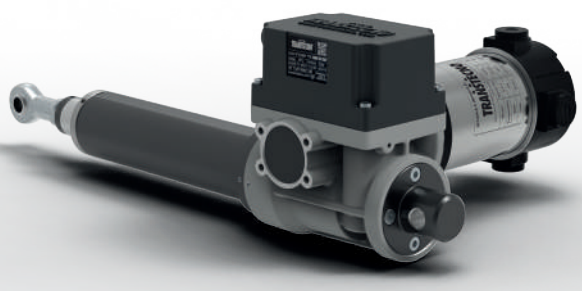
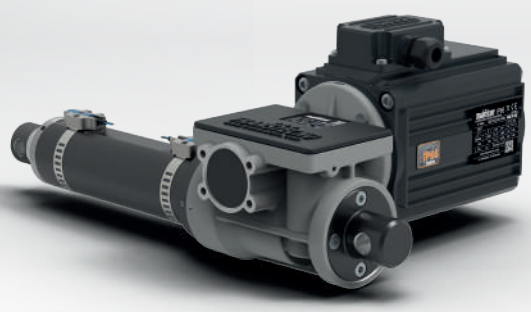
TRANSTECNO®

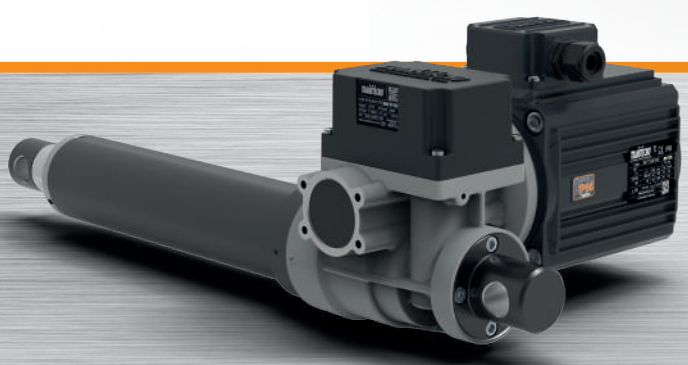
the modular gearmotor

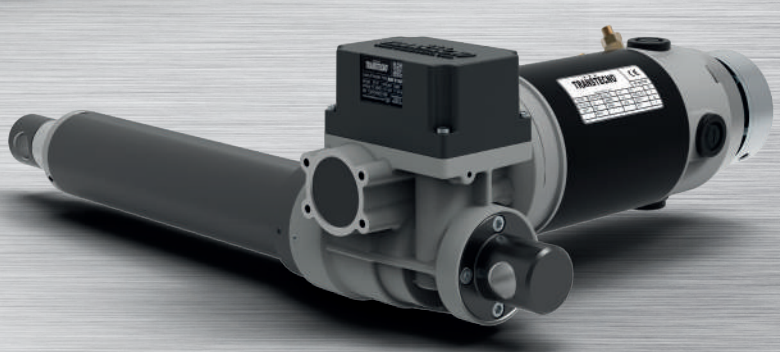
Linear Actuators

AT SERIES

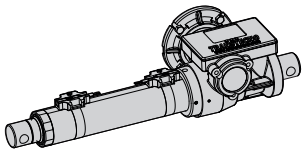








Indice *Index*

			Pag. *Page*
A	Introduzione	*Introduction*	A1
 B	Attuatori lineari AT	*Linear Actuators AT*	B1
C	Accessori	*Accessories*	C1
AC D E F	Motori elettrici CA	AC Electric motors	D1
DC G H I L	Motori elettrici CC	DC Electric motors	G1

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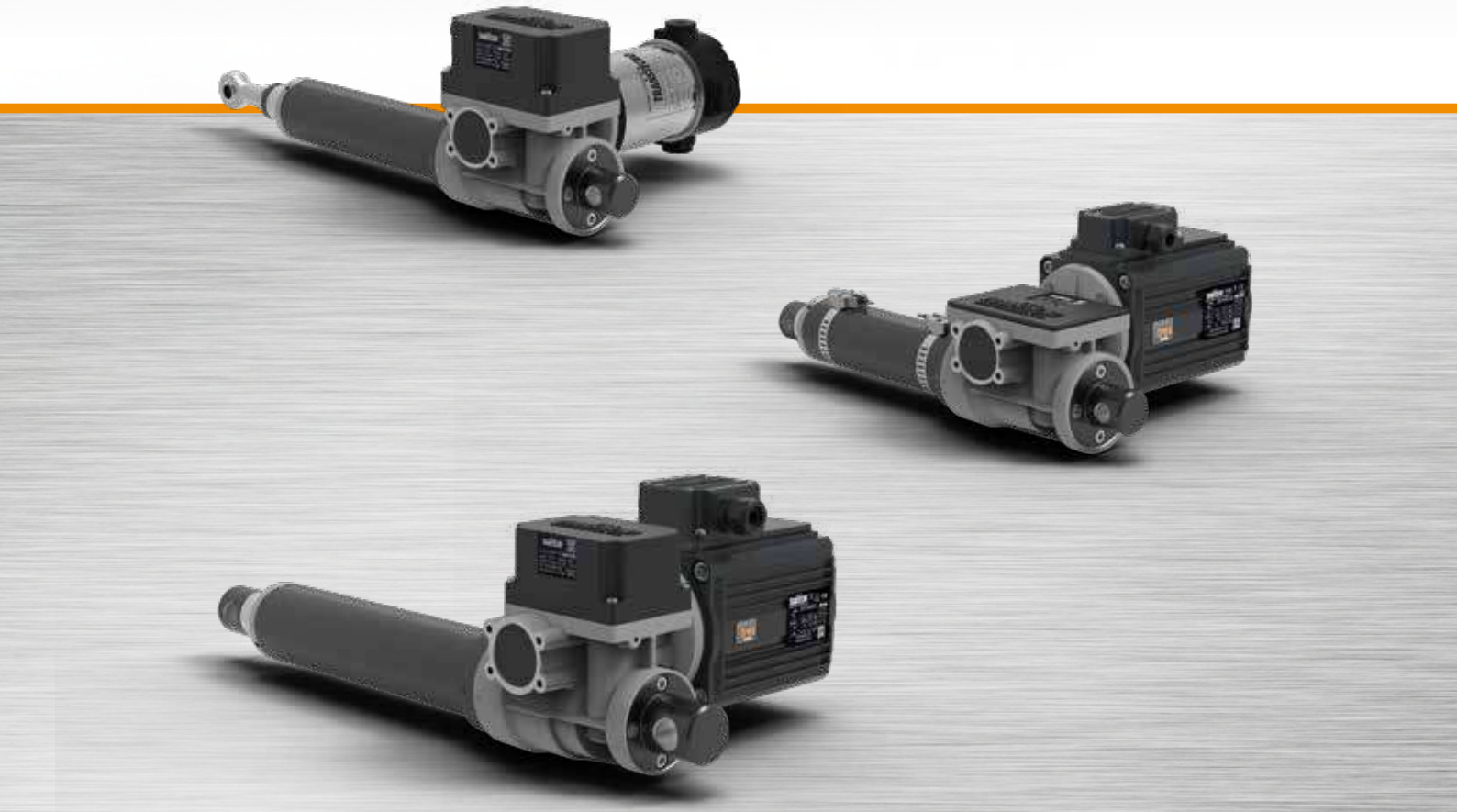
TRANSTECNO®
the modular gearmotor

AT

AT

Linear Actuators

Attuatori Lineari
Linear actuators



Indice	*Index*	Pag. *Page*
Caratteristiche tecniche	*Technical features*	**B3**
Dati tecnici	*Technical data*	**B4**
Designazione attuatore lineare	*Linear Actuator classification*	**B6**
Versione attuatore lineare	*Linear Actuator version*	**B6**
Flange motore	*Motor flanges*	**B7**
Terminale posteriore	*Rear terminals*	**B7**
Designazione motore	*Motor classification*	**B8**
Modularità	*Modularity*	**B9**
Dimensioni	*Dimensions*	
AT06	*AT06*	**B10**
AT12	*AT12*	**B14**
AT18	*AT18*	**B18**

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Caratteristiche tecniche

Technical features

La nuova serie di attuatori elettromeccanici AT è stata progettata sinergicamente con gli altri prodotti aziendali, sfruttando i componenti e i processi produttivi disponibili per garantire un prodotto affidabile e razionale.

The new series of electromechanicl actuators has been designed in sinergy with the other products of the company, using the components and the manufacturing processes available to grant a reliable and rational product.

Caratteristiche principali della gamma sono:
- Carcassa riduttore in alluminio pressofuso
- Ingranaggio a vite senza fine con vite in acciaio cementato, temprato e rettificato(16MnCr5)
- Ruota in bronzo G-CuSn12
- Vite trapezia con filettatura ISO 2901...2904 in acciaio C45 rullato
- Asta traslante in acciaio cromato
- Tubo di protezione con specifico profilo di alluminio estruso e anodizzato
- Flange motore in accordo con standard IEC B14 e B5

Main features of the range are:
- *Die cast aluminium housing*
- *Worm gear pair with case hardened ground worm (16MnCr5)*
- *G-CuSn12 bronze worm wheel*
- *Trapezoidal screw with ISO 2901...2904 thread in C45 rolled steel*
- *Chromed steel translating rod*
- *Protecting tube with specific profile in extruded and anodyzed aluminium*
- *Motor flanges according to IEC B14 and B5 standard*

Velocità unitaria lineare (V_{lu}) [mm]:
La velocità unitaria lineare V_{lu} [mm] è la velocità di avanzamento dello stelo per ciascun giro dell'asse in ingresso.

Unitary linear speed (V_{lu}) [mm]:
Unit linear speed V_{lu} [mm] is the displacement speed of the rod for each revolution of the input shaft.

$$V_{lu} = v / n_n * 60 = p / i$$

Essa definisce le caratteristiche costruttive dell'attuatore e dipende dalla scelta del motore (in particolare dalla sua velocità).

It is related to the main constructive features of the actuator and to the type of motor (especially its speed).

Attuatore *Actuator*	Caratteristiche generali / *General features*							
AT06	Carico massimo *Max. load* F [N]	6000						
	i	5		7.5		10	15	30
	TpN [mm]	16x4	16x8	16x4	16x8	16x4		
	V_{lu} [mm]	0.80	1.6	0.53	1.07	0.4	0.27	0.13
	η_a	0.32	0.37	0.31	0.36	0.31	0.29	0.24
AT12	Carico massimo *Max. load* F [N]	12000						
	i	5		7.5		10	15	30
	TpN [mm]	18x4	18x8	18x4	18x8	18x4		
	V_{lu} [mm]	0.8	1.6	0.53	1.07	0.4	0.27	0.13
	η_a	0.29	0.32	0.29	0.31	0.29	0.27	0.23
AT18	Carico massimo *Max. load* F [N]	18000						
	i	5		7.5		10	15	30
	TpN [mm]	25x5	25x10	25x5	25x10	25x5		
	V_{lu} [mm]	1.00	2.00	0.67	1.33	0.50	0.33	0.17
	η_a	0.31	0.33	0.30	0.33	0.29	0.28	0.25

Dati tecnici

Prestazioni con motore trifase CA

AC

Technical data

Performance with 3-phase AC motor

AT06 CA/AC 230-400 V 50Hz

V_{lu} [mm]	F_{max} [N]	V [mm/s]	Motore *Motor*	P_n [kw]	n_n [rpm]	i	TpN (ø x pitch) [mm]	Rendimento Efficiency η_a	Corsa massima Max. stroke s_{max} [mm]	
									Fine corsa meccanici *Mechanical switches*	Fine corsa magnetici o senza finecorsa *Magnetic switches or no switches*
1.6	1350	37	SMT5634NVBR	0.12	1400	5	16x8	0.37	600	900
0.8	2900	19	SMT5644NV	0.18	1400	5	16x4	0.32	350	800
0.53	4500	12	SMT5644NV	0.18	1400	7.5	16x4	0.31	350	640
0.4	5800	9	SMT5644NV	0.18	1400	10	16x4	0.31	350	550
0.27	6000	6	SMT5634NV	0.12	1400	15	16x4	0.29	350	550
0.13	6000	3	SMT5624NV	0.09	1400	30	16x4	0.24	350	550

AT12 CA/AC 230-400 V 50Hz

V_{lu} [mm]	F_{max} [N]	V [mm/s]	Motore *Motor*	P_n [kw]	n_n [rpm]	i	TpN (ø x pitch) [mm]	Rendimento Efficiency η_a	Corsa massima Max. stroke s_{max} [mm]	
									Fine corsa meccanici *Mechanical switches*	Fine corsa magnetici o senza finecorsa *Magnetic switches or no switches*
1.6	2300	37	SMT6334NVBR	0.37	1400	5	18x8	0.32	1000	1000
0.8	6000	19	SMT6344NV	0.37	1400	5	18x4	0.29	650	750
0.53	8500	12	SMT6344NV	0.37	1400	7.5	18x4	0.29	630	630
0.4	10000	9	SMT6344NV	0.37	1400	10	18x4	0.29	580	580
0.27	10000	6	SMT6334NV	0.25	1400	15	18x4	0.27	580	580
0.13	12000	3	SMT5644NV	0.18	1400	30	18x4	0.23	530	530

AT18 CA/AC 230-400 V 50Hz

V_{lu} [mm]	F_{max} [N]	V [mm/s]	Motore *Motor*	P_n [kw]	n_n [rpm]	i	TpN (ø x pitch) [mm]	Rendimento Efficiency η_a	Corsa massima Max. stroke s_{max} [mm]	
									Fine corsa meccanici *Mechanical switches*	Fine corsa magnetici o senza finecorsa *Magnetic switches or no switches*
2	4000	47	SMT7134NVBR	0.55	1400	5	25x10	0.33	1200	1400
1	10000	23	SMT7144NV	0.75	1400	5	25x5	0.31	800	1200
0.67	10000	16	SMT7134NV	0.55	1400	7.5	25x5	0.30	800	1200
0.5	14000	12	SMT7134NV	0.55	1400	10	25x5	0.29	800	1000
0.33	15000	8	SMT7134NV	0.55	1400	15	25x5	0.28	800	980
0.17	18000	4	SMT7134NV	0.55	1400	30	25x5	0.25	800	890

Dati tecnici

Prestazioni con motore in CC

DC

Technical data

Performance with DC motor

AT06 CC/DC 24V

V_{lu} [mm]	F_{max} [N]	V [mm/s]	Motore *Motor*	Corrente massima *Max current* [A]	n_n [rpm]	i	TpN (ø x pitch) [mm]	Rendimento Efficiency η_a	Corsa massima Max. stroke s_{max} [mm]	
									Fine corsa meccanici *Mechanical switches*	Fine corsa magnetici o senza finecorsa *Magnetic switches or no switches*
1.6	1300	80	EC100E	16.8	3000	5	16x8	0.37	600	820
0.8	2200	40	EC100E	16.8	3000	5	16x4	0.32	350	820
0.53	3250	27	EC100	16.8	3000	7.5	16x4	0.31	350	750
0.4	4000	20	EC100	16.0	3000	10	16x4	0.31	350	680
0.27	6000	13	EC100	15.8	3000	15	16x4	0.29	350	550
0.13	6000	7	EC070	8.9	3000	30	16x4	0.24	350	550

AT12 CC/DC 24V

V_{lu} [mm]	F_{max} [N]	V [mm/s]	Motore *Motor*	Corrente massima *Max current* [A]	n_n [rpm]	i	TpN (ø x pitch) [mm]	Rendimento Efficiency η_a	Corsa massima Max. stroke s_{max} [mm]	
									Fine corsa meccanici *Mechanical switches*	Fine corsa magnetici o senza finecorsa *Magnetic switches or no switches*
1.6	2200	80	EC180E	30.0	3000	5	18x8	0.32	890	890
0.8	3800	40	EC180	30.0	3000	5	18x4	0.29	650	890
0.53	5600	27	EC180	30.0	3000	7.5	18x4	0.29	650	780
0.4	7300	20	EC180	30.0	3000	10	18x4	0.29	650	680
0.27	10700	13	EC180	30.0	3000	15	18x4	0.27	560	560
0.13	12000	7	EC180	19.1	3000	30	18x4	0.23	530	530

AT18 CC/DC 24V

V_{lu} [mm]	F_{max} [N]	V [mm/s]	Motore *Motor*	Corrente massima *Max current* [A]	n_n [rpm]	i	TpN (ø x pitch) [mm]	Rendimento Efficiency η_a	Corsa massima Max. stroke s_{max} [mm]	
									Fine corsa meccanici *Mechanical switches*	Fine corsa magnetici o senza finecorsa *Magnetic switches or no switches*
2	3000	100	EC350E	52.4	3000	5	25x10	0.33	1050	1050
1	5000	50	EC350	47.8	3000	5	25x5	0.31	800	1050
0.67	7500	33	EC350	48.7	3000	7.5	25x5	0.30	800	1300
0.5	9650	25	EC350	48.7	3000	10	25x5	0.29	800	1200
0.33	12000	17	EC250	40.3	3000	15	25x5	0.28	800	1050
0.17	16000	8	EC250	28.9	3000	30	25x5	0.25	800	950

Designazione attuatore lineare — *Linear Actuator classification*

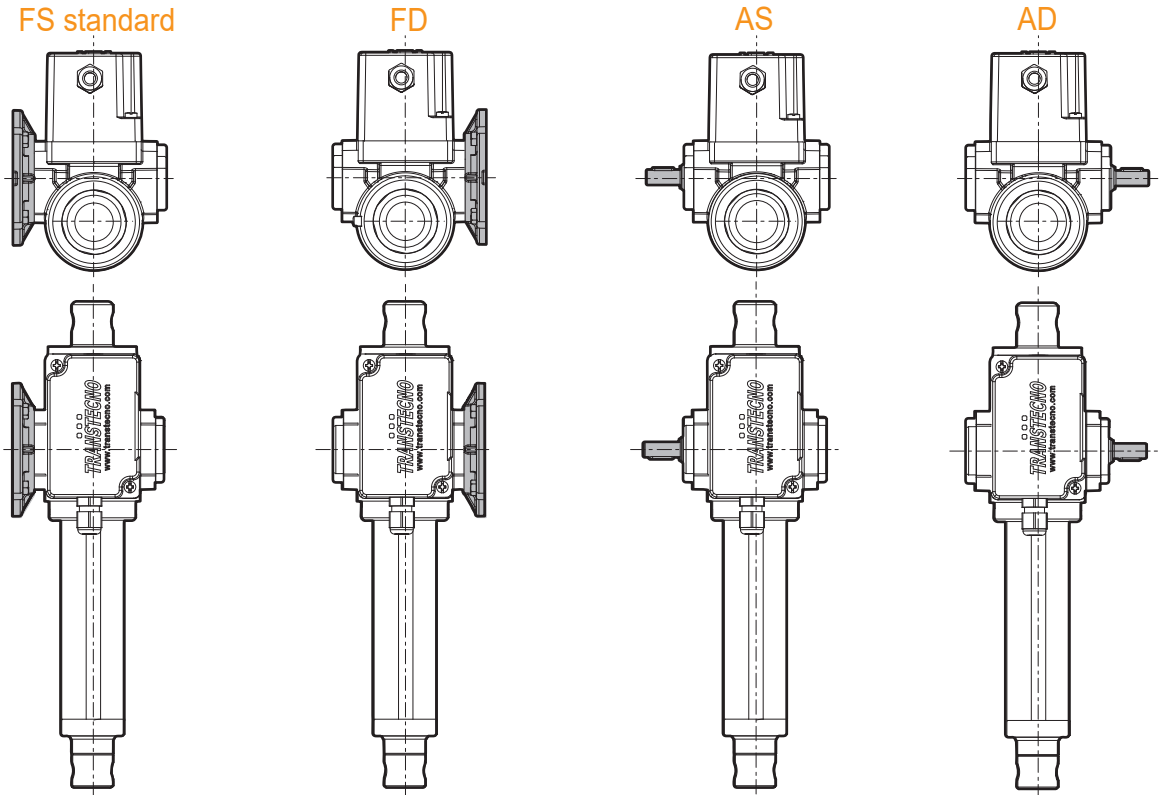
AT	06	FS	0.3	0180 (1)	PE
Tipo *Type*	Taglia *Size*	Versione attuatore *Actuator version*	Velocità lineare unitaria *Unitary linear speed* V_{lu} [mm]	Corsa *Stroke* s [mm]	Terminale anteriore *Front terminal*
AT	**06**	**FS** Flangia sinistra (standard) *Left flange (standard)*	AT06: **0.13**, **0.27**, **0.4**, **0.53**, **0.8**, **1.07**, **1.6**	Personalizzata *Customized*	**PE** Terminale oscillante *Oscillating terminal*
	12	**FD** Flangia destra *Right flange*	AT12: **0.13**, **0.27**, **0.4**, **0.53**, **0.8**, **1.07**, **1.6**		**BE** Terminale con foro *Bored terminal*
	18	**AS** Albero maschio sinistro Left input shaft	AT18: **0.17**, **0.33**, **0.5**, **0.67**, **1**, **1.33**, **2**		**TE** Terminale filettato *Threaded terminal*
		AD Albero maschio destro Right input shaft			**RE** Testa a snodo *Ball joint terminal*
					FE Forcella *Forked end terminal*
					SE Terminale speciale *Special terminal*

(1) La corsa dell'attuatore è personalizzata su richiesta.
Preferibilmente adottare una corsa minima di 50 mm con eventuali incrementi multipli di 50 in 50.
The stroke of the actuator is customized.
It is preferable to select a minimum stroke of 50 mm with further increments of 50 mm.

Versione attuatore lineare — *Linear Actuator version*

Per definizione la versione è identificata osservando l'attuatore lineare con il terminale rivolto verso l'osservatore.
In questo modo sono identificabili le posizioni a destra o a sinistra sia degli alberi sia delle flange.

By definition, the version form is identified by observing the linear actuator with the rod end facing the observer.
In this way, the left or right positions of both shafts and flanges can be identified.



Designazione attuatore lineare — *Linear Actuator classification*

P0	56 (2)	B14 (2)	2MLS	2 (3)	AD
Terminale posteriore *Rear terminal*	Taglia IEC *IEC size*	Forma costruttiva *Version*	Tipo fine corsa *Stroke limit switch type*	Pos. fine corsa *Limit switch pos.*	Accessori *Accessories*
P0 Terminale posteriore parallelo all'asse motore *Rear terminal parallel to motor axis*	**56**	**B14**	**-** Senza finecorsa *No limit switches*	**1 (std)**	**AD** Dispositivo antirotazione *Antirotation device*
P90 Terminale posteriore perpendicolare all'asse motore *Rear terminal orthogonal to motor axis*	**63**	**B5**	**2MLS0** Nr. 2 finecorsa magnetici NC (STD) *Nr. 2 magnetic limit switches NC (STD)*	**2**	**SN** Chiocciola di sicurezza *Safety nut*
	71		**2MLS1** Nr. 2 finecorsa magnetici NO *Nr. 2 magnetic limit switches NO*	**3**	**B** Protezione elastica *Elastic protection*
			2MLS2 Nr. 2 finecorsa magnetici NPN *Nr. 2 magnetic limit switches NPN*	**4**	**SSV** Versione inox *Stainless steel version*
			3MLS0 Nr. 3 finecorsa magnetici NC *Nr. 3 magnetic limit switches NC*		**ST** Staffa per terminale anteriore e posteriore *Front and rear terminal bracket*
			3MLS1 Nr. 3 finecorsa magnetici NO *Nr. 3 magnetic limit switches NO*		
			3MLS2 Nr. 3 finecorsa magnetici NPN *Nr. 3 magnetic limit switches NPN*		
			2MS Nr. 2 finecorsa meccanici *Nr. 2 mechanical limit switches*		
			3MS Nr. 3 finecorsa meccanici *Nr. 3 mechanical limit switches*		
			2MS-k5 Nr. 2 finecorsa meccanici + potenziometro 5k *Nr. 2 mechanical limit switches + 5k potentiometer*		
			k5 Potenziomatro 5k *5k potentiometer*		

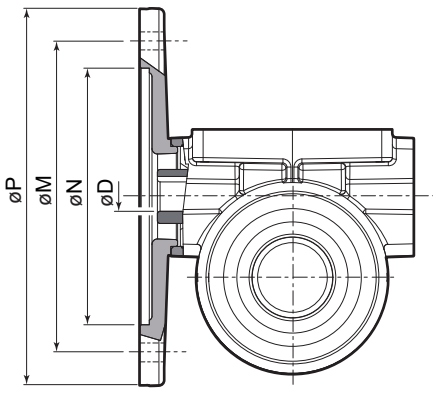
(2) Indicare Taglia IEC e Forma costruttiva solo per versioni attuatore FS ed FD
IEC size and version only for FS and FD actuator version

(3) Indicare Posizione fine corsa solo per versioni di fine corsa magnetiche 2MLS e 3MLS
Limit switch position only for magnetic switches 2MLS and 3MLS

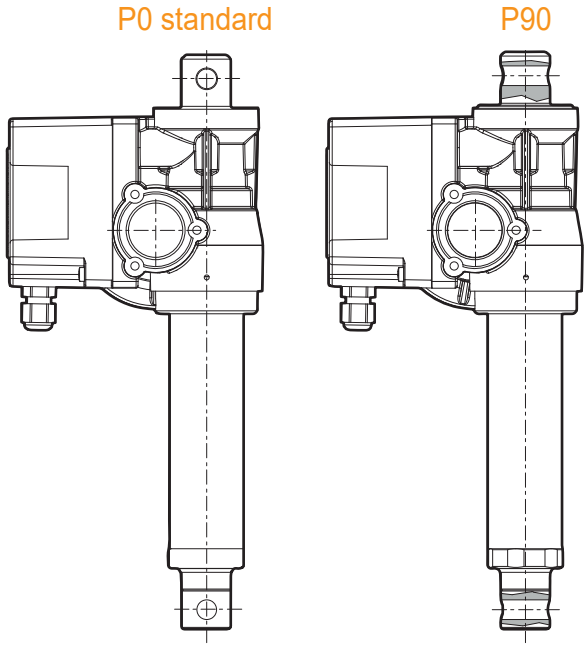
Flange motore — *Motor flanges*

Attuatore *Actuator*	IEC		N	M	P	D
AT06	56	B14	50	65	80	9
AT12	63	B5	95	115	140	11
		B14	60	75	90	
	56	B5	80	100	120	9
		B14	50	65	80	
AT18	71	B5	110	130	160	14
		B14	70	85	105	
	63	B5	95	115	140	11 *
		B14	60	75	90	
	56	B5	80	100	120	9
		B14	50	65	80	

* boccola di riduzione in acciaio
* *metal shaft sleeve*



Terminale posteriore — *Rear terminal*



Designazione motore — *Motor classification*

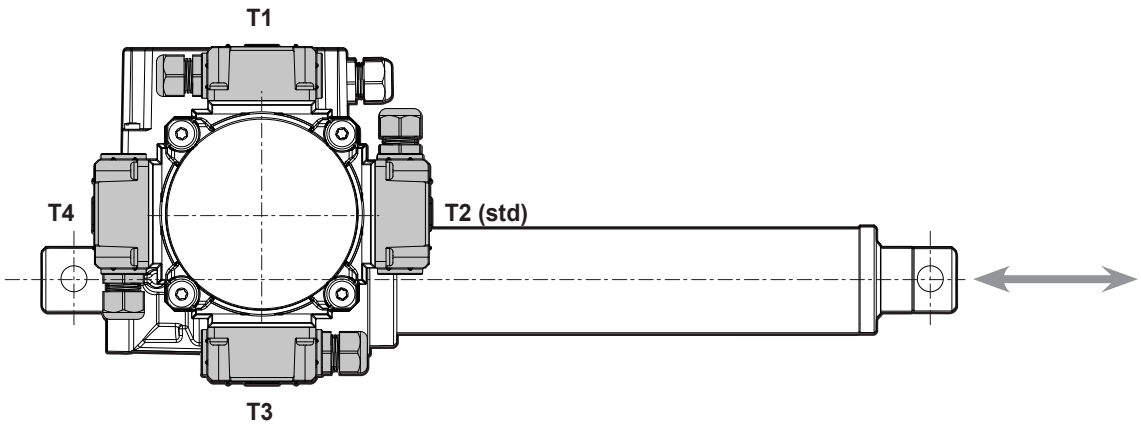
MOTORE TRIFASE / *THREE PHASE MOTOR*

SMT	63	2	4	0.18 kW	B14	230-400 V	50 Hz	TEFC	-	T1
Tipo *Type*	Grandezza *Size*	Indicativo potenza *Power coefficient*	Poli *Poles*	Potenza *Power*	Forma costruttiva *Version*	Tensione *Voltage*	Frequenza *Frequency*	Ventilazione *Fan cooling*	Opzioni *Options*	Pos. morsettiera *Terminal box pos.*
SMT	Vedi tabelle *See tables*	1-2-3-4-5	4	0.04 kW ... 0.75 kW	B14	230-400 V 460V	50Hz 60Hz	TEFC TENV	BR → E1 pag. UL-CSA → F1 pag.	T1, T2 (Std), T3, T4

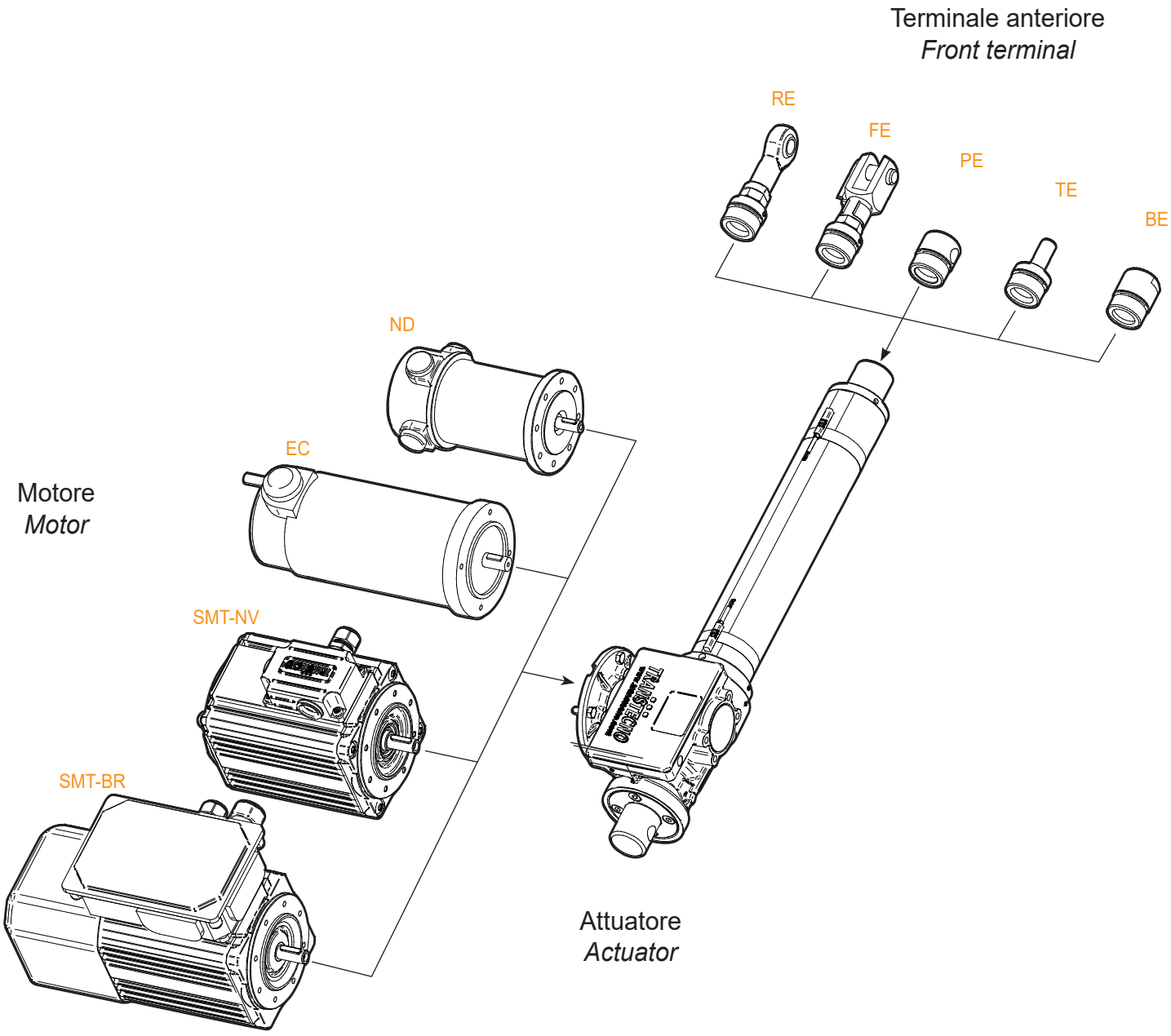
MOTORE MONOFASE / *SINGLE PHASE MOTOR*

SMM	63	2	4	0.18 kW	B14	230 V	50 Hz	TEFC	-	T1
Tipo *Type*	Grandezza *Size*	Indicativo potenza *Power coefficient*	Poli *Poles*	Potenza *Power*	Forma costruttiva *Version*	Tensione *Voltage*	Frequenza *Frequency*	Ventilazione *Fan cooling*	Opzioni *Options*	Pos. morsettiera *Terminal box pos.*
SMM	Vedi tabelle *See tables*	1-2-3-4	4	0.04 kW ... 0.75 kW	B14	230V 115V (UL-CSA)	50Hz	TEFC TENV	UL-CSA → F1 pag.	T1, T2 (Std), T3, T4

