

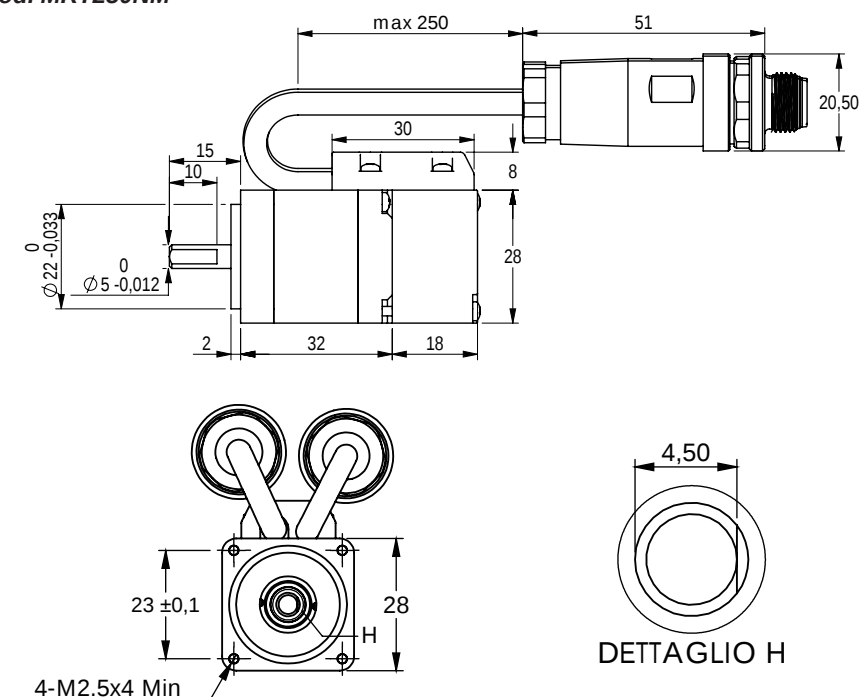
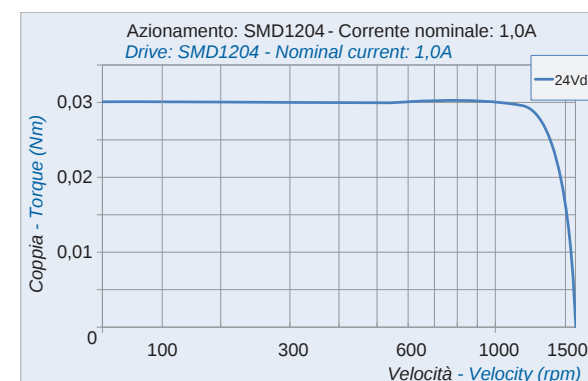
Stepper servomotors



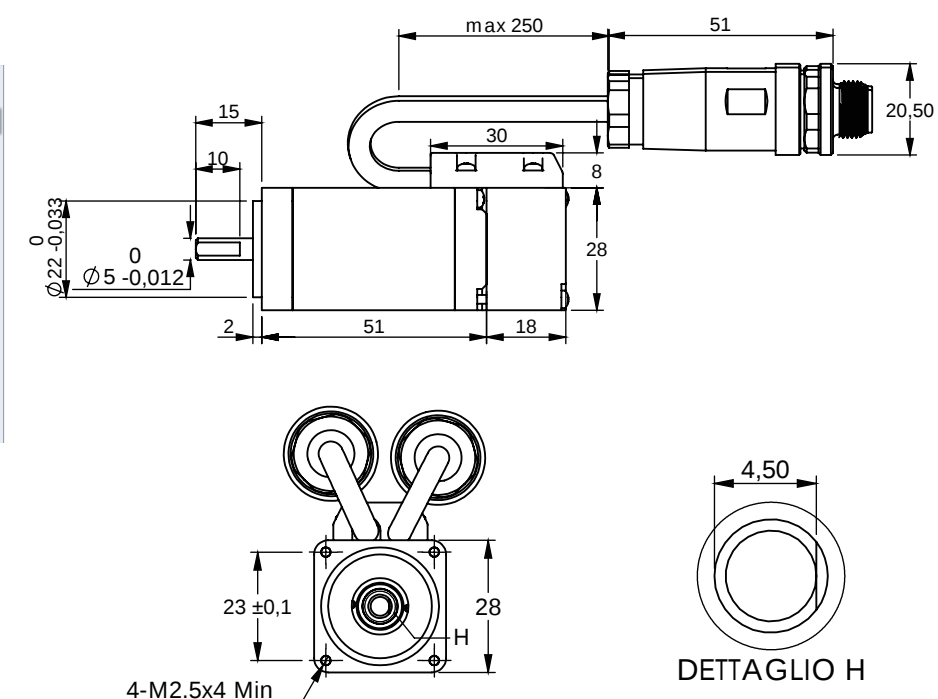
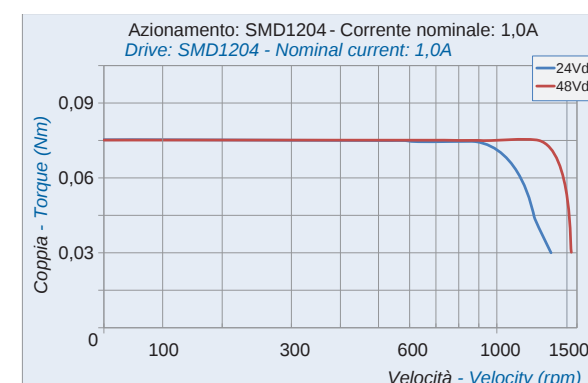
Stepper servomotors

M28SH32-Tx										
Model	Motor code	Current/Phase	Resistance/Phase	Inductance/Phase	Detent torque	Holding torque	Rotor inertia	Encoder	Pulses/revolution	Weight
M28SH32-TO1000L05C	M221	1,0 A	2,00 Ω	1,7 mH	2 mNm	0,07 Nm	8 gcm²	Line-driver	1000	220 g

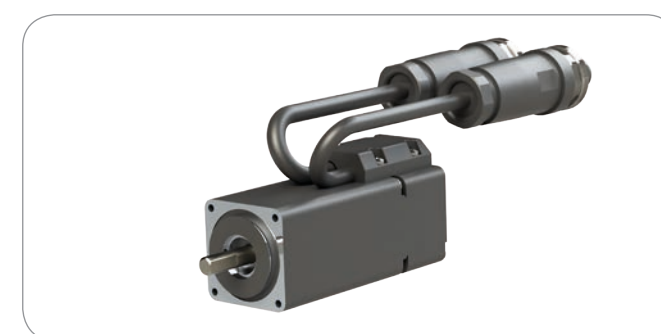
The torque curves are made with AEP torque transducer mod. MRT250NM



M28SH51-Tx										
Model	Motor code	Current/Phase	Resistance/Phase	Inductance/Phase	Detent torque	Holding torque	Rotor inertia	Encoder	Pulses/revolution	Weight
M28SH51-TO1000L05C	M224	1,0 A	3,30 Ω	4,2 mH	8 mNm	0,14 Nm	18 gcm²	Line-driver	1000	305 g

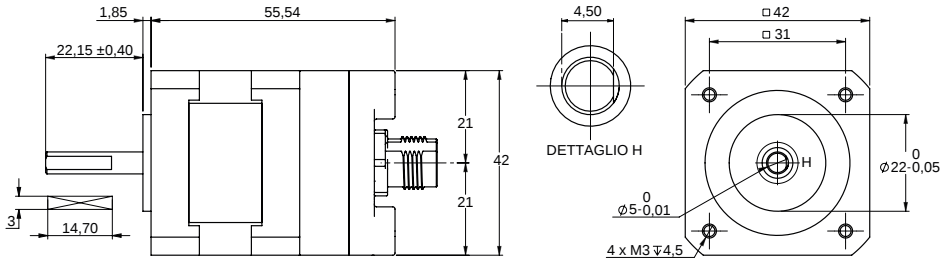
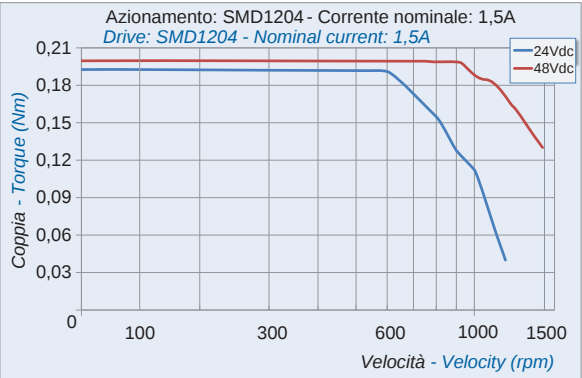


