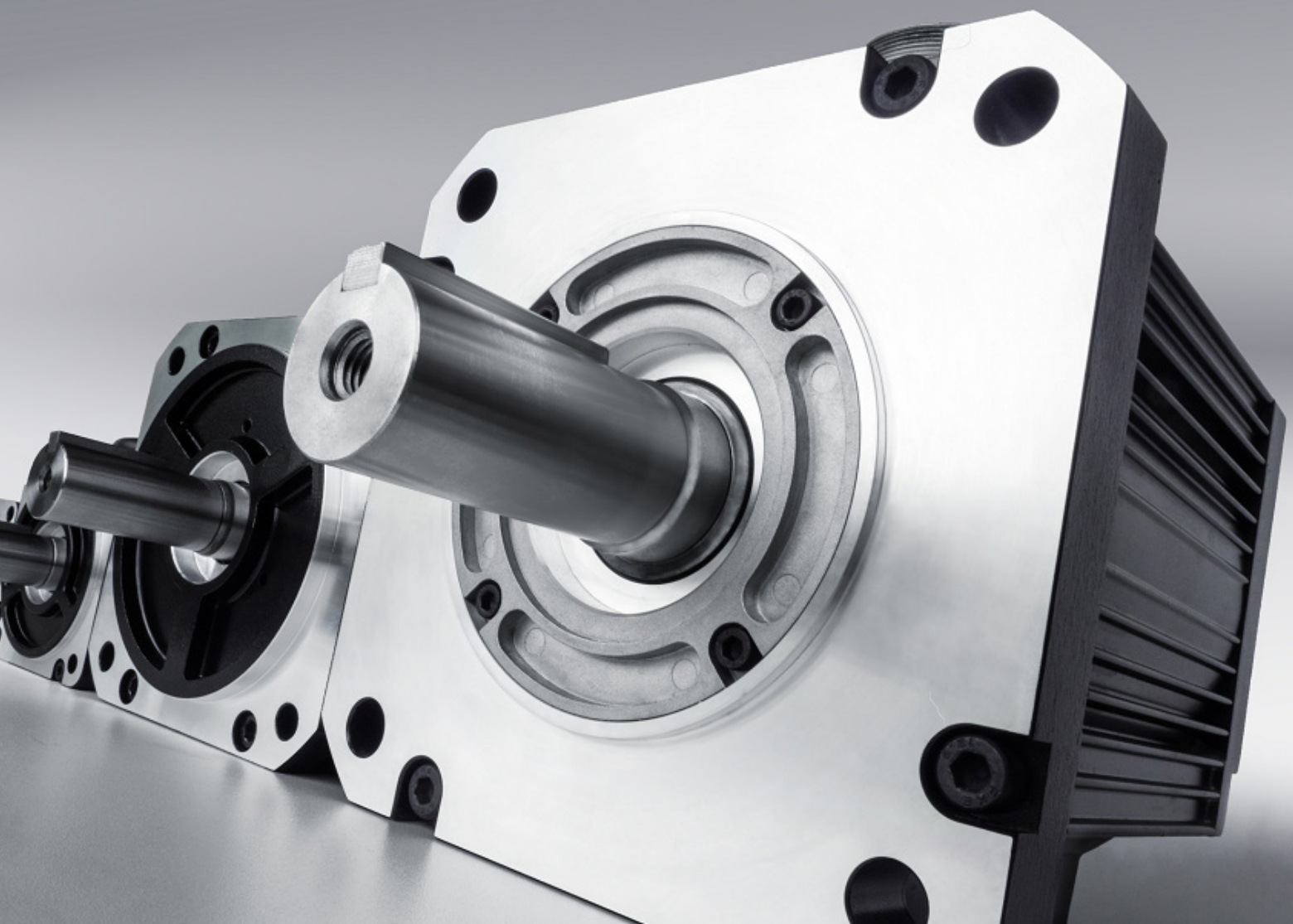


ABB highly dynamic motor and drive packages bring together ABB's e-Series servo motors and MicroFlex and MotiFlex series servo drives to create cost and performance optimized packages. These provide a flexible choice of input control and feedback options, offering scalable solutions for motion and position synchronization as well as speed and torque control.

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e-Series motors

technology highlights

e-Series servomotors for dynamic precision motion

Thanks to its high torque density, the e-Series servomotor is perfect for highly dynamic, precision motion. A choice of single- and multi-turn high resolution absolute encoder feedback options are available to match application requirements;

The e-Series motor range has power ratings from 100 to 7500 watts, in five nominal square frame sizes from 40 to 180 mm, motors are available with an optional brake and are IP67 rated except for the shaft opening and connectors. Flying leads for 40, 60 and 80 frame motors provide easy connection of both motor power and feedback. Motor mounted circular connectors are fitted to the larger frames sizes.

Compact and rugged brushless motors

Available in five square frame sizes, 40, 60, 80, 130 mm and 180 mm, with high torque to inertia ratio and rapid acceleration capability.



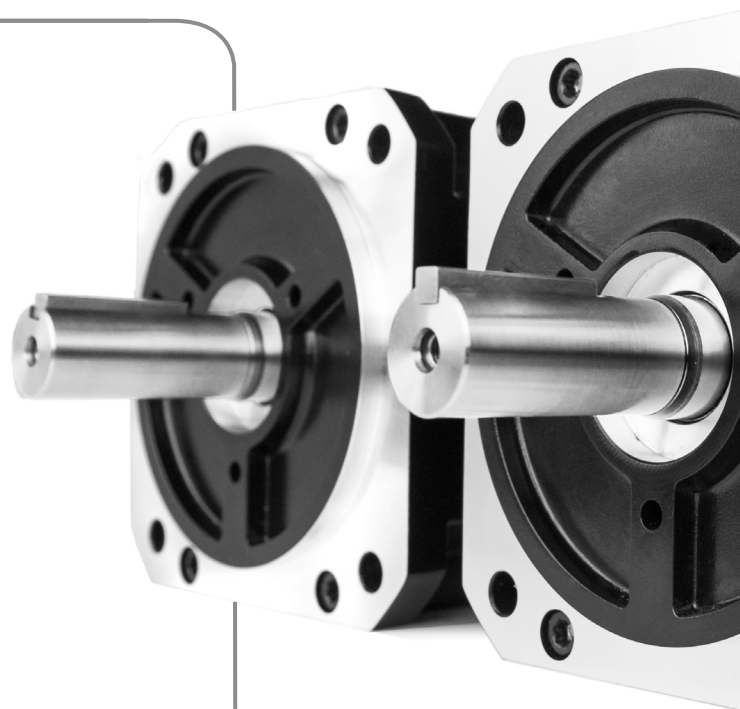
High reliability and efficiency combined

Servomotors by design are extremely reliable, low maintenance and energy efficient. Combined with drives that absorb and re-use regenerative energy, overall system efficiency is superior to standard AC drives and motors.



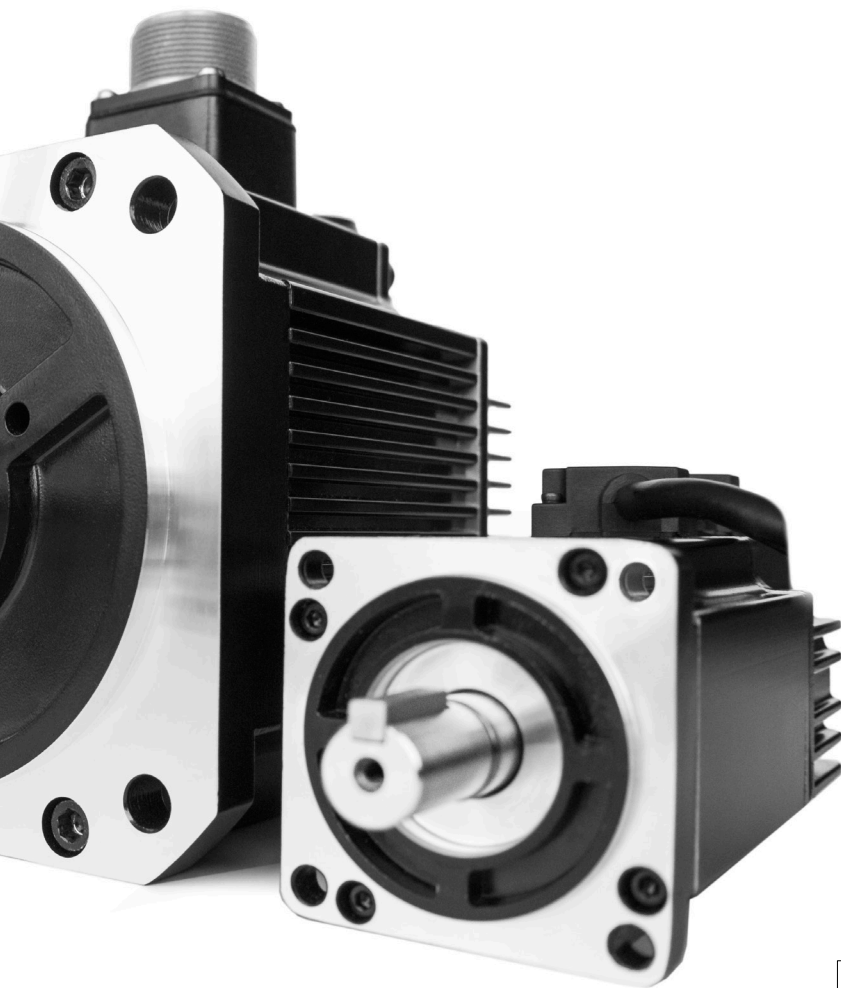
Practical installation options

A choice of pre-made cables sets to suit all feedback types, with or without drive interface connector, provide a flexible choice of drive interfacing to make installation simple.