Posizione morsettiera / *Terminal box position*



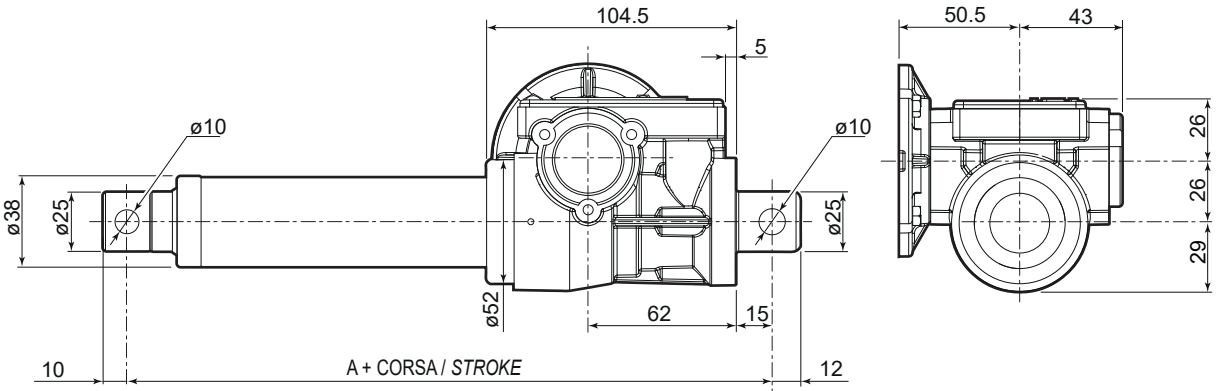
Modularità ***Modularity***



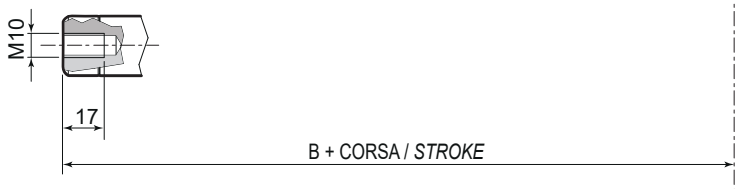
Dimensioni — *Dimensions*

AT06 senza finecorsa / *without limit switches*

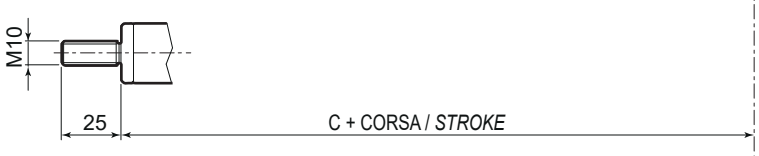
PE



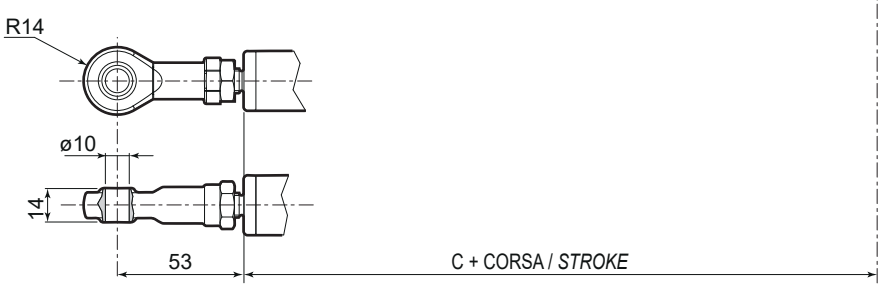
BE



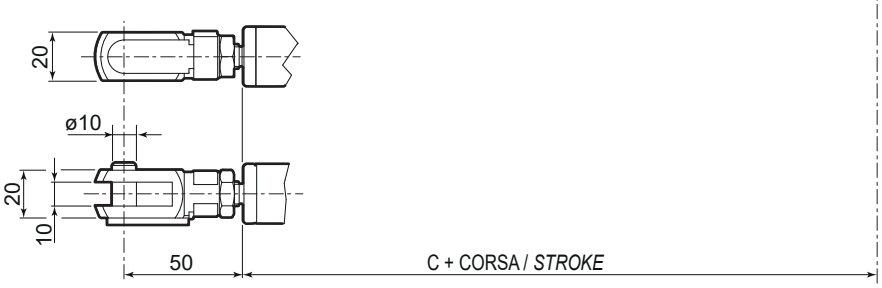
TE



RE



FE

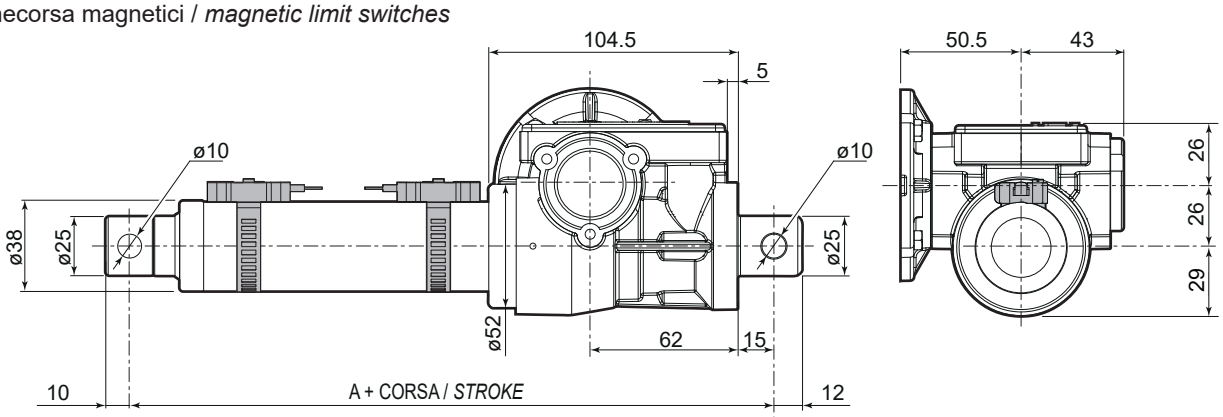


	AT06	senza finecorsa *without* limit switches	
	Dimensioni / *Dimensions*		
Corsa / *Stroke* C [mm]	**A**	**B**	**C**
< 320	170	175	165
320 ÷ 500	180	185	175
> 500	270	275	265

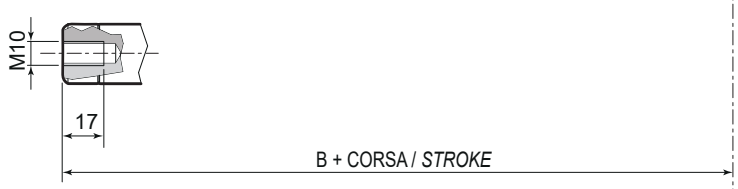
Dimensioni — *Dimensions*

AT06 finecorsa magnetici / *magnetic limit switches*

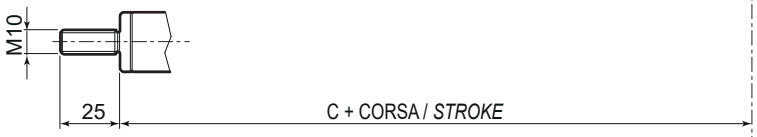
PE



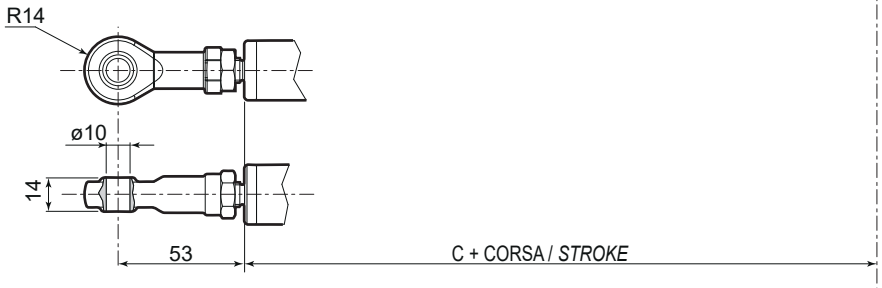
BE



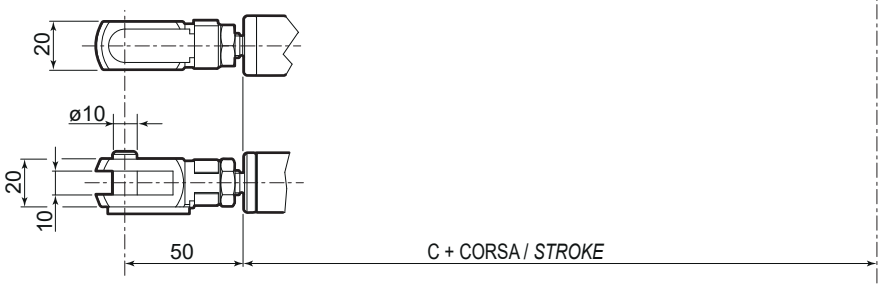
TE



RE

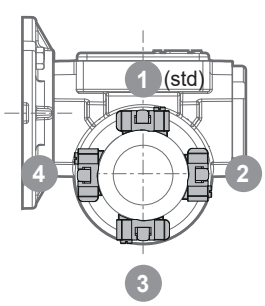


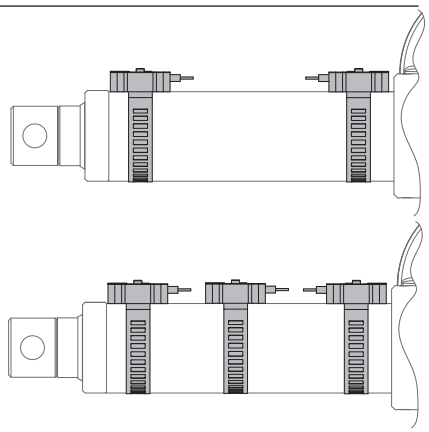
FE



	AT06 con finecorsa magnetici *with magnetic limit switches*		
	Dimensioni / *Dimensions*		
Corsa / *Stroke* C [mm]	**A**	**B**	**C**
< 320	205	210	200
320 ÷ 500	215	220	210
> 500	305	310	300

Posizionamento fine corsa magnetici — *Magnetic limit switches positon*

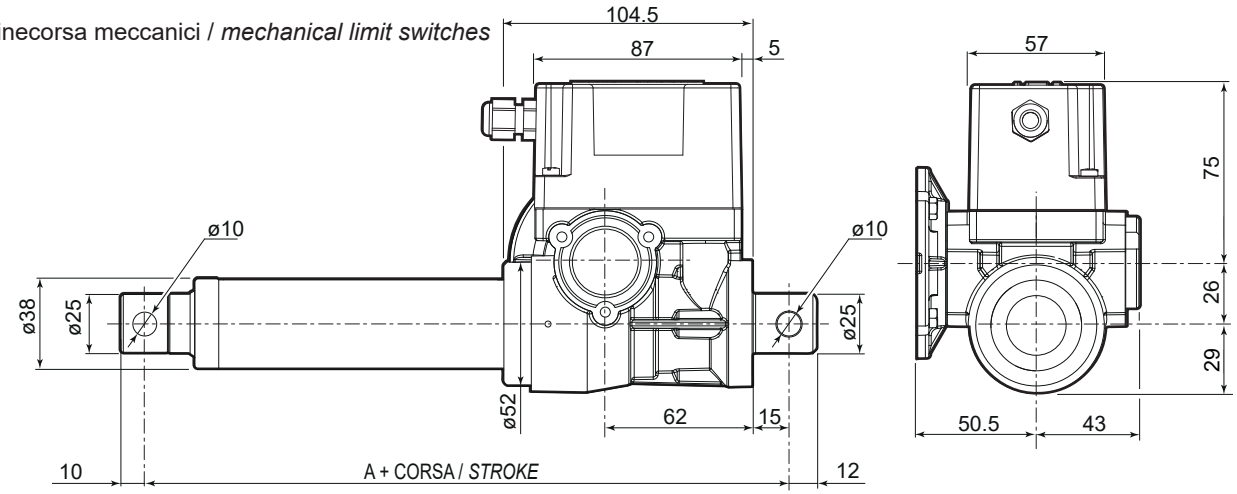




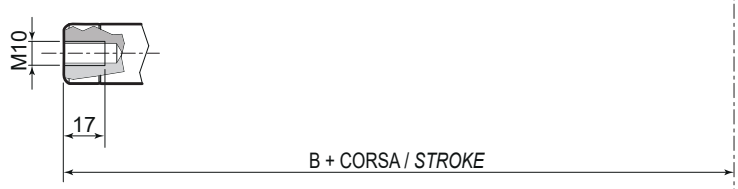
Dimensioni — *Dimensions*

AT06 finecorsa meccanici / *mechanical limit switches*

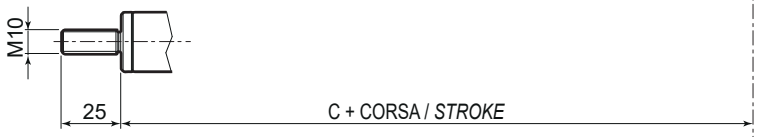
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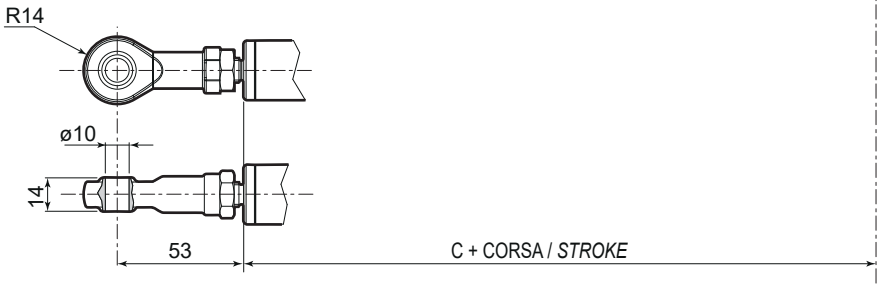
BE



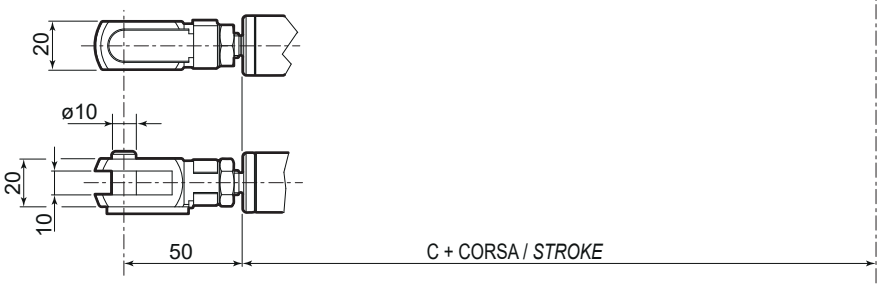
TE



RE



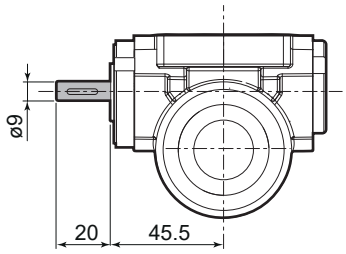
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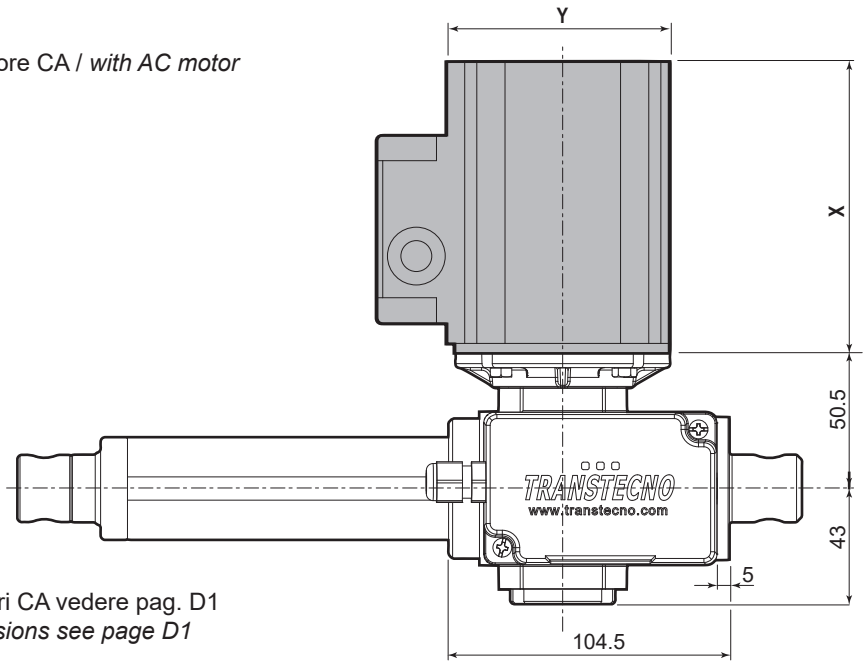
	AT06	con finecorsa meccanici *with mechanical limit switches*	
	Dimensioni / *Dimensions*		
Corsa / *Stroke* C [mm]	**A**	**B**	**C**
< 320	170	175	165
320 ÷ 500	180	185	175
> 500	270	275	265

Dimensioni ***Dimensions***

AT06 albero maschio in ingresso / *male input shaft*

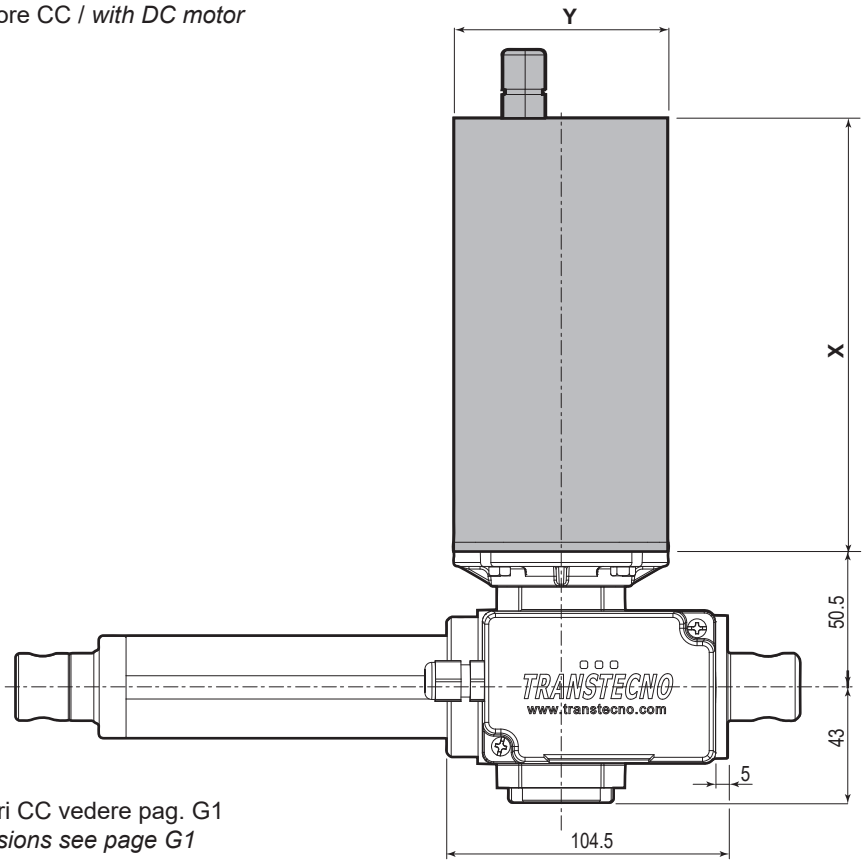


AT06 con motore CA / *with AC motor*



Per dimensioni motori CA vedere pag. D1
For AC motor dimensions see page D1

AT06 con motore CC / *with DC motor*

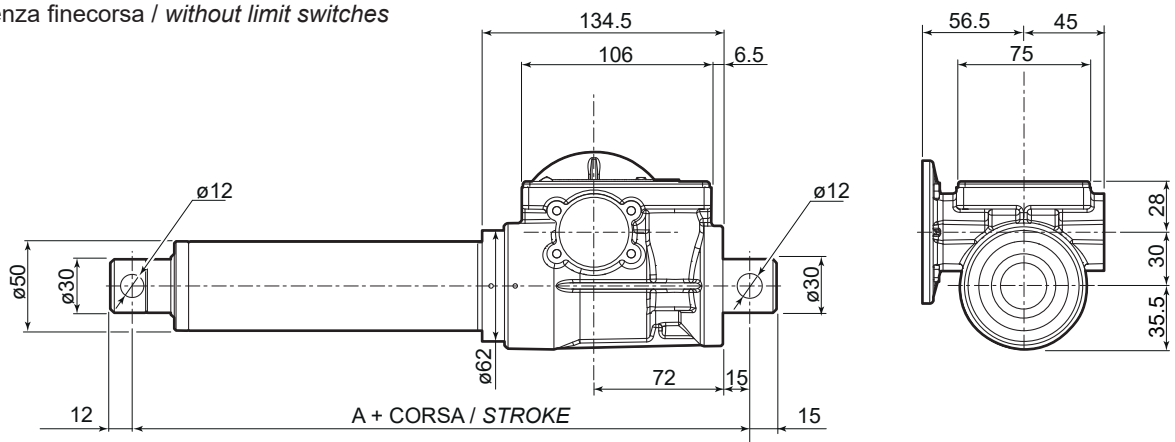


Per dimensioni motori CC vedere pag. G1
For DC motor dimensions see page G1

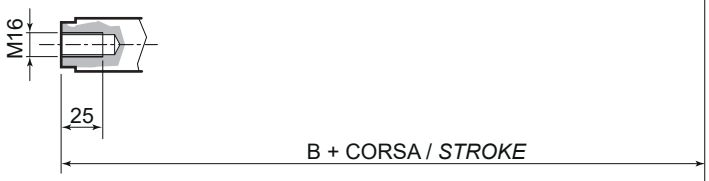
Dimensioni — *Dimensions*

AT12 senza finecorsa / *without limit switches*

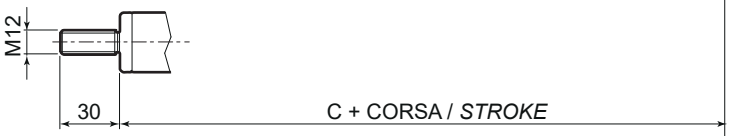
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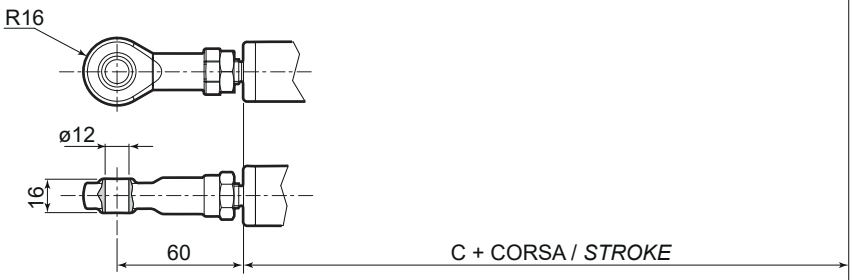
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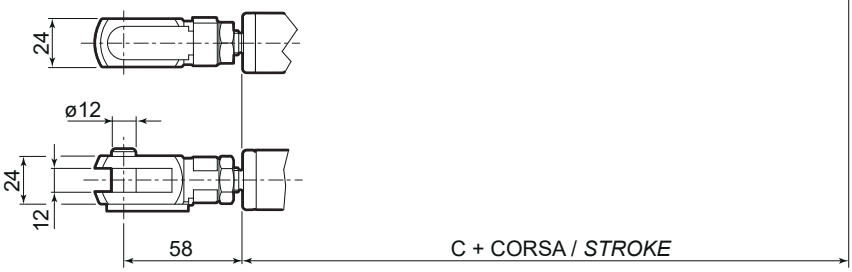
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RE



FE

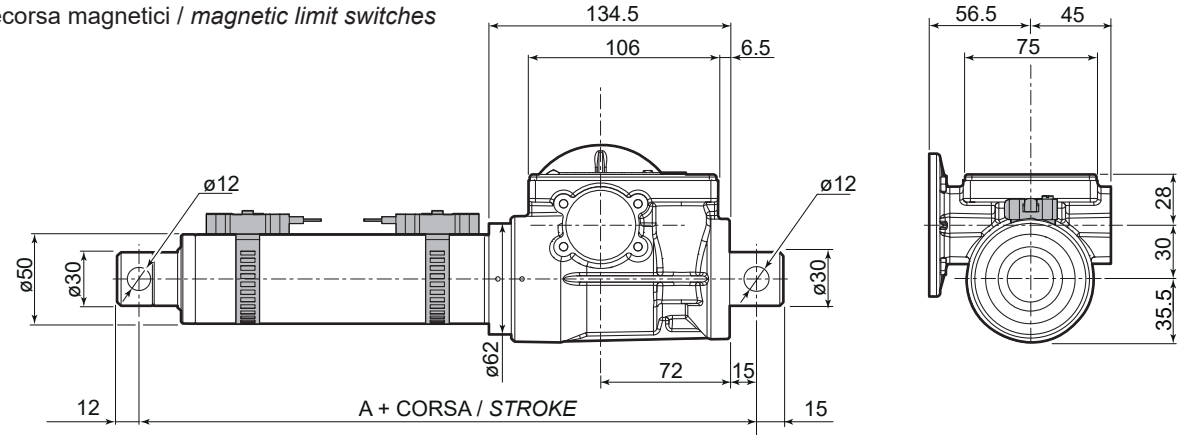


	AT12	senza finecorsa *without limit switches*	
	Dimensioni / *Dimensions*		
Corsa / *Stroke* C [mm]	**A**	**B**	**C**
< 360	190	206	190
360 ÷ 600	205	221	205
> 600	290	306	290

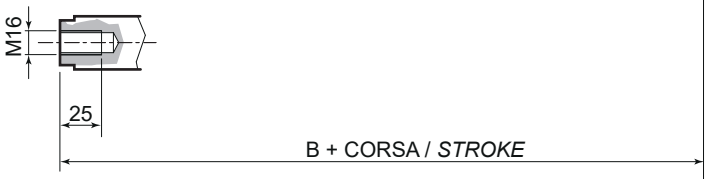
Dimensioni — *Dimensions*

AT12 finecorsa magnetici / *magnetic limit switches*

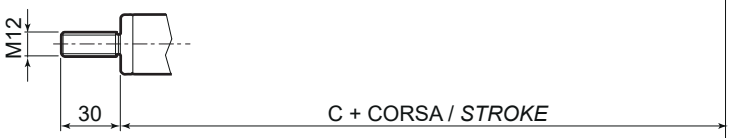
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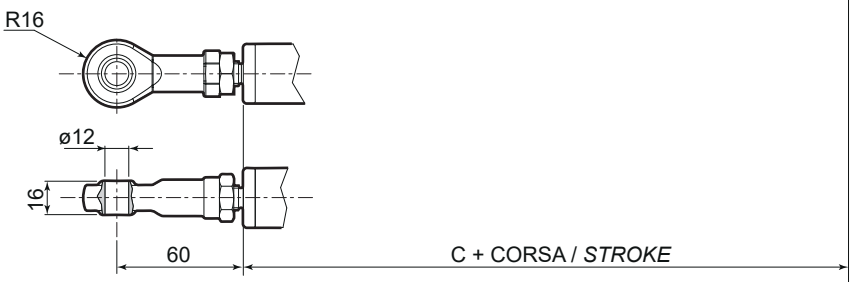
BE



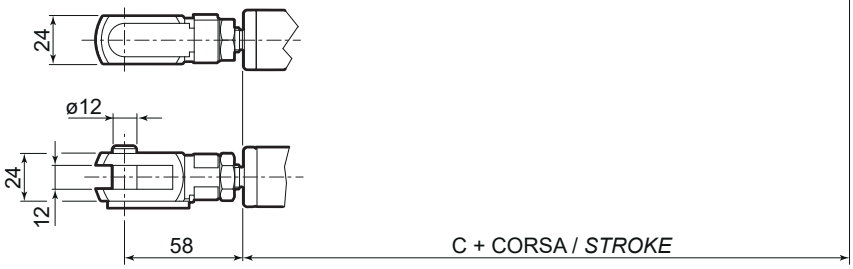
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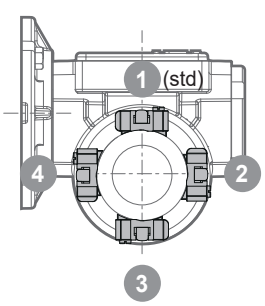


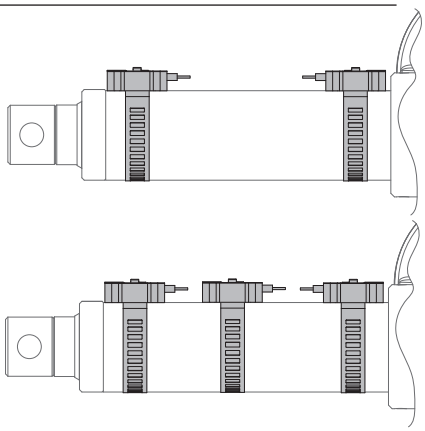
FE



Corsa / *Stroke* C [mm]	AT12 con finecorsa magnetici *with magnetic limit switches* — Dimensioni / *Dimensions* A	B	C
< 360	235	251	235
360 ÷ 600	250	266	250
> 600	335	351	335

Posizionamento fine corsa magnetici — *Magnetic limit switches positon*

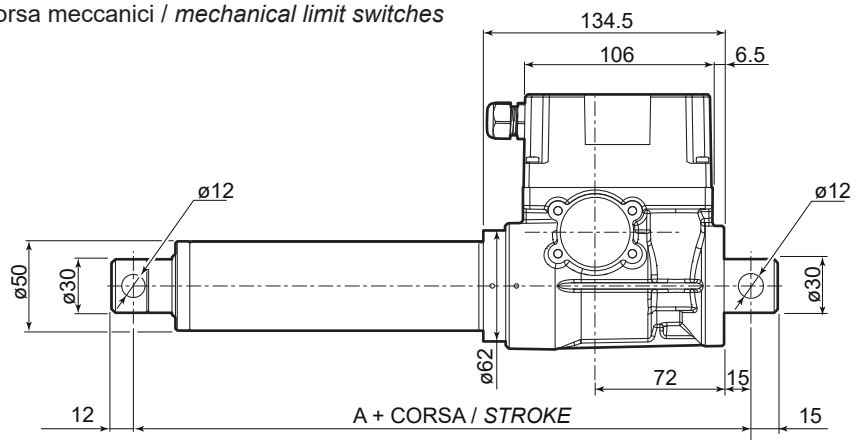


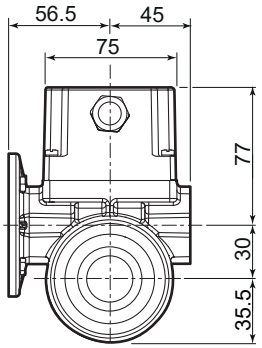


Dimensioni — *Dimensions*

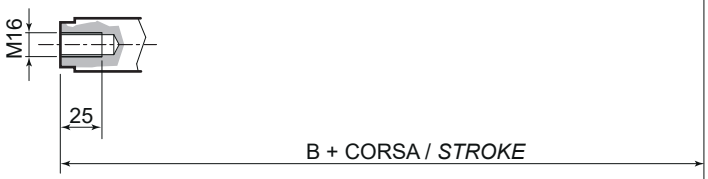
AT12 finecorsa meccanici / *mechanical limit switches*

PE

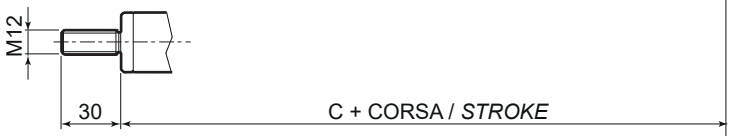




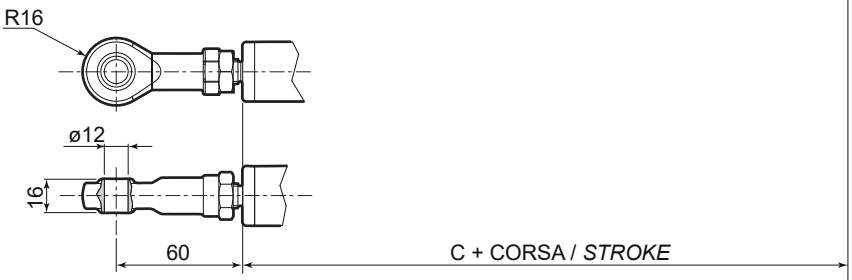
BE



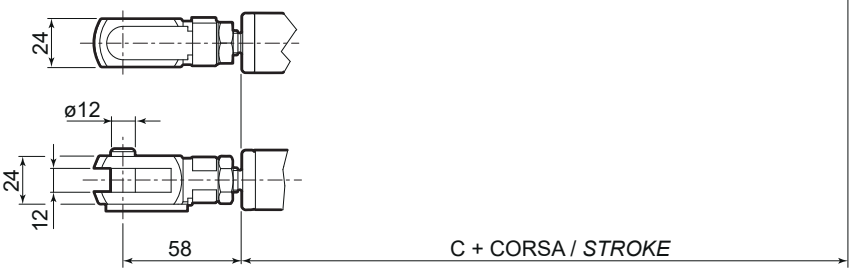
TE



RE



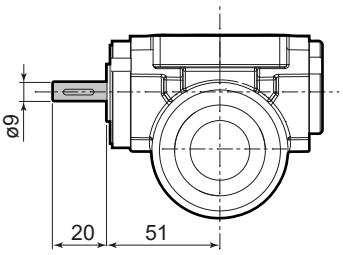
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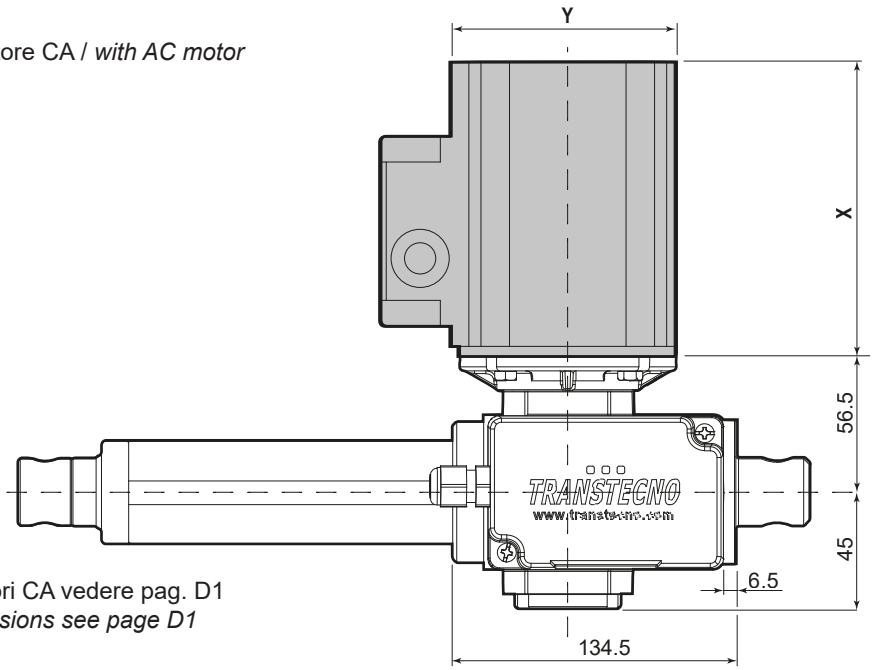
	AT12	senza finecorsa *without limit switches*	
	Dimensioni / *Dimensions*		
Corsa / *Stroke* C [mm]	**A**	**B**	**C**
< 360	190	206	190
360 ÷ 600	205	221	205
> 600	290	306	290

Dimensioni — *Dimensions*

AT12 albero maschio in ingresso / *male input shaft*

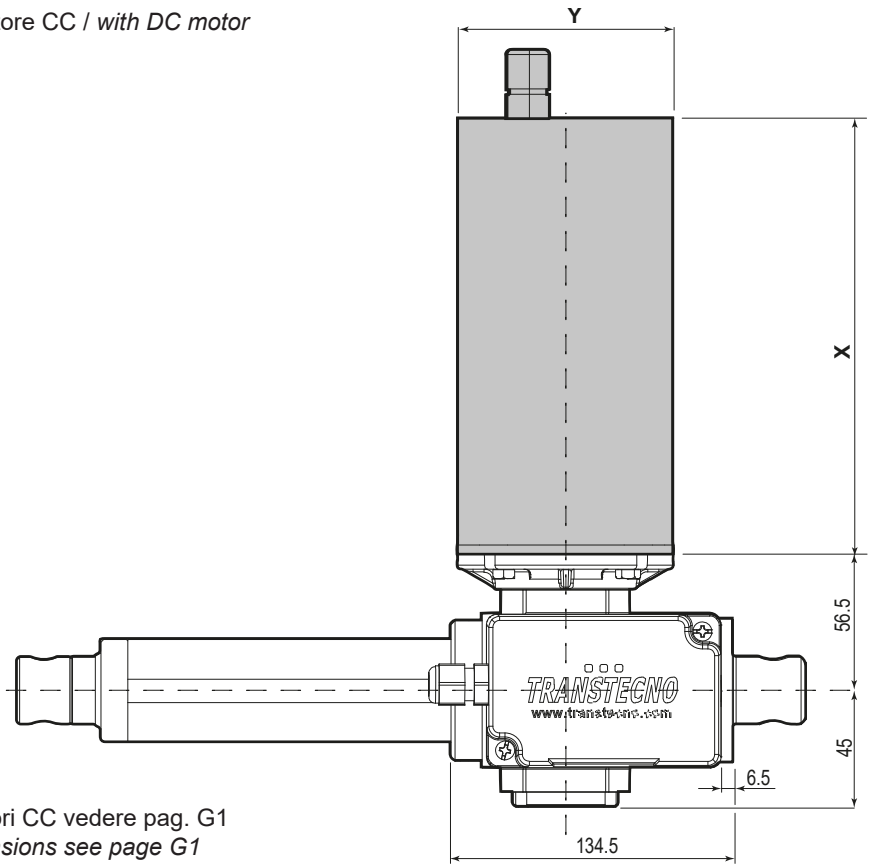


AT12 con motore CA / *with AC motor*



Per dimensioni motori CA vedere pag. D1
For AC motor dimensions see page D1

AT12 con motore CC / *with DC motor*

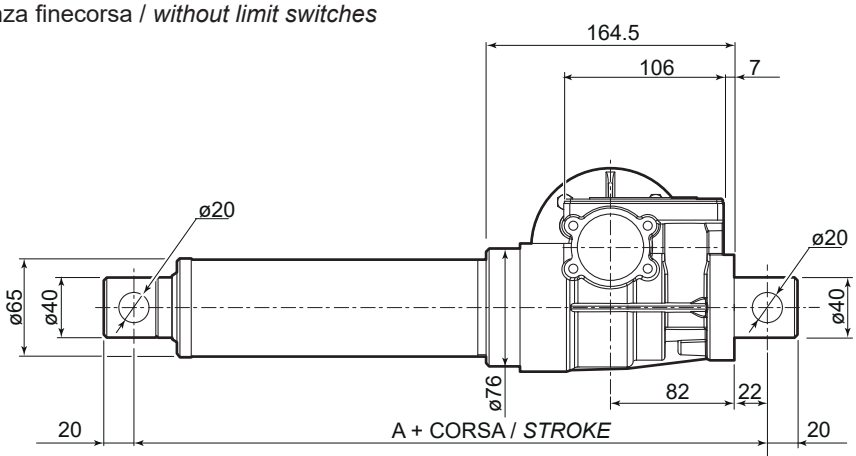


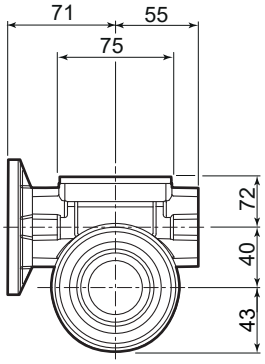
Per dimensioni motori CC vedere pag. G1
For DC motor dimensions see page G1