SPECIFICATIONS	M28 series
Insulation class	B
Ambient temperature	-10°C +35°C
Temperature rise	80°C max (2 phase ON)
Insulation resistance	100 MΩ min 500Vdc
Dielectric Strength	500 Vac for one minute
Shaft radial play	0.02 max (with 400g load)
Shaft axial play	0.08 max (with 400g load)
Max radial force	28 N (20mm from front flange)
Max axial force	10 N

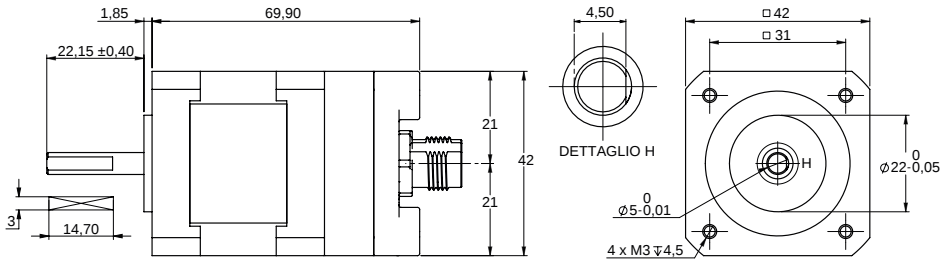
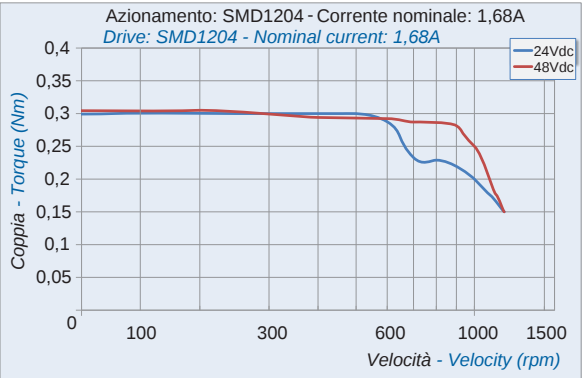


M42SH33-Tx										
Model	Motor code	Current/Phase	Resistan-ce/Phase	Inductan-ce/Phase	Detent torque	Holding torque	Rotor inertia	Encoder	Pulses/revolution	Weight
M42SH33-T-C	M117	1,5 A	1,35 Ω	2,1 mH	14 mNm	0,23 Nm	35 gcm ²	-	-	270 g
M42SH33-TO0512P24C	M140	1,5 A	1,35 Ω	2,1 mH	14 mNm	0,23 Nm	35 gcm ²	Push-pull	512	280 g
M42SH33-TO0512L05C	M130	1,5 A	1,35 Ω	2,1 mH	14 mNm	0,23 Nm	35 gcm ²	Line-driver	512	280 g

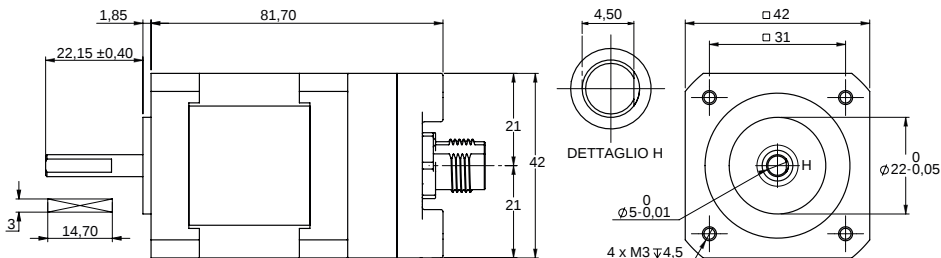
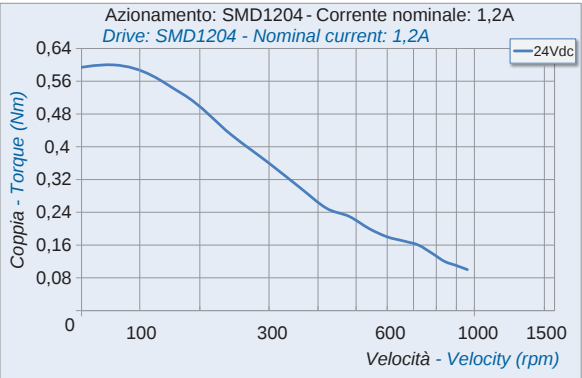
The torque curves are made with AEP torque transducer mod. MRT250NM



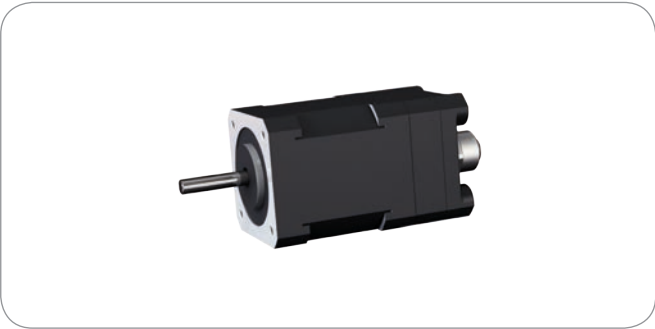
M42SH47-Tx										
Model	Motor code	Current/Phase	Resistan-ce/Phase	Inductan-ce/Phase	Detent torque	Holding torque	Rotor inertia	Encoder	Pulses/revolution	Weight
M42SH47-T-C	M111	1,68 A	1,65 Ω	2,8 mH	21 mNm	0,44 Nm	68 gcm ²	-	-	360 g
M42SH47-TO0512P24C	M141	1,68 A	1,65 Ω	2,8 mH	21 mNm	0,44 Nm	68 gcm ²	Push-pull	512	370 g
M42SH47-TO0512L05C	M131	1,68 A	1,65 Ω	2,8 mH	21 mNm	0,44 Nm	68 gcm ²	Line-driver	512	370 g



M42SH60-Tx										
Model	Motor code	Current/Phase	Resistan-ce/Phase	Inductan-ce/Phase	Detent torque	Holding torque	Rotor inertia	Encoder	Pulses/revolution	Weight
M42SH60-T-C	M112	1,2 A	7,3 Ω	16,6 mH	28 mNm	0,8 Nm	102 gcm ²	-	-	540 g
M42SH60-TO0512P24C	M142	1,2 A	7,3 Ω	16,6 mH	28 mNm	0,8 Nm	102 gcm ²	Push-pull	512	550 g
M42SH60-TO0512L05C	M132	1,2 A	7,3 Ω	16,6 mH	28 mNm	0,8 Nm	102 gcm ²	Line-driver	512	550 g



SPECIFICATIONS	M42 series
Insulation class	B
Ambient temperature	-10°C +35°C
Temperature rise	80°C max (2 phases ON))
Insulation resistance	100 MΩ min 500Vdc
Dielectric Strength	500 Vac for one minute
Shaft radial play	0.02 max (with 400g load)
Shaft axial play	0.08 max (with 400g load)
Max radial force	28 N (20mm from front flange)
Max axial force	10 N



M57SH56-Tx										
Model	Motor code	Current/Phase	Resistance/Phase	Inductance/Phase	Detent torque	Holding torque	Rotor inertia	Encoder	Pulses/revolution	Weight
M57SH56-T-C	M79	2,8 A	0,9 Ω	2,5 mH	40 mNm	1,26 Nm	300 gcm ²	-	-	0,7 Kg
M57SH56-TO0512P24C	M98	2,8 A	0,9 Ω	2,5 mH	40 mNm	1,26 Nm	300 gcm ²	Push-pull	512	0,7 Kg
M57SH56-TO0512L05C	M99	2,8 A	0,9 Ω	2,5 mH	40 mNm	1,26 Nm	300 gcm ²	Line-driver	512	0,7 Kg
M57SH56-TM1611S05C	M506	2,8 A	0,9 Ω	2,5 mH	40 mNm	1,26 Nm	300 gcm ²	Multiturn absolute	2048	0,7 Kg