Options and configuration

24 V holding brake is available on ESM06, ESM08, ESM13 and ESM18 frame sizes.



Absolute precision and performance

To meet the demands of higher productivity and product quality, e-Series digital feedback provides precise position information resulting in tighter control and lower settling times in dynamic movement. An absolute multi-turn option can eliminate homing cycles, reducing machine set-up time.

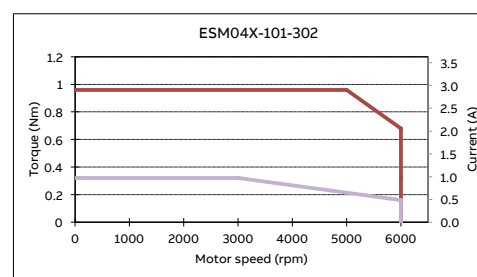


Dynamic performance

With a choice of 100, 200, 400, 750, 1000, 1500, 2000, 3000, 4400, 5000, 7500 watt output and continuous torque from 0.32 to 48N·m.

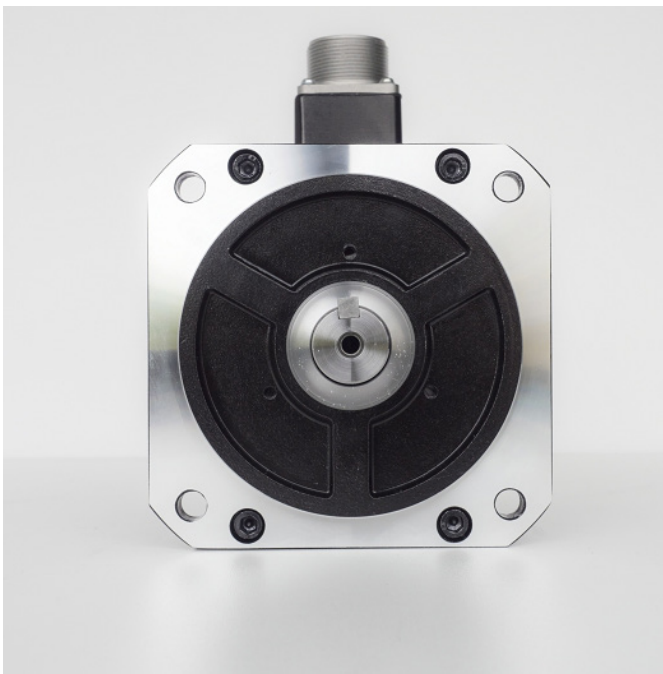
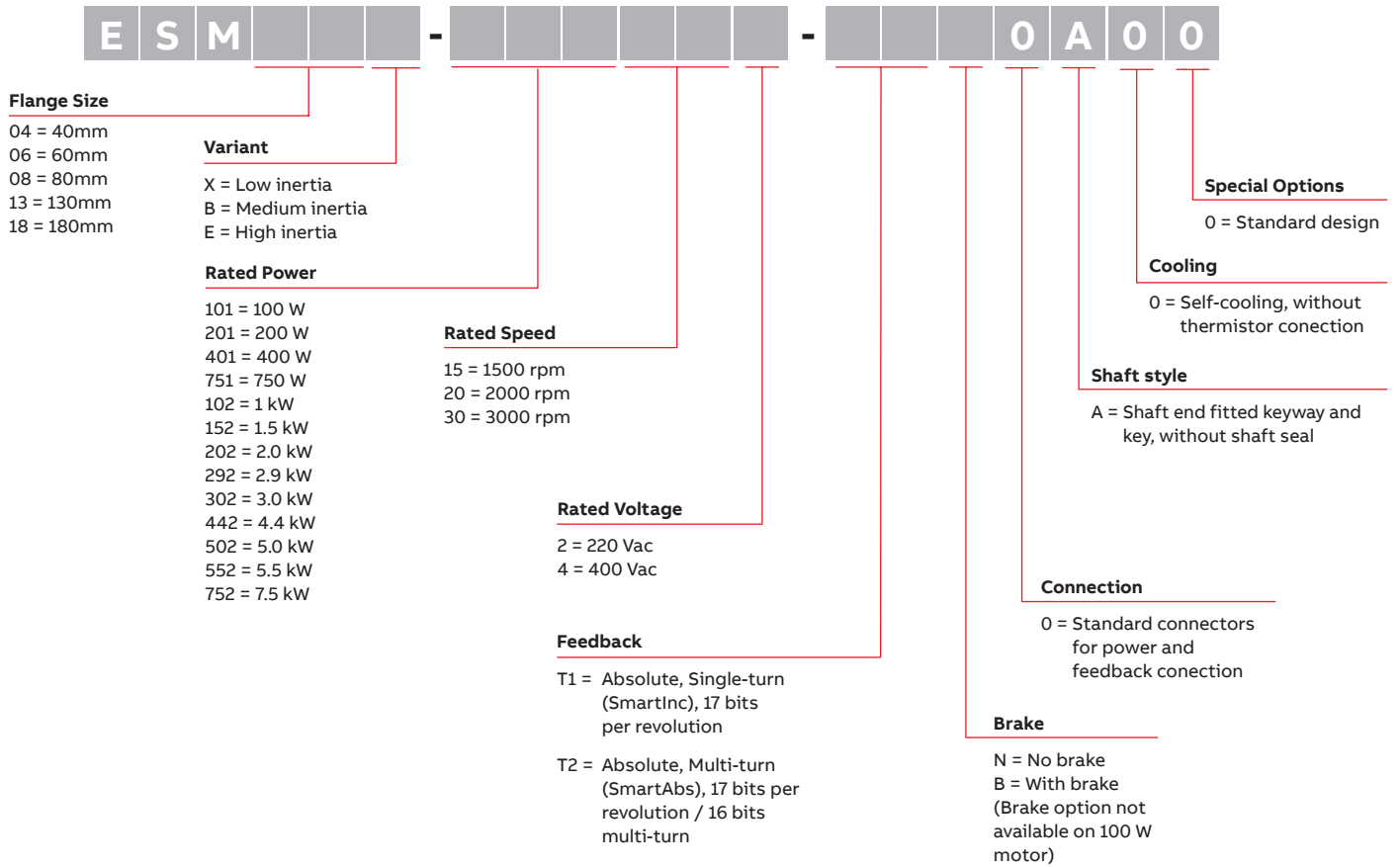