Dimensioni — *Dimensions*

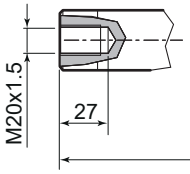
AT18 senza finecorsa / *without limit switches*

PE

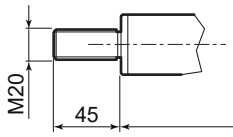




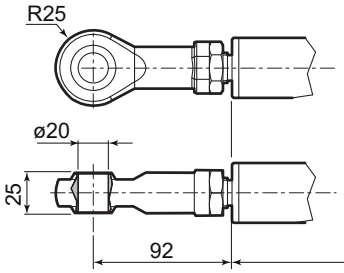
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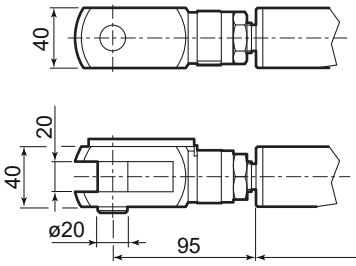
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RE



FE

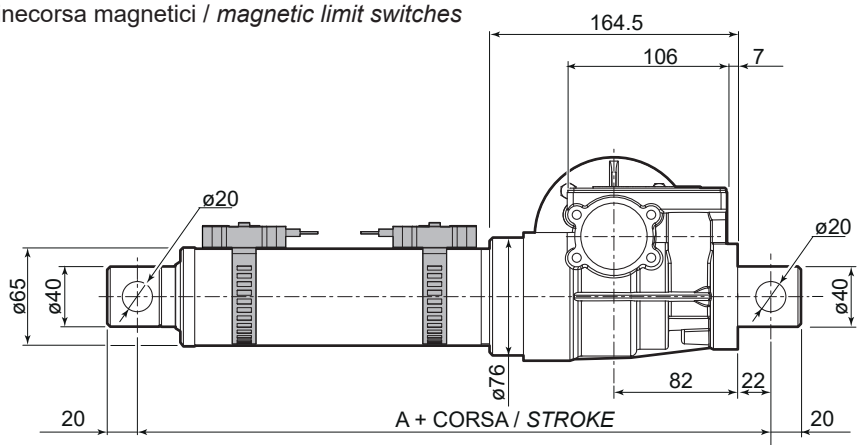


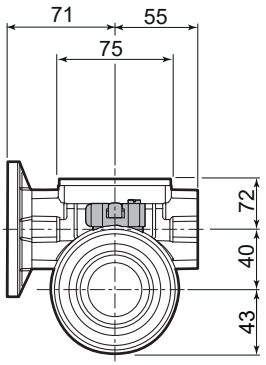
	AT18	senza finecorsa *without limit switches*	
	Dimensioni / *Dimensions*		
Corsa / *Stroke* C [mm]	**A**	**B**	**C**
< 500	270	280	260
500 ÷ 700	285	295	275
> 700	370	380	360

Dimensioni — *Dimensions*

AT18 finecorsa magnetici / *magnetic limit switches*

PE

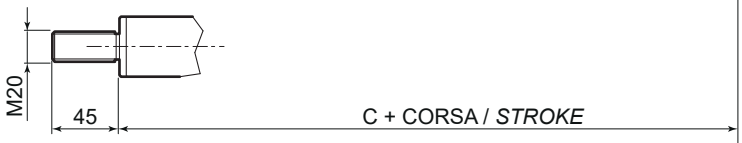




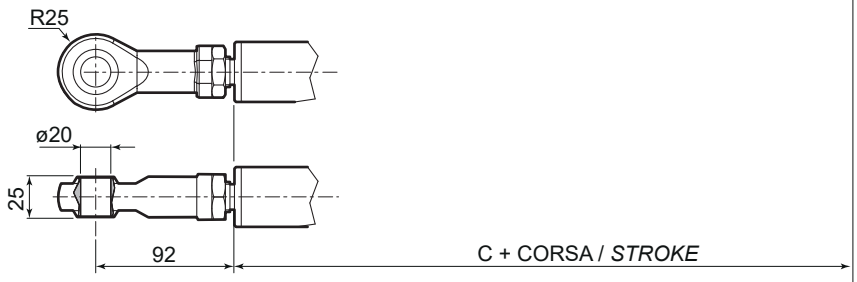
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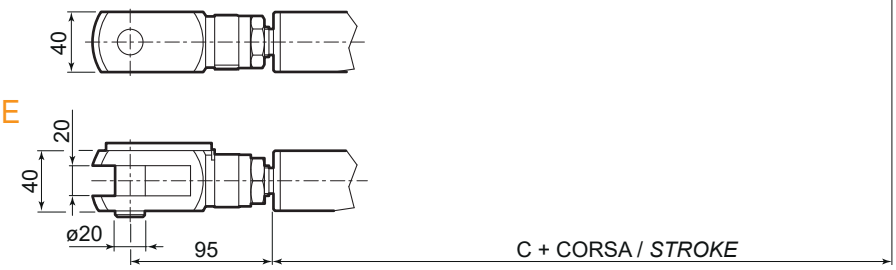
TE



RE

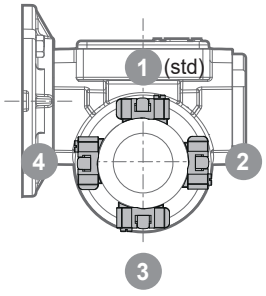


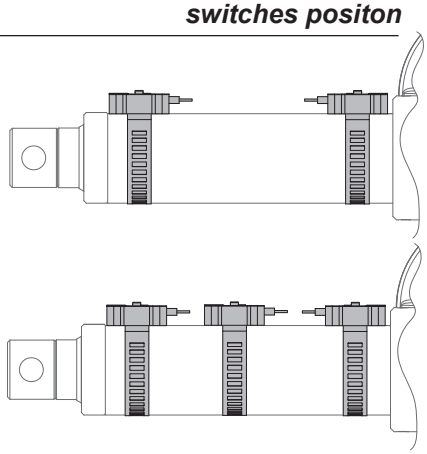
FE



Corsa / *Stroke* C [mm]	AT18 con finecorsa magnetici *with magnetic limit switches* — Dimensioni / *Dimensions* A	B	C
< 500	320	330	310
500 ÷ 700	335	345	325
> 700	420	430	410

Posizionamento fine corsa magnetici — *Magnetic limit switches positon*

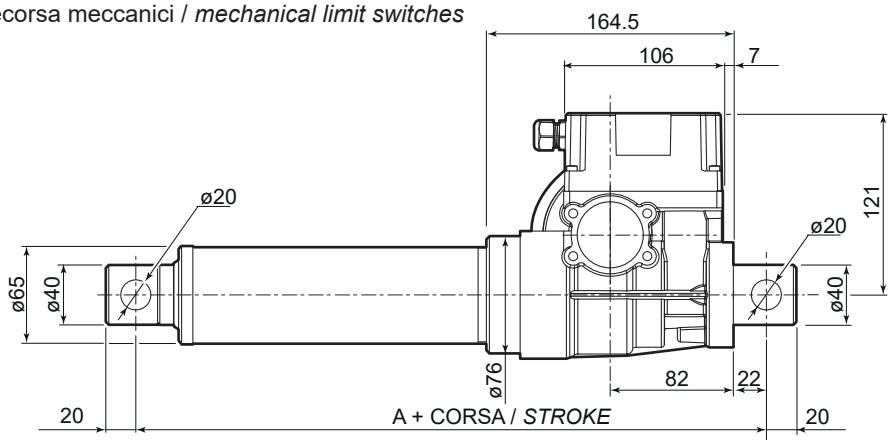


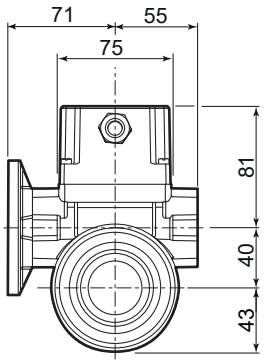


Dimensioni — *Dimensions*

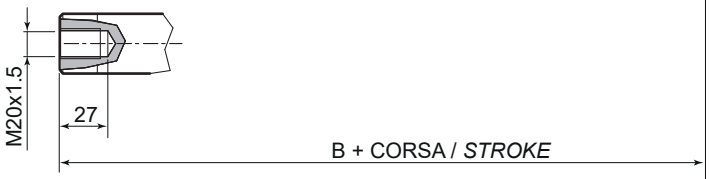
AT18 finecorsa meccanici / *mechanical limit switches*

PE

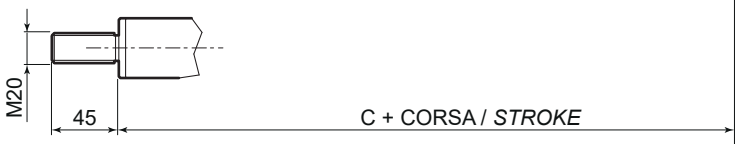




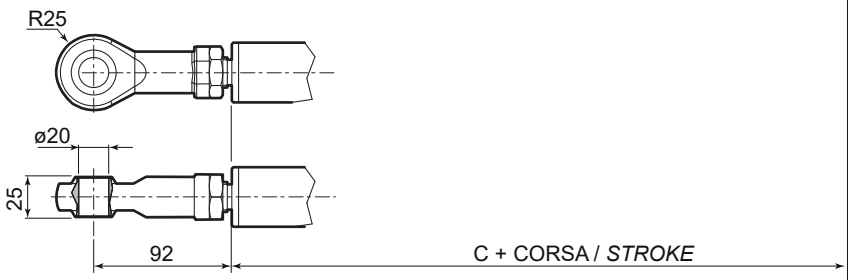
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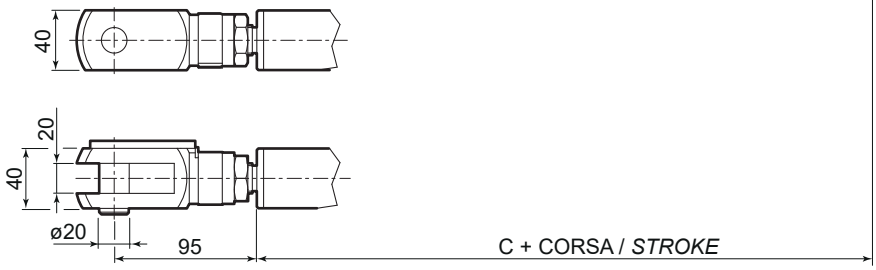
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RE

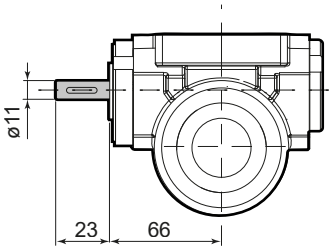


FE

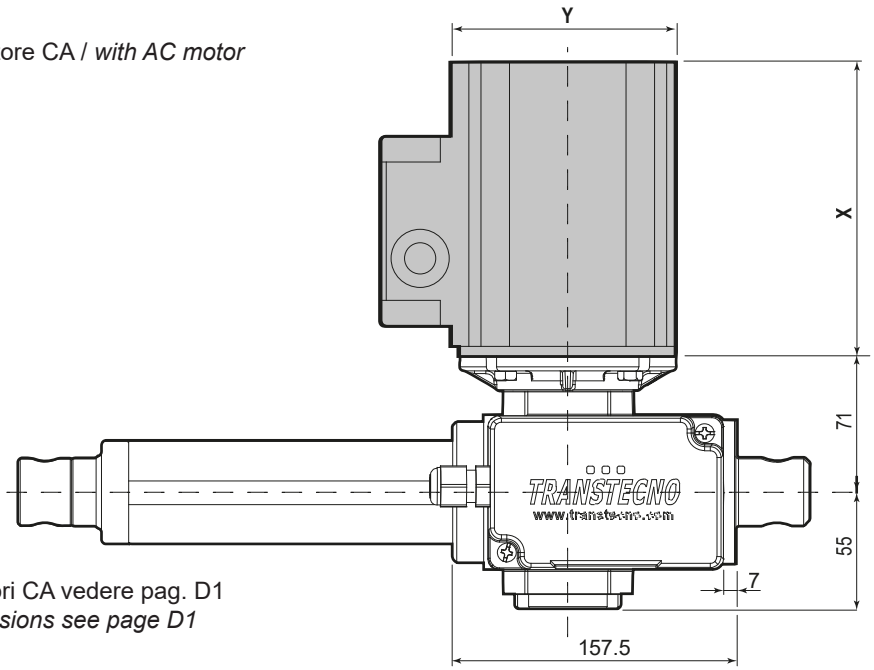


Corsa / *Stroke* C [mm]	AT18 senza finecorsa *without limit switches* — Dimensioni / *Dimensions* A	B	C
< 500	270	280	260
500 ÷ 700	285	295	275
> 700	370	380	360

AT18 albero maschio in ingresso / *male input shaft*

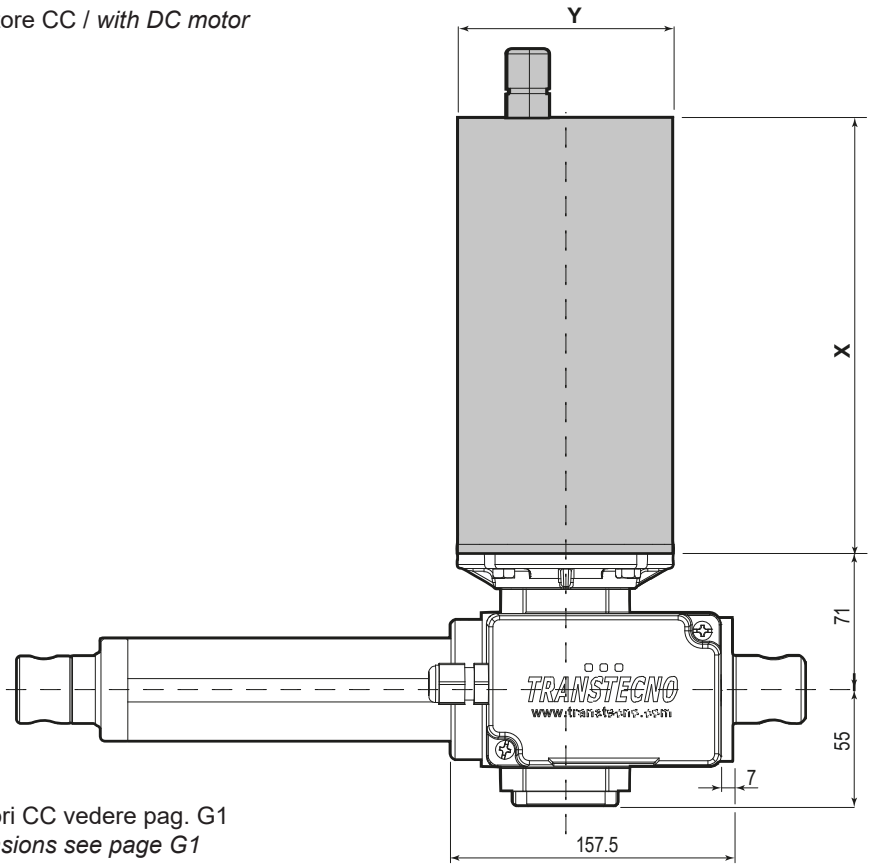


AT18 con motore CA / *with AC motor*



Per dimensioni motori CA vedere pag. D1
For AC motor dimensions see page D1

AT18 con motore CC / *with DC motor*



Per dimensioni motori CC vedere pag. G1
For DC motor dimensions see page G1

Note/*Notes*

TRANSTECNO®
the modular gearmotor

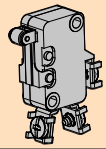
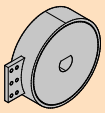
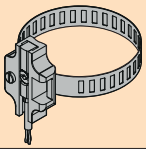
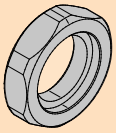
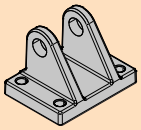
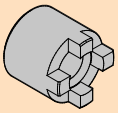
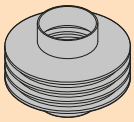
AT

ACC

Linear Actuators

Accessori
Accessories

Accessori — *Accessories*

Accessori *Accessories*		Descrizione *Description*	Disponibilità *Availability*		Pagina *Page*
			in stock	a richiesta *on demand*	
	**MS**	Fine corsa meccanici *Mechanical limit switches*	●	-	C2
	**k5**	Potenziometro 5k *Potentiometer 5k*	●	-	C3
	**MLS**	Fine corsa magnetici *Magnetic limit switches*	●	-	C4
COLLEGAMENTI ELETTRICI MOTORI ***MOTOR ELECTRICAL CONNECTIONS***	**-**	-	-	-	C6
COLLEGAMENTI ELETTRICI FINE CORSA ***LIMIT SWITCH ELECTRICAL CONNECTIONS***	**-**	-	-	-	C7
	**AD**	Dispositivo antirotazione *Antirotation Device*	●	-	C8
	**ST**	Staffa per terminale anteriore e posteriore *Bracket for front and rear terminals*	●	-	C9
	**SN**	Chiocciola di sicurezza *Safety nut*	-	●	C10
	**B**	Protezione elastica *Elastic protection*	-	●	C11
ACCIAIO INOX **STAINLESS STEEL**	**SSV**	Versione inox Stainless steel version	-	●	C12

Questa sezione annulla e sostituisce ogni precedente edizione o revisione. Qualora questa sezione non Vi sia giunta in distribuzione controllata, l'aggiornamento dei dati ivi contenuto non è assicurato. **In tal caso la versione più aggiornata è disponibile sul nostro sito internet www.transtecno.com**

This section replaces any previous edition and revision. If you obtained this catalogue other than through controlled distribution channels, the most up to date content is not guaranteed. ***In this case the latest version is available on our web site www.transtecno.com***

MS
Fine corsa meccanici

I fine corsa permettono di limitare la corsa in apertura e in chiusura evitando che si superi la corsa nominale dell'attuatore.

Gli attuatori non possono lavorare in battuta meccanica.
Il gruppo fine corsa integrato è composto da 2 o 3 microswitch fissati sulla parte superiore della cassa dell'attuatore, azionati da camme che ne permettono la regolazione.

La rotazione delle camme è data da una trasmissione che prende il moto direttamente dall'asse della vite trapezia.
Il terzo micro viene utilizzato per posizioni intermedie.
Tutto il gruppo è contenuto all'interno di un coperchio a tenuta.
Questo tipo di fine corsa non è compatibile con corse lunghe.

I limiti di corsa per le singole taglie sono riportati nelle pagine B6 e successive.
Nel caso in cui i micro vengano forniti tarati, la rotazione manuale dell'asta traslante genera la perdita della taratura.

MS
Mechanical limit switches

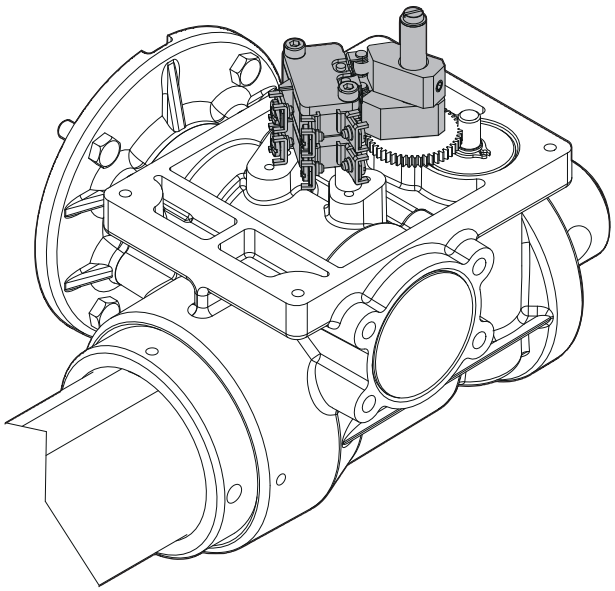
The limit switches limit the stroke during extension and retraction avoiding exceeding the nominal stroke of the actuator.

The actuators can't run over the allowed stroke.
The limit switch device is integrated in the actuator and it is composed of 2 or 3 microswitches connected on the upper part of the housing, moved by cams that allow for their adjustment.

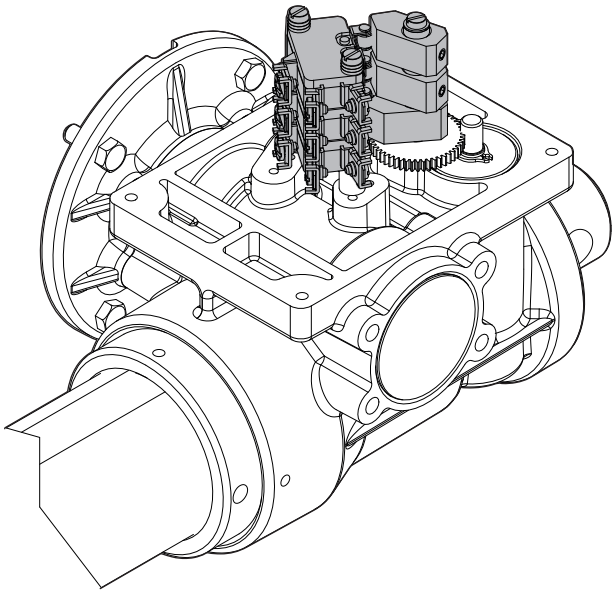
The cam rotation is granted by a transmission that gets the motion directly from the axis of the trapezoidal screw.
The third microswitch is used for intermediate positions. The whole group is placed inside a waterproof cover. This type of limit switches is not suitable for long strokes.

The limits of the allowable strokes are given at pages B6 onward
Should the microswitches be supplied already set, the manual rotation of the rod modifies the setting.

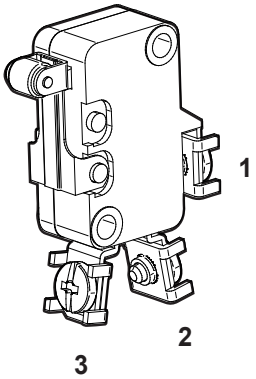
2MS



3MS



Switch finecorsa / *Limit switch*	
Tensione di isolamento nominale / ***Rated insulation voltage***	250 V
Corrente convenzionale termica / ***Conventional thermal curret*** I_{th}	10 A
Durata meccanica / ***Mechanical life***	10^7



1 = Comune / *Common*

2 = Normalmente aperto / *Normally open*

3 = Normalmente chiuso / *Normally closed*

k5
Potenziometro 5k

Il potenziometro rotativo è un trasduttore assoluto che permette il controllo della corsa.
Viene montato sullo stesso asse della camme di comando dei micro di fine corsa con gli stessi limiti di lunghezza delle corse e non viene sempre garantita la totale copertura di tutto l'angolo elettrico del potenziometro.

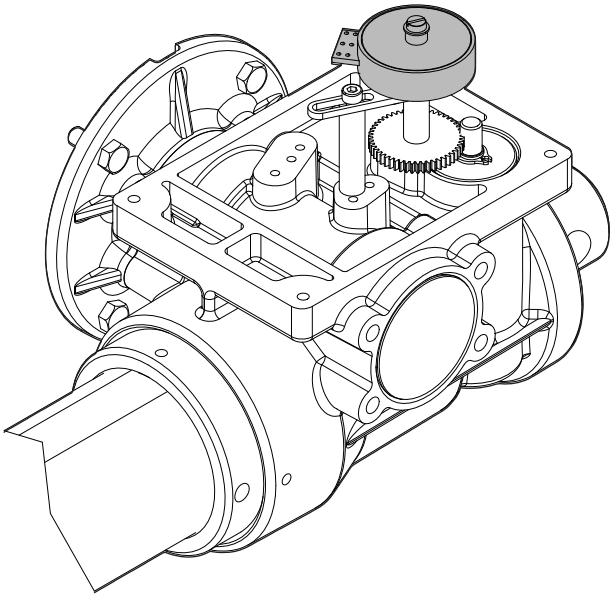
Può essere fornito singolarmente o abbinato a 2 fine corsa meccanici.

k5
Potentiometer 5k

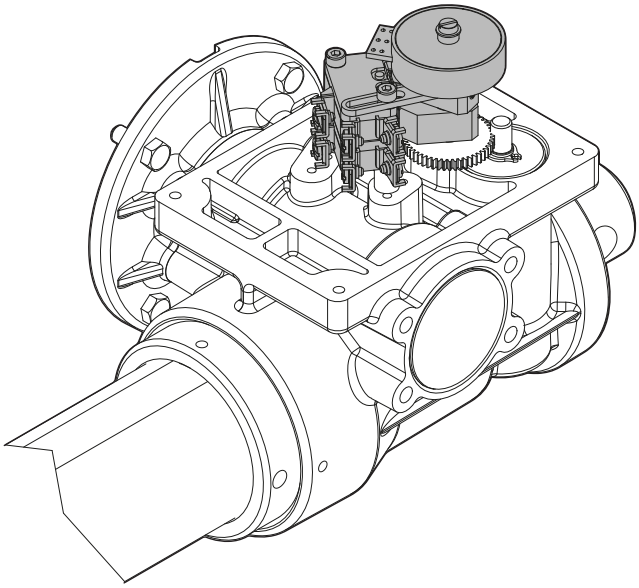
The revolving potentiometer is an absolute transducer that allows the control of the stroke.
It is assembled on the same axis of the driving cams of the microswitches with the same limitations of the stroke and the total coverage of all the electrical angle of the potentiometer is not always guaranteed.

It can be supplied as a stand-alone device or coupled with 2 mechanical limit switches.

k5



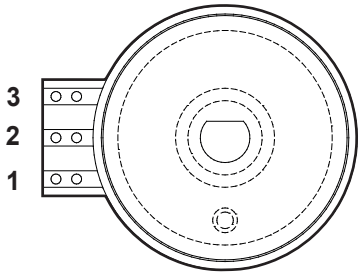
k5 + 2MS

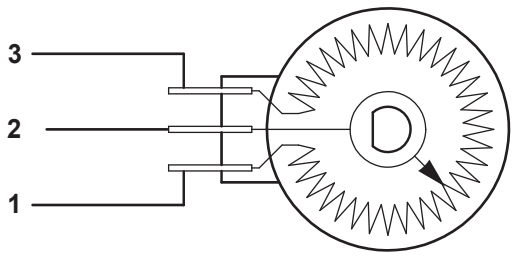


1 = 0 V CC

2 = Segnale / *Signal*

3 = + V CC





Potenziometro rotativo / *Revolving potentiometer*	
Elemento resistivo / *Resistive element*	Plastica conduttiva / *Conductive plastic*
Angolo elettrico / *Electric angle*	340°
Resistenza nominale / Resistance value	5 k
Tolleranza sulla resistenza nominale / Resistance tolerance	± 20%
Linearità / Independent linearity	± 2%
Tensione applicabile max. / Max. permissible voltage	35 V CC
Alimentazione consigliata / *Recommended power supply*	10 V CC
Temperatura di funzionamento / *Temperature range*	- 25° ÷ 75° C

MLS
Fine corsa magnetici

I fine corsa magnetici vengono fissati al tubo esterno tramite appositi supporti, che consentono la regolazione della corsa.

In fase della regolazione della corsa, occorre prestare molta attenzione a non superare il limite d'interasse indicati nelle tabelle dimensionali di pagina B6 e seguenti per evitare che l'attuatore raggiunga le posizioni estreme causando battute meccaniche.

Sono disponibili tre tipi di sensori:

Circuito Reed NC
Circuito con ampolla Reed normalmente chiusa protetta da varistore contro le sovratensioni generate all'apertura del circuito, e sistema di visualizzazione a LED.

Circuito Reed NO
Circuito con ampolla Reed normalmente aperta, protetta da varistore contro le sovratensioni generate all'apertura del circuito, e sistema di visualizzazione a LED.

Circuito NPN
Circuito con effetto di Hall con uscita NPN.
Protetto contro l'inversione di polarità e contro sovratensioni.
Sistema di visualizzazione a LED.

Per tutte le tipologie la lunghezza standard del cavo è di 2 m.

MLS
Magnetic limit switches

Magnetic limit switches are mounted on the external tube by means of dedicated supports, which allow the regulation of the stroke.

During the adjustment of the stroke, attention must be paid not to exceed the stroke limits stated in the tables at page B6 onward to avoid extreme positions causing damage.

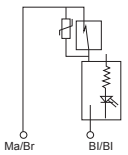
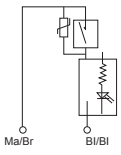
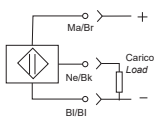
There are three types of sensor available:

NC Reed circuit
Circuit with normally closed Reed switch protected by varistor against overvoltages generated when the circuit is opened, and LED display system.

NO Reed Circuit
Circuit with normally open Reed switch protected by varistor gainst overvoltage generated when the circuit is opened, and LED display system.

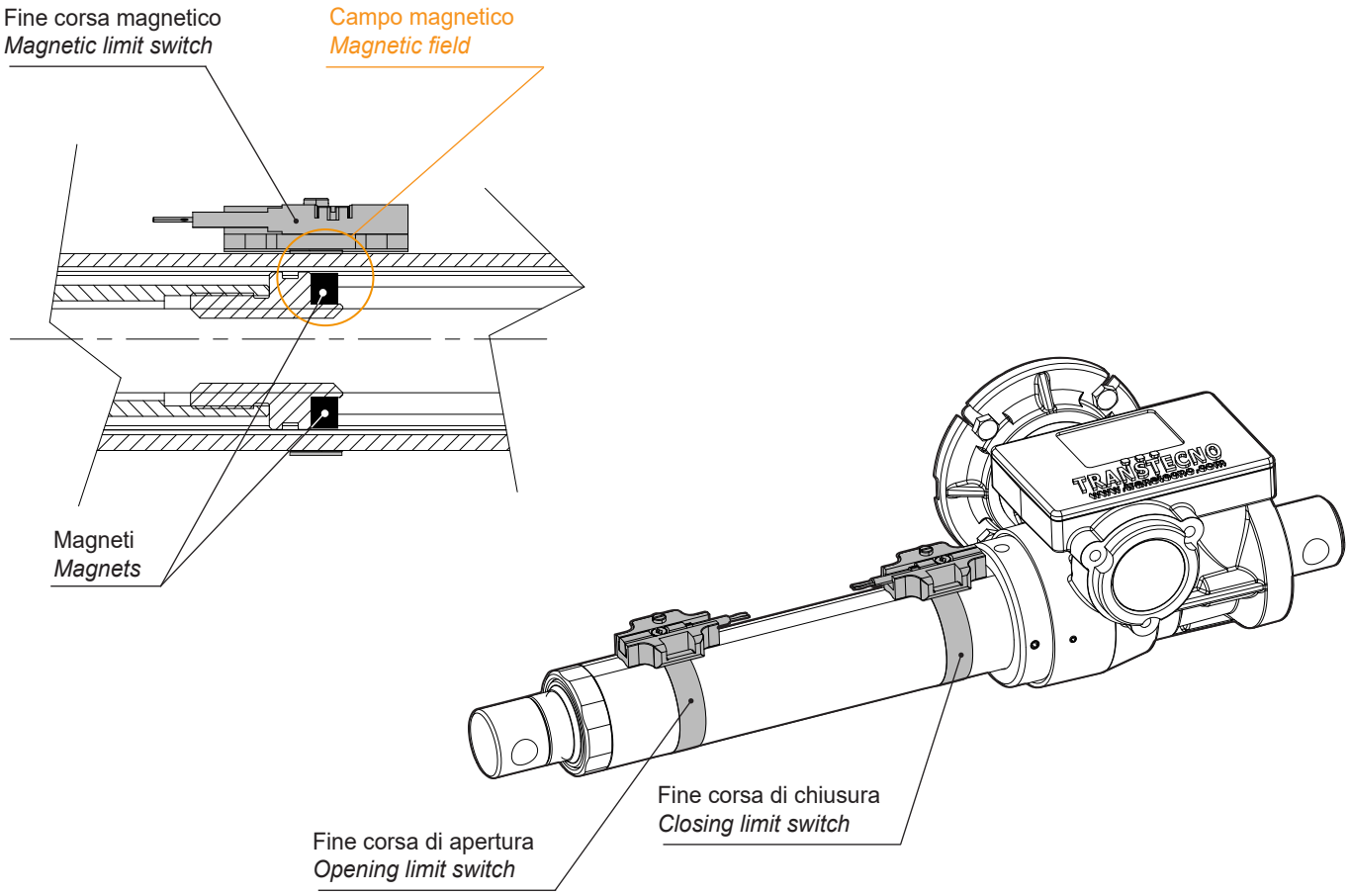
NPN Circuit
Circuit with Hall effect with NPN output. Protected against polarity reversal and against overvoltages.
LED display system.

For all types, the standard cable length is 2 m.