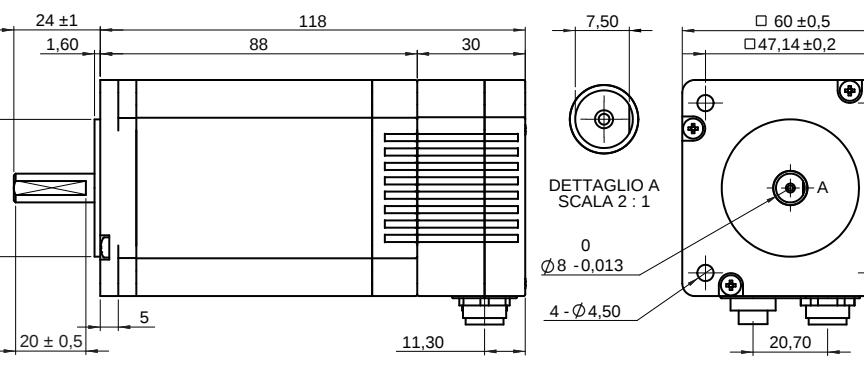
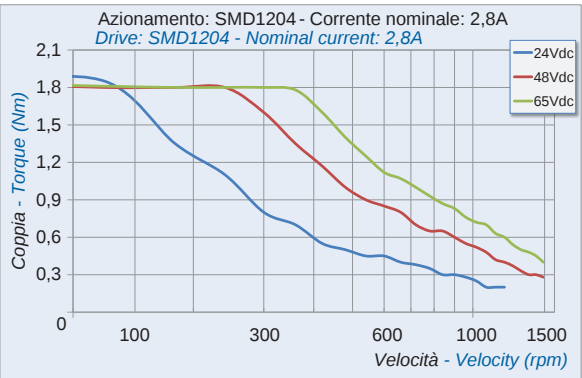
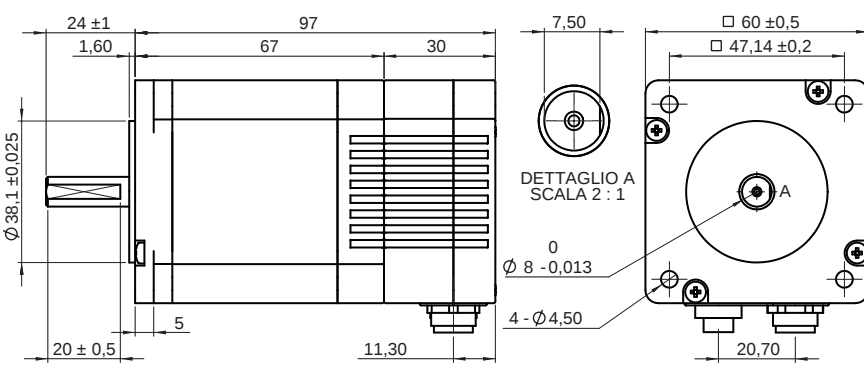
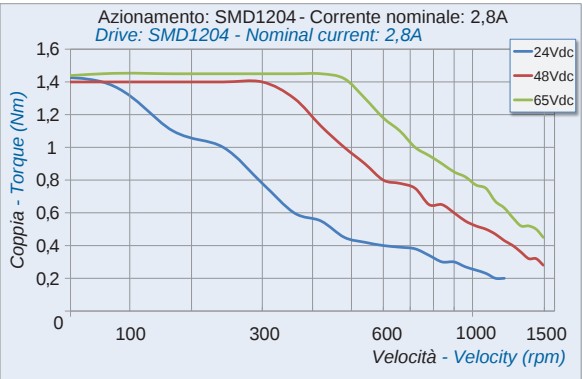
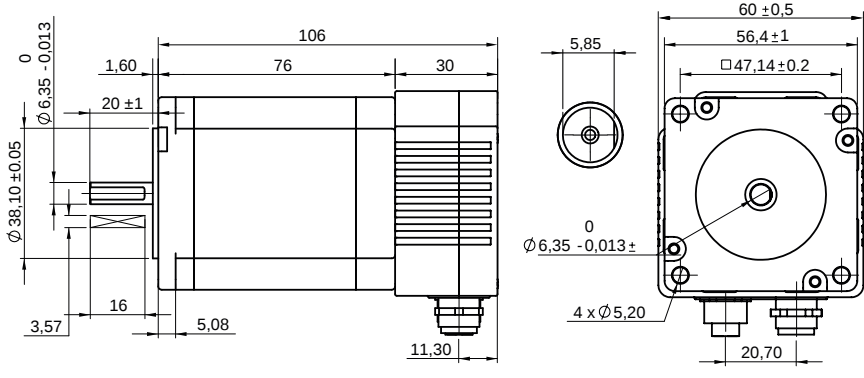
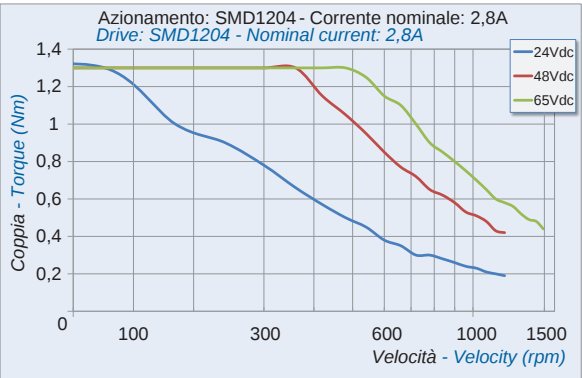
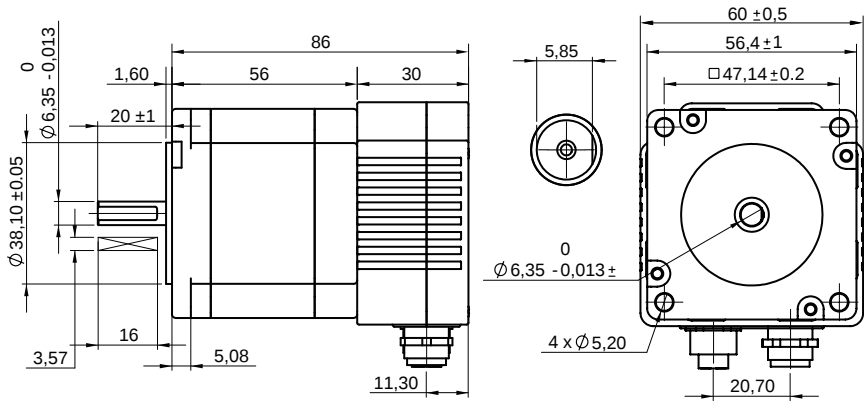
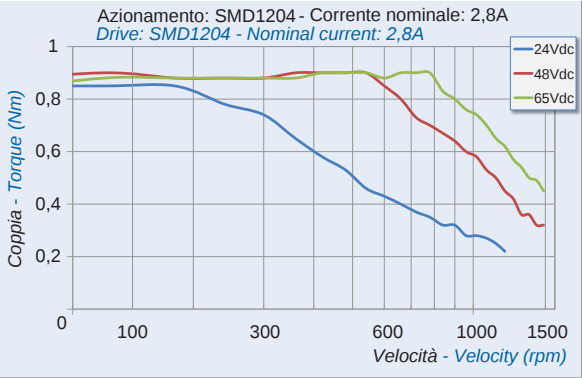
M57SH76-Tx										
Model	Motor code	Current/Phase	Resistance/Phase	Inductance/Phase	Detent torque	Holding torque	Rotor inertia	Encoder	Pulses/revolution	Weight
M57SH76-T-C	M213	2,8 A	1,2 Ω	5,4 mH	72 mNm	1,89 Nm	440 gcm ²	-	-	1,1 Kg
M57SH76-TO0512P24C	M214	2,8 A	1,2 Ω	5,4 mH	72 mNm	1,89 Nm	440 gcm ²	Push-pull	512	1,1 Kg
M57SH76-TO0512L05C	M215	2,8 A	1,2 Ω	5,4 mH	72 mNm	1,89 Nm	440 gcm ²	Line-driver	512	1,1 Kg
M57SH76-TM1611S05C	M507	2,8 A	1,2 Ω	5,4 mH	72 mNm	1,89 Nm	440 gcm ²	Multiturn absolute	2048	1,1 Kg