International standards
e-Series motors have UL, cUL, CE approval





e-Series motor ordering information



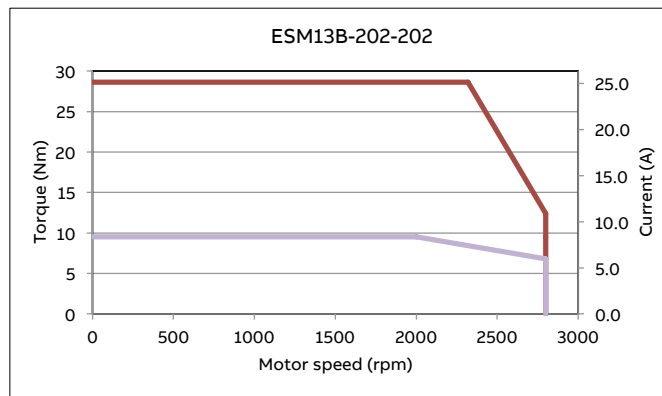
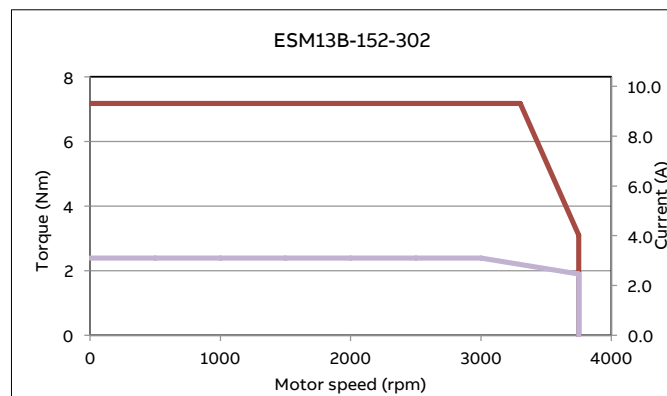
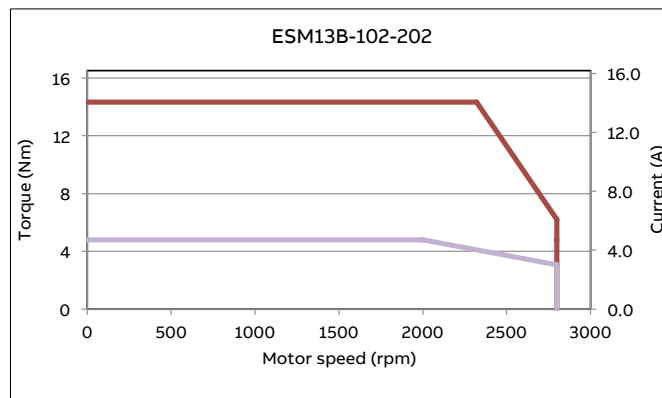
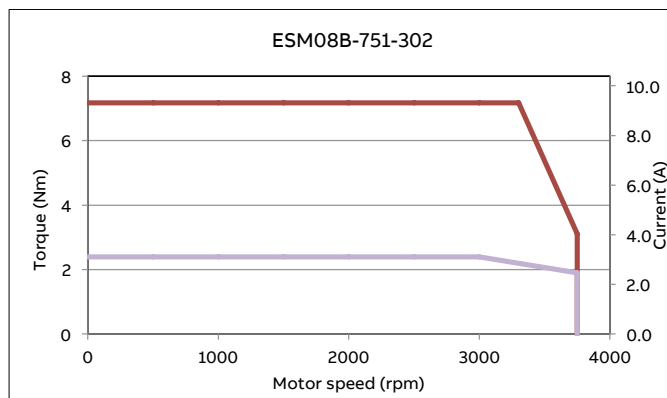
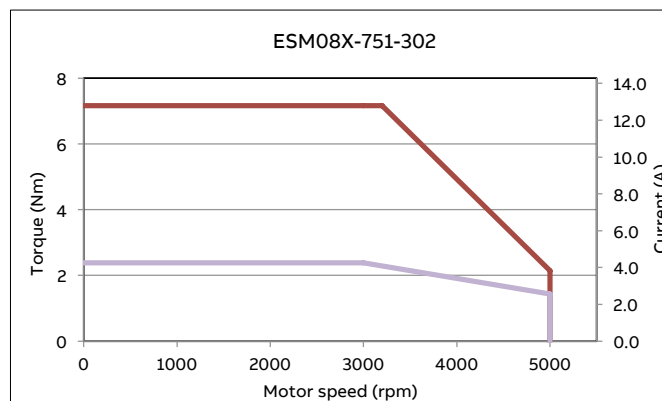
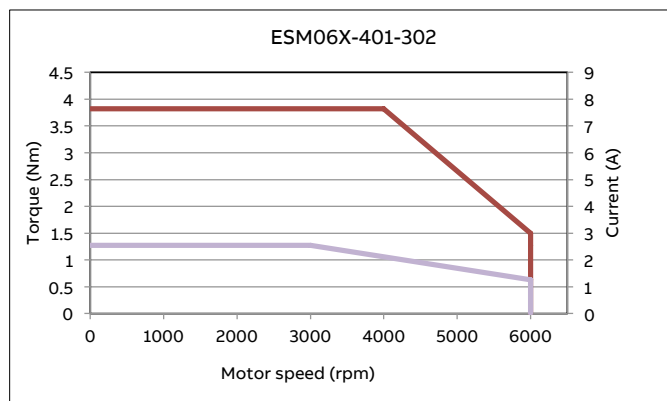
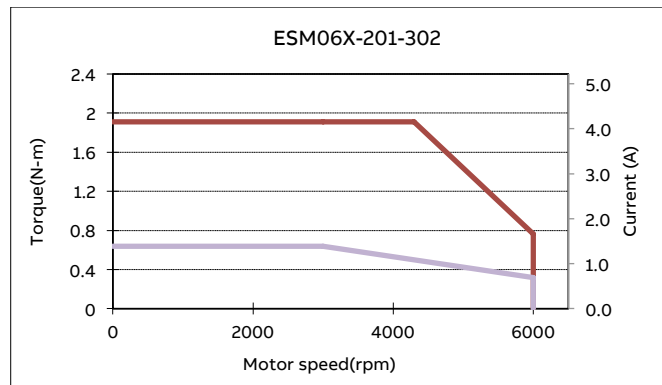
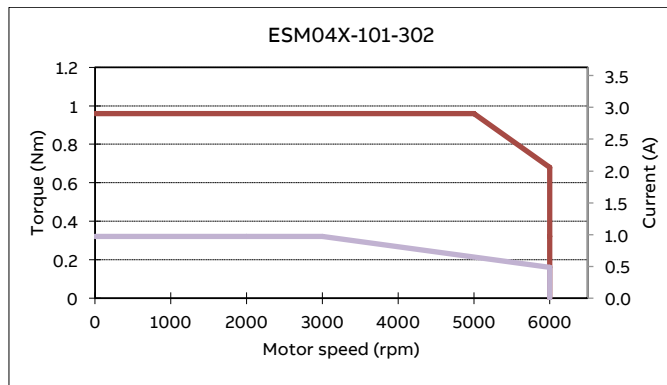
e-Series performance and specification

220 V motors

Frame size		ESM04	ESM06		ESM08		ESM13		
Catalog Number		X-101-302	X-201-302	X-401-302	X-751-302	B-751-302	B-102-202	B-152-302	B-202-202
Rated Power	Watts	100	200	400	750	750	1000	1500	2000
General									
Peak torque	Nm	0.95	1.91	3.81	7.16	7.17	14.31	14.31	28.65
Peak current	A	3	4.8	8.1	14	11.3	15.3	21.2	27
Continuous stall torque	Nm	0.32	0.64	1.27	2.39	2.39	4.78	4.78	9.55
Continuous current	A _{rms}	1	1.6	2.6	4.3	3.8	5.1	6.9	9
Rated speed	rpm	3000	3000	3000	3000	3000	2000	3000	2000
Rated Voltage	V	220							
Electrical									
Torque constant	Nm/A	0.32	0.46	0.47	0.56	0.77	1.02	0.74	1.14
Voltage constant	V _{rms} /krpm	23.7	28	32.8	37.3	42.5	61.7	44.7	68.9
Resistance	ohms	20.5	6.4	3.15	1.48	2.18	1.22	0.65	0.58
Inductance	mH	27.5	16.2	11	10.1	7.7	6.7	3.6	3.8
Electrical time constant	ms	1.22	2.53	3.5	5.74	3.53	5.49	5.48	6.52
Mechanical									
Rotor Inertia with brake	kg·cm ²	NA	0.23	0.34	1.03	2.39	6.96	6.96	12.84
Rotor Inertia without brake	kg·cm ²	0.04	0.17	0.28	0.9	2.26	6.26	6.26	12.14
Max. speed	rpm	6000	6000	6000	5000	3800	2800	3800	2800
Mechanical time constant	ms	1.01	3.36	0.83	0.59	1.64	1.1	1.24	0.86
Number of motor poles	-	8							
Weight with brake	kg	NA	1.4	1.9	3.8	4	8.1	8.1	11.8
Weight without brake	kg	0.5	1	1.4	2.4	3.2	6.5	6.5	10.2
Environmental									
Insulation class	-	F							
Operating temperature range	°C	0 to 40							
Operating humidity	%	80				90			
Storage temperature range	°C	-20 to 60							
Temperature coefficient	°C/W	1.276	0.256	0.154	0.117	0.088	0.064	0.062	0.048
Max radial load *	N	50	124	146	167	368	424	330	491
Max thrust load	N	10	23	23	22	68	175	89	220
Brake data									
Rated voltage	VDC ±10%	24							
Current	A	NA	0.26	0.43			0.82		
Input power	W	NA	6.3	10.4			19.5		
Static friction torque	N·m (min)	NA	2	3			20		
Armature release time	ms (max)	NA	17	35			27		
Armature pull-in time	ms (min)	NA	32	25			76		