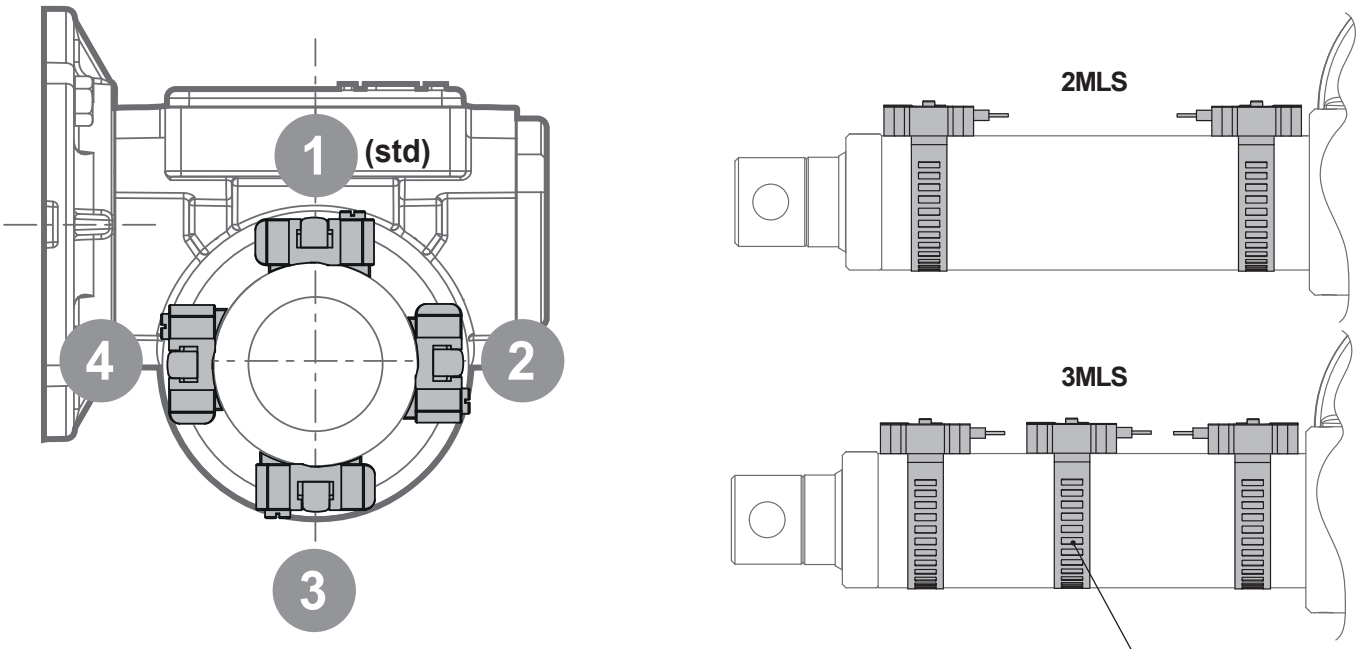
Tipo sensore ***Sensor type***	**Circuito Reed NC** ***NC Reed Circuit***	**Circuito Reed NO** ***NO Reed Circuit***	**Circuito NPN** ***NPN Circuit***
Riferimento designazione *Classification reference*	**2MLS0 / 3MLS0** 2/3 Sensori circuito Reed NC (versione standard) *2/3 Sensors NC Reed Circuit (standard version)*	**2MLS1 / 3MLS1** 2/3 Sensori circuito Reed NO *2/3 Sensors NO Reed Circuit*	**2MLS2 / 3MLS2** 2/3 Sensori NPN *2/3 NPN Sensors*
Tensione CC / *DC voltage*	3 / 110 V	3 / 30V	6 / 30 V
Tensione CA / *AC voltage*	3 / 110 V	3 / 30V	-
Corrente / *Current*	0.5 A	0.1 A	0.20A
Potenza / *Power*	20 VA	6 VA	4 W
Cavo alimentazione / *Supply cable*	PVC2 x 0.14mm	PVC2 x 0.14mm	PVC3 x 0.14mm
Lunghezza cavo / *Cable lenght*	2500 mm	2500 mm	2500 mm
Protezione / *Protection*	IP67	IP67	IP67
Schema circuito / *Circuit diagram*			

MLS
Fine corsa magnetici

MLS
Magnetic limit switches



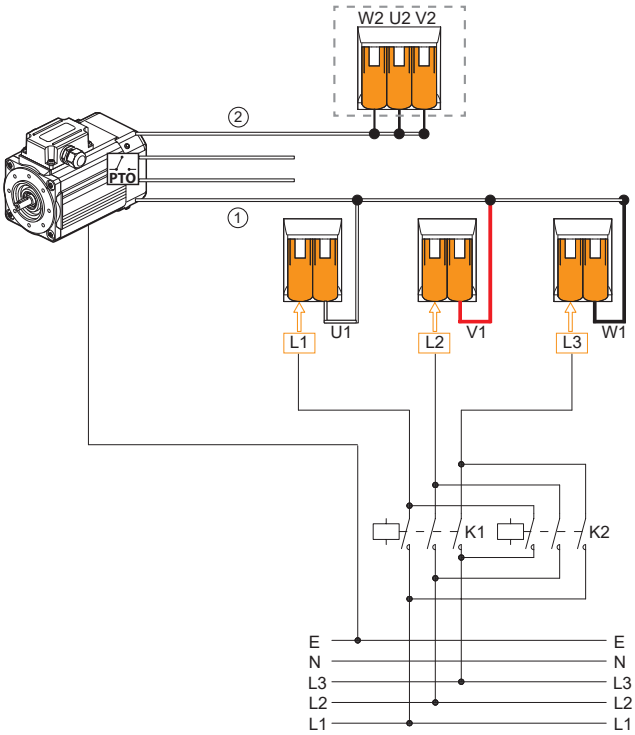
Posizionamento fine corsa magnetici / *Magnetic limit switch position*



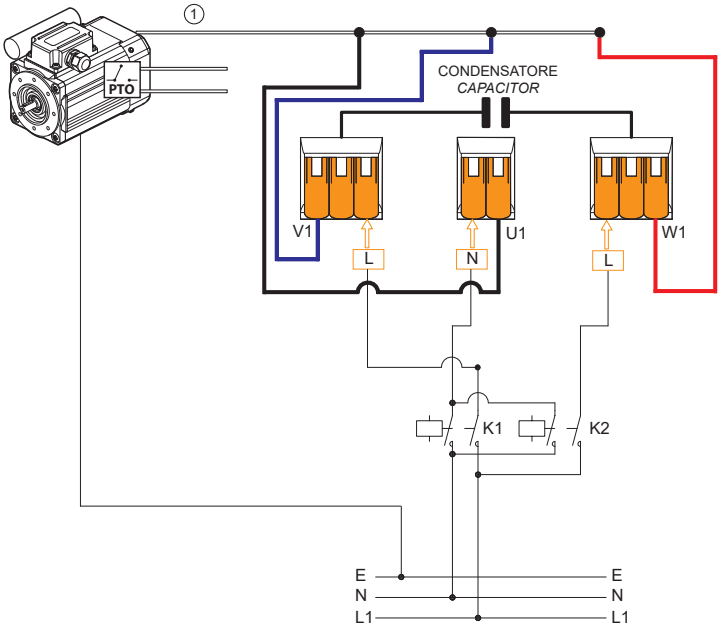
Il terzo finecorsa viene montato in posizione intermedia tra il finecorsa di apertura ed il finecorsa di chiusura.
The third limit switch is assembled in an intermediate position between the opening limit switch and the closing one.

Collegamenti elettrici motori — *Motor electrical connections*

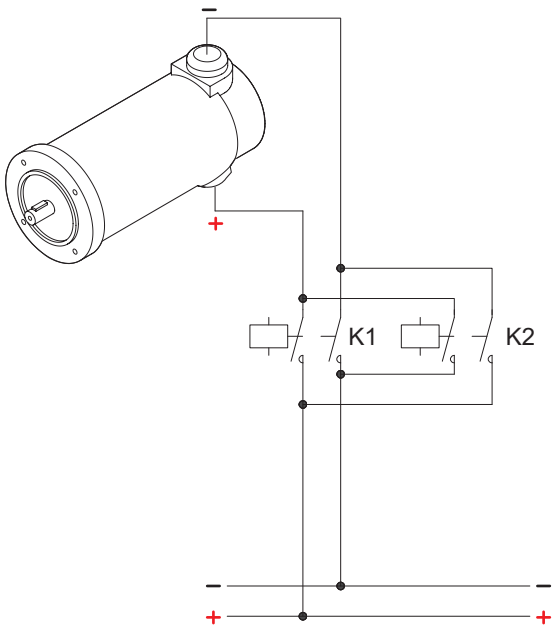
Motore CA trifase / *AC 3-phase motor*



Motore CA monofase/ *AC single-phase motor*

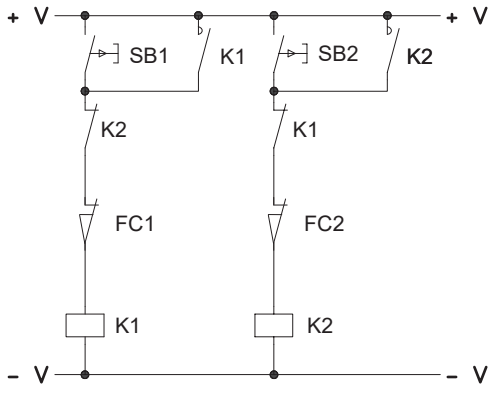


Motore CC / *DC motors*



Collegamenti elettrici fine corsa — *Limit switch electrical connections*

Fine corsa meccanici / *Mechanical limit switch*



Contatto normalmente chiuso NC
NC normally closed contact

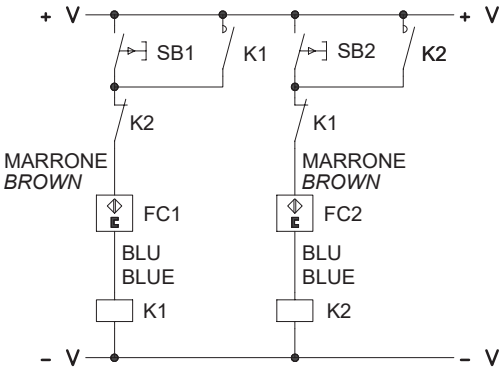
Contatto normalmente aperto NO
NO normally open contact

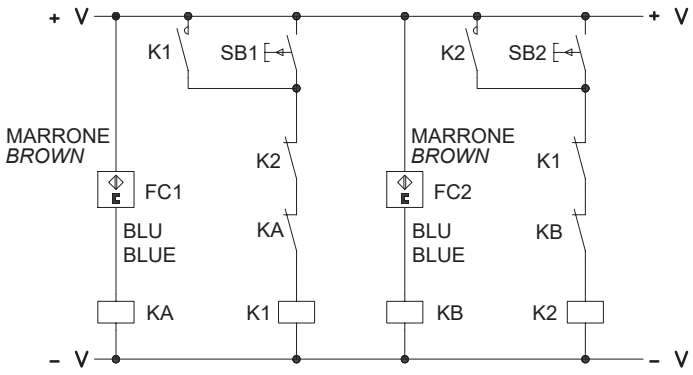
Interruttore
Switch

Tasto
Push button

Bobina relè
Relay coil

Fine corsa magnetici / *Magnetic limit switch*





Contatto normalmente chiuso NC
NC normally closed contact

Contatto normalmente aperto NO
NO normally open contact

Sensore REED
REED sensor

Tasto
Push button

Bobina relè
Relay coil

AD
Dispositivo antirotazione

Il dispositivo di antirotazione vincola la rotazione dell'asta traslante attorno al proprio asse.

Il dispositivo è realizzato con un componente esagonale che si accoppia sul profilo interno del tubo di protezione.

ATTENZIONE
Il dispositivo è indispensabile nel caso in cui il carico applicato all'attuatore non risulti guidato e con l'utilizzo dei terminali RE (teste a snodo) e FE (forcella).

Sugli attuatori con dispositivo antirotazione il terminale anteriore PE viene orientato in fase di montaggio.

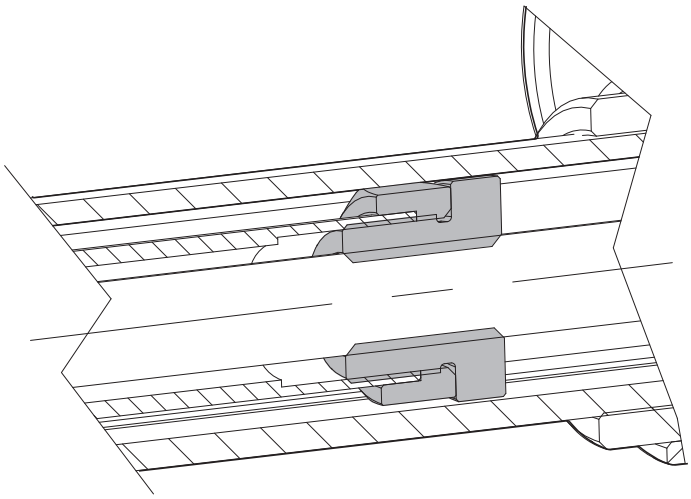
AD
Anti-rotation device

The anti-rotation device blocks the rotation of the translating rod.

The device is composed of a hexagonal nut that matches the internal profile of the protection tube.

WARNING
The device is mandatory whenever the applied load is not guided and when the front end terminals RE (ball joint) and FE (forked end) are used.

The front end terminal PE is orientated during assembly.



Taglia *Size*	Incremento quote A, B e C [mm] *Dimensions A,B and C increase [mm]*	Vedere pagina *See page*		
		senza finecorsa *without limit switches*	finecorsa magnetici *magnetic limit switches*	finecorsa meccanici *mechanical limit switches*
AT06	0	B10 pag.	B11 pag.	B12 pag.
AT12	15	B14 pag.	B15 pag.	B16 pag.
AT18	15	B18 pag.	B19 pag.	B20 pag.

ST

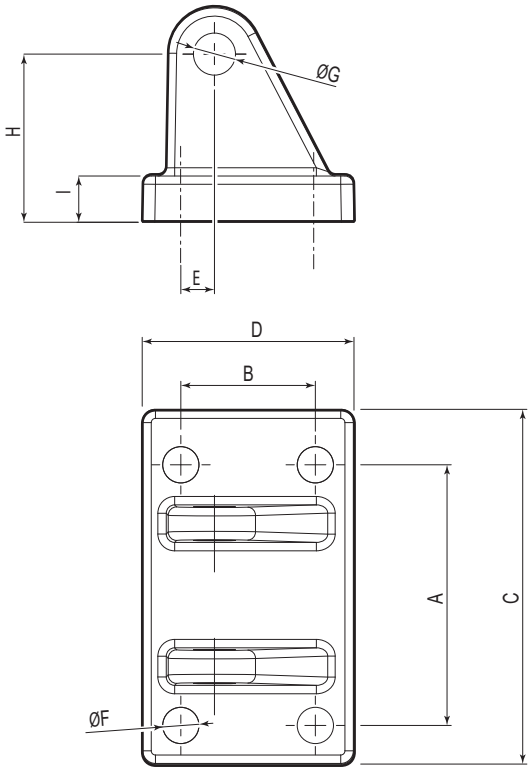
Staffa per terminale anteriore e posteriore

Per il fissaggio dell'attuatore sono disponibili delle staffe di fissaggio applicabili sia per il terminale posteriore che su quello anteriore tipo PE.

ST

Bracket for front and rear terminal

To fasten the actuator, fastening brackets are available and they can be used both for front and rear terminals PE.



Taglia / *Size*	A	B	C	D	E	ØF	ØG	H	I
AT06	62	32	84	50	8	9	10	40	11
AT12	72	38	90	58	8	9	12	45	12
AT18	85	55	110	81	15	11	20	58	15

SN
Chiocciola di sicurezza

La chiocciola di sicurezza è composta da una seconda chiocciola in bronzo collegata a quella di lavoro tramite 4 innesti.

La chiocciola di sicurezza interviene solo in caso d'usura o rottura della chiocciola di lavoro impedendo la caduta del carico.

La chiocciola di sicurezza è unidirezionale ed è disponibile per carichi in spinta.

Per applicazioni per carico in tiro contattare il nostro Ufficio Tecnico.

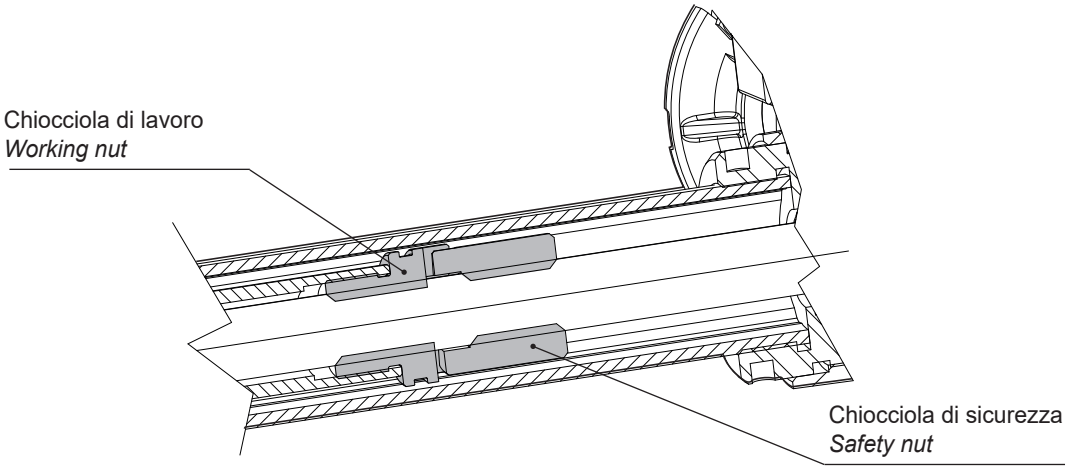
SN
Safety nut

The safety nut is a second bronze nut connected to the working one with 4 inserts.

The safety nut works in case of wear or failure of the working nut avoiding the collapse of the load.

The safety nut is unidirectional and it is available for thrusting loads.

In case of pulling loads, it is necessary to contact our Technical Department.



Taglia *Size*	Incremento quote A, B e C [mm] *Dimensions A,B and C increase [mm]*	Vedere pagina *See page*		
		senza finecorsa *without limit switches*	finecorsa magnetici *magnetic limit switches*	finecorsa meccanici *mechanical limit switches*
AT06	30	B10 pag.	B11 pag.	B12 pag.
AT12	30	B14 pag.	B15 pag.	B16 pag.
AT18	50	B18 pag.	B19 pag.	B20 pag.

B
Protezione elastica

Per l'utilizzo degli attuatori in condizioni ambientali particolari, con presenza di contaminanti che potrebbero danneggiare la guarnizione dell'asta traslante può essere inserita una protezione elastica.

Le protezioni elastiche standard sono realizzati in Poliestere spalmato con PVC. L'utilizzo di tali protezioni comporta l'aumento degli interassi dell'attuatore di 20mm, fatto eccezione per gli attuatori con fine corsa magnetici dove l'aumento dell'interasse è proporzionale alla corsa. (in questi casi contattare il nostro Ufficio Tecnico).

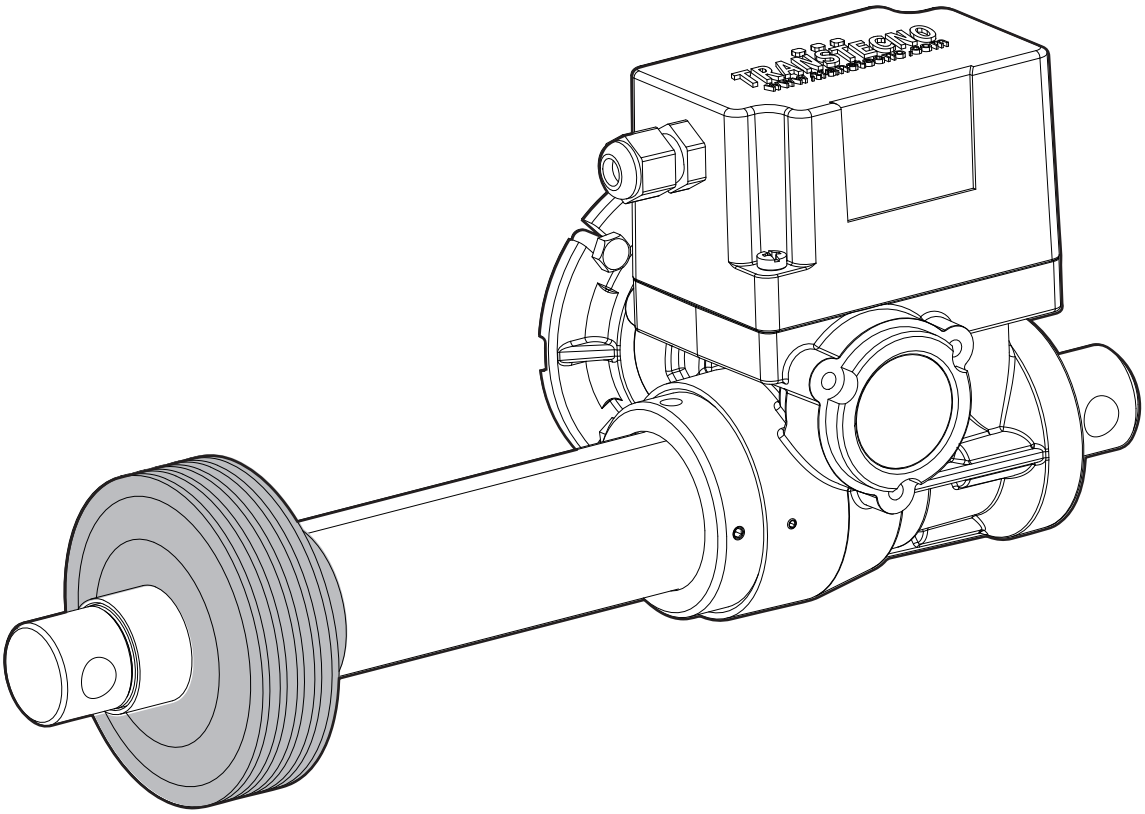
A richiesta, possono essere fornite protezioni elastiche anche per ambienti aggressivi particolari o con diversi materiali.

B
Elastic protection

When using the actuators in particularly demanding environments, with presence of contaminants that could damage the seal of the translation rod, an elastic protection is recommended.

The standard elastic protections are made up of Polyester glued with PVC. Using the standard elastic protections increases the length of the actuators by 20 mm, except for the one with magnetic limit switches where the length increases proportionally to the stoke (in this case, it is necessary to contact our Technical Department).

On demand, elastic protections for particularly aggressive environments or with different materials are available.



Taglia *Size*	Incremento quote A, B e C [mm] *Dimensions A,B and C increase [mm]*	Vedere pagina *See page*		
		senza finecorsa *without limit switches*	finecorsa magnetici *magnetic limit switches*	finecorsa meccanici *mechanical limit switches*
AT06	20	B10 pag.	Contattare Ufficio Tecnico Transtecno *Contact Transtecno Technical Department.*	B12 pag.
AT12	20	B14 pag.		B16 pag.
AT18	20	B18 pag.		B20 pag.

SSV
Versione inox

A richiesta, possono essere forniti attuatori con terminale anteriore e asta traslante in acciaio inox.

SSV
Stainless steel version

On demand, actuators with front terminal and translating rod in stainless steel can be supplied.

TRANSTECNO®
the modular gearmotor

AT

MOT.

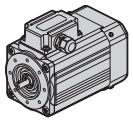
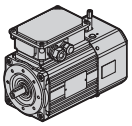
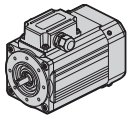
Linear Actuators

Motori applicabili
Motori elettrici AC
Applicable motors
AC Electric motors

AC



Indice — Index

			Motori elettrici CA SM	AC Electric motors SM	Pag. *Page*
IP66 TRANSTECNO		D	Motori elettrici CA SM	AC Electric motors SM	D1
BRAKE		E	Motori elettrici CA autofrenanti SMT..BR	AC Electric motors with brake SMT..BR	E1
c UL us		F	Motori elettrici CA SM..UL/CSA	AC Electric motors SM..UL/CSA	F1

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TRANSTECNO®
the modular gearmotor

AT

MOT.

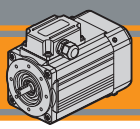
Linear Actuators

IP66 TRANSTECNO

Motori applicabili
Motori elettrici CA - SM
Applicable motors
AC Electric motors - SM









Indice	*Index*	Pag. *Page*
Caratteristiche tecniche	*Technical features*	**D2**
Designazione	*Classification*	**D3**
Simbologia e formule	*Symbols and formulas*	**D3**
Dati tecnici motori trifase	*Three phase motors technical data*	**D4**
Dati tecnici motori monofase	*Single phase motors technical data*	**D5**
Dimensioni motori trifase	*Three phase motors dimensions*	**D6**
Dimensioni motori monofase	*Single phase motors dimensions*	**D8**
Cava esagonale	*Hexagonal socket*	**D10**
Opzione guarnizione CA	*Rubber gasket option*	**D11**
Gradi di protezione IP	*IP protection rating*	**D11**
Normative di riferimento	*Reference standards*	**D12**
Tipo di servizio IEC	*IEC duty cycles*	**D12**
Classe di isolamento termico	*Insulation class*	**D13**
Serie SM - Funzionamento a 60 Hz	*Series SM - 60 Hz line power supply*	**D13**
Tabella pressacavi	*Table of cable glands data*	**D13**
Connessioni e collegamenti	*Connection diagram*	**D14**
Targhetta	*Nameplate*	**D19**

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Caratteristiche tecniche

Technical characteristics

I motori delle serie SMT ed SMM hanno le seguenti caratteristiche principali:

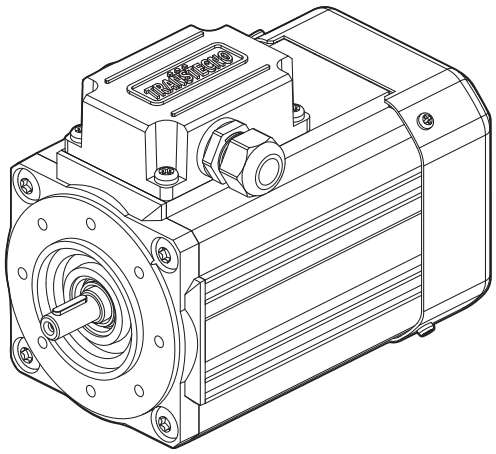
- Costruzione compatta
- Motorizzazioni in corrente alternata monofase e trifase
- Carcassa estrusa in alluminio anodizzato nero
- Motore elettrico CA con grado di protezione IP66 eccetto il condensatore.
- Rumorosità e vibrazioni contenute
- Isolamento termico di classe F
- Flangia motore IEC B14
- Temperatura ambiente: -15°C / +40°C per potenze superiori a 0.6 kW e +5°C / +40°C per potenze inferiori
- Disponibili sia nella versione ventilata TEFC (servizio S1) che non ventilata TENV (servizio S3)
- Protezioni termiche PTO 150°C per le taglie 56, 63, 71
- SMT56, SMT63, SMT71, SMT80 e SMT90 adatti al funzionamento con alimentazione da inverter.
- SMT56, SMT63 e SMT71 disponibili nella classe di rendimento IE2 solo in versione TEFC
- SMT80 e SMT90 conformi alla classe di rendimento IE3.

- Cava esagonale su albero motore lato NDE.
- Condensatore di marcia sempre cablato ad esclusione della taglia SMM50.
- La tolleranza di tensione è ±10% per tutti i motori ad esclusione della taglia 50 (±5%).
- Disponibili nelle versioni autofrenante, servoventilata e con certificazione UL/CSA.

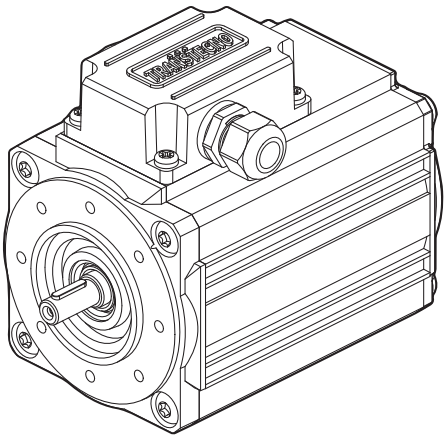
SMT and SMM motor range has the following main features:

- *Compact design*
- *AC single phase and three phase motors available*
- *Black anodized extruded aluminium housing*
- *AC electric motor in IP66 protection Standard, except capacitor*
- *Low noise and vibrations*
- *Class F insulation Standard*
- *Motor flange IEC B14*
- *Ambient temperature: -15°C / +40°C for power higher than 0.6 kW and +5°C / +40°C for lower power*
- *Fan cooled TEFC (duty S1) and not ventilated TENV (duty S3) versions available*
- *PTO 150°C thermal protection for motor sizes 56, 63, 71.*
- *SMT56, SMT63, SMT71, SMT80 and SMT90 are suitable to be driven by inverter.*
- *SMT56, SMT63 and SMT71 are available in the efficiency class IE2 for TEFC version only.*
- *SMT80 and SMT90 in compliance to the Standard efficiency class IE3*
- *Motor shafthexagon socket on the NDE side.*
- *Running capacitor always connected, except for SMM50.*

- *The voltage tolerance is ±10% for all motors, except for size 50 (±5%).*
- *Brake motors, forced ventilation motors and UL/CSA compliance versions available.*

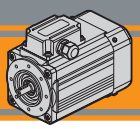


SM .. TEFC



SM .. TENV

IP66 TRANSTECNO



Designazione — *Classification*

MOTORE TRIFASE / *THREE PHASE MOTOR*

SMT	63	2	4	0.18 kW	IE2	B14	230-400 V	50 Hz	TEFC	BR
Tipo *Type*	Grandezza *Size*	Indicativo potenza *Power coefficient*	Poli *Poles*	Potenza *Power*	Efficienza *Efficiency level*	Forma costruttiva *Version*	Tensione *Voltage*	Frequenza *Frequency*	Ventilazione *Fan cooling*	Opzioni *Options*
SMT	Vedi tabelle *See tables*	1-2-3-4-5	4	0.04 kW ... 0.75 kW	IE1-IE2	B14	230-400 V 460V	50Hz 60Hz	TEFC TENV	BR → E1 pag. UL-CSA → F1 pag.

MOTORE MONOFASE / *SINGLE PHASE MOTOR*

SMM	63	2	4	0.18 kW	B14	230 V	50 Hz	TEFC	-
Tipo *Type*	Grandezza *Size*	Indicativo potenza *Power coefficient*	Poli *Poles*	Potenza *Power*	Forma costruttiva *Version*	Tensione *Voltage*	Frequenza *Frequency*	Ventilazione *Fan cooling*	Opzioni *Options*
SMM	Vedi tabelle *See tables*	1-2-3-4	4	0.04 kW ... 0.75 kW	B14	230V 115V (UL-CSA)	50Hz	TEFC TENV	UL-CSA → F1 pag.

Simbologia e formule — *Symbols and formulas*

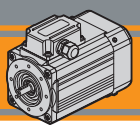
P_n	[kW]	Potenza nominale	*Rated power*
I_n	[A]	Corrente nominale (a 400V)	*Rated current (at 400V)*
M_n	[Nm]	Coppia nominale	*Rated torque*
n_n	[rpm]	Velocità nominale	*Rated speed*
M_s / M_n		Rapporto coppia spunto / coppia nominale	*Ratio start torque / rated torque*
M_k / M_n		Rapporto coppia massima / coppia nominale	*Ratio max torque / rated torque*
I_s / I_n		Rapporto corrente di spunto / corrente nominale	*Ratio start current / rated current*
cosφ		Fattore di potenza al carico nominale	*Power factor at rated torque load*
η		Rendimento al carico nominale	*Efficiency at rated torque load*
Potenza *Power*	[HP]	Potenza [kW] x 1.341	*Power [kW] x 1.341*
Potenza resa P_n *P_n output power*	[kW]	Potenza assorbita x η	*Absorbed power x η*
Pot. assorbita *Absorbed power*	[kW]	$\frac{V \times I \times \cos\varphi}{1000}$ (monofase) $\frac{V \times I \times \sqrt{3} \times \cos\varphi}{1000}$ (trifase)	$\frac{V \times I \times \cos\varphi}{1000}$ *(singlephase)* $\frac{V \times I \times \sqrt{3} \times \cos\varphi}{1000}$ *(threephase)*
I_n (230 V)		In (400 V) x √3	*In (400 V) x √3*

Dati tecnici motori trifase — *Three phase motors technical data*

SMT Motori trifase / *SMT Three phase motors*

(230-400 V / 50 Hz) poli / *poles* 4

	TAGLIA *SIZE*	P_n [kW]	M_n [Nm]	n_n [min^{-1}]	I_n (400V) [A]	η %	cosφ	M_s/M_n	I_s/I_n	M_k/M_n	PTO [°C]	Servizio *Duty* TEFC	Servizio *Duty* TENV
	5014	0.04	0.30	1290	0.25	34.0	0.68	1.65	1.75	1.70	-	S1	S3 30%
	5024	0.06	0.44	1300	0.35	35.7	0.69	1.55	1.80	1.60			
	5034	0.09	0.65	1315	0.54	38.0	0.64	1.80	2.00	1.85			
	5044	0.12	0.87	1315	0.64	43.0	0.63	1.80	2.00	1.80		S3 75%	
	5624	0.09	0.64	1345	0.45	46.5	0.62	2.50	2.40	2.70	PTO 150°	S1	S3 50%
	5634	0.12	0.89	1300	0.45	52.0	0.74	1.90	2.40	1.90		S3 75%	
IE2	**5634 IE2**	0.12	0.84	1360	0.48	59.1	0.61	2.70	2.90	2.70		S1	-
	5644	0.18	1.26	1360	0.69	59.0	0.65	2.50	3.00	2.60		S3 75%	S3 50%
	5654	0.25	1.80	1330	0.93	59.0	0.66	2.50	2.80	2.60			
	6324	0.18	1.26	1360	0.69	57.0	0.66	2.50	2.90	2.50			
IE2	**6324 IE2**	0.18	1.27	1360	0.65	64.7	0.62	2.50	2.90	2.50		S1	-
	6334	0.25	1.74	1375	0.94	62.0	0.64	2.80	3.00	2.80		S3 75%	S3 50%
IE2	**6334 IE2**	0.25	1.72	1390	0.88	68.5	0.60	3.20	3.50	3.20		S1	-
	6344	0.37	2.60	1360	1.24	65.3	0.66	2.70	3.00	2.70		S3 75%	S3 50%
	7124	0.37	2.52	1400	1.10	67.9	0.72	2.75	4.20	2.75			S3 45%
IE2	**7124 IE2**	0.37	2.48	1425	1.05	72.7	0.70	2.80	4.90	2.90		S1	-
	7134	0.55	3.76	1395	1.55	70.2	0.73	2.90	4.40	2.90		S3 75%	S3 45%
IE2	**7134 IE2**	0.55	3.70	1420	1.56	77.1	0.66	3.40	5.20	3.40		S1	-
	7144	0.75	5.09	1405	2.00	74.0	0.73	2.90	5.00	2.90		S3 75%	S3 45%



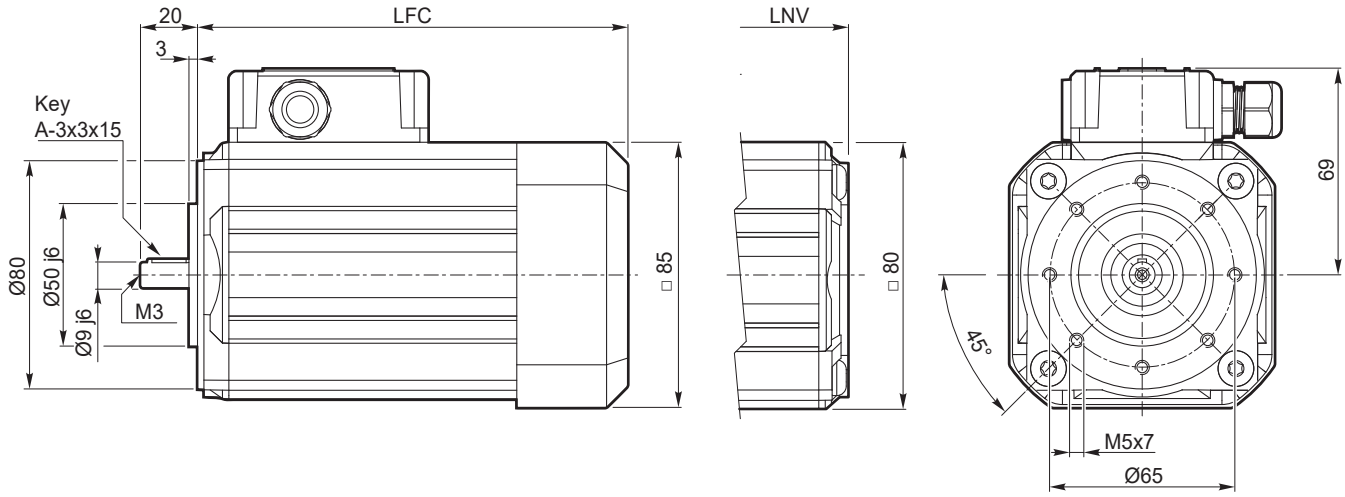
SMM Motori monofase / *SMM Single phase motors*

(230 V / 50 Hz) poli / *poles* 4

TAGLIA *SIZE*	P_n [kW]	M_n [Nm]	n_n [min^{-1}]	I_n (230V) [A]	η %	cosφ	M_s/M_n	I_s/I_n	M_k/M_n	Cond/cap [µF]	PTO [°C]	Servizio *Duty* TEFC	Servizio *Duty* TENV
5014	0.04	0.27	1390	0.60	33.4	0.88	0.74	1.60	1.55	8.0	-	S1	S3 30%
5024	0.06	0.42	1380	0.89	34.3	0.85	0.76	1.70	1.50	12.0			
5034	0.09	0.63	1375	1.10	40.0	0.89	0.80	1.70	1.45	16.0			
5624	0.09	0.63	1370	0.82	48.6	0.98	0.72	1.70	1.45	6.3	PTO 150°	S3 75%	S3 50%
5634	0.12	0.83	1380	1.06	50.3	0.98	0.75	2.10	1.65	9.0			
5644	0.18	1.25	1375	1.50	53.8	0.97	0.70	2.20	1.58	12.5			
6324	0.18	1.33	1290	1.50	54.5	0.97	1.00	1.80	1.45	12.0			
6334	0.25	1.85	1290	1.95	56.8	0.98	0.93	1.90	1.50	16.0			
7124	0.37	2.72	1300	2.78	58.6	0.99	0.77	2.00	1.35	20.0			S3 45%
7134	0.55	3.95	1330	3.54	68.9	0.98	0.66	2.40	1.40	25.0			
8024	0.75	5.31	1350	4.93	67.4	0.98	0.67	2.50	1.54	35.0			S3 40%