M60SH65-Tx										
Model	Motor code	Current/Phase	Resistance/Phase	Inductance/Phase	Detent torque	Holding torque	Rotor inertia	Encoder	Pulses/revolution	Weight
M60SH65-T-C	M02	2,8 A	1,2 Ω	4,6 mH	56 mNm	2,1 Nm	570 gcm ²	-	-	1,2 Kg
M60SH65-TO0512P24C	M90	2,8 A	1,2 Ω	4,6 mH	56 mNm	2,1 Nm	570 gcm ²	Push-pull	512	1,2 Kg
M60SH65-TO0512L05C	M81	2,8 A	1,2 Ω	4,6 mH	56 mNm	2,1 Nm	570 gcm ²	Line-driver	512	1,2 Kg
M60SH65-TM1611S05C	M508	2,8 A	1,2 Ω	4,6 mH	56 mNm	2,1 Nm	570 gcm ²	Multiturn absolute	2048	1,2 Kg

M60SH86-Tx										
Model	Motor code	Current/Phase	Resistance/Phase	Inductance/Phase	Detent torque	Holding torque	Rotor inertia	Encoder	Pulses/revolution	Weight
M60SH86-T-C	M06	2,8 A	1,5 Ω	6,8 mH	75 mNm	3,1 Nm	840 gcm ²	-	-	1,4 Kg
M60SH86-TO0512P24C	M91	2,8 A	1,5 Ω	6,8 mH	75 mNm	3,1 Nm	840 gcm ²	Push-pull	512	1,4 Kg
M60SH86-TO0512L05C	M82	2,8 A	1,5 Ω	6,8 mH	75 mNm	3,1 Nm	840 gcm ²	Line-driver	512	1,4 Kg
M60SH86-TM1611S05C	M509	2,8 A	1,5 Ω	6,8 mH	75 mNm	3,1 Nm	840 gcm ²	Multiturn absolute	2048	1,4 Kg

SPECIFICATIONS	M57 -M60
Insulation class	B
Temperatura ambiente	-20°C +50°C
Temperature rise	80°C max (2 phases ON)
Insulation resistance	100 MΩ min 500Vdc
Dielectric Strength	500 Vac for one minute
Shaft radial play	0.02 max (with 0,5Kg load)
Shaft axial play	0.08 max (with 1Kg load)
Max radial force	75 N (20mm from front flange)
Max axial force	15 N

The torque curves are made with AEP torque transducer mod. MRT250NM



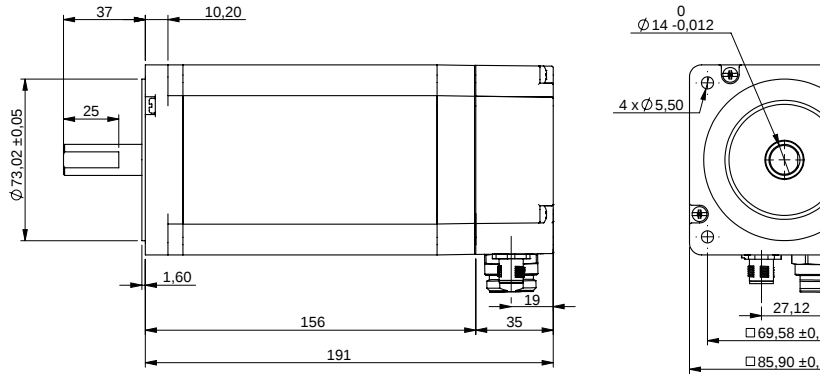
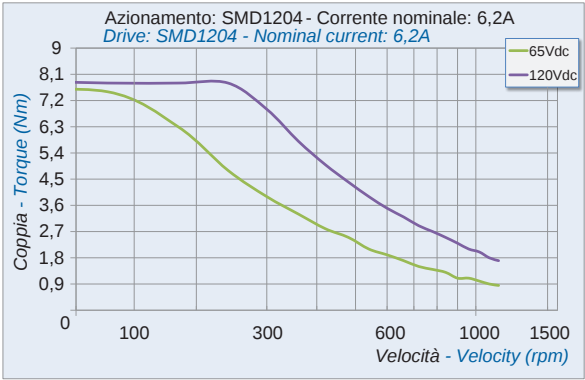
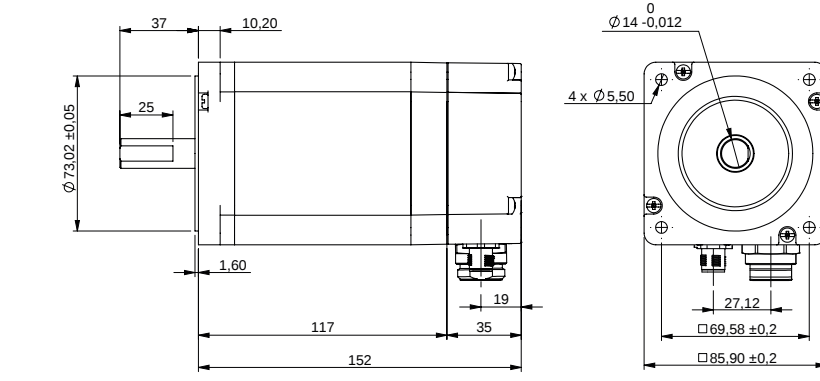
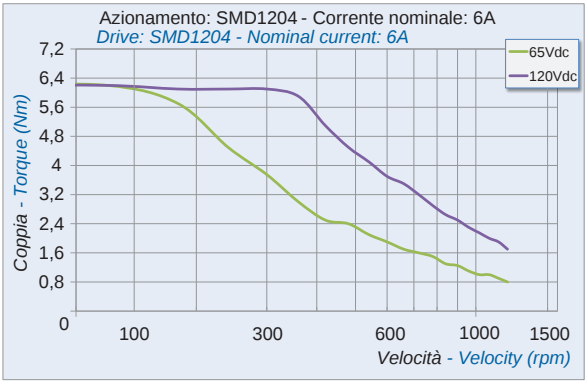
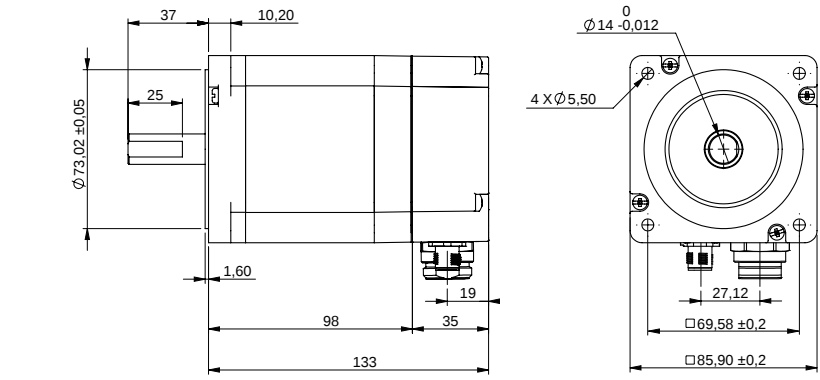
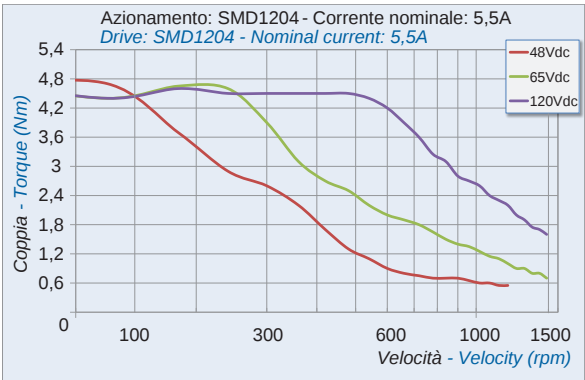
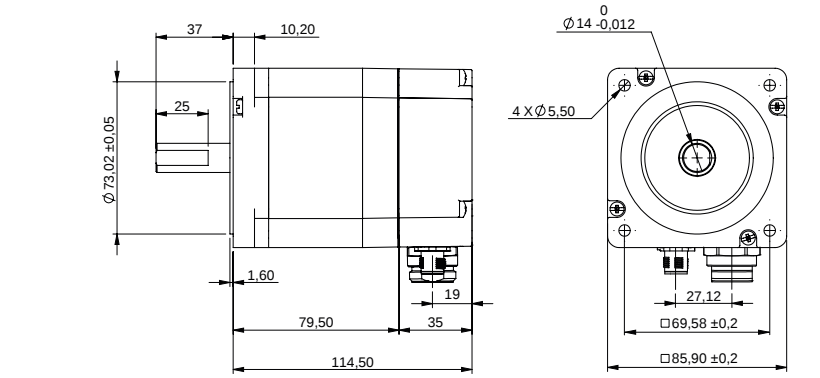
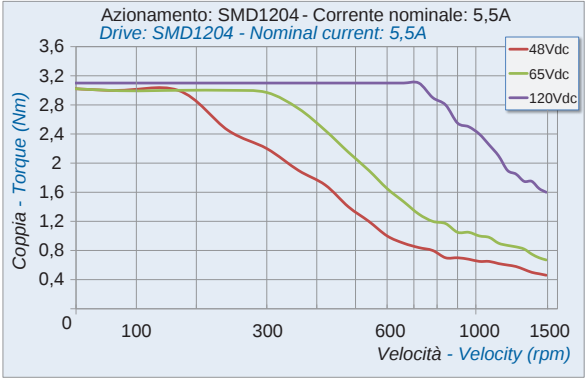
M86SH80-Tx										
Model	Motor code	Current/Phase	Resistance/Phase	Inductance/Phase	Detent torque	Holding torque	Rotor inertia	Encoder	Pulses/revolution	Weight
M86SH80-T-C	M15	5,5 A	0,42 Ω	3,5 mH	130 mNm	4,6 Nm	1400 gcm ²	-	-	2,3 Kg
M86SH80-TO0512P24C	M92	5,5 A	0,42 Ω	3,5 mH	130 mNm	4,6 Nm	1400 gcm ²	Push-pull	512	2,3 Kg
M86SH80-TO0512L05C	M83	5,5 A	0,42 Ω	3,5 mH	130 mNm	4,6 Nm	1400 gcm ²	Line-driver	512	2,3 Kg
M86SH80-TM1611S05C	M510	5,5 A	0,42 Ω	3,5 mH	130 mNm	4,6 Nm	1400 gcm ²	Multiturn absolute	2048	2,3 Kg