* Radial force applied at the end of motor shaft

e-Series 220 V torque curves for MicroFlex drives



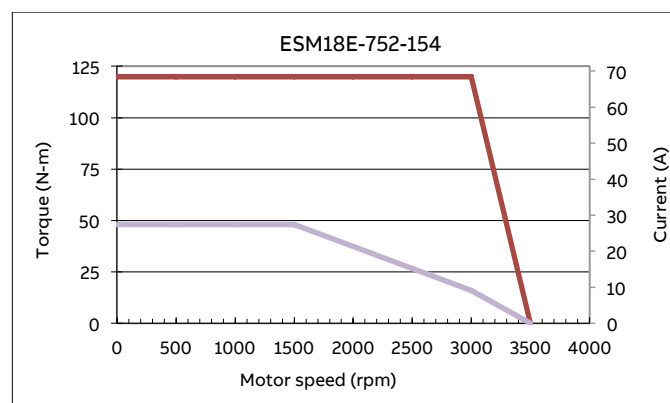
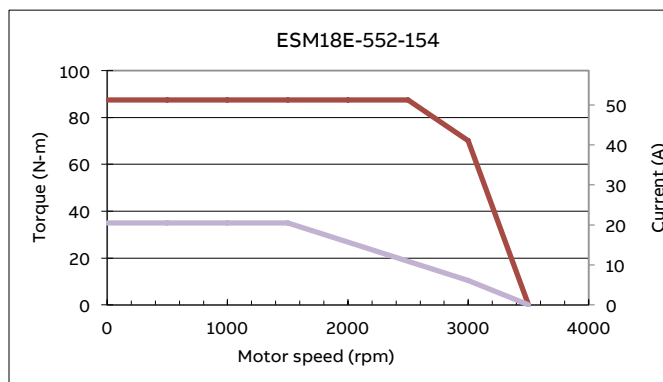
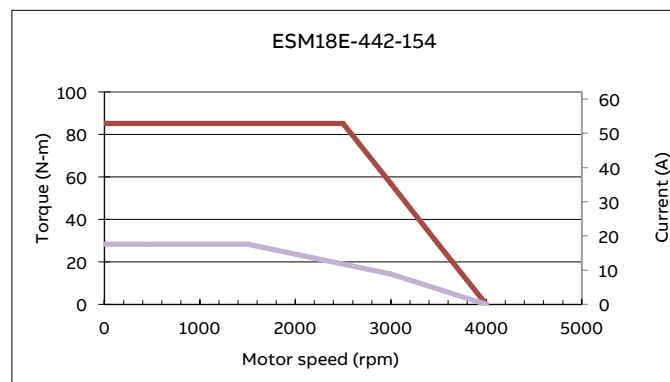
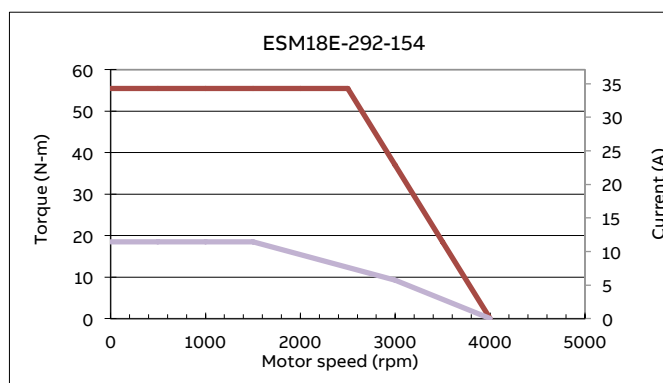
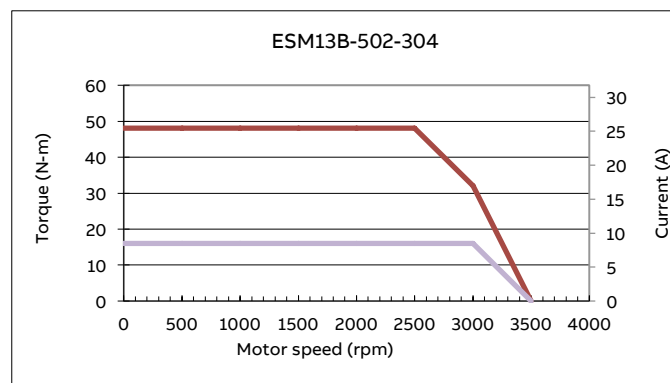
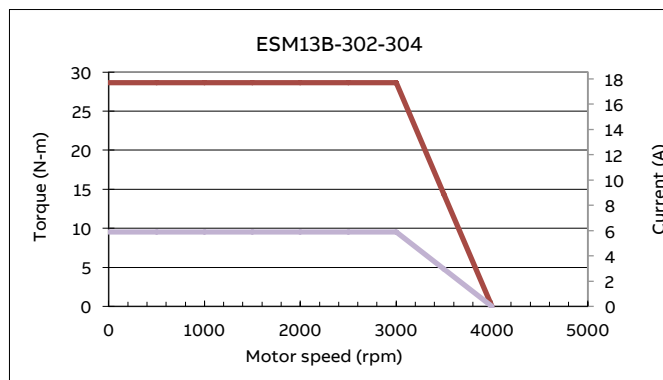
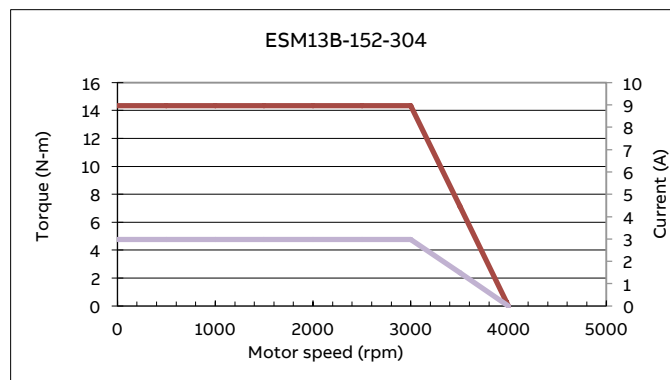
e-Series performance and specification

400 V motors

Frame size		ESM13				ESM18		
Catalog Number		B-152-304	B-302-304	B-502-304	E-292-154	E-442-154	E-552-154	E-752-154
Rated Power	Watts	1500	3000	5000	2900	4400	5500	7500
General								
Peak torque	Nm	14.3	28.7	48.2	45.1	71.1	87.6	119
Peak current	A	9	18	25.8	27.7	44.1	51.3	68
Continuous stall torque	Nm	4.8	9.6	16.1	18.6	28	35	48
Continuous current	A _{rms}	3	6	8.6	11.4	17.6	20.5	27.4
Rated speed	rpm	3000	3000	3000	1500	1500	1500	1500
Rated Voltage	V	400						
Electrical								
Torque constant	Nm/A	1.59	1.59	1.87	1.63	1.61	1.71	1.75
Voltage constant	V _{rms} /krpm	106.7	107.4	122.1	107.5	107.2	113.5	116.5
Resistance	ohms	3.8	1.6	1.1	0.5	0.3	0.2	0.2
Inductance	mH	20.1	9.1	7.5	11.2	7.4	6.2	4.2
Electrical time constant	ms	6.27	6.56	6.13	22.12	23.63	26.3	27.18
Mechanical								
Rotor Inertia with brake	kgcm ²	6.96	12.84	18.62	48	67.8	92.4	132.4
Rotor Inertia without brake	kgcm ²	6.26	12.14	17.9	45.6	65.4	89.98	129.8
Max. speed	rpm	4000	4000	3500	4000	4000	3500	3500
Mechanical time constant	ms	0.86	0.85	0.99	1.2	1.1	1	0.9
Number of motor poles	-	8						
Weight with brake	kg	8.1	11.77	15.1	22.5	28	35	45.7
Weight without brake	kg	6.5	10.6	13.87	18	23.5	30.5	41.2
Environmental								
Insulation class	-	F						
Operating temperature range	°C	0 to 40						
Operating humidity	%	90						
Storage temperature range	°C	-20 to 60						
Temperature coefficient	°C/W	0.060	0.038	0.022	0.024	0.022	0.017	0.014
Max radial load *	N	330	470	449	999	1112	1072	1216
Max thrust load	N	89	89	67	221	221	221	221
Brake data								
Rated voltage	VDC ±10%	24						
Current	A	0.82						
Input power	W	19.5						
Static friction torque	N·m (min)	20						
Armature release time	ms (max)	27						
Armature pull-in time	ms (min)	76						

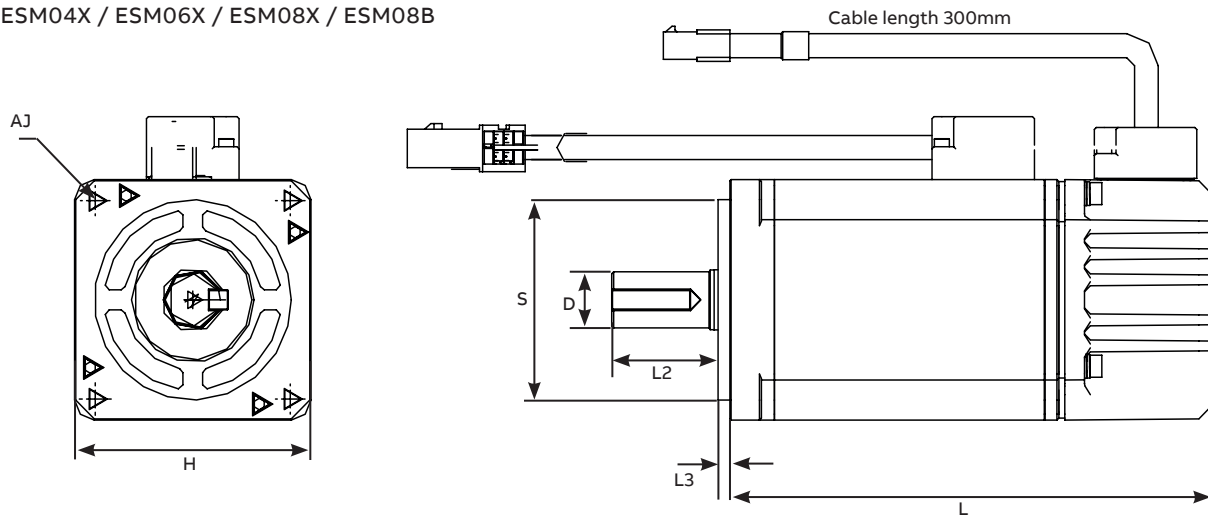
* Radial force applied at the end of motor shaft