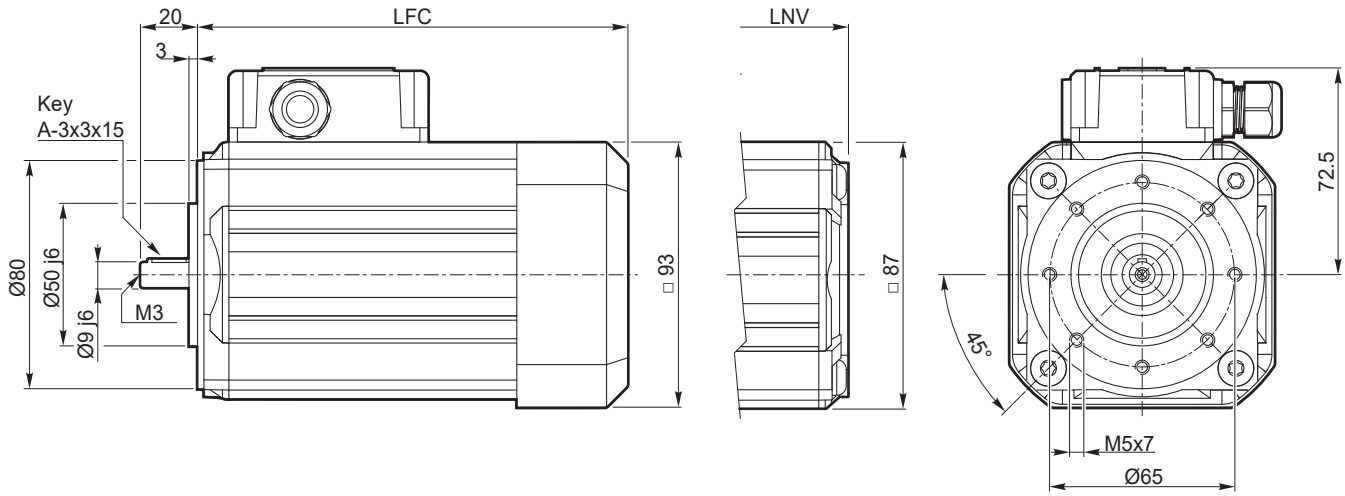
Dimensioni motori trifase *Three phase motors dimensions*

3 ~ SMT50.. - B14 - TEFC / TENV

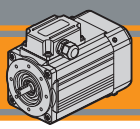


SMT	... TEFC		... TENV	
	LFC	Kg	LNV	Kg
5014	135.5	2.3	108.5	2.2
5024	150.5	2.7	123.5	2.6
5034	175.5	3.5	148.5	3.4
5044	200.5	4.2	173.5	4.1

3 ~ SMT56.. - B14 - TEFC / TENV

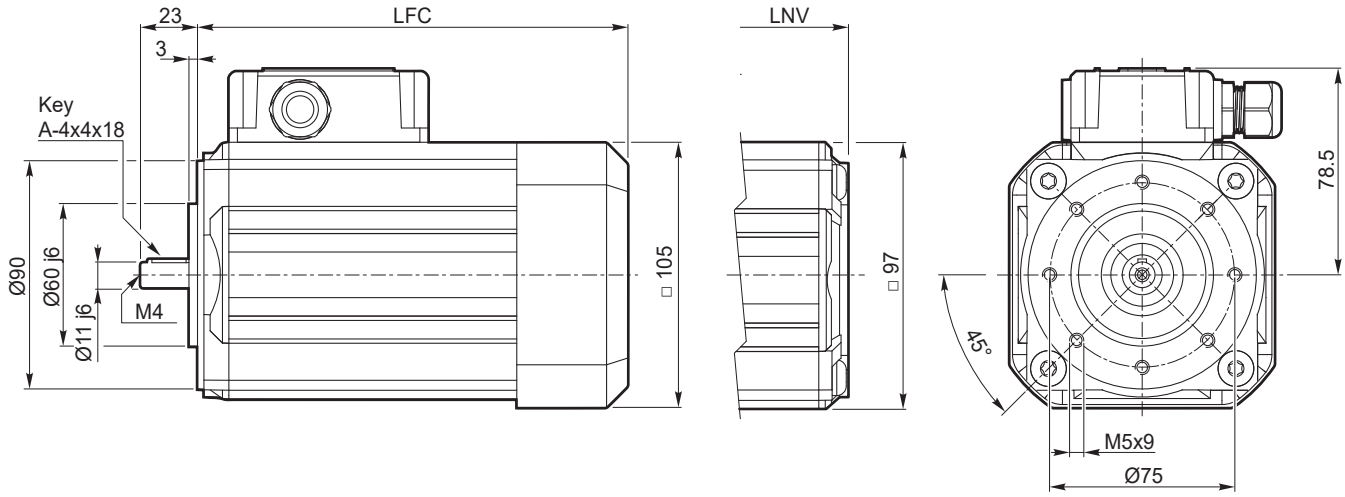


SMT	... TEFC		... TENV	
	LFC	Kg	LNV	Kg
5624	141	2.9	117	2.8
5634	151	3.2	127	3.1
5634 IE2	171	3.8	-	
5644	186	4.4	162	4.3
5654	206	5.1	182	5.0

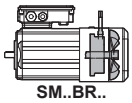


3 ~

SMT63.. - B14 - TEFC / TENV



SMT	... TEFC		... TENV	
	LFC	Kg	LNV	Kg
6324	165.5	4.3	138.5	4.2
6324 IE2	180.5	4.9	-	
6334	180.5	5.0	153.5	4.9
6334 IE2	205.5	6.1	-	
6344	205.5	6.2	178.5	6.1

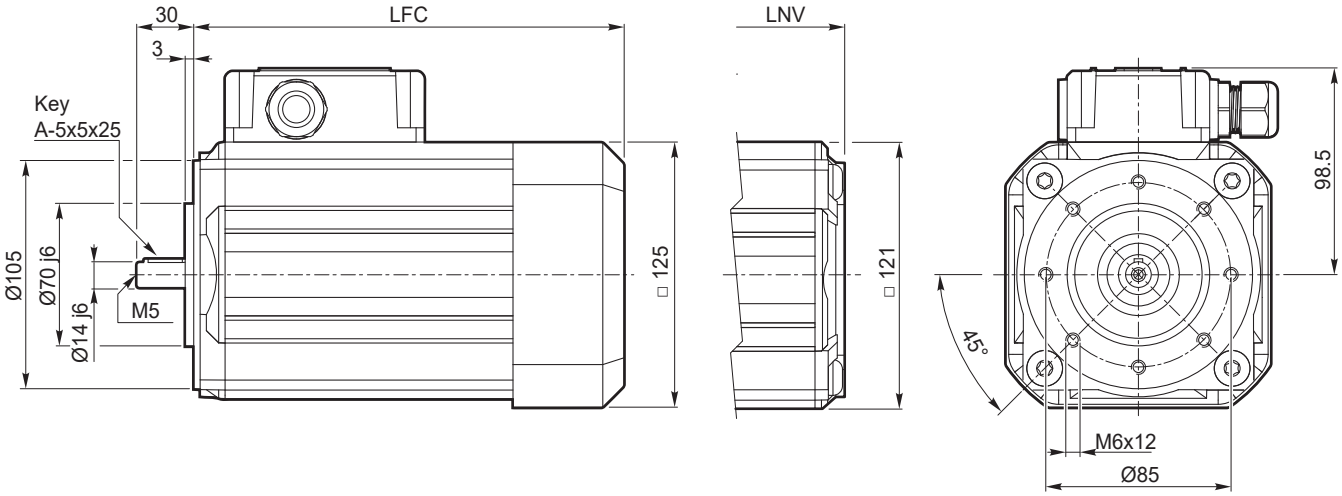


SM..BR..
Motori autofrenanti
Brake motors

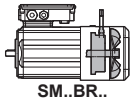
E4
pag.

3 ~

SMT71.. - B14 - TEFC / TENV



SMT	... TEFC		... TENV	
	LFC	Kg	LNV	Kg
7124	174	6.6	145.5	6.4
7124 IE2	189	7.5	-	
7134	189	7.7	160.5	7.5
7134 IE2	214	9.2	-	
7144	214	9.4	185.5	9.2

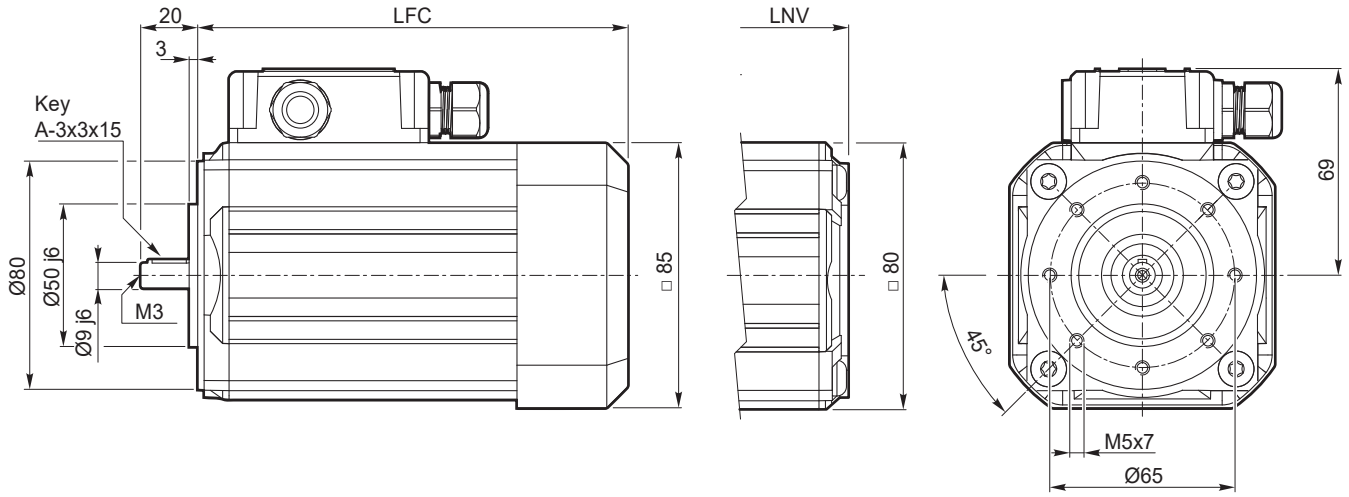


SM..BR..
Motori autofrenanti
Brake motors

E4
pag.

Dimensioni motori monofase | ***Single phase motors dimensions***

1 ~ SMM50.. - B14 - TEFC / TENV

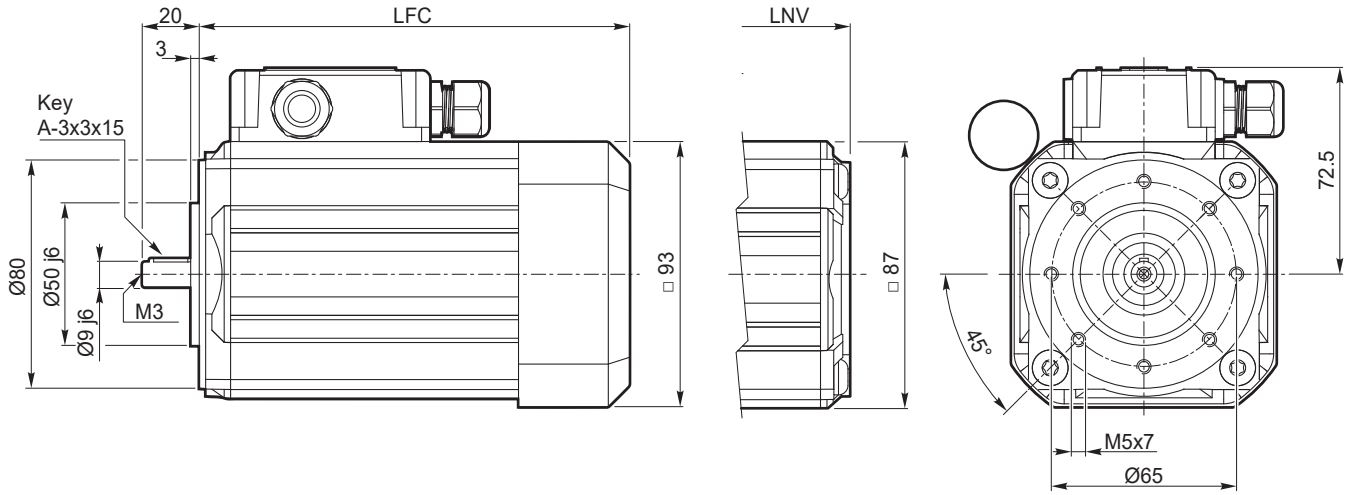


SMM	... TEFC		... TENV	
	LFC	Kg	LNV	Kg
5014	150.5	2.7	123.5	2.6
5024	175.5	3.5	148.5	3.4
5034	200.5	4.2	173.5	4.1

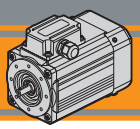
Nota:
il condensatore sarà fornito a corredo

Note:
the capacitor will be supplied separately

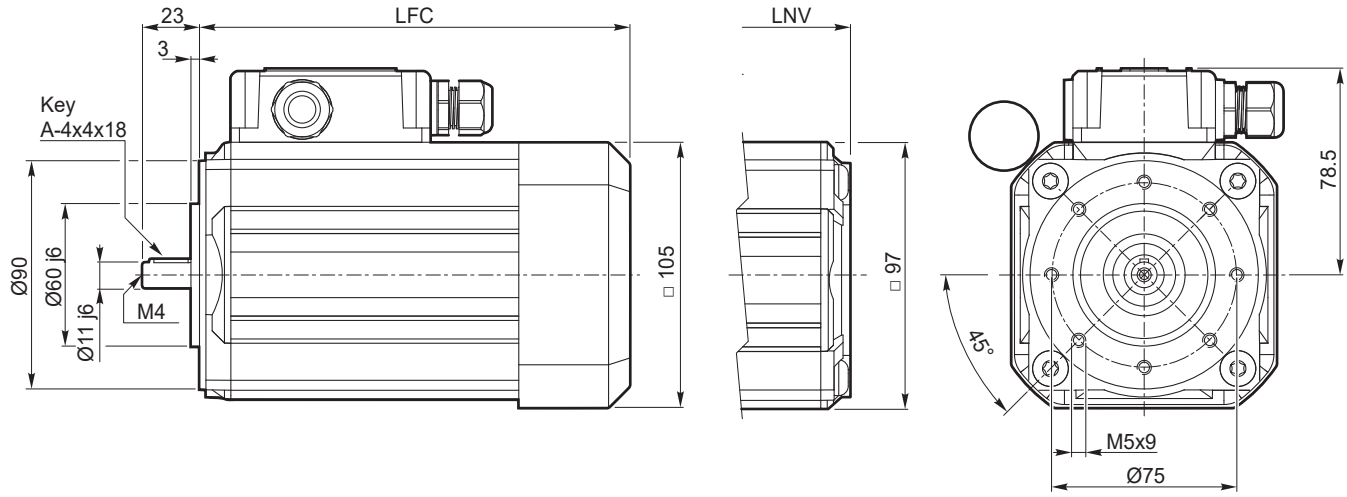
1 ~ SMM56.. - B14 - TEFC / TENV



SMM	... TEFC		... TENV	
	LFC	Kg	LNV	Kg
5624	151	3.3	127	3.2
5634	171	3.9	147	3.8
5644	206	5.0	182	4.9

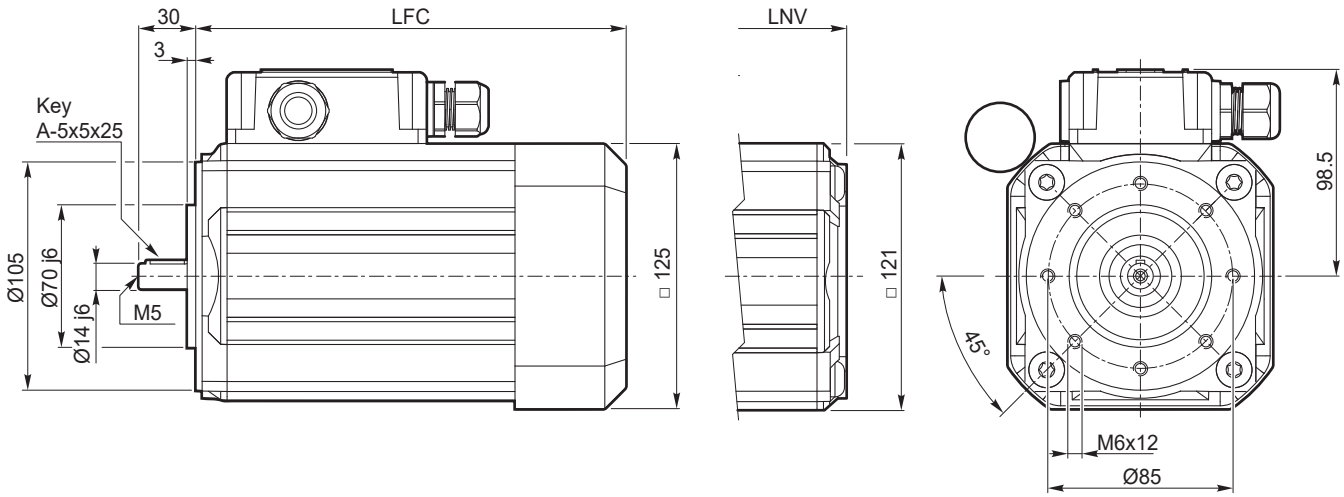


1 ~ SMM63.. - B14 - TEFC / TENV



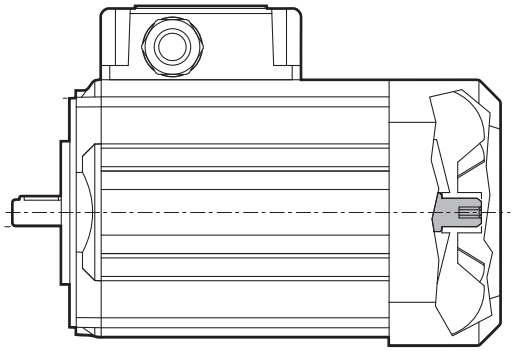
SMM	... TEFC		... TENV	
	LFC	Kg	LNV	Kg
6324	180.5	5.1	153.5	5.0
6334	205.5	6.2	178.5	6.1

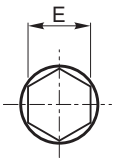
1 ~ SMM71.. - B14 - TEFC / TENV



SMM	... TEFC		... TENV	
	LFC	Kg	LNV	Kg
7124	189	7.3	160.5	7.1
7134	214	9.2	185.5	9.0

Cava esagonale — *Hexagonal socket*





Esagono / *Hexagon*

SM..	E
50	4
56	
63	
71	6

Nota:

Installare a monte dell'alimentazione un dispositivo che assicuri la disconnessione della rete omnipolare, durante le operazioni di rotazione manuale è obbligatorio l'utilizzo di tale sezionatore.

Il quadro elettrico del motore deve essere lucchettabile al fine di evitare il riarmo non previsto alla rete elettrica.

E' severamente vietata la messa in servizio del motore elettrico senza copriventola opportunamente montata.

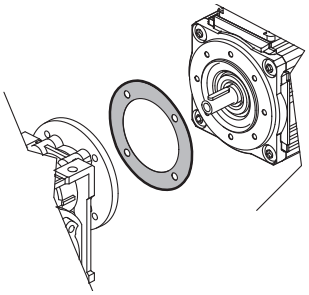
Note:

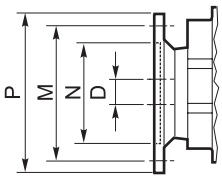
An omnipolar cut-off device must be fitted upstream of the power supply; the use of this device is mandatory during manual rotation operations.

The switchgear for the motor must be padlockable in order to prevent the power supply from being accidentally reset. It is strictly prohibited to put the electric motor into service if the fan cover is not fitted.

Opzione guarnizione CA

Rubber gasket option





Dimensioni IEC / *IEC Dimensions*			
	56 B14	**63 B14**	**71 B14**
N	50	60	70
M	65	75	85
P	80	90	105
D	**9**	**11**	**14**

Grado di protezione IP

IP protection rating

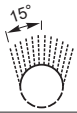
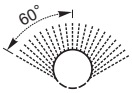
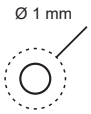
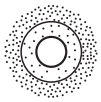
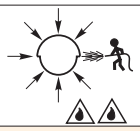
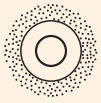
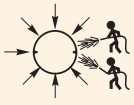
Indica il grado di isolamento meccanico del corpo motore.
1ª cifra protezione alla penetrazione di corpi solidi.

2ª cifra protezione contro la penetrazione d'acqua.

IP protection rating indicates the degree of mechanical insulation of the motor casing.

The 1st figure indicates the level of protection against the intrusion of solid matter.

The 2nd figure indicates to which degree the motor is waterproof.

IP		Definizione / *Description*	IP		Definizione / *Description*
0		Non protetto / *No protection*	**0**		Non protetto / *No protection*
1		Protetto da corpi solidi superiori a Ø 50 mm. *Protected against solid matter (over Ø 50 mm).*	**1**		Protetto contro la caduta verticale di gocce d'acqua. *Protected against drops of water falling vertically.*
2		Protetto da corpi solidi superiori a Ø 12 mm. *Protected against solid matter (over Ø 12 mm).*	**2**		Protetto contro la caduta verticale di gocce d'acqua con inclinazione max di 15°. *Protected against drops of water falling up to 15°.*
3		Protetto da corpi solidi superiori a Ø 2.5 mm. *Protected against solid matter (over Ø 2.5 mm).*	**3**		Protetto contro la pioggia. *Rain proof.*
4		Protetto da corpi solidi superiori a Ø1 mm. *Protected against solid matter (over Ø1 mm).*	**4**		Protetto contro gli spruzzi. *Splash proof.*
5		Protetto contro la polvere. *Dust protected.*	**5**		Protetto contro getti d'acqua. *Water jet proof.*
6		Totalmente protetto contro la polvere. *Fully dust tight.*	**6**		Protetto dalle ondate. *Waveproof.*
7		N.A.	**7**		Protetto contro immersione. *Immersion up to 1 metre.*
8		N.A.	**8**		Protetto contro immersione/sommersione prolungata. *Immersion beyond 1 metre.*

Normative di riferimento — *Reference Standards*

	Europe EN	World IEC	Italy CEI
Requisiti genarali per macchine elettriche *General requirements electrical machines*	EN 60034-1:2010	*IEC 60034-1:2010*	*CEI EN 60034-1:2010*
Classificazione del grado di protezione *Classification degree of protection provided by enclosures*	EN 60034-5:2001	*IEC 60034-5:2001*	*CEI EN 60034-5:2001*
Sistema di raffreddamento *Cooling system*	EN 60034-6:1993	*IEC 60034-6:1993*	*CEI EN 60034-6:1993*
Modalità di montaggio *Mounting arrangements*	EN 60034-7:1993	*IEC 60034-7:1993*	*CEI EN 60034-7:1993*

Tipi di servizi IEC — *IEC duty cycles*

Il servizio di un motore indica il tipo di utilizzo e la gravosità del ciclo di lavoro.

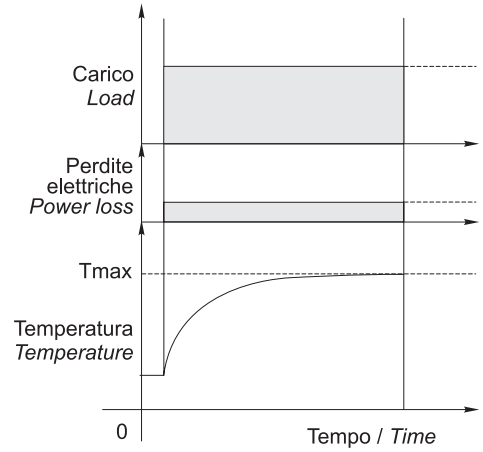
The duty cycle of a motor indicates its use and running cycle.

Grafico servizi più comuni

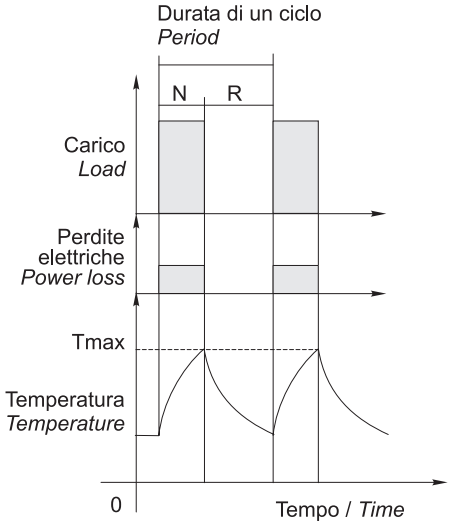
Most common duty cycles diagram

N = funzionamento / *run*
R = riposo / *rest*

S1



S2/S3



NOTA: Lo stesso motore può essere usato per cicli e servizi diversi, con l'unica limitazione che la temperatura interna non superi mai la Tmax stabilita dalla classe di isolamento termico del motore.

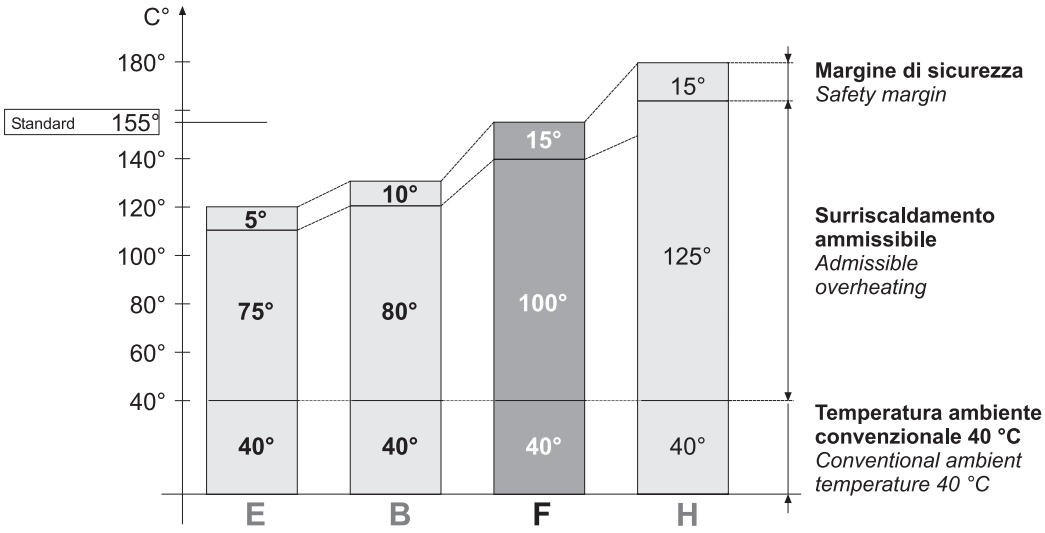
NOTE: The same motor can run under all duty services, limitation is due to internal temperature that must not override Tmax stated by motor thermal class.

Classe di isolamento termico — *Insulation class*

La classe termica indica il grado di resistenza alla temperatura interna, nel punto più caldo (avvolgimenti).
Isolamento termico classe F.

Thermal insulation class indicates the level of thermal protection measured at the hottest point inside the motor (windings).
Thermal insulation class F.

Classe ***Class***	Massima temperatura interna Max. *windings temp.*
E	120°C
B	130°C
F	155°C
H	180°C



Serie SM - Funzionamento in ambiente 60 Hz — *Series SM - 60 Hz line power supply*

Velocità, coppia e potenza nominale nel funzionamento a 60 Hz varieranno come da tabella:

Speed, torque and rated power in 60 Hz operation is shown in the following table:

	50 Hz	**60 Hz**
400 V	Vedi dati tecnici / *see technical data* D4 pag.	Velocità / *speed* ≈ + 20% Coppia / *torque* ≈ -20% Potenza / *power* ≈ invariata / *the same*
480 V	**Non permesso / *not allowed***	Velocità / *speed* ≈ + 20% Coppia / *torque* ≈ invariata / *the same* Potenza / *power* ≈ + 20%

Tabella pressacavi — *Table of cable glands data*

Serie SMT / *SMT Series*

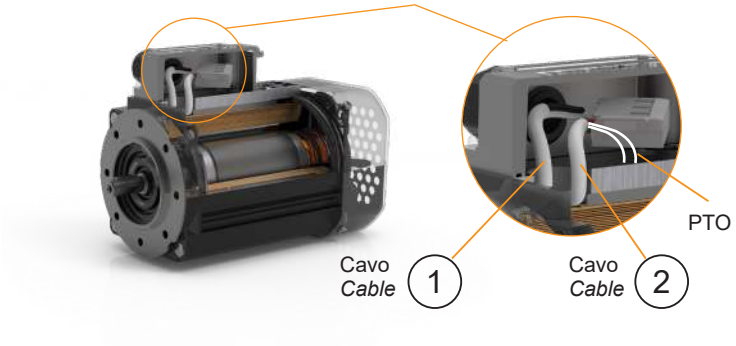
TAGLIA ***SIZE***	**Pressacavo** ***Cable gland***
50 / 56 / 63	M16x1.5
71	M20x1.5

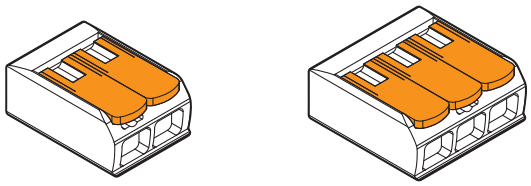
Serie SMM / *SMM Series*

TAGLIA ***SIZE***	**Pressacavo** ***Cable gland***
50 / 56 / 63	2 x M16x1.5
71	M20x1.5 + M16x1.5

Connessioni e collegamenti — *Connection diagram*

Riferimenti — *References*

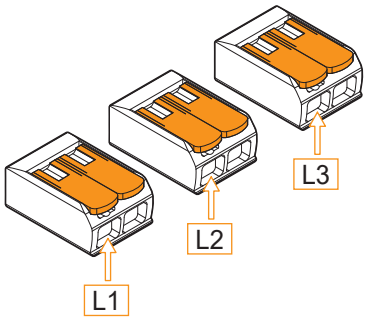




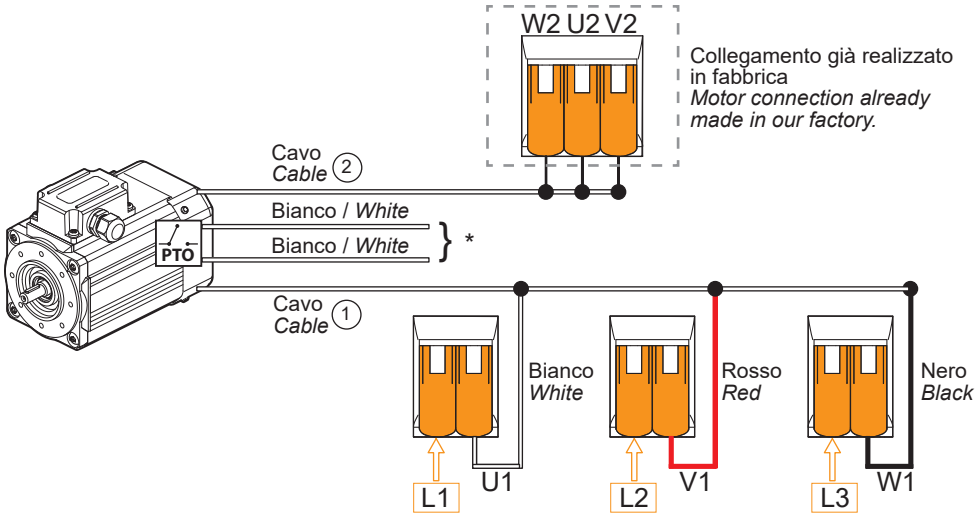
Morsetto di collegamento a leva a 2 e 3 poli
Splicing connector with lever2 - and 3 - pin.

400/460 V - Trifase / *three phase*

Collegamento a stella / *Star connection*



Morsetti a levetta liberi per alimentazione motore
Splicing connector with free-lever for the motor power source



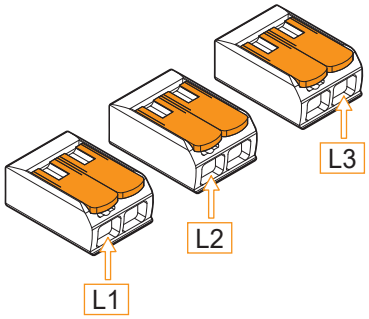
*: collegamento al circuito di comando del motore a cura del cliente. Per ragioni di sicurezza è sconsigliato il collegamento in serie. Se necessario contattare il Servizio Tecnico Transtecno. PTO disponibile per taglie 56, 63, 71.

*: *motor supply connection by the customer. For safety reason Transtecno advises against PTO connected in series. If needed, contact Transtecno Technical Service. PTO is available for sizes 56, 63, 71.*

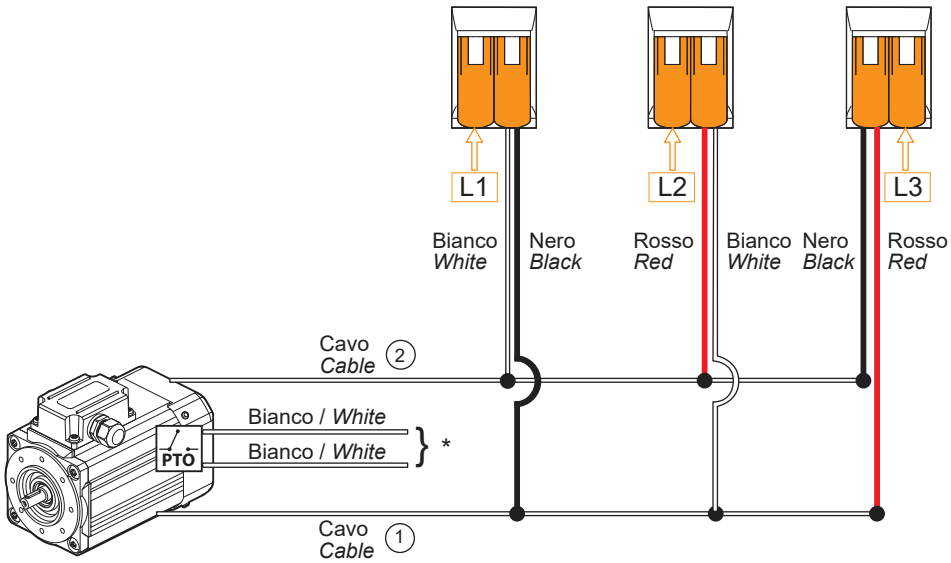
Connessioni e collegamenti — *Connection diagram*

230 V - Trifase / *Three phase*

Collegamento a triangolo / *Delta connection*



Morsetti a levetta liberi per alimentazione motore
Splicing connector with free-lever for the motor power source



*: collegamento al circuito di comando del motore a cura del cliente. Per ragioni di sicurezza è sconsigliato il collegamento in serie. Se necessario contattare il Servizio Tecnico Transtecno. PTO disponibile per taglie 56, 63, 71.

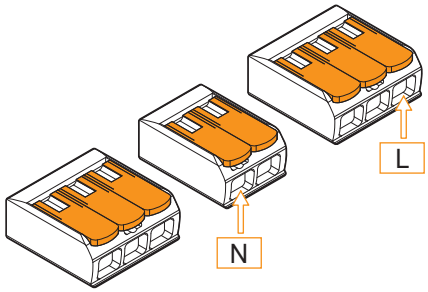
**: motor supply connection by the customer. For safety reason Transtecno advises against PTO connected in series. If needed, contact Transtecno Technical Service. PTO is available for sizes 56, 63, 71.*

I motori della serie SM sono forniti in collegamento a stella, lo schema di collegamento a triangolo sopra riportato fornisce una chiara indicazione delle modifiche che il cliente può apportare in autonomia. Se necessario contattare il Servizio Tecnico Transtecno.

The SM series is supplied in star connection, the delta connection diagram shown above provides a clear indication of the modification that the customer can make independently. If needed, contact Transtecno Technical Service.