M86SH96-Tx										
Model	Motor code	Current/Phase	Resistance/Phase	Inductance/Phase	Detent torque	Holding torque	Rotor inertia	Encoder	Pulses/revolution	Weight
M86SH96-T-C	M216	5,6 A	0,45 Ω	3,8 mH	120 mNm	6,5 Nm	1900 gcm ²	-	-	2,9 Kg
M86SH96-TO0512P24C	M217	5,6 A	0,45 Ω	3,8 mH	120 mNm	6,5 Nm	1900 gcm ²	Push-pull	512	2,9 Kg
M86SH96-TO0512L05C	M218	5,6 A	0,45 Ω	3,8 mH	120 mNm	6,5 Nm	1900 gcm ²	Line-driver	512	2,9 Kg
M86SH96-TM1611S05C	M511	5,6 A	0,45 Ω	3,8 mH	120 mNm	6,5 Nm	1900 gcm ²	Multiturn absolute	2048	2,9 Kg

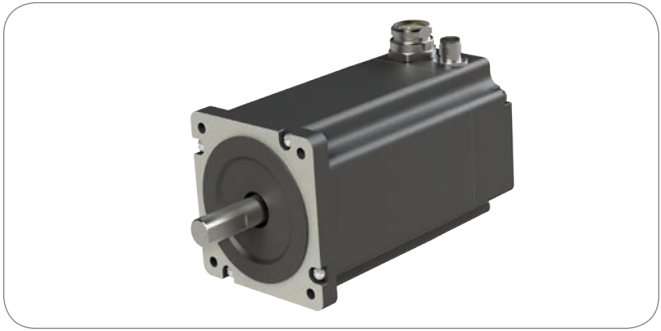
M86SH118-Tx										
Model	Motor code	Current/Phase	Resistance/Phase	Inductance/Phase	Detent torque	Holding torque	Rotor inertia	Encoder	Pulses/revolution	Weight
M86SH118-T-C	M18	6,0 A	0,45 Ω	5,1 mH	230 mNm	8,7 Nm	2700 gcm ²	-	-	3,8 Kg
M86SH118-TO0512P24C	M93	6,0 A	0,45 Ω	5,1 mH	230 mNm	8,7 Nm	2700 gcm ²	Push-pull	512	3,8 Kg
M86SH118-TO0512L05C	M84	6,0 A	0,45 Ω	5,1 mH	230 mNm	8,7 Nm	2700 gcm ²	Line-driver	512	3,8 Kg
M86SH118-TM1611S05C	M512	6,0 A	0,45 Ω	5,1 mH	230 mNm	8,7 Nm	2700 gcm ²	Multiturn absolute	2048	3,8 Kg

M86SH156-Tx										
Model	Motor code	Current/Phase	Resistance/Phase	Inductance/Phase	Detent torque	Holding torque	Rotor inertia	Encoder	Pulses/revolution	Weight
M86SH156-T-C	M22	6,2 A	0,75 Ω	9 mH	360 mNm	12,8 Nm	4000 gcm ²	-	-	5,4 Kg
M86SH156-TO0512P24C	M94	6,2 A	0,75 Ω	9 mH	360 mNm	12,8 Nm	4000 gcm ²	Push-pull	512	5,4 Kg
M86SH156-TO0512L05C	M85	6,2 A	0,75 Ω	9 mH	360 mNm	12,8 Nm	4000 gcm ²	Line-driver	512	5,4 Kg
M86SH156-TM1611S05C	M513	6,2 A	0,75 Ω	9 mH	360 mNm	12,8 Nm	4000 gcm ²	Multiturn absolute	2048	5,4 Kg

The torque curves are made with AEP torque transducer mod. MRT250NM

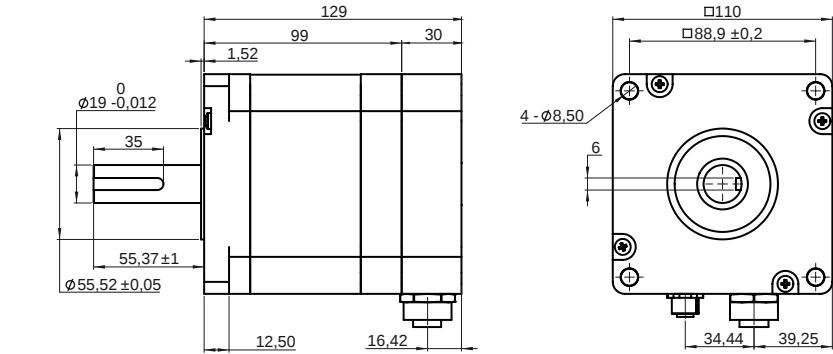
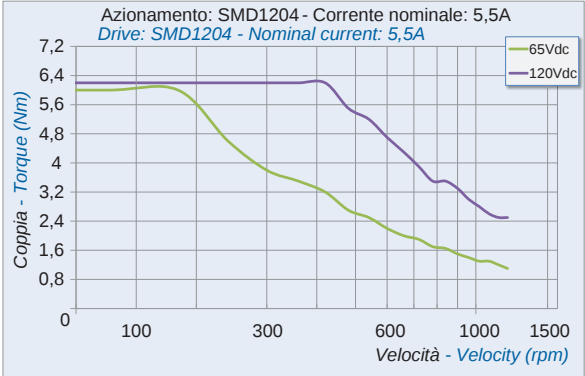


SPECIFICATIONS	M86 Series
Insulation class	B
Ambient temperature	-20°C +50°C
Temperature rise	80°C max (2 PHASES ON)
Insulation resistance	100 MΩ min 500Vdc
Dielectric Strength	820 Vac for one minute
Shaft radial play	0.02 max (0.5Kg)
Shaft axial play	0.08 max (1Kg)
Max radial force	220 N (20mm from front flange)
Max axial force	60 N