e-Series 400 V torque curves for MotiFlex drives

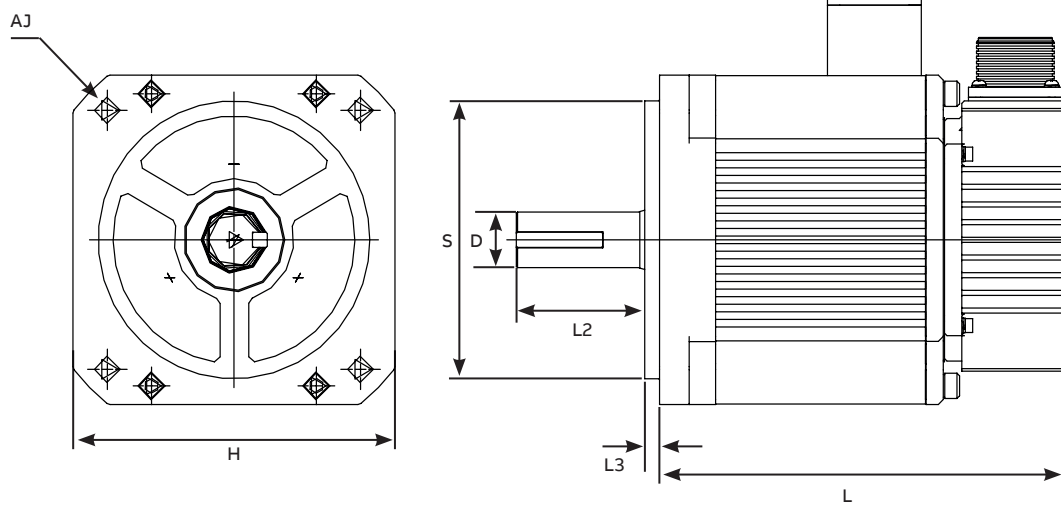


e-Series motor drawings

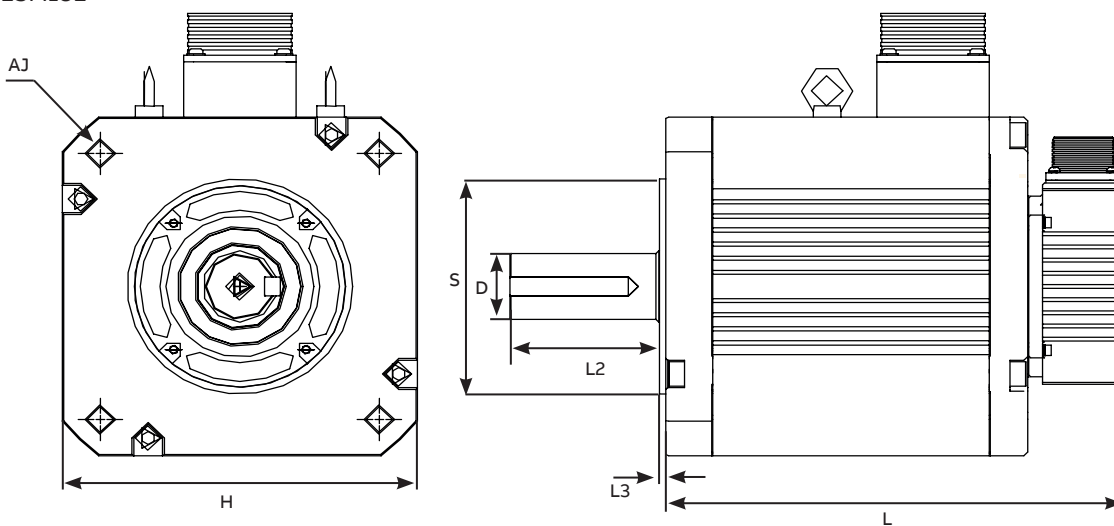
ESM04X / ESM06X / ESM08X / ESM08B



ESM13B



ESM18E



e-Series motor dimensions

Catalog Number	Motor Length (L) mm		Shaft		Frame	Spigot		Mounting Holes	
	W/O brake	W/brake	Length (L2) mm	Diameter (D) mm	Width (H) mm	Depth (L3) mm	Diameter (S) mm	Diameter (AJ) mm	PCD mm
ESM04X-101-302-xx0A00	98.5	NA	25	8	40	2.5	30	4.5	46
ESM06X-201-302-xx0A00	101	139.5	30	14	60	3	50	5.5	70
ESM06X-401-302-xx0A00	123	161.5	30	14	60	3	50	5.5	70
ESM08X-751-302-xx0A00	122.2	160.5	40	19	80	3	70	6.5	90
ESM08B-751-302-xx0A00	147.5	182.7	35	16	86	3	80.4	6.5	100

Motor flying lead cable colours (ESM04, ESM06 and ESM08 only)

Power

Pin	Function	Colour
1	U	Red
2	V	White
3	W	Black
4	GND	Green
5	Shield	Shield
6	Brake 24V	Yellow
7	Brake 0V	Blue

Smart Inc (T1)

Pin	Function	Colour
3	Data +	Blue
4	Data -	Purple
7	GND	Black
10	Vcc	White
18	Shield	Shield

SmartAbs (T2)

Pin	Function	Colour
3	Data +	Blue
4	Data -	Blue / black
7	GND	Black
8	Bat -	Brown / black
9	Bat +	Brown
10	Vcc	Red
18	Shield	Shield

Catalog Number	Motor Length (L) mm		Shaft		Frame	Spigot		Mounting Holes	
	W/O brake	W/brake	Length (L2) mm	Diameter (D) mm	Width (H) mm	Depth (L3) mm	Diameter (S) mm	Diameter (AJ) mm	PCD mm
ESM13B-102-202-xx0A00	163.8	218.3	58	22	130.4	6	110	9	145
ESM13B-152-302-xx0A00	163.8	218.3	58	22	130.4	6	110	9	145
ESM13B-202-202-xx0A00	213.8	268.3	58	22	130.4	6	110	9	145
ESM13B-152-304-xx0A00	163.8	218.3	58	22	130.4	6	110	9	145
ESM13B-302-304-xx0A00	213.8	268.3	58	22	130.4	6	110	9	145
ESM13B-502-304-xx0A00	263.8	318.3	58	28	130.4	6	110	9	145

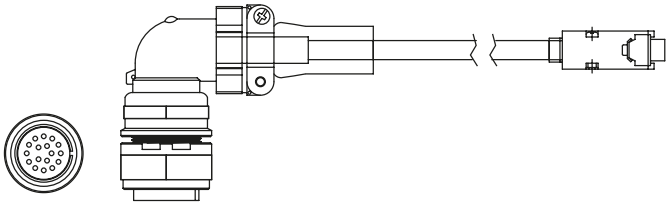
Catalog Number	Motor Length (L) mm		Shaft		Frame	Spigot		Mounting Holes	
	W/O brake	W/brake	Length (L2) mm	Diameter (D) mm	Width (H) mm	Depth (L3) mm	Diameter (S) mm	Diameter (AJ) mm	PCD mm
ESM18E-292-154-xx0A00	200.4	252.6	74	35	180	3.2	114.3	13.5	200
ESM18E-442-154-xx0A00	232.4	284.6	74	35	180	3.2	114.3	13.5	200
ESM18E-552-154-xx0A00	268.4	320.6	108	42	180	3.2	114.3	13.5	200
ESM18E-752-154-xx0A00	342.4	394.6	108	42	180	3.2	114.3	13.5	200

Note - ESM18 motors fitted with brakes have an additional connector that is not shown on this diagram. Details drawings are available from the ABB website.

CBLxxx-EFM-F22

Encoder signal cable for ESM13 or ESM18 2500 ppr encoder and 17 bit single-turn absolute encoder

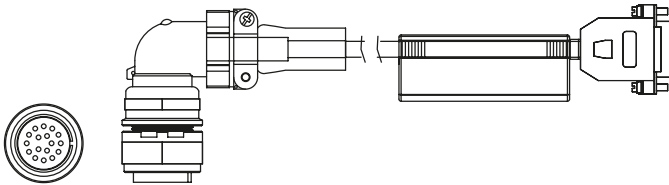
Motor	Colour	Function	Drive
C	Blue	SD+	1
D	Blue / Blk	SD-	9
G	Black	0V	13
K	Red	5V	12
T	Screen	Screen	Shell



CBLxxx-EFM-T22

Encoder signal cable for ESM13 or ESM18 and 17 bit multi-turn absolute encoder*

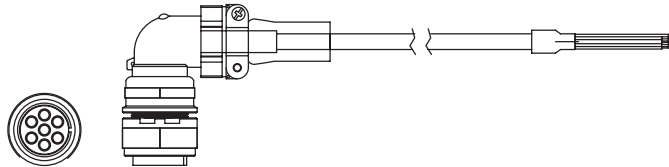
Motor	Colour	Function	Drive
C	Blue	SD+	1
D	Green	SD-	9
G	Black	0V	13
H	Red	VB-	-
J	Brown	VB+	-
K	White	5V	12
T	Screen	Screen	Shell