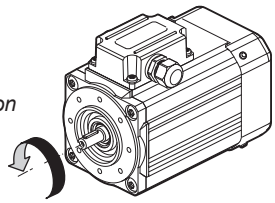
230 V - Monofase / *Single phase*

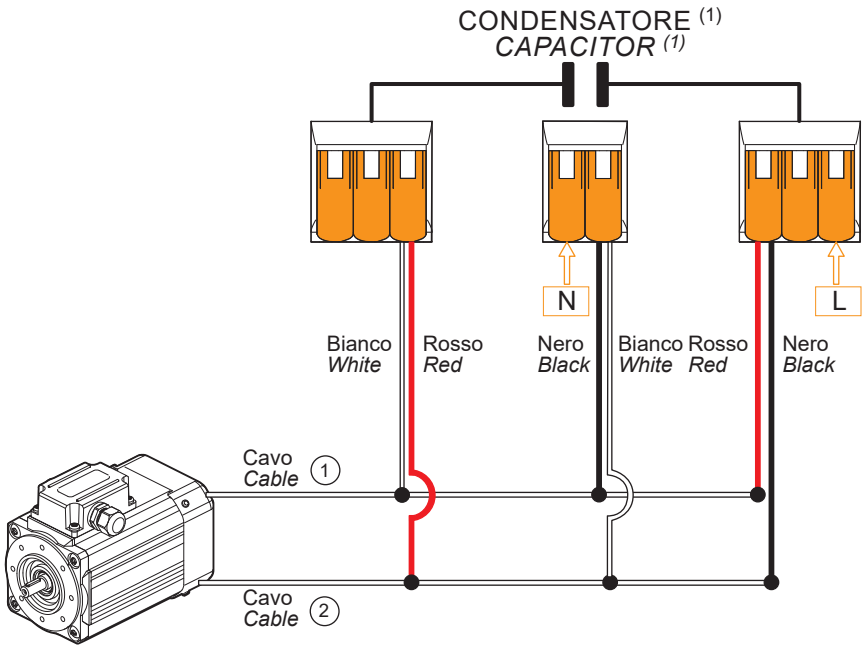
Monofase SMM 50... / *Single phase SMM 50...*



Morsetti a levetta liberi per alimentazione motore
Splicing connector with free-lever for the motor power source

Senso di rotazione antiorario
Counter-clockwise direction of rotation





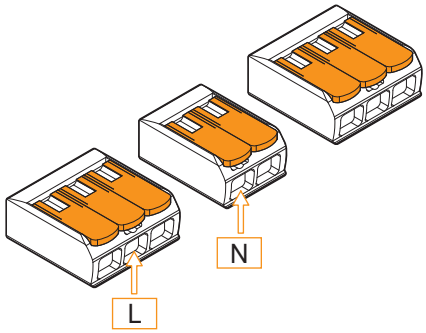
(1): il condensatore sarà fornito a corredo.

(1): the capacitor will be supplied separately.

Connessioni e collegamenti — *Connection diagram*

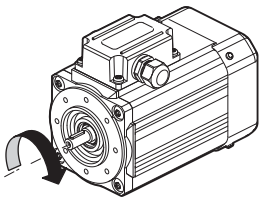
230 V - Monofase / *Single phase*

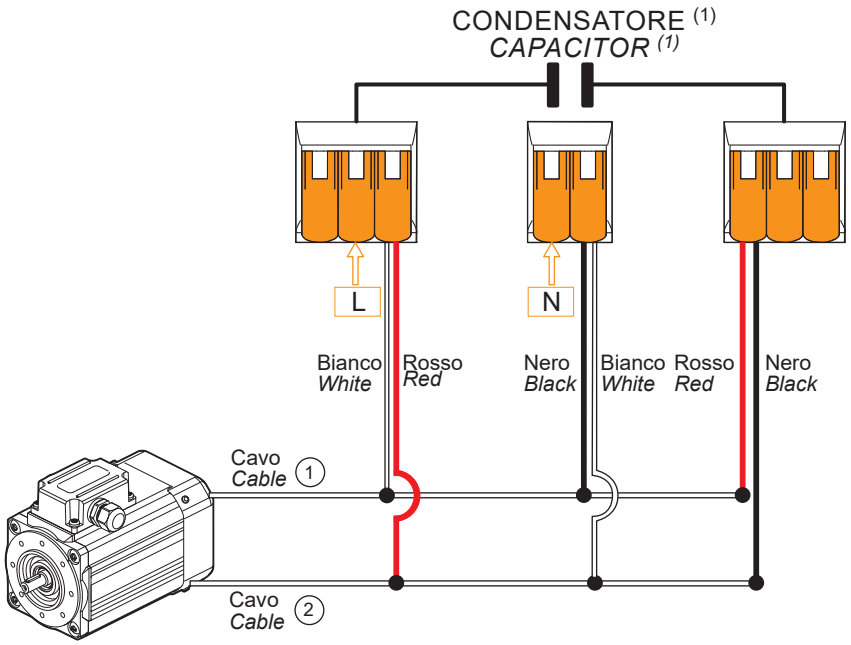
Monofase SMM 50... / *Single phase SMM 50...*



Morsetti a levetta liberi per alimentazione motore
Splicing connector with free-lever for the motor power source

Senso di rotazione orario
Clockwise direction of rotation



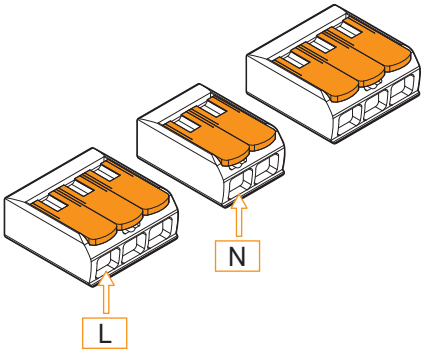


(1): il condensatore sarà fornito a corredo.
(1): the capacitor will be supplied separately.

Connessioni e collegamenti — *Connection diagram*

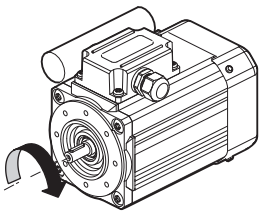
230 V - Monofase / *Single phase*

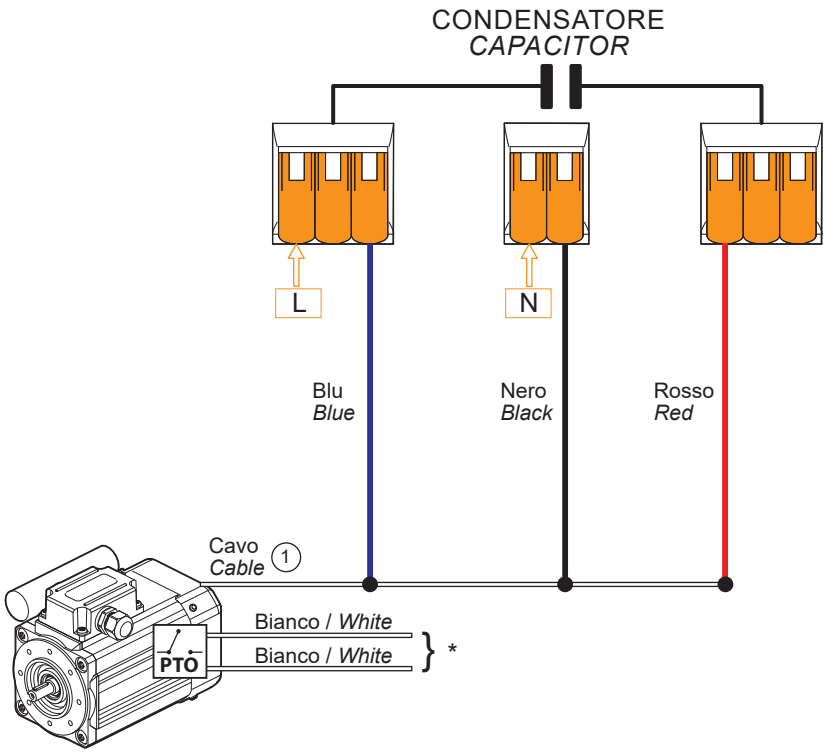
Monofase da SMM 56... a SMM 71... / *Single phase from SMM 56... to SMM 71...*



Morsetti a levetta liberi per alimentazione motore
Splicing connector with free-lever for the motor power source

Senso di rotazione orario
Clockwise direction of rotation





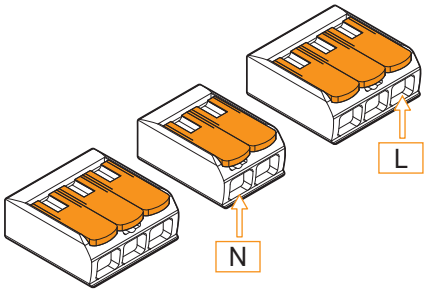
*: collegamento al circuito di comando del motore a cura del cliente. Per ragioni di sicurezza è sconsigliato il collegamento in serie. Se necessario contattare il Servizio Tecnico Transtecno. PTO disponibile per taglie 56, 63, 71.

*: *motor supply connection by the customer. For safety reason Transtecno advises against PTO connected in series. If needed, contact Transtecno Technical Service. PTO is available for sizes 56, 63, 71.*

Connessioni e collegamenti — *Connection diagram*

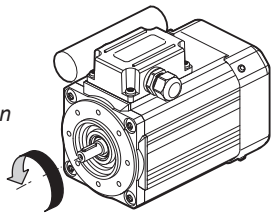
230 V - Monofase / *Single phase*

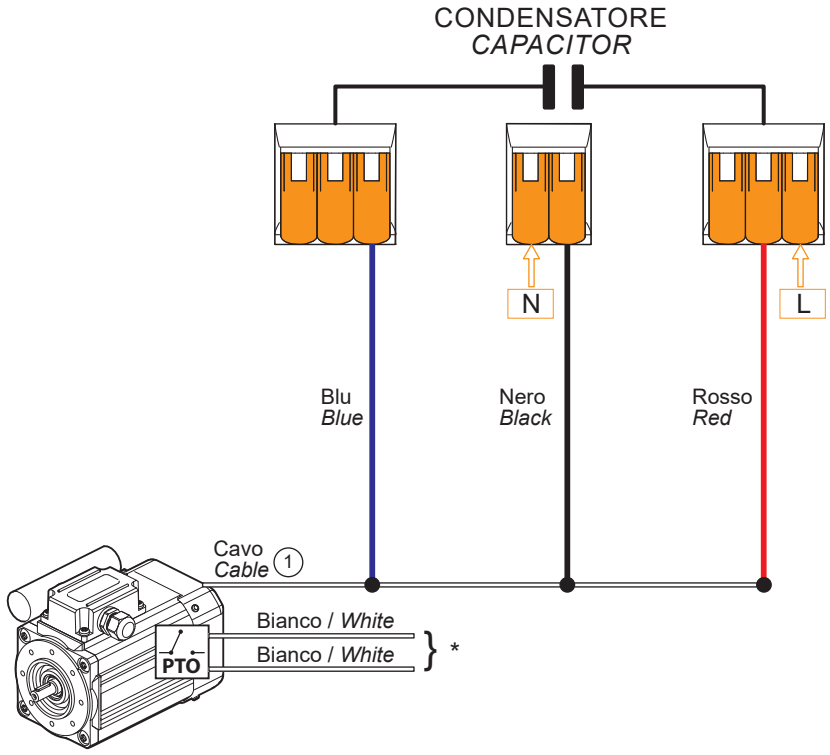
Monofase da SMM 56... a SMM 71... / *Single phase from SMM 56... to SMM 71...*



Morsetti a levetta liberi per alimentazione motore
Splicing connector with free-lever for the motor power source

Senso di rotazione antiorario
Counter-clockwise direction of rotation



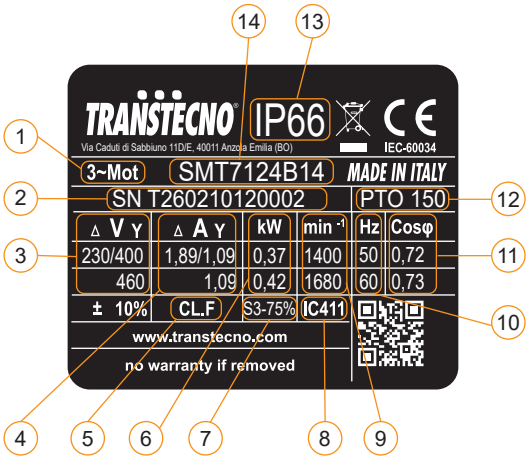


*: collegamento al circuito di comando del motore a cura del cliente. Per ragioni di sicurezza è sconsigliato il collegamento in serie. Se necessario contattare il Servizio Tecnico Transtecno. PTO disponibile per taglie 56, 63, 71.

**: motor supply connection by the customer. For safety reason Transtecno advises against PTO connected in series. If needed, contact Transtecno Technical Service. PTO is available for sizes 56, 63, 71.*

Targhetta

Nameplate



Pos.	Descrizione	*Description*
1	Tipo di alimentazione	*Power supply*
2	Numero di serie	*Serial number*
3	Tensione di alimentazione	*Supply voltage*
4	Corrente nominale	*Rated current*
5	Classe di isolamento	*Insulation class*
6	Potenza nominale	*Rated power*
7	Servizio	*Duty*
8	Ventilazione	*Fan cooling*
9	Velocità nominale	*Rated speed*
10	Frequenza nominale	*Rated frequency*
11	Fattore di potenza	*Power factor*
12	Protezione termica PTO 150°C	*PTO 150°C Thermal protection*
13	Grado di protezione IP	*IP protection rating*
14	Tipo motore	*Motor type*

Note/*Notes*

TRANSTECNO®
the modular gearmotor

AT

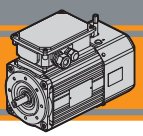
MOT.

Linear Actuators

IP66 TRANSTECNO

Motori applicabili
Motori elettrici CA autofrenanti - SM..BR
Applicable motors
AC Electric motors with brake - SM..BR





IP66 TRANSTECNO

BRAKE

Indice	*Index*	Pag. *Page*
Caratteristiche tecniche	*Technical features*	**E2**
Designazione	*Classification*	**E2**
Simbologia e formule	*Symbols and formulas*	**E3**
Dati tecnici	*Technical data*	**E3**
Dimensioni motori trifase	*Three phase motors dimensions*	**E4**
Cava esagonale	*Hexagonal socket*	**E5**
Opzione guarnizione CA	*Rubber gasket option*	**E5**
Gradi di protezione IP	*IP protection rating*	**E6**
Tipo di servizio IEC	*IEC duty cycles*	**E7**
Classe di isolamento termico	*Insulation class*	**E7**
Tabella pressacavi	*Table of cable glands data*	**E7**
Connessioni e collegamenti	*Connection diagram*	**E8**
Targhetta	*Nameplate*	**E10**

Questa sezione annulla e sostituisce ogni precedente edizione o revisione. Qualora questa sezione non Vi sia giunta in distribuzione controllata, l'aggiornamento dei dati ivi contenuto non è assicurato. **In tal caso la versione più aggiornata è disponibile sul nostro sito internet www.transtecno.com**

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Caratteristiche tecniche

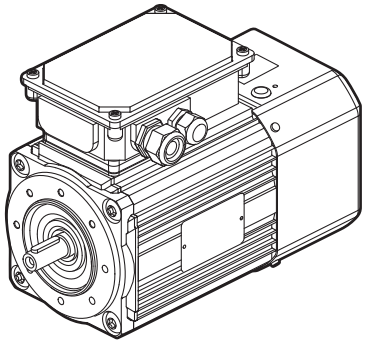
Technical characteristics

I motori autofrenanti delle serie SMT..BR hanno le seguenti caratteristiche principali:

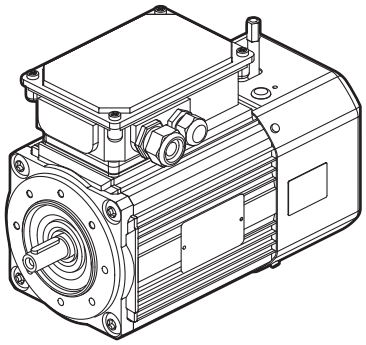
- Costruzione compatta
- Motorizzazioni in corrente alternata trifase
- Carcassa estrusa in alluminio anodizzato nero
- Motore elettrico CA con grado di protezione IP66 (freno IP66 e IP65)
- Rumorosità e vibrazioni contenute
- Isolamento termico di classe F
- Flangia motore IEC B14
- Temperatura ambiente: +5°C / + 40°C (Per utilizzo a temperature diverse contattare il ns. servizio tecnico)
- Disponibili nella versione ventilata TEFC (servizio S1)
- Protezioni termiche PTO 150°C
- Adatti al funzionamento con alimentazione da inverter (Richiedere opzione freno con alimentazione separata)
- Cava esagonale su albero motore lato NDE.
- La tolleranza di tensione è ±10% per tutti i motori
- Il freno è a corrente continua

SMT..BR braked motor range has the following main features:

- *Compact design*
- *AC three phase motors available*
- *Black anodized extruded aluminium housing*
- *AC electric motor in IP66 protection Standard (IP66 and IP65 brake)*
- *Low noise and vibrations*
- *Class F insulation Standard*
- *Motor flange IEC B14*
- *Ambient temperature: +5°C / +40°C (For different temperatures contact Transtecno Technical Dept)*
- *Fan cooled TEFC (duty S1) available*
- *PTO 150°C thermal protection*
- *Suitable to be driven by inverter (Request brake option with separate power supply)*
- *Motor shaft hexagon socket on the NDE side*
- *The voltage tolerance is ±10% for all motors*
- *The brake is DC*



SMT..TEFC BR



SMT..TEFC BRL

IP66 TRANSTECNO

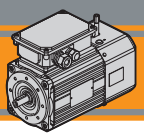
BRAKE

Designazione

Classification

MOTORE TRIFASE AUTOFRENANTE / *THREE PHASE MOTOR WITH BRAKE*

SMT	63	2	4	0.18 kW	B14	230-400 V	50 Hz	TEFC	BR
Tipo *Type*	Grandezza *Size*	Indicativo potenza *Power coefficient*	Poli *Poles*	Potenza *Power*	Forma costruttiva *Version*	Tensione *Voltage*	Frequenza *Frequency*	*Ventilazione Fan cooling*	Freno - Leva di sblocco *Brake - Hand-release lever*
SMT	Vedi tabelle *See tables*	**1-2-3-4-5**	**4**	**0.18 kW** ... **0.55 kW**	**B14**	**230-400 V** **460V** a richiesta *on request*	**50Hz** **60Hz**	**TEFC**	**BR** **BRL**
SMT									
3 ~									



Simbologia e formule — *Symbols and formulas*

P_n	[kW]	Potenza nominale	*Rated power*
I_n	[A]	Corrente nominale (a 400V)	*Rated current (at 400V)*
M_n	[Nm]	Coppia nominale	*Rated torque*
n_n	[rpm]	Velocità nominale	*Rated speed*
M_s / M_n		Rapporto coppia spunto / coppia nominale	*Ratio start torque / rated torque*
M_k / M_n		Rapporto coppia massima / coppia nominale	*Ratio max torque / rated torque*
M_b	[Nm]	Coppia frenante	*Braking torque*
I_s / I_n		Rapporto corrente di spunto / corrente nominale	*Ratio start current / rated current*
cosφ		Fattore di potenza al carico nominale	*Power factor at rated torque load*
η		Rendimento al carico nominale	*Efficiency at rated torque load*
Potenza *Power*	[HP]	Potenza [kW] x 1.341	*Power [kW] x 1.341*
Potenza resa P_n *P_n output power*	[kW]	Potenza assorbita x η	*Absorbed power x η*
Pot. assorbita *Absorbed power*	[kW]	$\frac{V \times I \times \cos\varphi}{1000}$ (monofase) $\frac{V \times I \times \sqrt{3} \times \cos\varphi}{1000}$ (trifase)	$\frac{V \times I \times \cos\varphi}{1000}$ *(singlephase)* $\frac{V \times I \times \sqrt{3} \times \cos\varphi}{1000}$ *(threephase)*
I_n (230 V)		In (400 V) x √3	*In (400 V) x √3*

SMT..BR

Dati tecnici — *Technical data*

SMT..BR Motori trifase autofrenanti / *SMT..BR Three phase motors with brake* (230-400 V / 50 Hz) poli / *poles* 4

TAGLIA *SIZE*	P_n [kW]	M_n [Nm]	n_n [min^{-1}]	I_n (400V) [A]	η %	cosφ	M_s/M_n	I_s/I_n	M_k/M_n	PTO [°C]	Servizio *Duty* TEFC	IP Motore *Motor*	M_b [Nm]	IP Freno *Brake*
SMT6324B14BR(L)	0.18	1.26	1360	0.69	57.0	0.66	2.50	2.90	2.50	PTO 150°	S3 75%	**66**	4	66
SMT6334B14BR(L)	0.25	1.74	1375	0.94	62.0	0.64	2.80	3.00	2.80				4	66
SMT7124B14BR(L)	0.37	2.52	1400	1.10	67.9	0.72	2.75	4.20	2.75				7,5	65
SMT7134B14BR(L)	0.55	3.76	1395	1.55	70.2	0.73	2.90	4.40	2.90				7,5	65

I freni adottati sono freni elettromagnetici ad azione negativa: l'azione frenante viene quindi esercitata in assenza di alimentazione.

Il freno è a corrente continua e, in configurazione standard, viene alimentato a 230 V_{ac} / 50Hz direttamente da una fase del motore, passando attraverso un raddrizzatore alloggiato all'interno della morsettiera. Per le applicazioni in cui si rende necessario, come ad esempio l'azionamento tramite inverter, è possibile richiedere l'alimentazione del freno separata 230Vac ±10% 50Hz. Sono disponibili anche le versioni 400Vac ±10% 50Hz o 24Vdc.

La leva di sblocco è una opzione che va specificata in fase di ordine.

The brakes adopted are negative action electromagnetic brakes: the braking action is performed in the absence of power.

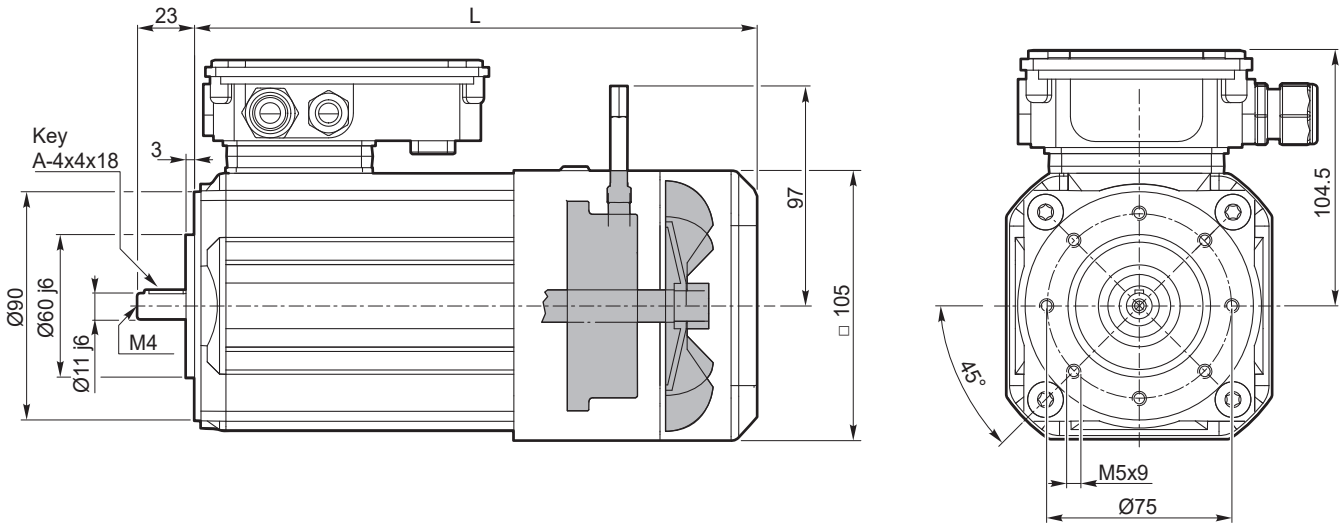
The brake is DC and, in standard configuration, is powered at 230 V_{ac} / 50Hz directly by a phase of the motor, passing through a rectifier housed inside the terminal block. For the applications in which it is required, like the ones with motor driven by inverter, it is possible to request 230Vac ± 10% 50Hz separate brake power supply. 400Vac ± 10% 50Hz or 24Vdc power supply are available on request.

The release lever is an option that must be requested when ordering.

Dimensioni motori trifase | ***Three phase motors dimensions***

3 ~

SMT63.. - B14 - TEFC - BR (L)



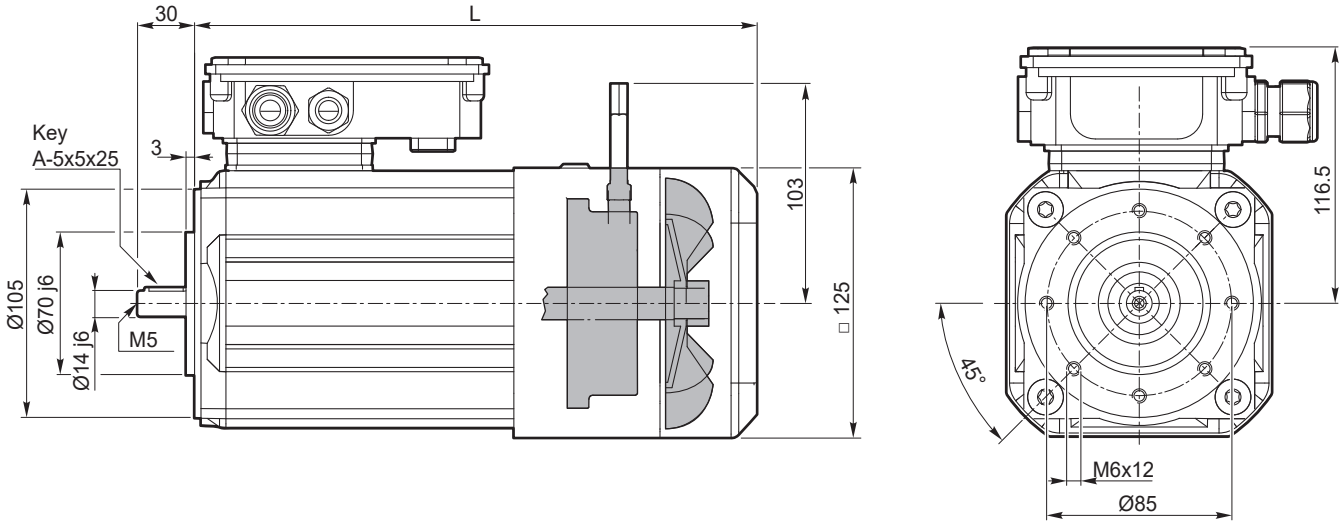
Nota:
La leva di sblocco è una opzione che va specificata in fase di ordine.

Note:
The release lever is an option that must be requested when ordering.

SMT..BR	... TEFC	
	L	Kg
6324	211	5.8
6334	226	6.5

3 ~

SMT71.. - B14 - TEFC - BR (L)

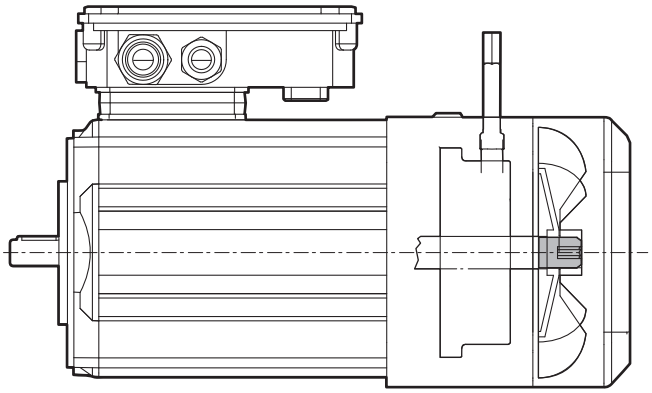


Nota:
La leva di sblocco è una opzione che va specificata in fase di ordine.

Note:
The release lever is an option that must be requested when ordering.

SMT..BR	... TEFC	
	L	Kg
7124	221	7.8
7134	236	8.9

Cava esagonale / *Hexagonal socket*





Esagono / *Hexagon*

SM..	E
63	4
71	6

Nota:

Installare a monte dell'alimentazione un dispositivo che assicuri la disconnessione della rete omnipolare, durante le operazioni di rotazione manuale è obbligatorio l'utilizzo di tale sezionatore.

Il quadro elettrico del motore deve essere lucchettabile al fine di evitare il riarmo non previsto alla rete elettrica.

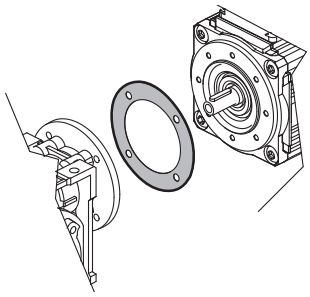
E' severamente vietata la messa in servizio del motore elettrico senza copriventola opportunamente montata.

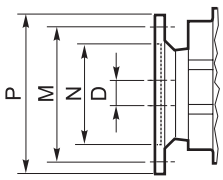
Note:

An omnipolar cut-off device must be fitted upstream of the power supply; the use of this device is mandatory during manual rotation operations.

The switchgear for the motor must be padlockable in order to prevent the power supply from being accidentally reset. It is strictly prohibited to put the electric motor into service if the fan cover is not fitted.

Opzione guarnizione CA / *Rubber gasket option*





Dimensioni IEC / *IEC Dimensions*		
	63 B14	**71 B14**
N	60	70
M	75	85
P	90	105
D	**11**	**14**

Grado di protezione IP

IP protection rating

Indica il grado di isolamento meccanico del corpo motore.

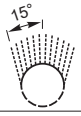
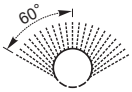
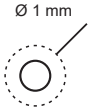
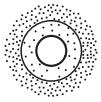
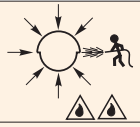
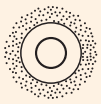
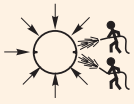
1ª cifra protezione alla penetrazione di corpi solidi.

2ª cifra protezione contro la penetrazione d'acqua.

IP protection rating indicates the degree of mechanical insulation of the motor casing.

The 1st figure indicates the level of protection against the intrusion of solid matter.

The 2nd figure indicates to which degree the motor is waterproof.

IP		Definizione / *Description*	IP		Definizione / *Description*
0		Non protetto / *No protection*	0		Non protetto / *No protection*
1		Protetto da corpi solidi superiori a Ø 50 mm. *Protected against solid matter (over Ø 50 mm).*	1		Protetto contro la caduta verticale di gocce d'acqua. *Protected against drops of water falling vertically.*
2		Protetto da corpi solidi superiori a Ø 12 mm. *Protected against solid matter (over Ø 12 mm).*	2		Protetto contro la caduta verticale di gocce d'acqua con inclinazione max di 15°. *Protected against drops of water falling up to 15°.*
3		Protetto da corpi solidi superiori a Ø 2.5 mm. *Protected against solid matter (over Ø 2.5 mm).*	3		Protetto contro la pioggia. *Rain proof.*
4		Protetto da corpi solidi superiori a Ø1 mm. *Protected against solid matter (over Ø1 mm).*	4		Protetto contro gli spruzzi. *Splash proof.*
5		Protetto contro la polvere. *Dust protected.*	5		Protetto contro getti d'acqua. *Water jet proof.*
6		Totalmente protetto contro la polvere. *Fully dust tight.*	6		Protetto dalle ondate. *Waveproof.*
7		N.A.	7		Protetto contro immersione. *Immersion up to 1 metre.*
8		N.A.	8		Protetto contro immersione/sommersione prolungata. *Immersion beyond 1 metre.*

Tipi di servizi IEC — *IEC duty cycles*

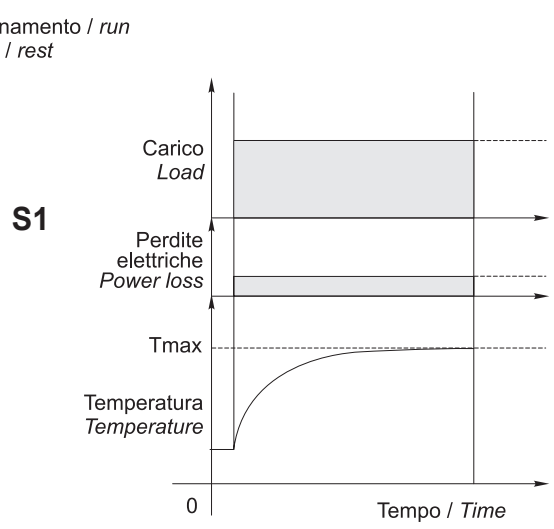
Il servizio di un motore indica il tipo di utilizzo e la gravosità del ciclo di lavoro.

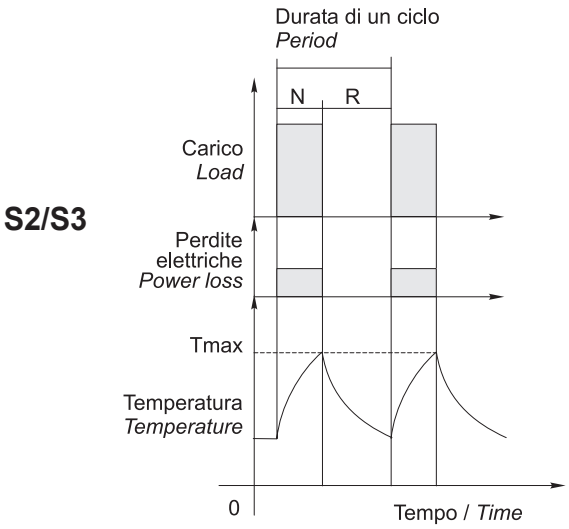
The duty cycle of a motor indicates its use and running cycle.

Grafico servizi più comuni

Most common duty cycles diagram

N = funzionamento / *run*
R = riposo / *rest*





NOTA: Lo stesso motore può essere usato per cicli e servizi diversi, con l'unica limitazione che la temperatura interna non superi mai la Tmax stabilita dalla classe di isolamento termico del motore.

NOTE: The same motor can run under all duty services, limitation is due to internal temperature that must not override Tmax stated by motor thermal class.

Classe di isolamento termico — *Insulation class*

La classe termica indica il grado di resistenza alla temperatura interna, nel punto più caldo (avvolgimenti).
Isolamento termico classse F.

Thermal insulation class indicates the level of thermal protection measured at the hottest point inside the motor (windings).
Thermal insulation class F.