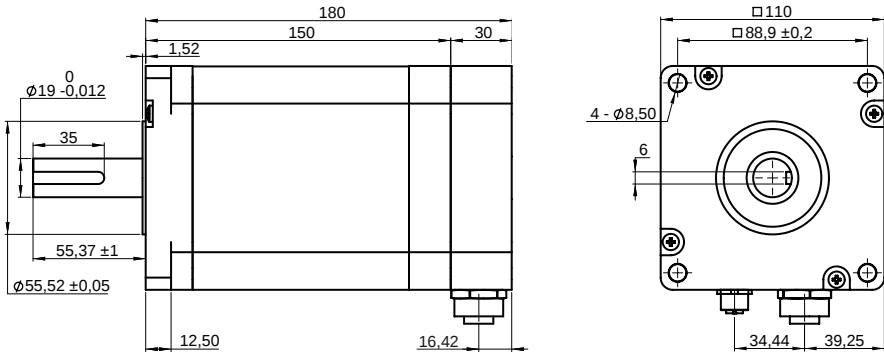
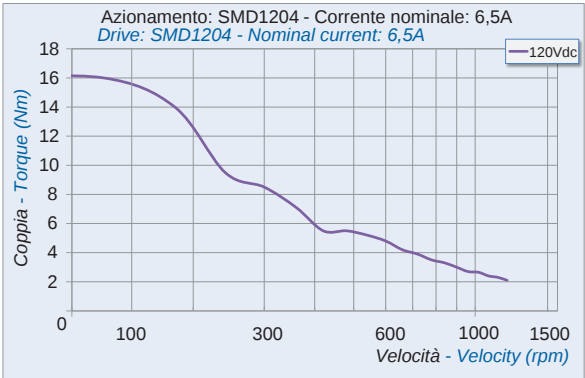


M110SH99-Tx										
Model	Motor code	Current/Phase	Resistan-ce/Phase	Inductan-ce/Phase	Detent torque	Holding torque	Rotor inertia	Encoder	Pulses/revolution	Weight
M110SH99-T-C	M32	5,5 A	0,9 Ω	12 mH	380 mNm	11,2 Nm	5500 gcm ²	-	-	5 Kg
M110SH99-TO0512P24C	M95	5,5 A	0,9 Ω	12 mH	380 mNm	11,2 Nm	5500 gcm ²	Push-pull	512	5 Kg
M110SH99-TO0512L05C	M86	5,5 A	0,9 Ω	12 mH	380 mNm	11,2 Nm	5500 gcm ²	Line-driver	512	5 Kg

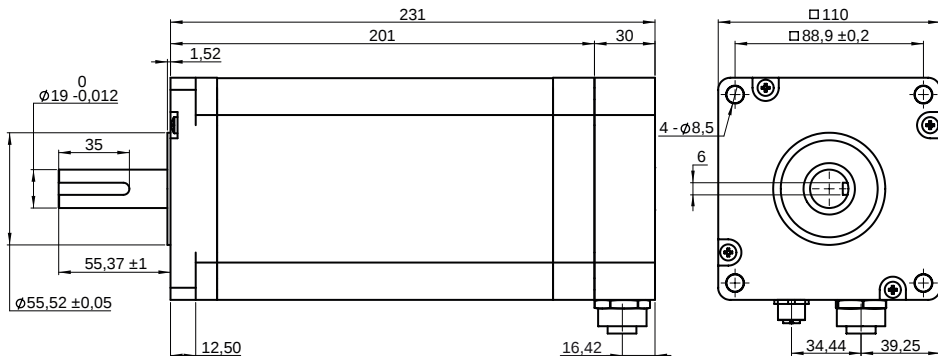
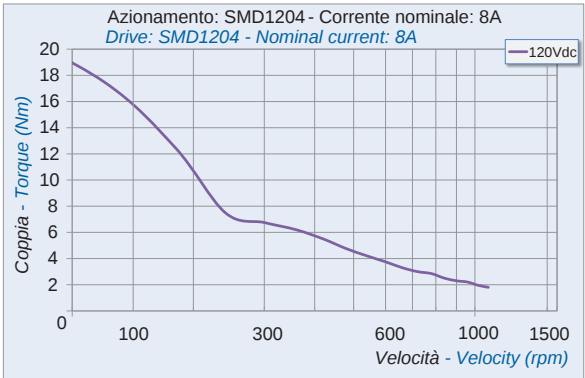
The torque curves are made with AEP torque transducer mod. MRT250NM



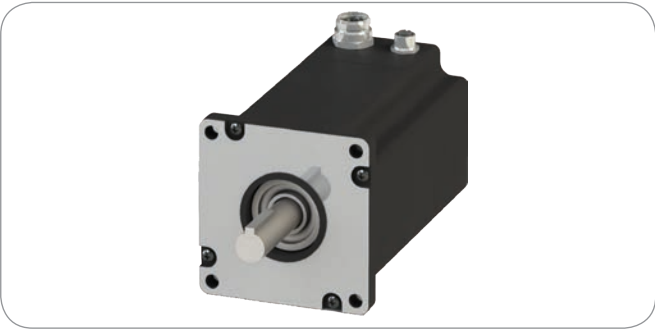
M110SH150-Tx										
Model	Motor code	Current/Phase	Resistan-ce/Phase	Inductan-ce/Phase	Detent torque	Holding torque	Rotor inertia	Encoder	Pulses/revolution	Weight
M110SH150-T-C	M36	6,5 A	0,8 Ω	15 mH	510 mNm	22 Nm	10900 gcm ²	-	-	8,4 Kg
M110SH150-TO0512P24C	M96	6,5 A	0,8 Ω	15 mH	510 mNm	22 Nm	10900 gcm ²	Push-pull	512	8,4 Kg
M110SH150-TO0512L05C	M87	6,5 A	0,8 Ω	15 mH	510 mNm	22 Nm	10900 gcm ²	Line-driver	512	8,4 Kg



M110SH201-Tx										
Model	Motor code	Current/Phase	Resistan-ce/Phase	Inductan-ce/Phase	Detent torque	Holding torque	Rotor inertia	Encoder	Pulses/revolution	Weight
M110SH201-T-C	M40	8,0 A	0,67 Ω	12 mH	670 mNm	30 Nm	16200 gcm ²	-	-	11,7 Kg
M110SH201-TO0512P24C	M97	8,0 A	0,67 Ω	12 mH	670 mNm	30 Nm	16200 gcm ²	Push-pull	512	11,7 Kg
M110SH201-TO0512L05C	M88	8,0 A	0,67 Ω	12 mH	670 mNm	30 Nm	16200 gcm ²	Line-driver	512	11,7 Kg



SPECIFICATIONS	M110 Series
Insulation class	B
Ambient temperature	-20°C +50°C
Temperature rise	80°C max (2 PHASES ON)
Insulation resistance	100 MΩ min 500Vdc
Dielectric Strength	820 Vac for one minute
Shaft radial play	0.02 max (0.5Kg)
Shaft axial play	0.08 max (1Kg)
Max radial force	220 N (20mm from front flange)
Max axial force	60 N





IPG28xxx						
Matching motors	Stages	Reduction ratio	Intermittent torque	Efficiency (%)	Angular backlash	Output shaft
NEMA 11	1	3,6 .. 5,33	6 Nm	0,90	<=1°	10 mm
	2	12.96 .. 28.41	6 Nm	0,80	<=1°	10 mm
	3	46.65 .. 151,42	6 Nm	0,70	<=1°	10 mm

IPG42xxx						
Matching motors	Stages	Reduction ratio	Intermittent torque	Efficiency (%)	Angular backlash	Output shaft
NEMA 17	1	3 .. 8	6 .. 9 Nm	0,96	10'	10 mm
	2	16 .. 64	8 .. 12 Nm	0,94	15'	10 mm

IPG55xxx						
Matching motors	Stages	Reduction ratio	Intermittent torque	Efficiency (%)	Angular backlash	Output shaft
NEMA 24	1	3 .. 10	10 .. 16 Nm	0,96	8'	12 mm
	2	9 .. 100	12 .. 16 Nm	0,93	10'	12 mm

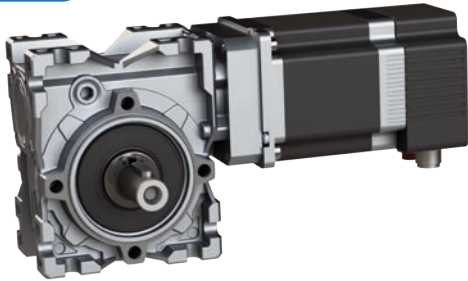
IPG75xxx						
Matching motors	Stages	Reduction ratio	Intermittent torque	Efficiency (%)	Angular backlash	Output shaft
NEMA 34	1	3 .. 10	20 .. 32 Nm	0,96	8'	14 / 16 mm
	2	9 .. 100	22 .. 36 Nm	0,93	10'	14 / 16 mm