CBLxxx-EPM-PB12

Power & brake cable for ESM13B

Motor	Colour	Function
B	Red	U
G	White	V
E	Black	W
A	Blue	Brake 0V
F	Yellow	Brake 24V
C	Green	FG



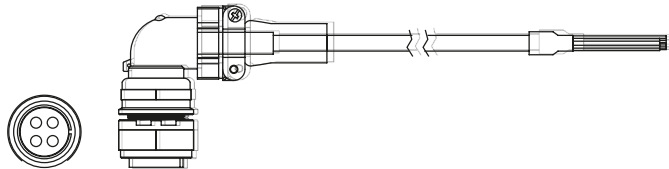
CBLxxx-EPM-P20

Power cable for ESM18E-292 & ESM18E-442

CBLxxx-EPM-P35

Power cable for ESM18E-552 & ESM18E-752

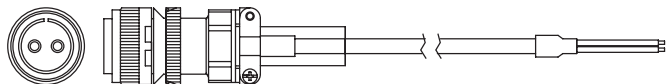
Motor	Colour	Function
B	Red	U
G	White	V
E	Black	W
D	Green	Shield



CBLxxx-EBM-B02

Brake cable for ESM18

Motor	Colour	Function
A	Red	Brake 24V
B	Black	Brake 0V

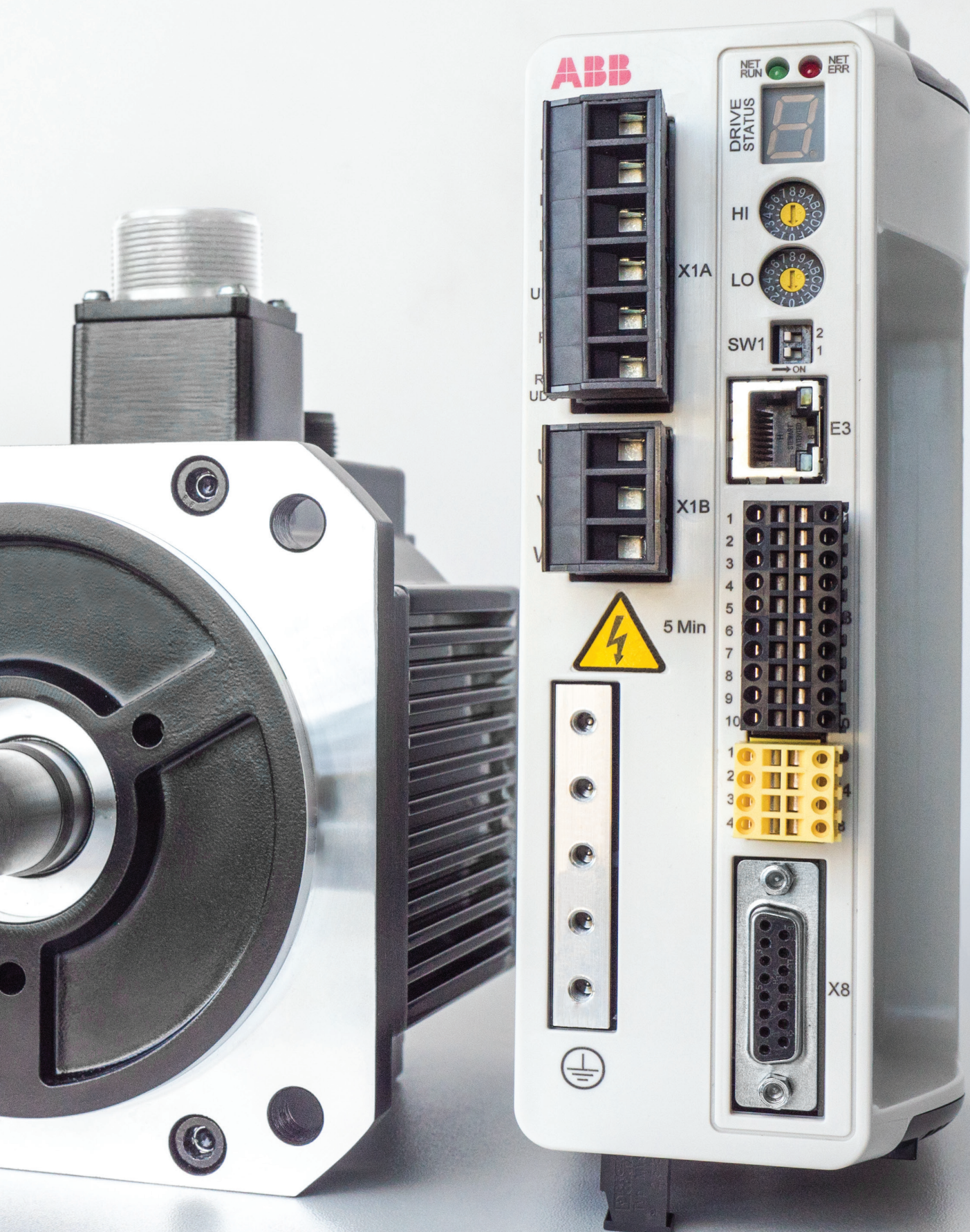


* Absolute feedback battery data – Please use a 3.6 V Lithium Thionyl Chloride AA non-rechargeable battery, available from electrical suppliers.

ABB highly dynamic servo drive packages

The advanced yet simple to use MicroFlex servo drive family with graded functionality and straightforward configuration uses a single intuitive software tool. When combined with the compact and durable e-Series brushless servo motors, continuous torques range from 0.32 to 48N·m. Applications can use step and direction control, ± 10 V dc control, standalone MINT programmable motion, or real-time multi-axis Ethernet networked positioning.





MicroFlex e190 and MotiFlex e180

servo drives -

technology highlights

Microflex e190 and MotiFlex e180 drives deliver versatile motion control performance, capability and dependability to power machine innovations. Flexible connectivity with Ethernet and motor feedback technologies is highly integrated and

optimized for demanding motion applications. With the MINT WorkBench PC tool you can quickly and easily customize the drive to the exact control requirements of your machine.

HMI connection via Ethernet

Profinet IO, Modbus TCP and Ethernet/IP provide support for HMI, PLC or upstream communication network



Two high speed registration inputs

Precise registration of print marks or product position achieved with 2 x 24 V fast isolated inputs that can be used to latch feedback device position in hardware and trigger software events locally in MINT



I/O – digital and analog

I/O used for configurable drive functions, such as end limits or home sensor or within MINT programming for typical machine functions such as push buttons



Dual encoder

Dual encoder input for position and commutation. Provides line shaft following or dual loop control to eliminate mechanical errors.



Wide range of feedback interfaces

Drive feedback options support different serial encoders (EnDat, SSI, BiSS, SmartAbs, Hiperface), resolver and incremental encoders. In addition DSL encoders are supported on e180 to provide a single cable solution.



1010
0110

Memory unit

The compact memory unit stores drive's settings, parameters and application programs. Prepare drive settings off-site, manage functionality levels or move settings from one drive to another.

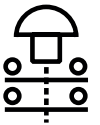


Flexible Ethernet connectivity

Integrated and flexible Ethernet interface enables real-time connectivity with EtherCAT and POWERLINK protocols. In addition Profinet IO, EtherNet/IP, Modbus TCP and RAW Ethernet are supported. Simply select the required protocol by switches on the drive.

Safety

Safe torque-off (STO) SIL3 PLe is a standard feature. STO prevents rotation for machine safety applications, eliminating the need to remove AC power in most applications, minimizing downtime and maximizing machine utilization



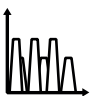
Advanced motion programming

Intelligent drive, offering MINT programming - a high level multitasking language - tailored for motion applications. This powerful but simple programming language, accessed using MINT WorkBench software, provides control of communications, logic, motion and HMI interactions.



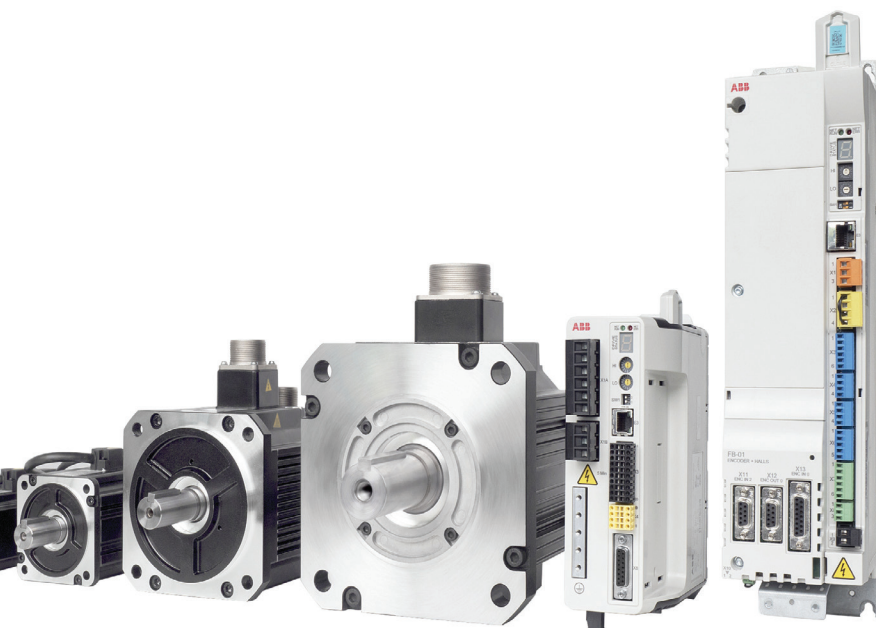
Dynamic overload

A peak overload of 300 percent of rms current maximizes available torque for dynamic acceleration. 300 percent peak torque delivers faster cycle times and increased productivity.