Classe ***Class***	Massima temperatura interna Max. *windings temp.*
E	120°C
B	130°C
F	155°C
H	180°C

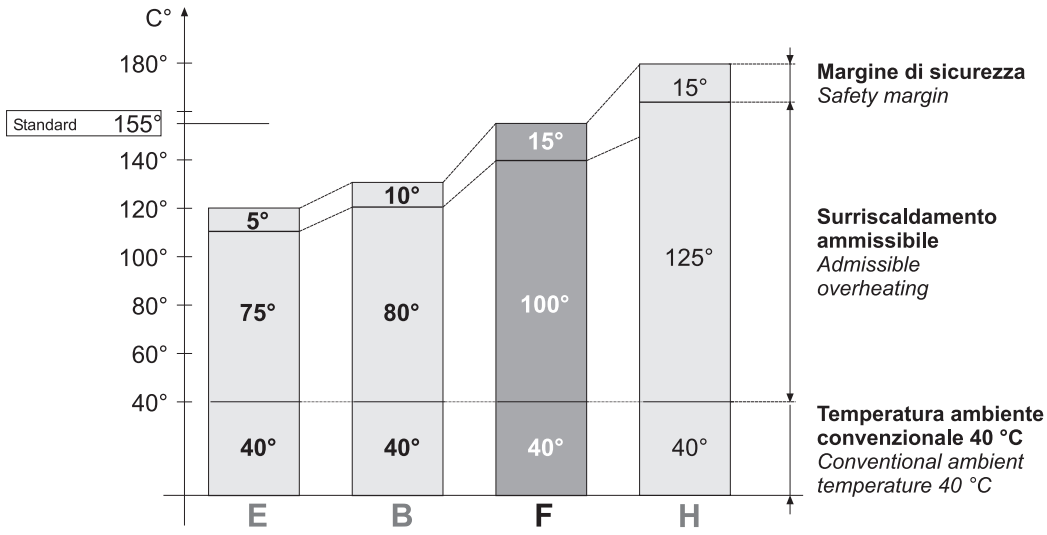


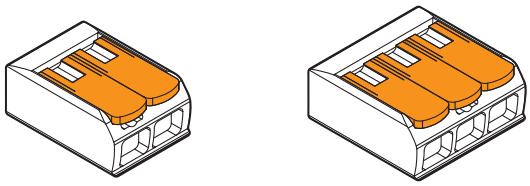
Tabella pressacavi — *Table of cable glands data*

Serie SMT..BR / *SMT..BR Series*

TAGLIA ***SIZE***	**Pressacavo** ***Cable gland***
63 / 71	1x M20x1.5

Connessioni e collegamenti — *Connection diagram*

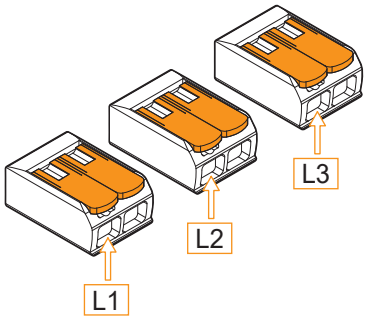
Riferimenti — *References*



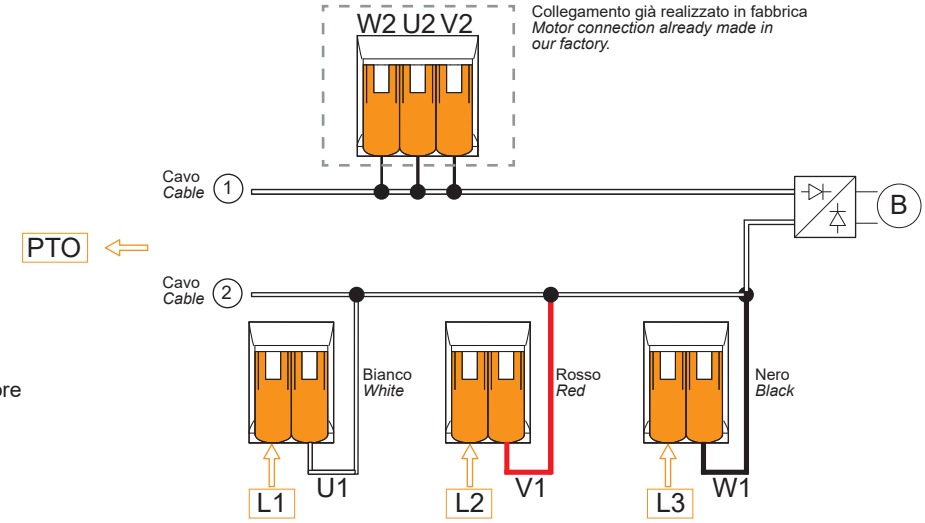
Morsetto di collegamento a leva a 2 e 3 poli
Splicing connector with lever2 - and 3 - pin.

400/460 V - Trifase / *three phase*

Collegamento a stella / *Star connection*

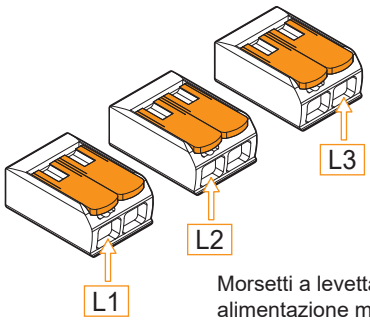


Morsetti a levetta liberi per alimentazione motore
Splicing connector with free-lever for the motor power source



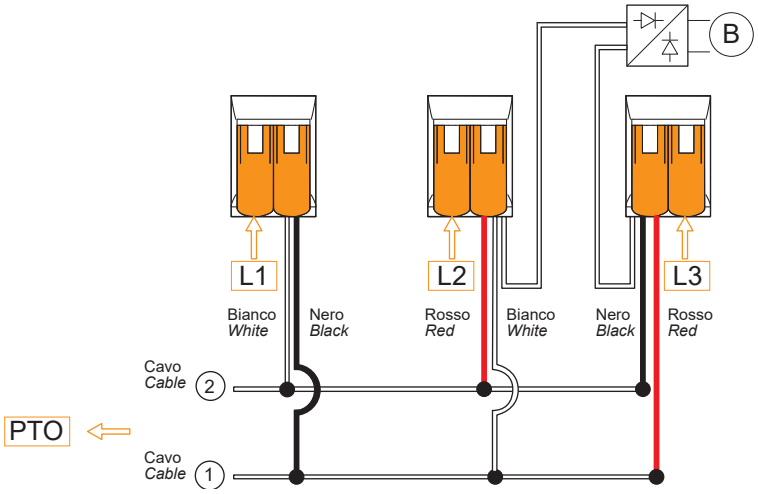
230 V - Trifase / *three phase*

Collegamento a triangolo / *Delta connection*



Morsetti a levetta liberi per alimentazione motore

Splicing connector with free-lever for the motor power source



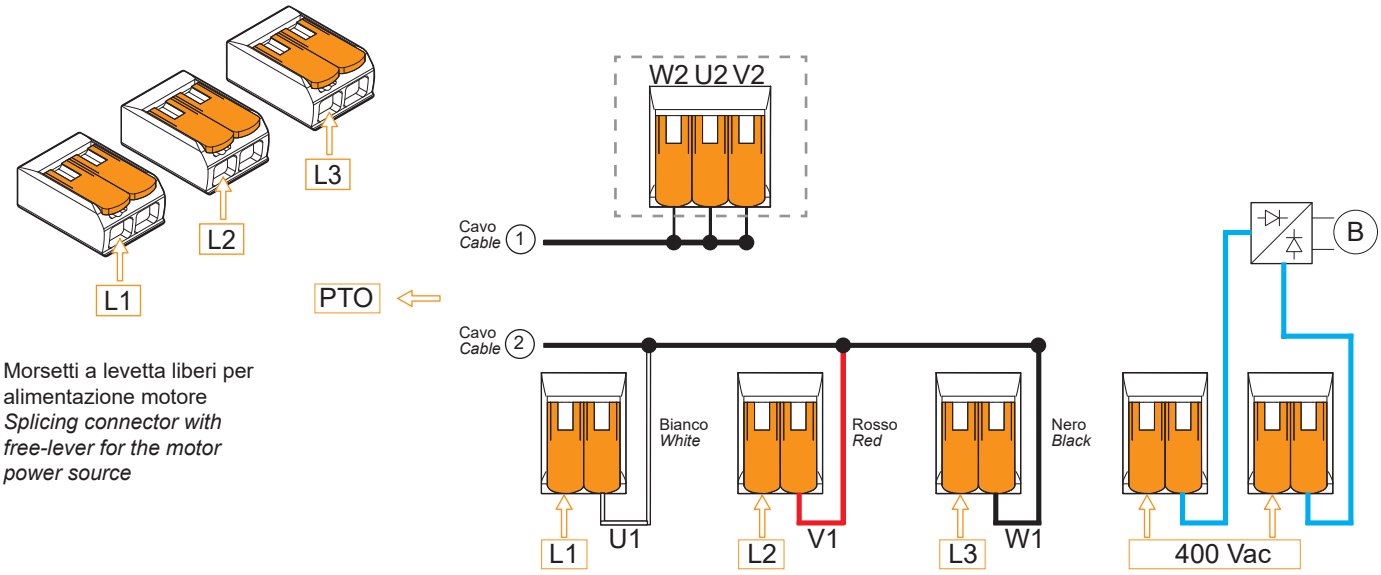
I motori della serie SM sono forniti in collegamento a stella, lo schema di collegamento a triangolo sopra riportato fornisce una chiara indicazione delle modifiche che il cliente può apportare in autonomia. Se necessario contattare il Servizio Tecnico Transtecno.

The SM series is supplied in star connection, the delta connection diagram shown above provides a clear indication of the modification that the customer can make independently. If needed, contact Transtecno Technical Service.

Connessioni e collegamenti | ***Connection diagram***

400/460 V - Trifase / *three phase - Freno / Brake 400 Vac*

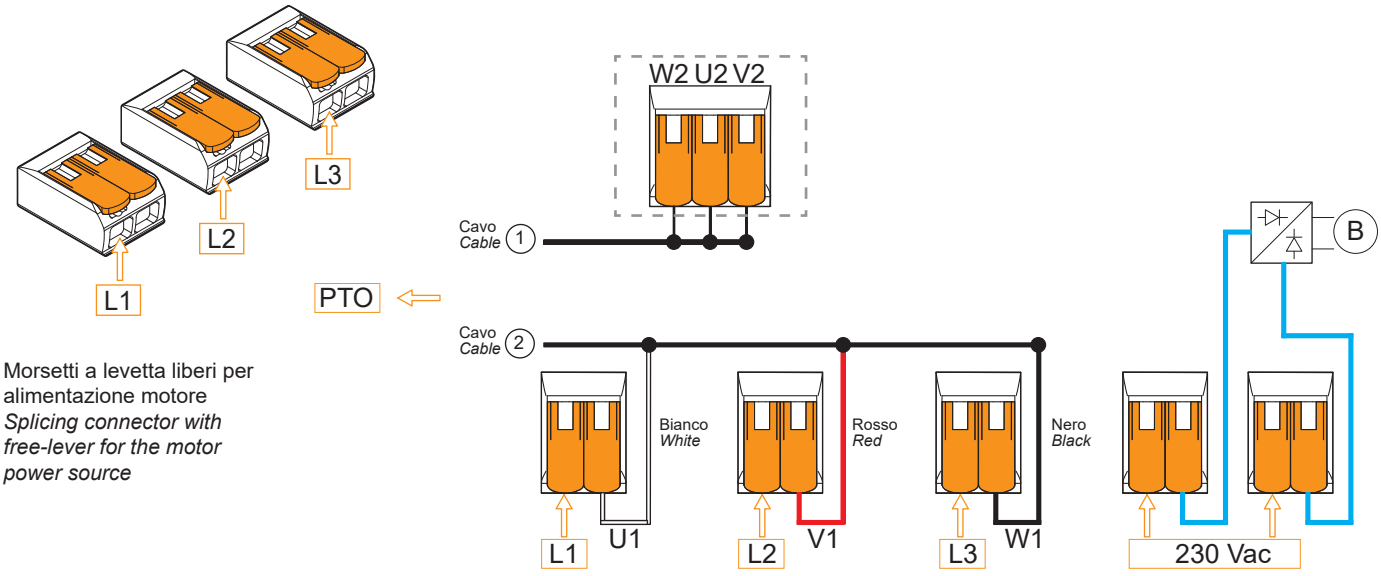
Collegamento a stella / *Star connection*
Alimentazione freno separata 400 Vac / *Brake connection separate power supply 400 Vac*



Morsetti a levetta liberi per alimentazione motore
Splicing connector with free-lever for the motor power source

400/460 V - Trifase / *three phase - Freno / Brake 230 Vac*

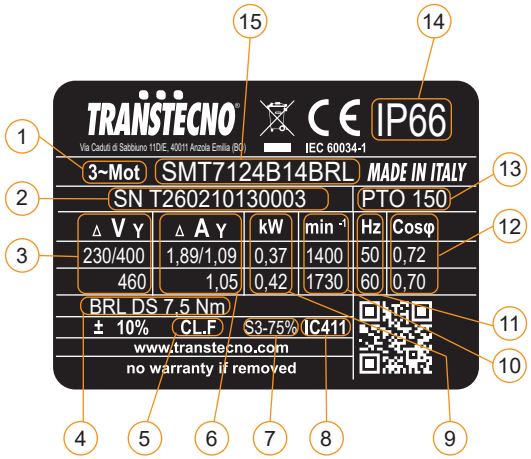
Collegamento a stella / *Star connection*
Alimentazione freno separata 230 Vac / *Brake connection separate power supply 230 Vac*

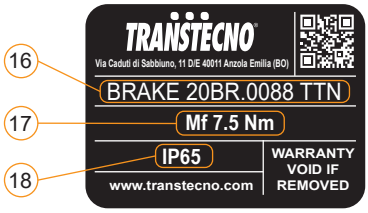


Morsetti a levetta liberi per alimentazione motore
Splicing connector with free-lever for the motor power source

Targhetta

Nameplate





Pos.	Descrizione	*Description*
1	Tipo di alimentazione	*Power supply*
2	Numero di serie	*Serial number*
3	Tensione di alimentazione	*Supply voltage*
4	Tipo freno	*Brake type*
5	Classe di isolamento	*Insulation class*
6	Corrente nominale	*Rated current*
7	Servizio	*Duty*
8	Ventilazione	*Fan cooling*
9	Potenza nominale	*Rated power*
10	Velocità nominale	*Rated speed*
11	Frequenza nominale	*Rated frequency*
12	Fattore di potenza	*Power factor*
13	Protezione termica PTO 150°C	*PTO 150°C Thermal protection*
14	Grado di protezione IP motore	*Motor IP protection rating*
15	Tipo motore	*Motor type*
16	Codice freno	*Brake code*
17	Coppia frenante	*Braking torque*
18	Grado di protezione IP freno	*Brake IP protection rating*

TRANSTECNO®
the modular gearmotor

AT

MOT.

Linear Actuators

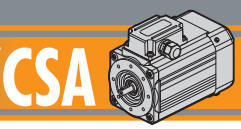
IP66 TRANSTECNO

Motori applicabili
Motori elettrici CA - SM..UL/CSA
Applicable motors
AC Electric motors - SM..UL/CSA





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File E511911



IP66 TRANSTECNO

Indice	*Index*	Pag. *Page*
Caratteristiche tecniche	*Technical features*	**F2**
Designazione	*Classification*	**F2**
Simbologia e formule	*Symbols and formulas*	**F3**
Dati tecnici	*Technical data*	**F3**
Dimensioni motori trifase	*Three phase motors dimensions*	**F4**
Dimensioni motori monofase	*Single phase motors dimensions*	**F6**
Cava esagonale	*Hexagonal socket*	**F8**
Versioni opzionali	*Optional versions*	**F8**
Opzione guarnizione CA	*Rubber gasket option*	**F8**
Certificazione UL / CSA	*UL / CSA certificate*	**F8**
Gradi di protezione IP	*IP protection rating*	**F9**
Tipo di servizio IEC	*IEC duty cycles*	**F10**
Tabella pressacavi	*Table of cable glands data*	**F10**
Connessioni e collegamenti	*Connection diagram*	**F11**
Targhetta	*Nameplate*	**F13**

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Caratteristiche tecniche

Technical characteristics

I motori certificati UL/CSA delle serie SMT ed SMM hanno le seguenti caratteristiche principali:

- Costruzione compatta
- Motorizzazioni in corrente alternata monofase e trifase
- Carcassa estrusa in alluminio anodizzato nero
- Motore elettrico CA con grado di protezione IP66 (escluso condensatore)
- Rumorosità e vibrazioni contenute
- Isolamento termico di classe F
- Flangia motore IEC B14
- Temperatura ambiente: -15°C / +40°C per potenze superiori a 0.6 kW e +5°C / +40°C per potenze inferiori
- Disponibili nella versione ventilata TEFC (servizio S1).
- Protezione termica PTO 150°C
- Motori trifase SMT dotati di separatori di fase
- Cava esagonale su albero motore lato NDE
- Condensatore di marcia per motori monofase SMM
- La tolleranza di tensione è ±10%
- Standard applicati:

  UL1004-1: Rotating Electrical Machines General Requirements

  CSA:100-14: Motors and Generators

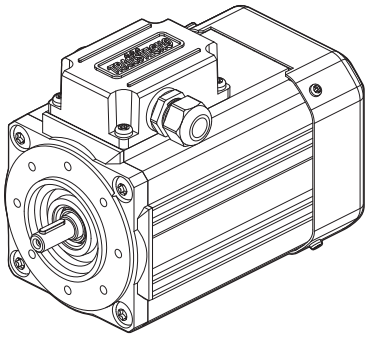
SMT and SMM motor range with UL/CSA Certification has the following main features:

- *Compact design*
- *AC single phase and three phase motors available*
- *Black anodized extruded aluminium housing*
- *AC electric motor in IP66 protection Standard (except capacitor)*
- *Low noise and vibrations*
- *Class F insulation Standard*
- *Motor flange IEC B14*
- *Ambient temperature: -15°C / +40°C for power higher than 0.6 kW and +5°C / +40°C for lower power*
- *Fan cooled TEFC (duty S1)*
- *PTO 150°C thermal protection*
- *Three phase motors SMT equipped with phase separators.*
- *Motor shaft hexagon socket on the NDE side.*
- *Running capacitor for single phase motors SMM.*
- *Voltage tolerance ±10%*
- *Standards applied:*

  UL1004-1: Rotating Electrical Machines General Requirements

  CSA:100-14: Motors and Generators

SM .. UL/CSA



File E511911

IP66 TRANSTECNO

Designazione

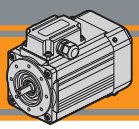
Classification

MOTORE TRIFASE / *THREE PHASE MOTOR*

SMT	63	2	4	0.18 kW	B14	230-400 V	50 Hz	TEFC	UL-CSA
Tipo *Type*	Grandezza *Size*	Indicativo potenza *Power coefficient*	Poli *Poles*	Potenza *Power*	Forma costruttiva *Version*	Tensione *Voltage*	Frequenza *Frequency*	*Ventilazione Fan cooling*	Versione UL *UL Version*
SMT	Vedi tabelle *See tables*	**2 - 3**	**4**	**0.09 kW ... 0.66 kW**	**B14**	**230-400 V**	**50Hz**	**TEFC**	**UL-CSA**
						**460V**	**60Hz**		
3 ~									

MOTORE MONOFASE / *SINGLE PHASE MOTOR*

SMM	63	2	4	0.18 kW	B14	115 V	60 Hz	TEFC	UL-CSA
Tipo *Type*	Grandezza *Size*	Indicativo potenza *Power coefficient*	Poli *Poles*	Potenza *Power*	Forma costruttiva *Version*	Tensione *Voltage*	Frequenza *Frequency*	*Ventilazione Fan cooling*	Versione UL *UL Version*
SMM	Vedi tabelle *See tables*	**2 - 3**	**4**	**0.09 kW ... 0.37 kW**	**B14**	**115V**	**60Hz**	**TEFC**	**UL-CSA**
									
1 ~									



Simbologia e formule — *Symbols and formulas*

P_n	[kW]	Potenza nominale	*Rated power*
I_n	[A]	Corrente nominale	*Rated current*
M_n	[Nm]	Coppia nominale	*Rated torque*
n_n	[rpm]	Velocità nominale	*Rated speed*
M_s / M_n		Rapporto coppia spunto / coppia nominale	*Ratio start torque / rated torque*
M_k / M_n		Rapporto coppia massima / coppia nominale	*Ratio max torque / rated torque*
I_s / I_n		Rapporto corrente di spunto / corrente nominale	*Ratio start current / rated current*
cosφ		Fattore di potenza al carico nominale	*Power factor at rated torque load*
η		Rendimento al carico nominale	*Efficiency at rated torque load*
f	[Hz]	Frequenza	*Frequency*
V	[V]	Tensione	*Voltage*
Potenza *Power*	[HP]	Potenza [kW] x 1.341	*Power [kW] x 1.341*
Potenza resa P_n *P_n output power*	[kW]	Potenza assorbita x η	*Absorbed power x η*
Pot. assorbita *Absorbed power*	[kW]	$\frac{V \times I \times \cos\varphi}{1000}$ (monofase) $\frac{V \times I \times \sqrt{3} \times \cos\varphi}{1000}$ (trifase)	$\frac{V \times I \times \cos\varphi}{1000}$ *(singlephase)* $\frac{V \times I \times \sqrt{3} \times \cos\varphi}{1000}$ *(threephase)*
I_n (230 V)		In (400 V) x √3	*In (400 V) x √3*

Dati tecnici — *Technical data*

SMT Motori trifase / *SMT Three phase motors*

(230-400 V / 50 Hz) poli / *poles* 4
(460 V / 60 Hz) poli / *poles* 4

TAGLIA *SIZE*	P_n [kW]	M_n [Nm]	n_n [min^{-1}]	V - f [V - Hz]	I_n (400-460 V) [A]	η %	cosφ	M_s/M_n	I_s/I_n	M_k/M_n	PTO [°C]	Servizio *Duty* TEFC
5624	0.09	0.63	1365	400 - 50	0.45	47.3	0.61	2.50	2.40	2.70	PTO 150°	S1
	0.11		1660	460 - 60		50.3		2.60	2.60			
5634	0.12	0.88	1300	400 - 50	0.45	52.0	0.74	1.90	2.40	1.90		
	0.14	0.83	1600	460 - 60	0.42	59.0	0.71	2.10	2.70	2.10		
6324	0.18	1.26	1360	400 - 50	0.69	57.0	0.66	2.50	2.90	2.50		
	0.22	1.27	1650	460 - 60		59.7	0.67		3.00			
6334	0.25	1.74	1375	400 - 50	0.94	62.0	0.64	2.80	3.00	2.80		
	0.28	1.59	1690	460 - 60		61.3	0.61	3.00	3.20	3.00		
7124	0.37	2.52	1400	400 - 50	1.09	68.0	0.72	2.75	4.20	2.75		
	0.42	2.35	1700	460 - 60		68.1	0.71	2.90	4.50	2.90		
7134	0.55	3.76	1395	400 - 50	1.55	70.2	0.73	2.90	4.40	2.90		
	0.66	3.71	1700	460 - 60		73.2			4.80	2.80		

SMM Motori monofase / *SMM Single phase motors*

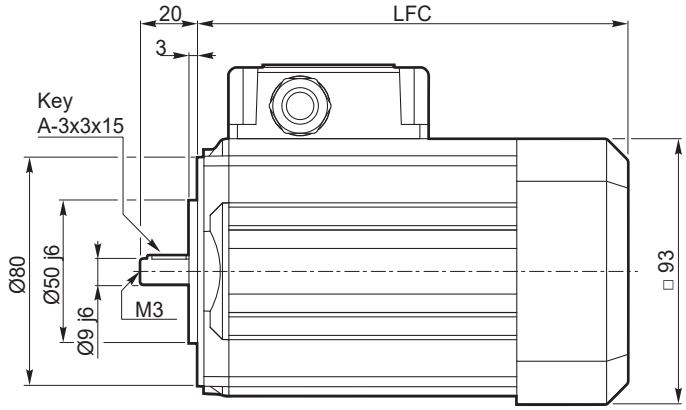
(115 V / 60 Hz) poli / *poles* 4

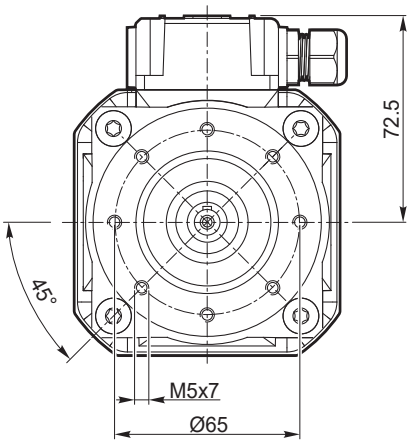
TAGLIA *SIZE*	P_n [kW]	M_n [Nm]	n_n [min^{-1}]	V - f [V - Hz]	I_n (115V) [A]	η %	cosφ	M_s/M_n	I_s/I_n	M_k/M_n	Cond/cap [µF]	PTO [°C]	Servizio *Duty* TEFC
5624	0.09	0.52	1665	115 - 60	1.60	50.0	0.98	0.64	1.95	1.51	20	PTO 150°	S1
6324	0.18	1.09	1570	115 - 60	2.70	58.5	0.99	1.0	2.1	1.50	40		
7124	0.37	2.18	1620	115 - 60	4.70	69.8	0.98	0.64	2.3	1.33	60		

Dimensioni motori trifase *Three phase motors dimensions*

3 ~

SMT56.. - B14 - TEFC

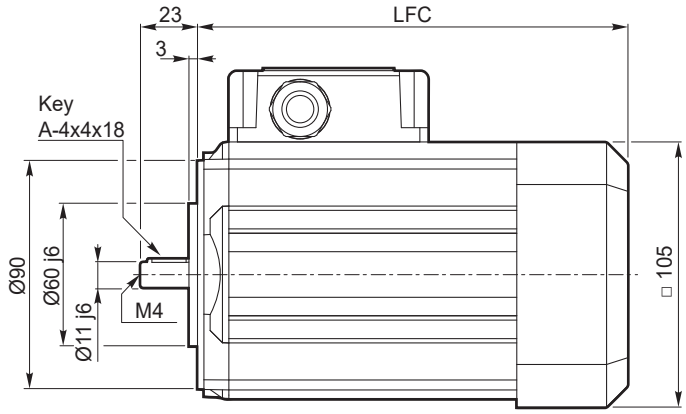


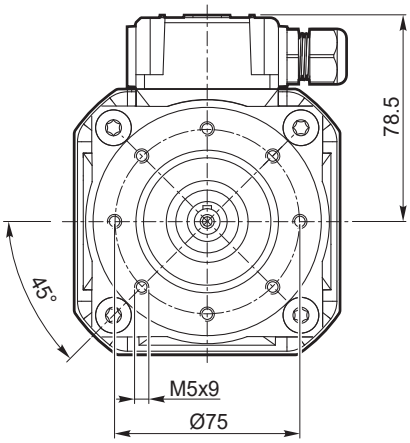


SMT	... TEFC	
	LFC	Kg
5624	186	3.1
5634	186	3.5

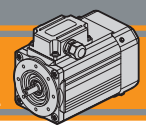
3 ~

SMT63.. - B14 - TEFC





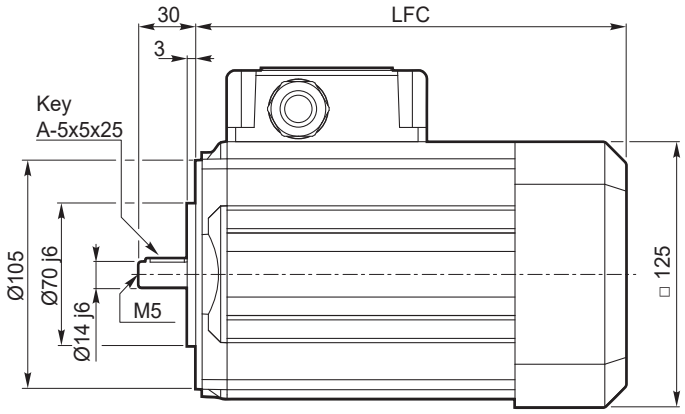
SMT	... TEFC	
	LFC	Kg
6324	205.5	4.7
6334	205.5	5.4

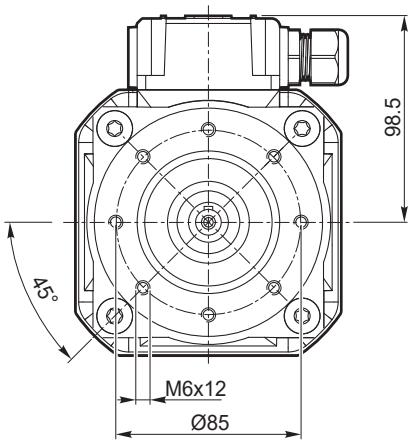


Dimensioni motori trifase *Three phase motors dimensions*

3 ~

SMT71.. - B14 - TEFC

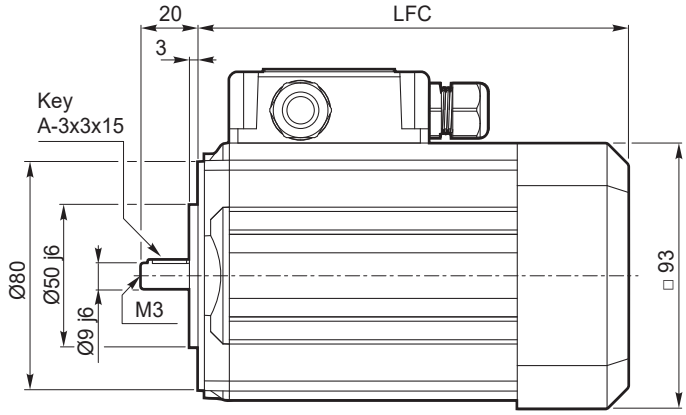


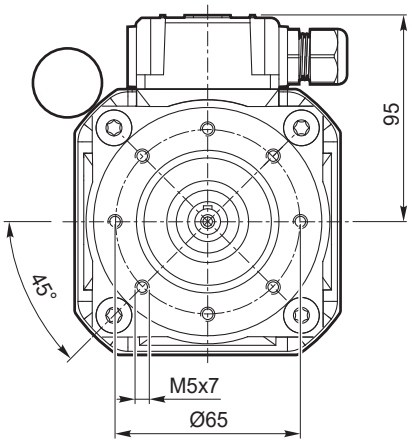


SMT	... TEFC	
	LFC	Kg
7124	214	7.0
7134	214	8.2

Dimensioni motori monofase *Single phase motors dimensions*

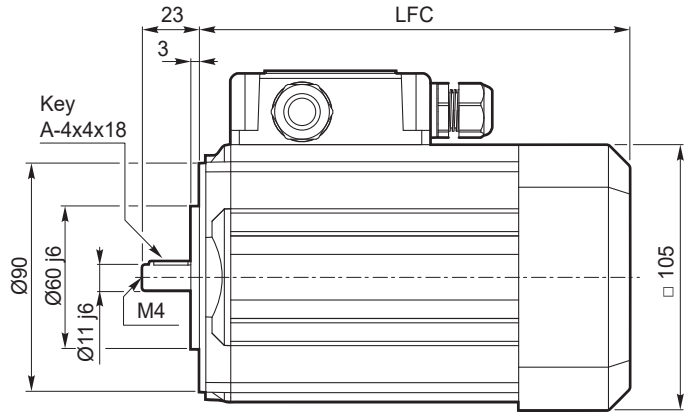
1 ~ SMM56.. - B14 - TEFC

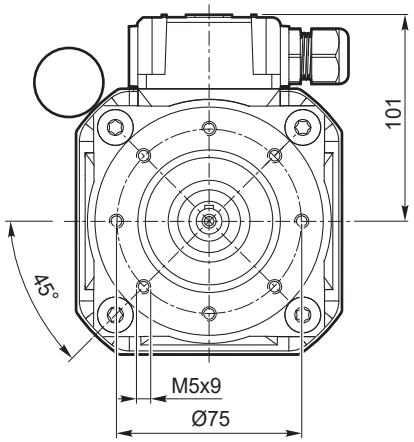




SMM	... TEFC	
	LFC	Kg
5624	186	3.6

1 ~ SMM63.. - B14 - TEFC





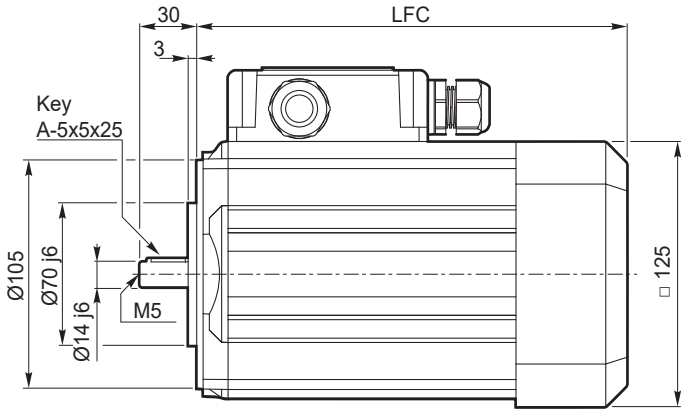
SMM	... TEFC	
	LFC	Kg
6324	205.5	5.5

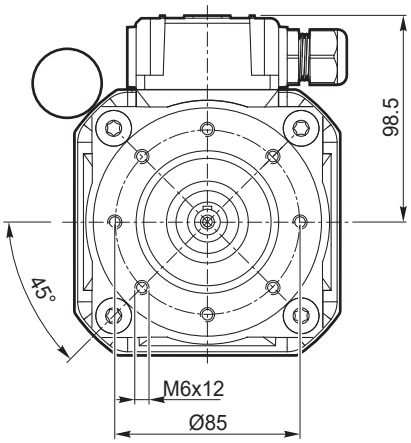
Dimensioni motori monofase

Single phase motors dimensions

1 ~

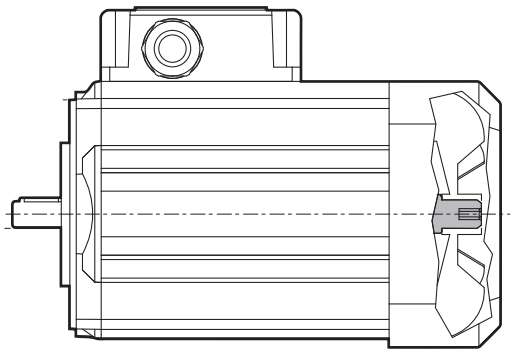
SMM71.. - B14 - TEFC

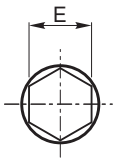




SMM	... TEFC	
	LFC	Kg
7124	214	8.0

Cava esagonale — *Hexagonal socket*





Esagono / *Hexagon*

SM..	E
56	4
63	
71	6

Nota:

Installare a monte dell'alimentazione un dispositivo che assicuri la disconnessione della rete omnipolare, durante le operazioni di rotazione manuale è obbligatorio l'utilizzo di tale sezionatore.

Il quadro elettrico del motore deve essere lucchettabile al fine di evitare il riarmo non previsto alla rete elettrica.

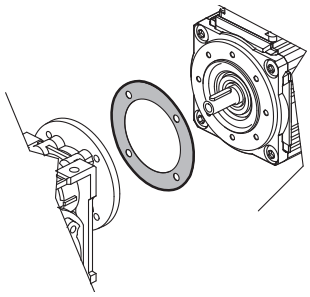
E' severamente vietata la messa in servizio del motore elettrico senza copriventola opportunamente montata.

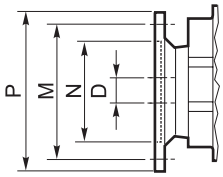
Note:

An omnipolar cut-off device must be fitted upstream of the power supply; the use of this device is mandatory during manual rotation operations.

The switchgear for the motor must be padlockable in order to prevent the power supply from being accidentally reset. It is strictly prohibited to put the electric motor into service if the fan cover is not fitted.

Opzione guarnizione CA — *Rubber gasket option*





Dimensioni IEC / *IEC Dimensions*			
	56 B14	63 B14	71 B14
N	50	60	70
M	65	75	85
P	80	90	105
D	9	11	14

Versioni opzionali — *Optional versions*

Versioni opzionali con freno ed encoder disponibili a richiesta su alcuni modelli. Su richiesta sono disponibili grandezze motore superiori a quelle indicate a catalogo.
Si prega di contattare il nostro Servizio Tecnico.

Optional versions with brake and encoder are available on request on some models. Motor sizes bigger than those indicated in the catalogue are available on request.
Please contact our Technical Service.

Certificazione UL / CSA — *UL / CSA certificate*

I motori SM certificati UL/CSA sono marcati secondo la Norma UL 1004-1, Rotating Electrical Machines General Requirements e CSA 100-14, Motors and Generators.

SM motors Certified UL/CSA are marked for approval by UL 1004-1, Rotating Electrical Machines General Requirements and CSA 100-14, Motors and Generators.

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Grado di protezione IP

IP protection rating

Indica il grado di isolamento meccanico del corpo motore.

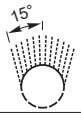
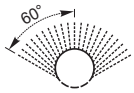
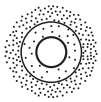
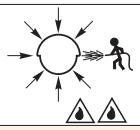
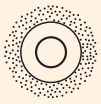
1ª cifra protezione alla penetrazione di corpi solidi.

2ª cifra protezione contro la penetrazione d'acqua.

IP protection rating indicates the degree of mechanical insulation of the motor casing.

The 1st figure indicates the level of protection against the intrusion of solid matter.

The 2nd figure indicates to which degree the motor is waterproof.

IP		Definizione / *Description*	IP		Definizione / *Description*
0		Non protetto / *No protection*	0		Non protetto / *No protection*
1		Protetto da corpi solidi superiori a Ø 50 mm. *Protected against solid matter (over Ø 50 mm).*	1		Protetto contro la caduta verticale di gocce d'acqua. *Protected against drops of water falling vertically.*
2		Protetto da corpi solidi superiori a Ø 12 mm. *Protected against solid matter (over Ø 12 mm).*	2		Protetto contro la caduta verticale di gocce d'acqua con inclinazione max di 15°. *Protected against drops of water falling up to 15°.*
3		Protetto da corpi solidi superiori a Ø 2.5 mm. *Protected against solid matter (over Ø 2.5 mm).*	3		Protetto contro la pioggia. *Rain proof.*
4		Protetto da corpi solidi superiori a Ø1 mm. *Protected against solid matter (over Ø1 mm).*	4		Protetto contro gli spruzzi. *Splash proof.*
5		Protetto contro la polvere. *Dust protected.*	5		Protetto contro getti d'acqua. *Water jet proof.*
6		Totalmente protetto contro la polvere. *Fully dust tight.*	6		Protetto dalle ondate. *Waveproof.*
7		N.A.	7		Protetto contro immersione. *Immersion up to 1 metre.*
8		N.A.	8		Protetto contro immersione/sommersione prolungata. *Immersion beyond 1 metre.*

Tipi di servizi IEC

IEC duty cycles

Il servizio di un motore indica il tipo di utilizzo e la gravosità del ciclo di lavoro.