IPG90xxx						
Matching motors	Stages	Reduction ratio	Intermittent torque	Efficiency (%)	Angular backlash	Output shaft
NEMA 34	1	3 .. 10	50 .. 60 Nm	0,96	8'	19 / 22 mm
	2	9 .. 100	55 .. 75 Nm	0,93	10'	19 / 22 mm

IPG120xxx						
Matching motors	Stages	Reduction ratio	Intermittent torque	Efficiency (%)	Angular backlash	Output shaft
NEMA 42	1	3 .. 10	100..180 Nm	0,96	8'	25 / 32 mm
	2	9 .. 100	110..220 Nm	0,93	10'	25 / 32 mm

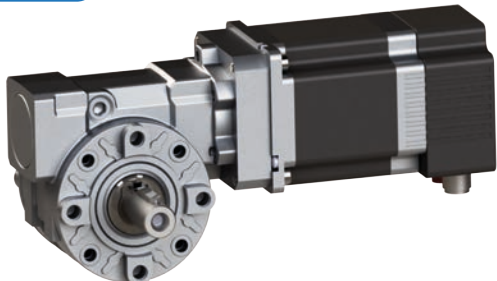
For more information, see the catalogue “Planetary servogearmotors”

IWX



Taglia 28						
Matching motors	Model	Version	Reduction ratio	Maximum applicable output torque	Efficiency (%)	Output shaft
NEMA 24	IWX28	Square	5 .. 100	8 .. 24 Nm	36 .. 86	14 mm
	IWK28	Round				

IWK



Taglia 40						
Matching motors	Model	Version	Reduction ratio	Maximum applicable output torque	Efficiency (%)	Output shaft
NEMA 34	IWX40	Square	5 .. 100	38 .. 59 Nm	39 .. 85	19 mm
	IWK40	Round				

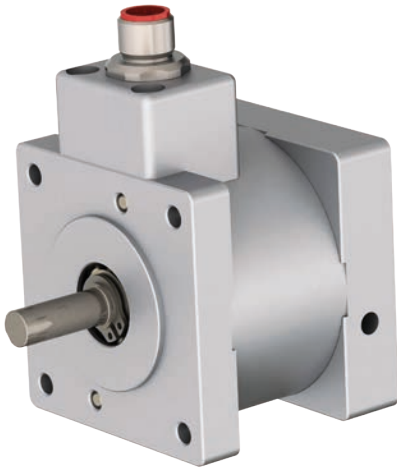
Taglia 50						
Matching motors	Model	Version	Reduction ratio	Maximum applicable output torque	Efficiency (%)	Output shaft
NEMA 34	IWX50	Square	5 .. 100	62 .. 110 Nm	39 .. 86	24 mm
	IWK50	Round				

Taglia 60						
Matching motors	Model	Version	Reduction ratio	Maximum applicable output torque	Efficiency (%)	Output shaft
NEMA 34	IWX60	Square	5 .. 100	100 .. 187 Nm	44 .. 87	25 mm
	IWK60	Round				

For more information, see the catalogue “Worm servogearmotors”

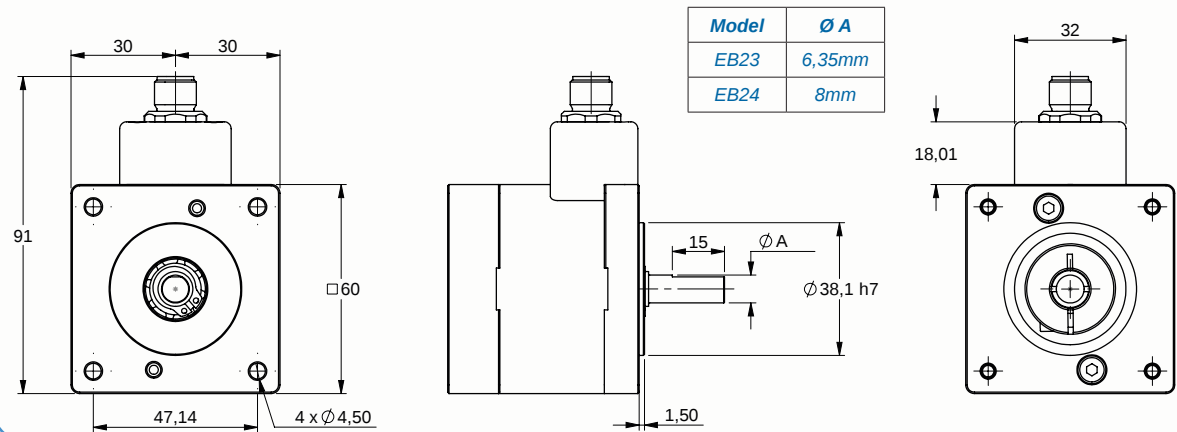
EB23, EB24 and EB34 are negative single disc electromagnetic brakes, closed by a spring mechanism and equipped with NEMA23/NEMA 24/NEMA 34 flange for an easy and quick mounting. It is used for a dry run as an holding brake.

Characteristics		EB23	EB24	EB34	U.M.
Braking torque		1,5	1,5	3,0	Nm
Max output torque (Nm)		5	5	13	Nm
Max axial force (Fa)		5	5	10	N
Max radial force (Fr)		5	5	10	N
Tripping time	Insertion	10	10	17	ms
	Disinsertion	21	21	35	ms
Inertia		9	9	70	gcm ²
Weight		750	750	1850	g
Supply		24	24	24	V _{dc}
Power		15	15	24	W
Maximum speed		3000			RPM
Operating temperature range		-10 .. +90			°C
Ambient temperature range		-10 .. +50			°C
Humidity range (no condensation)		max 95%			%HR