Rotary and linear motors

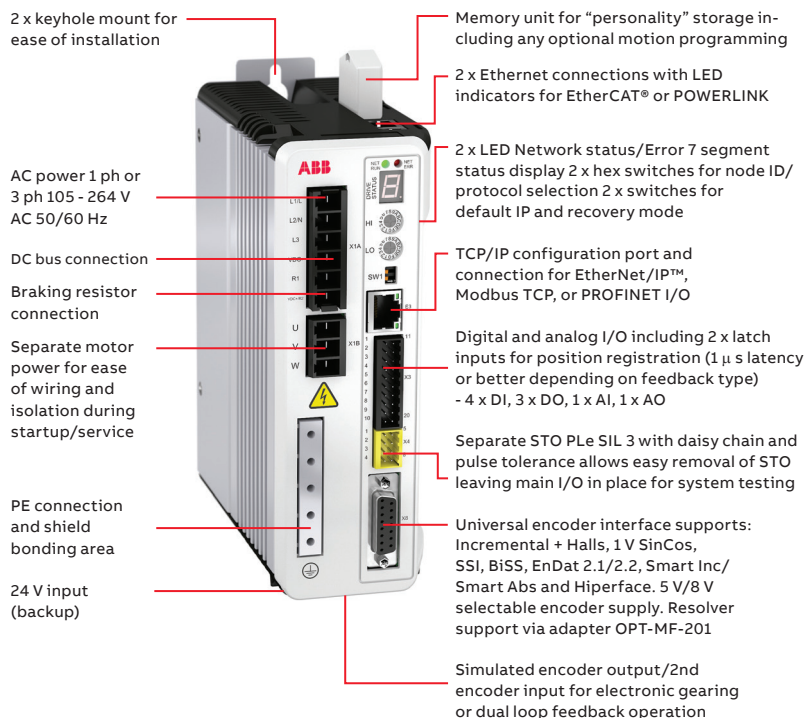
Provides precision motor control of servo motors, both rotary and linear. Universal encoder interface can be simply configured by software to support a wide range of feedback types.



MicroFlex e190

Specification

- 0.4 kW to 3 kW
- 105 to 240 V AC single and three phase
- IP20, flush mount, side-by-side
- 200 and 300 percent overload modes
- Universal feedback interface
- Dual encoder input or buffered encoder out
- Digital and analog I/O
- Integrated selectable Ethernet protocols
- Transferable memory module for all application data
- 2 x high speed registration inputs
- EMC bonding plate that simplifies cable management
- Analog and Pulse Train Output (PTO) control modes
- Multi-tasking motion programming option



Technical data

eSeries and MicroFlex e190 - Matched performance drives and motor packages

Motor type and rating	Drive type and ratings				Package rating				
	Cont Current (A)	Peak Current (A)	Drive Type	Mode ¹	Rated Amps (A)	Peak Amps (A)	Cont Torque (N·m)	Peak Torque (N·m)	Rated Power (W)
ESM04X-101-302-xxN0A00	1.1	3.2	MFE190-04UN-01A6-2	200%	1.6	3.2	0.32	0.93	100
ESM06X-201-302-xxx0A00	1.6	4.8	MFE190-04UN-01A6-2	300%	1.6	4.8	0.64	1.91	200
ESM06X-401-302-xxx0A00	2.7	8.1	MFE190-04UN-03A0-2	200%	3	6	1.27	2.83	400
			MFE190-04UN-06A0-2 ¹	200%	6	12	1.27	3.82	400
ESM08X-751-302-xxx0A00	4.3	14	MFE190-04UN-06A0-2	300%	5.25	15.75	2.39	7.77	750
ESM08B-751-302-xxx0A00	3.8	11.3	MFE190-04UN-06A0-2	200%	6	12	2.42	7.20	750
ESM13B-102-202-xxx0A00	5.1	15.3	MFE190-04UN-06A0-2	200%	6	12	4.77	11.22	1000
			MFE190-04UN-09A0-2 ¹	200%	9	18	4.77	14.31	1000
ESM13B-152-302-xxx0A00	6.9	20.7	MFE190-04UN-06A0-2	200%	6	12	4.15	8.30	1300
			MFE190-04UN-09A0-2 ¹	300%	7.5	22.5	4.77	14.31	1500
ESM13B-202-202-xxx0A00	9	27	MFE190-04UN-09A0-2	200%	9	18	9.55	19.09	2000
			MFE190-04UN-09A0-2	300%	7.5	22.5	7.95	23.86	1700

¹ e190 drives offer a 200% and 300% rating mode offering higher peak torques at a slightly reduced rms rating. Highlighted rows will provide full peak and continuous torque of the motor. If full peak torque is not required by the application, a lower rating drive can be selected in some cases for a more cost effective solution.

MotiFlex e180

Specification

- 0.4 kW to 3 kW
- 105 to 240 V AC single and three phase
- IP20, flush mount, side-by-side
- 200 and 300 percent overload modes
- Universal feedback interface
- Dual encoder input or buffered encoder out
- Digital and analog I/O
- Integrated selectable Ethernet protocols
- Transferable memory module for all application data
- 2 x high speed registration inputs
- EMC bonding plate that simplifies cable management
- Analog and Pulse Train Output (PTO) control modes
- Multi-tasking motion programming option

Technical data

eSeries and MotiFlex e180 - Matched performance drives and motor packages

Realtime Ethernet
Software selectable protocol including:

- EtherCAT®
- PowerLink
- Other protocols supported by generic Ethernet port

Feedback options

- Serial Encoder + SinCos (1Vpp) EnDat, SSI, BiSS, SmartAbs, Hiperface,
- Incremental + Halls
- Resolver
- DSL

Incremental encoder input

- Dual loop or line shaft functions

Simulated encoder output

Motor thermal PTC (isolated)

24 V control supply

- Maintain communications and position with AC power removed

Memory module

- Firmware and parameters
- Easy drive swap out

Other features

- 7 segment display alarm/status
- 2 x hex switches for node ID
- 2 x DIP switches comms functions

Ethernet commissioning

- Modbus TCP
- EtherNet/IP™

2 channel STO SIL 3 PL e

I/O features

- 2 x fast latch inputs (1 micro sec)
- 8 x DI (inc fast latch input)
- 4 x DO
- 2 x AI (12 bit, +/-10 V)
- 1 x AO (12 bit, +/-10 V)
- Motor thermal PTC (isolated)
- 1 x Relay out 1 x c/o (240 V 5.0 A)

Motor type and rating			Drive type and ratings		Package rating				
Type code	Cont Current (A)	Peak Current (A)	Drive Type	Mode ¹	Rated Amps (A)	Peak Amps (A)	Cont Torque (N.m)	Peak Torque (N.m)	Rated Power (W)
ESM13B-152-304-xxx0A00	3	9	MotiFlex e180-03A0	200%	3	6	4.81	9.63	1500
			MotiFlex e180-05A0	200%	4	8	4.81	12.84	1500
			MotiFlex e180-07A0	200%	4.7	9.4	4.81	14.44	1500
ESM13B-302-304-xxx0A00	5.9	17.7	MotiFlex e180-07A0	150%	6	9	9.52	14.53	3000
			MotiFlex e180-016A	200%	9	18	2.39	28.57	3000
ESM13B-502-304-xxx0A00	8.7	26.2	MotiFlex e180-016A	200%	9	18	15.97	33.05	5000
			MotiFlex e180-024A	200%	13.5	27	15.97	48.1	5000
ESM18E-292-154-xxx0A00	11.4	34.3	MotiFlex e180-016A	110%	14	15.4	18.43	24.9	2900
			MotiFlex e180-024A	200%	13.5	27	18.43	43.65	2900
			MotiFlex e180-031A	200%	21	42	18.43	55.45	2900
ESM18E-442-154-xxx0A00	17.6	52.9	MotiFlex e180-024A	110%	21.5	23.7	28.37	38.12	4400
			MotiFlex e180-031A	200%	21	42	28.37	67.69	4400
			MotiFlex e180-046A	200%	28	56	28.37	85.26	4400
ESM18E-552-154-xxx0A00	20.5	61.5	MotiFlex e180-024A	110%	21.5	23.7	34.98	40.36	5500
			MotiFlex e180-031A	200%	21	32	34.98	71.67	5500
			MotiFlex e180-046A	200%	28	56	34.98	95.56	5500
			MotiFlex e180-060A	200%	35	70	34.98	104.95	5500
ESM18E-752-154-xxx0A00	27.4	82.2	MotiFlex e180-031A	110%	28	30.8	47.98	53.94	7500
			MotiFlex e180-046A	200%	28	56	47.98	98.07	7500
			MotiFlex e180-060A	200%	35	70	47.98	122.59	7500
			MotiFlex e180-090A	200%	55	110	47.95	143.85	7500

Please note all MotiFlex e180 ratings shown are at 4 kHz switching frequency.

Highlighted rows will provide full peak and continuous torque. If full peak torque is not required then other more cost effective solutions may be offered.

Applications and industries

High throughput with smooth speed and fast settling times are important machine design requirements. ABB highly dynamic servo packages with advanced motor controls are ideal for these applications, providing dynamic acceleration and high torque density. A choice of incremental encoder or high resolution absolute feedback suits precision tasks, whilst resolver feedback offers improved durability.

Choose between simple analog or digital control through to intelligent drives that can fulfill single-axis standalone motion control or tightly synchronized multi-axis motion in combination with ABB's motion controls.

This flexible and adaptable range offers solutions for:

- Cut-to-length
- Infeed control
- Flying shear
- Rotary Shear
- Electronic gearbox
- High speed registration
- Point-to-point positioning
- Synchronized multi-axis motion

Applications include:

- Robotics/Pick and place
- Material handling
- Labeling machines
- Packaging machines
- Winding and unwinding machines
- Printing machines
- Dispensing machines

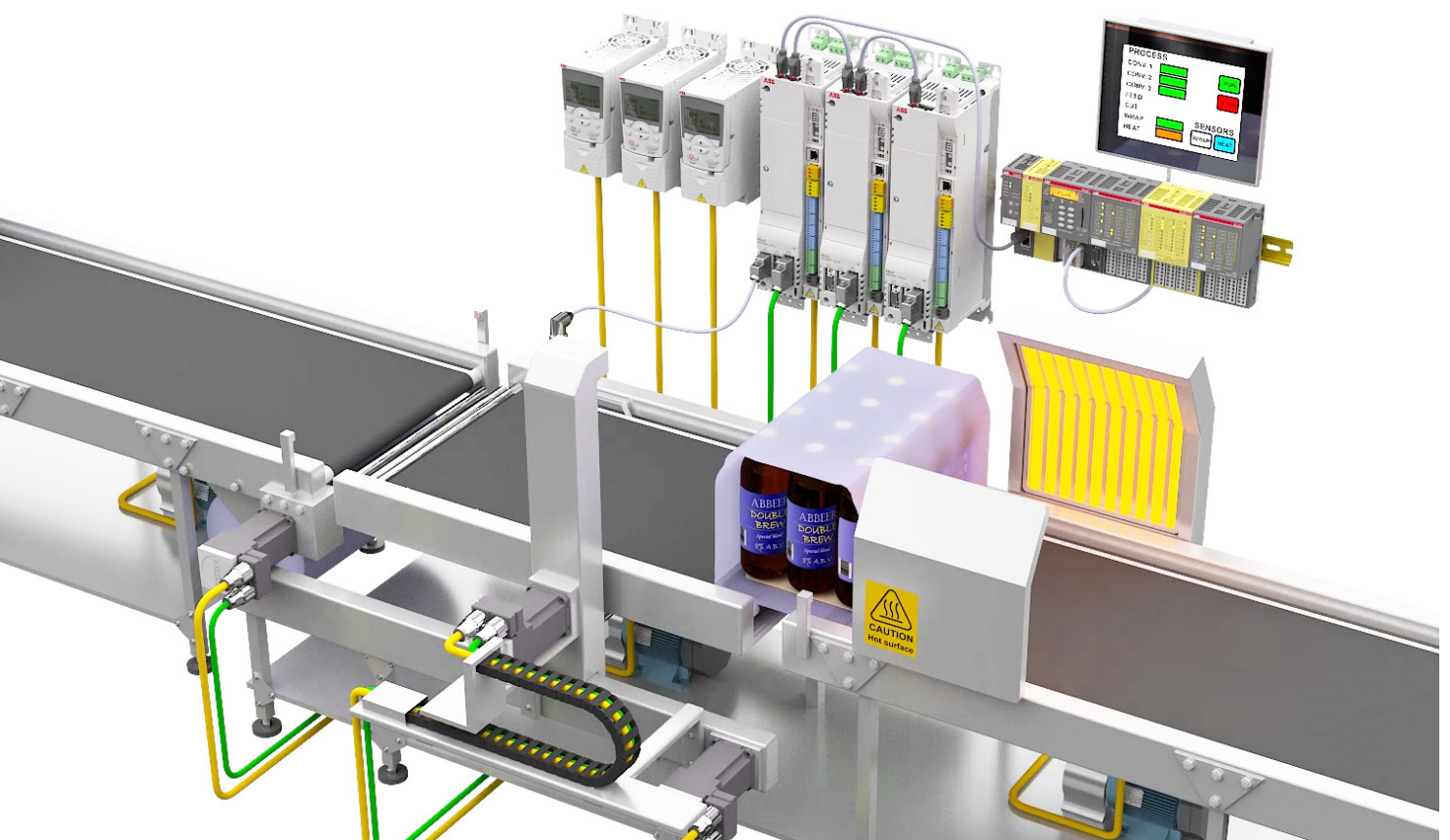




ABB automation products



Servo drives

ABB offers a range of servo drives to cover many different applications. Its drives range from simple analog, fieldbus controlled drives, indexing drives, fully programmable motion drives and real-time Ethernet solutions based on the open standard Ethernet POWERLINK and EtherCAT. ABB motion drives control rotary and linear AC servo motors or closed load induction motors and are available from 1.6A single phase through to 90A three phase.



Machinery drives

ABB offers machinery builders AC drives from component drives up to high performance machinery drives. Global support and service guarantees lifelong satisfaction. ABB machinery drives provide speed control of diverse applications from spa bath motors to treadmill motors, as well as high precision applications such as positioning and synchronization systems.



Control panels

Our control panels offer a wide range of touchscreen graphical displays from 3.5" up to 15". They are provided with user-friendly configuration software that enables tailor made customized HMI solutions. Rich sets of graphical symbols and the relevant drivers for ABB automation products are provided. Control panels for visualization of AC500 web server applications are available.



Motion controllers

ABB offers a wide range of motion control products to suit many different applications. Motion controllers are available in PCI format, as standalone units with USB, CANopen, serial and Ethernet interfaces and as intelligent programmable drives for use in single or multiaxis systems.



Servo motors

ABB's e-Series and BSM servo motors offer a wide range of power outputs, a choice of feedback devices and gearheads to match. All ABB servo motors are designed for durability and ability to handle harsh environments.



AC motors

ABB's low voltage AC motors are designed to save energy, reduce operating costs and enable demanding motor applications to perform reliably and without unscheduled downtime. General performance motors combine convenience and easy handling seamlessly with ABB's engineering expertise. Process performance motors provide the most comprehensive, versatile set of motors for the process industries and heavy-duty applications.



Jokab safety products

ABB Jokab Safety offers an extensive range of innovative products and solutions for machine safety systems. It is represented in standardization organisations for machine safety and works daily with the practical application of safety requirements in combination with production requirements. ABB Jokab Safety delivers everything from a single safety solution to complete safety systems for single machines or entire production lines.



AC500

ABB's powerful flagship PLC offering a wide range of performance levels and scalability within a single simple concept where most competitors require multiple product ranges to deliver similar functionality. Web server integrated and IEC 60870-5-104 remote control protocol for all Ethernet versions.



AC500-eCo

Meets the cost-effective demands of the small PLC market whilst offering total inter-operability with the core AC500 range. Web server, FTP server and Modbus-TCP for all Ethernet versions. A Pulse Train Output module is available for multi-axis positioning.



AC500-S

A PLC based modular automation solution that makes it easier than before to mix and match standard and safety I/O modules to expertly meet your safety requirements in all functional safety applications. "Extreme conditions" version is also offered.



AC500-XC

"Extreme conditions" modules with extended operating temperature, immunity to vibration and hazardous gases, for use at high altitudes, in humid conditions, etc. It replaces expensive cabinets with its built-in protection against dirt, water, gases and dust.



Programming software

Automation Builder integrates the engineering and maintenance for PLC, drives, motion, HMI and robotics. It complies with the IEC 61131-3 standard offering all five IEC programming languages for PLC and drive configuration. In addition, it includes continuous function chart, C, extensive function block libraries and powerful embedded simulation/visualization features. Automation Builder supports a number of languages (English, German, French, Chinese, Spanish) and comes with new libraries, FTP functions, SMTP, SNMP, smart diagnostics and debugging capabilities.



Robotics

ABB's robotic automation offers cell automation by integrating AC500 PLCs in IRC5 robot controllers. More productivity with robots is achieved by wireless interfaces for sensors and actuators on robot tools. Wireless from ABB is an innovative, proven solution well-suited for robots, presses, rotary tables and gantries.



I/O modules

Centralised I/O expansion of the AC500 line and decentralised modular I/O supporting CS31, CANopen, PROFIBUS® DP, PROFINET® and EtherCAT.

Additional information

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