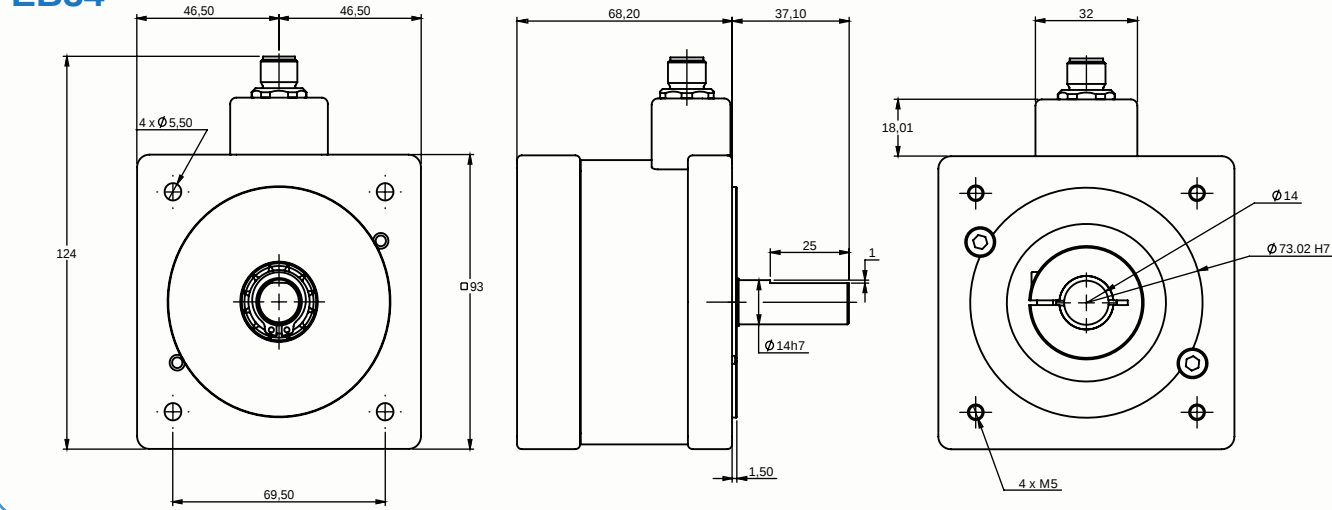


Mechanical dimensions

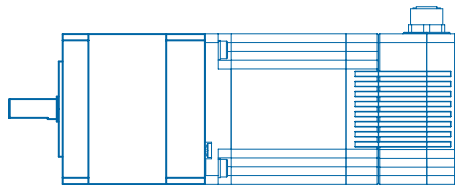
EB23/EB24



EB34



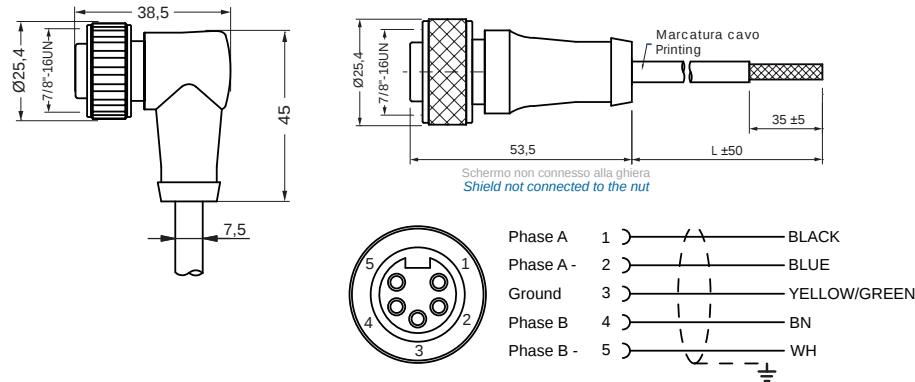
Mounting example



CONV05Fxx78CxxSU100

Cavo motore preassemblato
7/8" 5 vie femmina

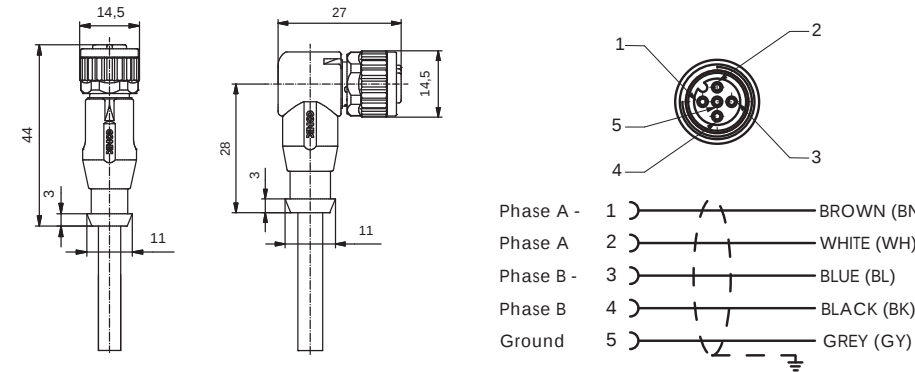
7/8" 5 ways female
preassembled motor cable



CONV05FxxM12CxxSU034

Cavo motore preassemblato
M12 5 vie femmina

M12 5 ways female
preassembled motor cable

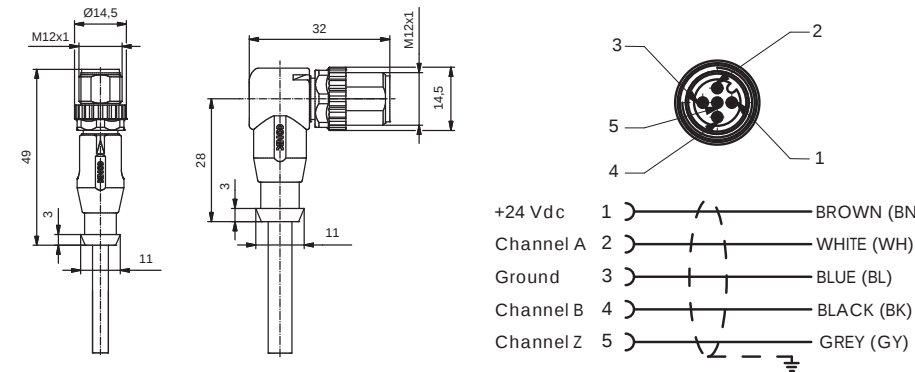


CONV05MxxM12CxxSU025

Cavo encoder PUSH PULL
preassemblato M12 5 vie maschio

M12 5 ways male
preassembled PUSH-PULL
encoder cable

ENCODER
PUSH-PULL

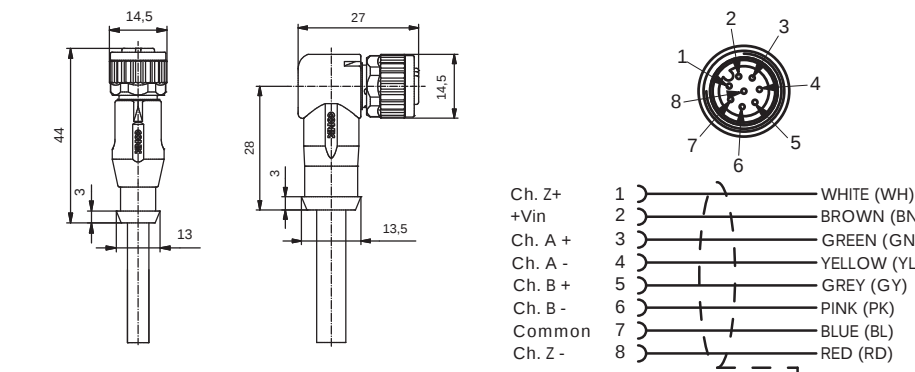


CONV08FxxM12CxxSU025

Cavo encoder LINE-DRIVER
preassemblato M12 8 vie femmina

M12 8 ways female
preassembled LINE-DRIVER
encoder cable

ENCODER
LINE-DRIVER

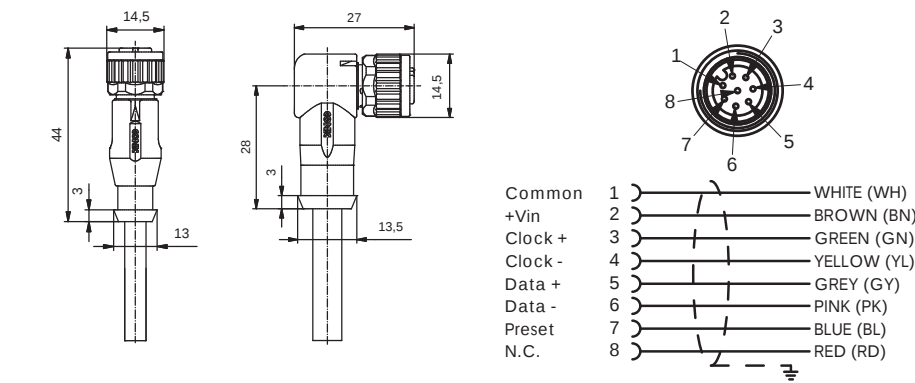


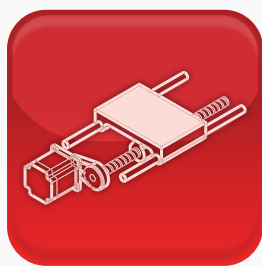
CONV08FxxM12CxxSU025

Cavo encoder ASSOLUTO SSI
preassemblato M12 8 vie femmina

M12 8 ways female
preassembled ABSOLUTE SSI
encoder cable

ENCODER
ASSOLUTO SSI





Attuatori lineari / Linear actuators

- Assi lineari a vite senza fine / *Ball-screw linear axes*
- Assi lineari a cinghia / *Belt linear axes*
- Cilindri elettrici ISO / *ISO electric cylinders*
- Pick and Place



Attuatori rotativi / Rotary actuators

- Tavole rotanti programmabili autoportanti / *Self-supporting programmable rotary tables*
- Cambio formato / *Format changeover*
- Orientamento pezzi / *Parts orientation*



Sistemi di trasporto / Transport systems

- Nastri di trasporto a passo variabile / *Variable pitch conveyors*
- Rulliere a velocità controllata / *Controlled speed roller tables*
- Motoriduttori a gioco ridotto / *Reduced backlash motorgearboxes*



Sistemi di svolgimento / Unwinding systems

- Applicatori di etichette / *Label applicators*
- Svolgitori a passo costante e variabile / *Variable or constant pitch unwinding machines*
- Sfogliatori / *Sheeter machines*

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