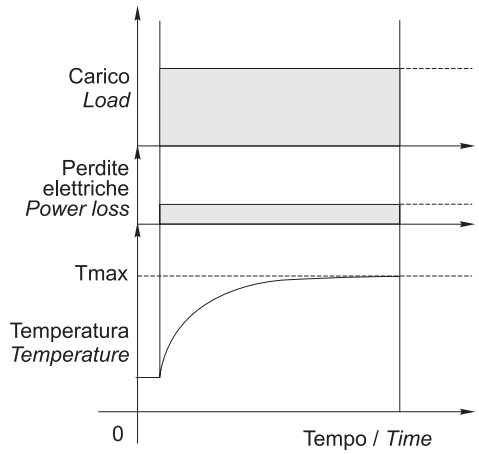
The duty cycle of a motor indicates its use and running cycle.

Grafico servizi più comuni

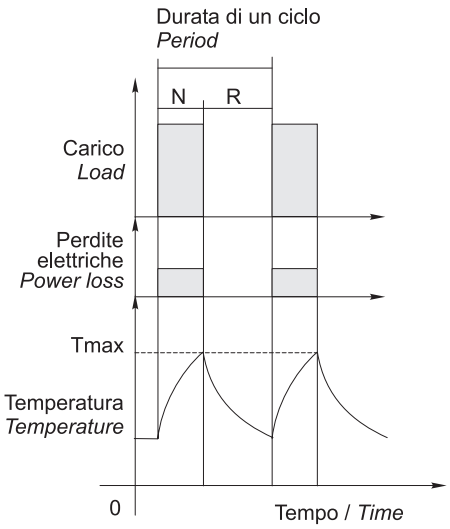
Most common duty cycles diagram

N = funzionamento / *run*
R = riposo / *rest*

S1



S2/S3



NOTA: Lo stesso motore può essere usato per cicli e servizi diversi, con l'unica limitazione che la temperatura interna non superi mai la Tmax stabilita dalla classe di isolamento termico del motore.

NOTE: The same motor can run under all duty services, limitation is due to internal temperature that must not override Tmax stated by motor thermal class.

Tabella pressacavi

Table of cable glands data

Serie SMT / *SMT Series*

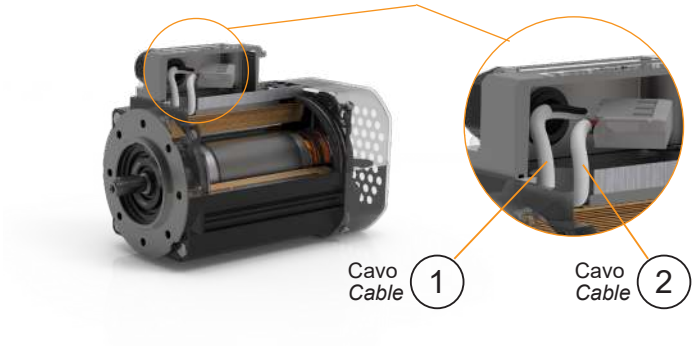
TAGLIA *SIZE*	Pressacavo *Cable gland*
56 / 63	M16x1.5
71	M20x1.5

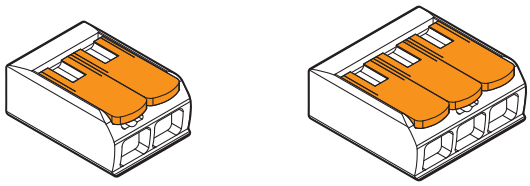
Serie SMM / *SMM Series*

TAGLIA *SIZE*	Pressacavo *Cable gland*
56 / 63	2 x M16x1.5
71	1x M20x1.5 + 1 x M16x1.5

Connessioni e collegamenti — *Connection diagram*

Riferimenti — *References*

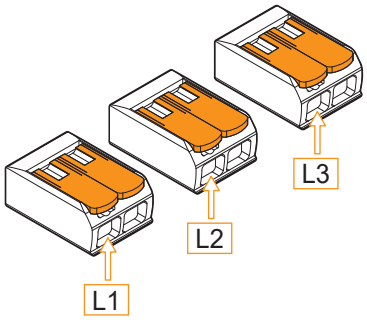




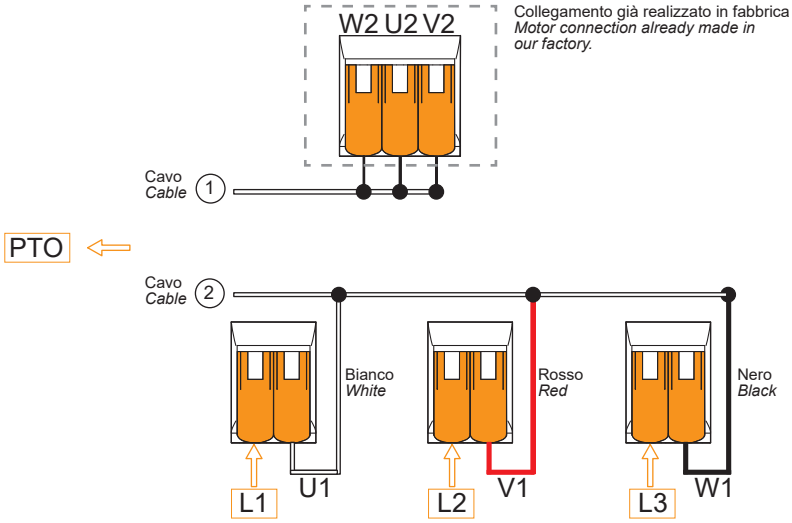
Morsetto di collegamento a leva a 2 e 3 poli
Splicing connector with lever 2 - and 3 - pin.

400/460 V - Trifase / *three phase*

Collegamento a stella / *Star connection*

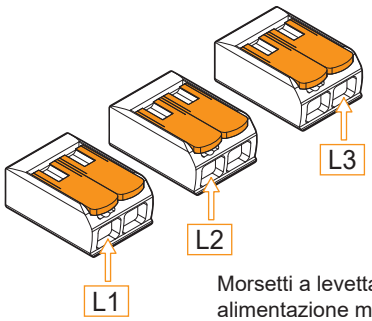


Morsetti a levetta liberi per alimentazione motore
Splicing connector with free-lever for the motor power source



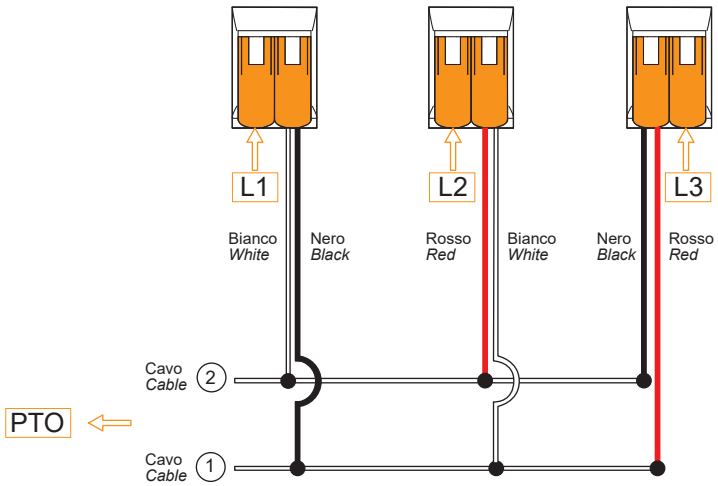
230 V - Trifase / *three phase*

Collegamento a triangolo / *Delta connection*



Morsetti a levetta liberi per alimentazione motore

Splicing connector with free-lever for the motor power source



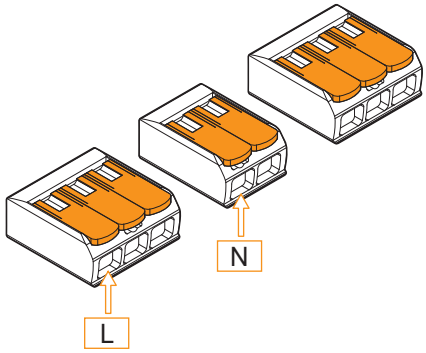
I motori della serie SM sono forniti in collegamento a stella, lo schema di collegamento a triangolo sopra riportato fornisce una chiara indicazione delle modifiche che il cliente può apportare in autonomia. Se necessario contattare il Servizio Tecnico Transtecno.

The SM series is supplied in star connection, the delta connection diagram shown above provides a clear indication of the modification that the customer can make independently. If needed, contact Transtecno Technical Service.

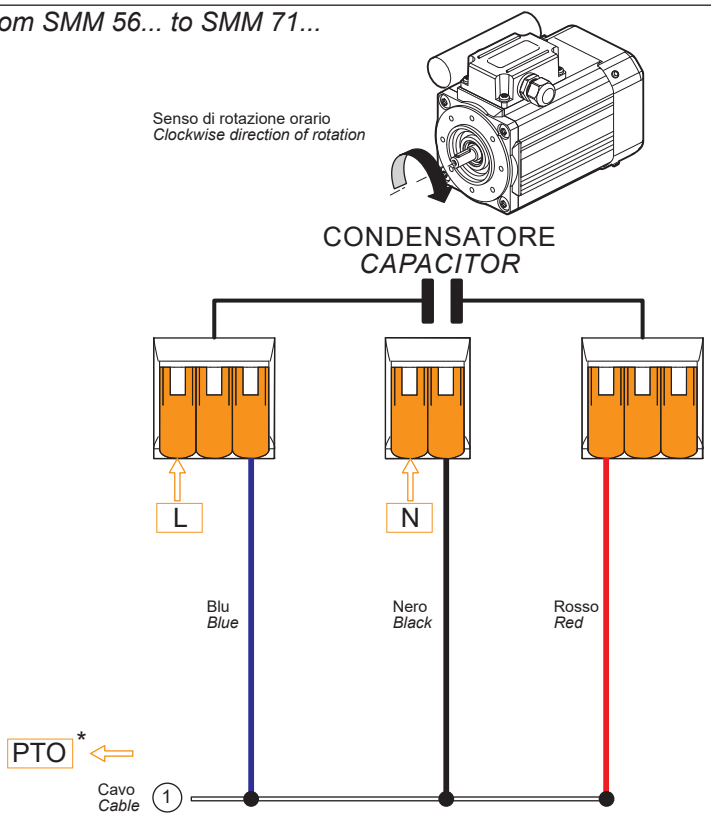
Connessioni e collegamenti — *Connection diagram*

115 V - Monofase / *single phase*

Monofase da SMM 56... a SMM 71... / *Single phase from SMM 56... to SMM 71...*

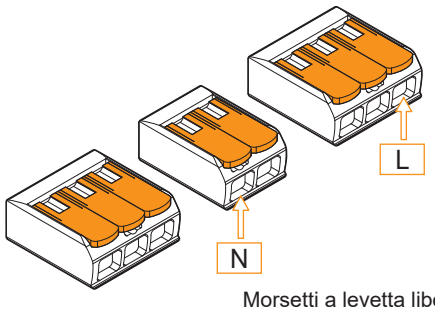


Morsetti a levetta liberi per alimentazione motore
Splicing connector with free-lever for the motor power source



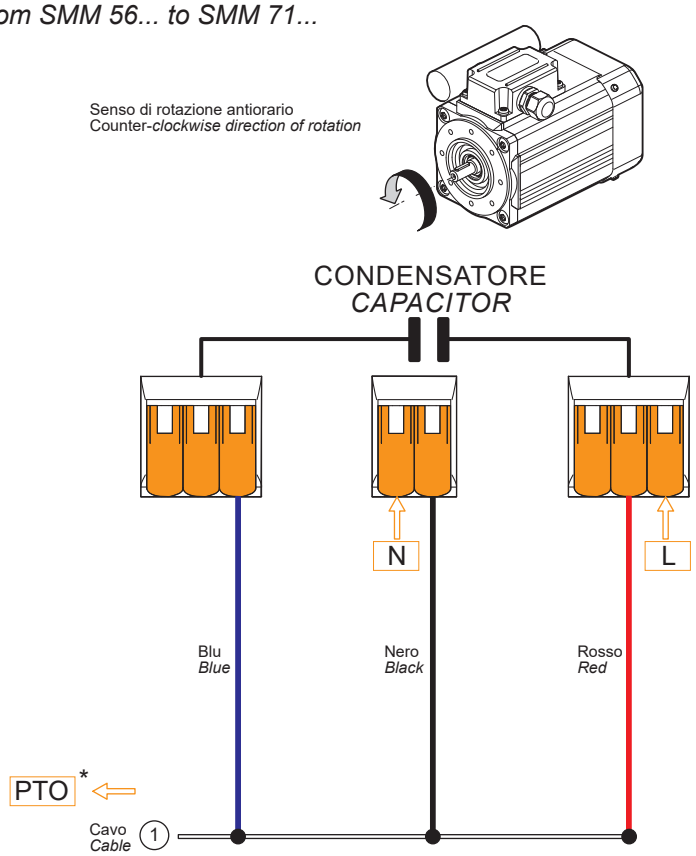
115 V - Monofase / *single phase*

Monofase da SMM 56... a SMM 71... / *Single phase from SMM 56... to SMM 71...*



Morsetti a levetta liberi per alimentazione motore

Splicing connector with free-lever for the motor power source

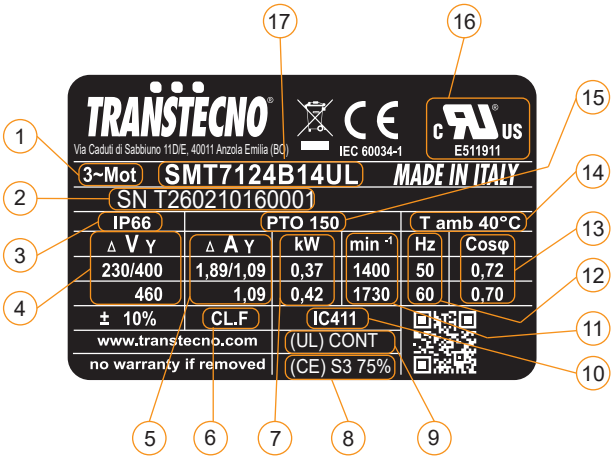


*: collegamento al circuito di comando del motore a cura del cliente. Per ragioni di sicurezza è sconsigliato il collegamento in serie. Se necessario contattare il Servizio Tecnico Transtecno.

**: motor supply connection by the customer. For safety reason Transtecno advises against PTO connected in series. If needed, contact Transtecno Technical Service.*

Targhetta

Nameplate



Pos.	Descrizione	*Description*
1	Tipo di alimentazione	*Power supply*
2	Numero di serie	*Serial number*
3	Grado di protezione IP motore	*Motor IP protection rating*
4	Tensione di alimentazione	*Supply voltage*
5	Corrente nominale	*Rated current*
6	Classe di isolamento	*Insulation class*
7	Potenza nominale	*Rated power*
8	Servizio per certificazione CE	*CE compliance duty*
9	Servizio per certificazione UL/CSA	*UL/CSA compliance duty*
10	Ventilazione	*Fan cooling*
11	Velocità nominale	*Rated speed*
12	Frequenza nominale	*Rated frequency*
13	Fattore di potenza	*Power factor*
14	Temperatura ambiente massima	*Max allowed ambient temperature*
15	Protezione termica PTO 150°C	*PTO 150°C Thermal protection*
16	Certificazione UL/CSA	*UL/CSA compliance*
17	Tipo di motore	*Motor type*

Note/*Notes*

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AT

MOT.

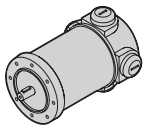
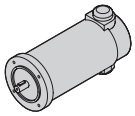
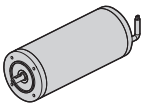
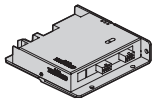
Linear Actuators

Motori applicabili
Motori elettrici CC
Applicable motors
DC Electric motors

DC



Indice *Index*

				Pag. *Page*
	G	Motori elettrici CC ND	DC Electric motors ND	G1
	H	Motori elettrici CC EC	DC Electric motors EC	H1
	I	Motori elettrici CC EC IP66	DC Electric motors EC IP66	I1
	L	Azionamenti per motori CC PLN	DC Motors control PLN	L1

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the modular gearmotor

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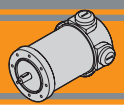
MOT.

Linear Actuators

Neodymium

Motori applicabili
Motori elettrici CC - ND
Applicable motors
DC Electric motors - ND





	Indice	*Index*	Pag. *Page*
	Caratteristiche tecniche	*Technical Features*	**G2**
	Grado di protezione IP	*IP enclosures protection indexes*	**G3**
	Classe di isolamento termico	*Insulation class*	**G3**
	Tipi di servizio IEC	*IEC duty cycle ratings*	**G3**
ND120.120 ND120.240	Caratteristiche	*Features*	**G4**
	Dimensioni	*Dimensions*	**G4**
	Prestazioni	*Performances*	**G5**
ND180.120 ND180.240	Caratteristiche	*Features*	**G6**
	Dimensioni	*Dimensions*	**G6**
	Prestazioni	*Performances*	**G7**
	Legenda / Glossario dei grafici	*Key / Diagram Glossary*	**G8**
	Formule utili	*Useful formulas*	**G8**
	Freni	*Brakes*	**G9**
	Encoder	*Encoder*	**G9**

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Caratteristiche tecniche

I magneti in Neodimio (NdFeB) fanno parte dei magneti a terre rare e sono attualmente i magneti più potenti in produzione.
Dotati di alta forza coercitiva (resistenza alla smagnetizzazione) ed alto valore di saturazione magnetica, sono in grado di immagazzinare moltissima energia magnetica. Pertanto, i motori CC dotati di magneti in Neodimio forniscono alti valori di coppia pur in dimensioni ridotte, grazie all'alta densità di flusso del campo magnetico.

Le caratteristiche principali dei motori elettrici CC a magneti permanenti in neodimio ND sono:

- Campo magnetico generato da magneti permanenti in Neodimio (NdFeB)
- Costruzione tubolare senza ventilazione
- Disponibili in una grandezza diametro 65
- Alimentazione a bassa tensione 12 o 24 Vcc
- Potenza 160W e 250W S2
- Elevata coppia di spunto
- Maggiori coppie e potenze rispetto ai corrispettivi motori a magneti permanenti standard (a parità di dimensioni)
- Predisposizione encoder / freno

Technical features

Neodymium magnet (NdFeB) is a type of rare-earth magnet and is currently the strongest type of permanent magnets.
Due to high coercivity resistance to being demagnetized and high saturation magnetization, they have potential for storing large amounts of magnetic energy. Therefore permanent Neodymium magnets DC motors can provide high torque in compact size due to the high density flux of magnet field.

The main features of ND neodymium permanent magnets DC electric motors range are:

- *Magnetic field generated by Neodymium (NdFeB) permanent magnets*
- *Tubular construction without fan*
- *Available in one size diameter 65*
- *Low voltage power supply 12 or 24 Vdc*
- *Power ratings available 160W and 250W S2*
- *High starting torque*
- *Higher torque and higher power than standard permanent magnet D.C. motors.*
- *Suitable for encoder / brake assembly*

Classe di isolamento termico

Gli avvolgimenti del rotore sono soggetti a surriscaldamento, come pure altre parti del motore. Il grado di isolamento indica la massima temperatura ammissibile oltre la quale l'isolante della matassa e l'isolante di tutte le parti soggette ad elevato riscaldamento perde le caratteristiche di buon isolante, con pericolo di danneggiamento del motore.

Thermal insulation class

The windings of the rotor can overheat just like other parts of the motor too. The degree of insulation indicates the maximum allowable temperature above which the insulation of the windings, as well as that of all the parts which heat up to a high temperature, loses its insulating properties and the motor therefore risks being damaged.

Servizio

Rappresenta la relazione tra il tempo di lavoro ed il tempo di riposo del motore. Servizio continuo (S1) = funzionamento continuo del motore a pieno carico.

Servizio intermittente (S2, S3, etc...) = periodi alternati di lavoro e di riposo tali da raffreddare il motore. Dato un motore, la potenza espressa per servizio continuo è inferiore a quella per servizio intermittente.

Duty cycle

This represents the relationship between the time the motor operates and the time it remains stationary. Continuous operation (S1) = the motor operates non-stop under full load.

Intermittent operation (S2, S3, etc.) = alternating periods of work and rest so that the motor can cool down. The output power for continuous operation is lower than that for intermittent operation.

Fattore di forma

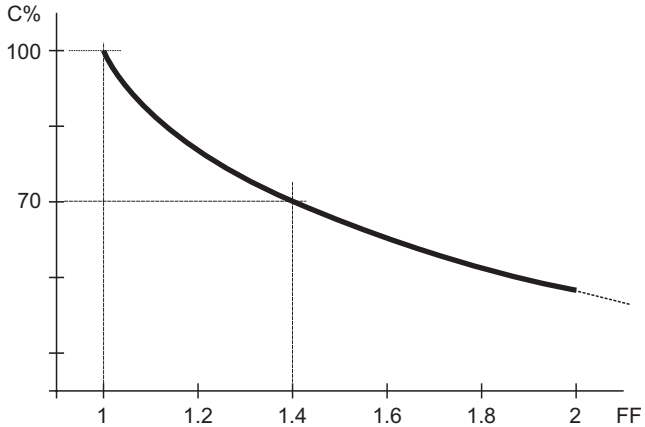
Indica quanta componente spuria alternata è presente nella alimentazione CC del motore. Più alto è il fattore ed inferiore è l'efficienza del motore. Alimentatori ad SCR = F.F 1.40. Alimentazione pura da batteria = FF 1 Alimentazione da transistori (modulazione PWM) = FF 1.05.

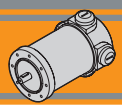
Qualitativamente l' andamento della coppia (percentuale) rispetto al fattore di forma è indicato nel grafico seguente:

Form factor

It indicates how much spurious alternating current is present in the D.C. motor power supply. The higher the factor, the lower the motor's efficiency. SCR power supplies = F.F 1.40. Battery supply = FF 1 Transistor supply (PWM modulation) = FF 1.05.

The graph below indicates the torque trend (percentage) in relation to the form factor:





Grado di protezione IP

IP enclosures protection indexes

Indica il grado di isolamento meccanico del corpo motore.

1ª cifra: protezione alla penetrazione di corpi solidi.

2ª cifra: protezione contro la penetrazione d'acqua.

Indicates the degree of mechanical insulation of the motor body.

1st figure: indicating level of protection against the penetration of solid bodies.

2nd figure: indicating degree to which the motor is waterproof.

0	Non protetto / *No protection*	**0**	Non protetto / *No protection*
1	Protetto da corpi solidi superiori a Ø 50 mm. *Protected against solid matters (over Ø 50 mm)*	**1**	Protetto contro la caduta verticale di gocce d'acqua. *Protected against drops of water falling vertically*
2	Protetto da corpi solidi superiori a Ø 12 mm. *Protected against solid matters (over Ø 12 mm)*	**2**	Protetto contro la caduta verticale di gocce d'acqua con inclinazione max di 15° *Protected against drops of water falling up to 15°*
3	Protetto da corpi solidi superiori a Ø 2.5 mm. *Protected against solid matters (over Ø 2.5 mm)*	**3**	Protetto contro la pioggia. *Rain proof fixture*
4	Protetto da corpi solidi superiori a Ø 1 mm. *Protected against solid matters (over Ø 1 mm)*	**4**	Protetto contro gli spruzzi. *Splash proof fixture*
5	Protetto contro la polvere *Dust proof*	**5**	Protetto contro getti d'acqua *Water jet proof*
6	Totalmente protetto contro la polvere *Fully dust proof*	**6**	Protetto dalle ondate *Wave proof*
7	N.A.	**7**	Protetto contro immersione *Watertight immersion fixture.*
8	N.A.	**8**	Protetto contro immersione/sommersione prolungata *Watertight immersion fixture for a long time.*

Classe di isolamento termico

Insulation class

Classe / *Class*	Δ t °C Temp. ambiente: 40°C *Ambient temperature: 40°C*
A	65°C
B	90°C
F	115°C
H	140°C

Tipi di servizio IEC

IEC duty cycle ratings

S1	**Servizio continuo.** Funzionamento a carico costante per una durata sufficiente al raggiungimento dell'equilibrio termico.	***Continuous duty.*** *The motor works at a constant load for enough time to reach temperature equilibrium*
S2	**Servizio di durata limitata.** Funzionamento a carico costante per una durata inferiore a quella necessaria al raggiungimento dell' equilibrio termico, seguito da un periodo di riposo tale da riportare il motore alla temperatura ambiente.	***Short time duty****. The motor works at a constant load, but not long enough to reach temperature equilibrium, and the rest periods are long enough for the motor to reach ambient temperature.*
S3	**Servizio periodico intermittente.** Sequenze di cicli identici di marcia e di riposo a carico costante, senza raggiungimento dell'equilibrio termico. La corrente di spunto ha effetti trascurabili sul surriscaldamento del motore.	***Intermittent periodic duty.*** *Sequential, identical run and rest cycles with constant load. Temperature equilibrium is never reached. Starting current has little effect on temperature rise.*
S4	**Servizio periodico intermittente con avviamento.** Sequenza di cicli di funzionamento identici di avviamento, marcia e riposo a carico costante, senza raggiungimento dell'equilibrio termico. La corrente di spunto ha effetti sul riscaldamento del motore.	***Intermittent periodic duty with starting.*** *Sequential identical start, run and rest cycles with constant load. Temperature equilibrium is not reached, but starting current affects temperature rise.*
S5	**Servizio periodico intermittente con frenatura elettrica.** Sequenza di cicli di funzionamento identici di avviamento, marcia a carico costante, frenatura elettrica e riposo, senza raggiungimento dell'equilibrio termico.	***Intermittent periodic duty with electric braking.*** *Sequential, identical cycles of starting, running at constant load, electric braking and rest. Temperature equilibrium is not reached.*
S6	**Servizio periodico ininterrotto con carico intermittente.** Sequenza di cicli di lavoro identici con carico costante e senza carico. Non ci sono periodi di riposo.	***Continuous operation with intermittent load.*** *Sequential, identical cycles of running with constant load and running with no load. No rest periods.*
S7	**Servizio periodico ininterrotto con frenatura elettrica.** Sequenza di cicli di funzionamento identici di avviamento, marcia a carico costante e frenatura elettrica, senza periodi di riposo.	***Continuous operation with electric braking.*** *Sequential, identical cycles of starting, running at constant load and electric braking. No rest periods.*
S8	**Servizio periodico ininterrotto con variazioni di carico e di velocità.** Sequenza di cicli identici di avviamento, marcia a carico costante e velocità definita, seguiti da marcia a carico costante differente e velocità differente dalla precedente. Non ci sono periodi di riposo.	***Continuous operation with periodic changes in load and speed.*** *Sequential, identical, duty cycles of start, run at constant load and given speed, then run at other constant loads and speeds. No rest periods.*

ND120.120 - ND120.240

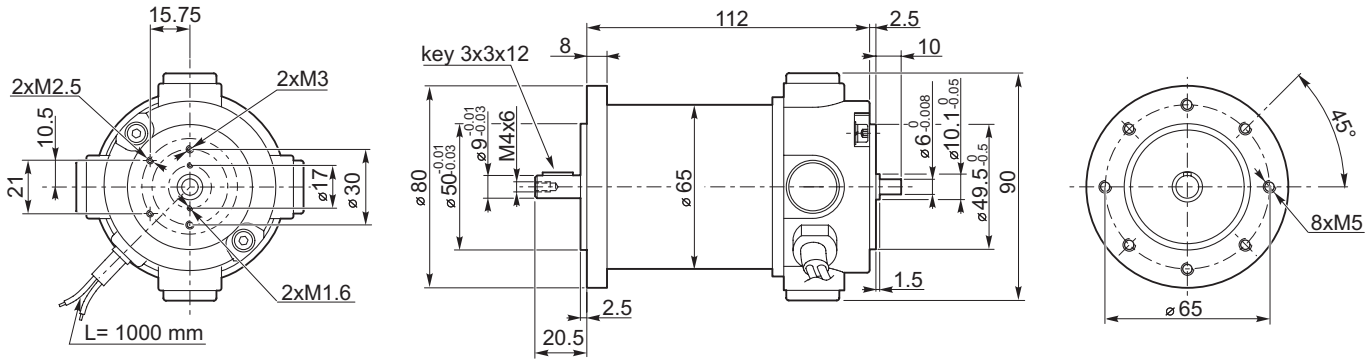
Caratteristiche / *Features*

Costruzione	Tubolare, senza ventilazione
Grandezza	Ø 65 mm
Potenza	160 W S2 (120 W S1)
Magneti	4 magneti in terre rare
Supporti	Cuscinetti a sfera
Fori di montaggio	8
Alimentazione	Bassa tensione, 12 o 24 Vcc
Spazzole	N° 4 di composto grafite-rame
Cavo di alimentazione	Lunghezza: 1000 mm
Bisporgenza	Standard

Construction	*Tubular, without fan*
Size	*Ø 65 mm*
Power	*160 W S2 (120 W S1)*
Magnets	*4 rare earth magnets*
Bearings	*Ball bearings*
Mounting holes	*8*
Power supply	*Low voltage, 12 or 24 Vdc*
Brushes	*4 brushes made of graphite/copper composite*
Electric cable	*Length: 1000 mm*
Rear Shaft	*Standard*

Tipo *Type*	S	Pn [W]	V [V]	I [A]	IC	FF	Mn [Nm]	n_1 [min^{-1}]	IP	Kg
ND120.120	**S1**	120	12	13.9	F	1	0.38	3000	20	1.6
	S2 20'	160		19			0.51			
ND120.240	**S1**	120	24	6.9			0.38			
	S2 20'	160		9.0			0.51			

Dimensioni / *Dimensions*



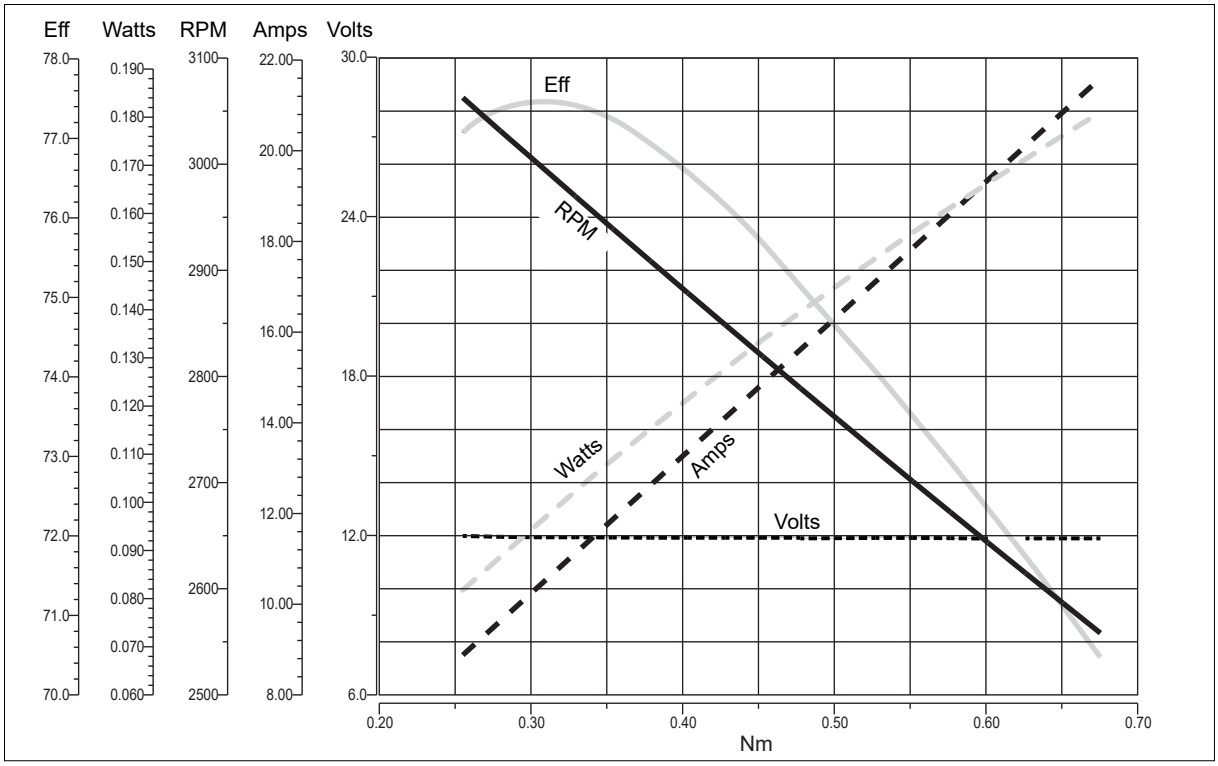
Freno / *Brake* G9

Encoder G9

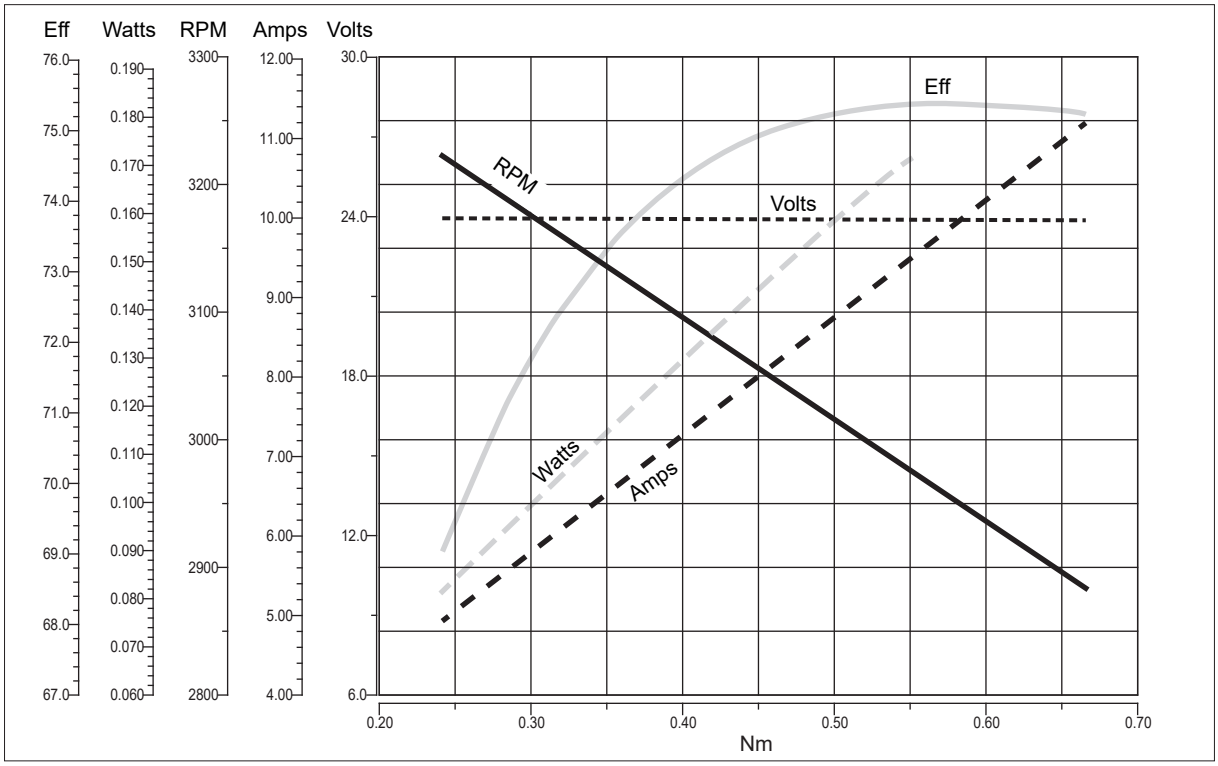
ND120.120 - ND120.240

Prestazioni / *Performances*

ND120.120



ND120.240



ND

ND180.120 - ND180.240

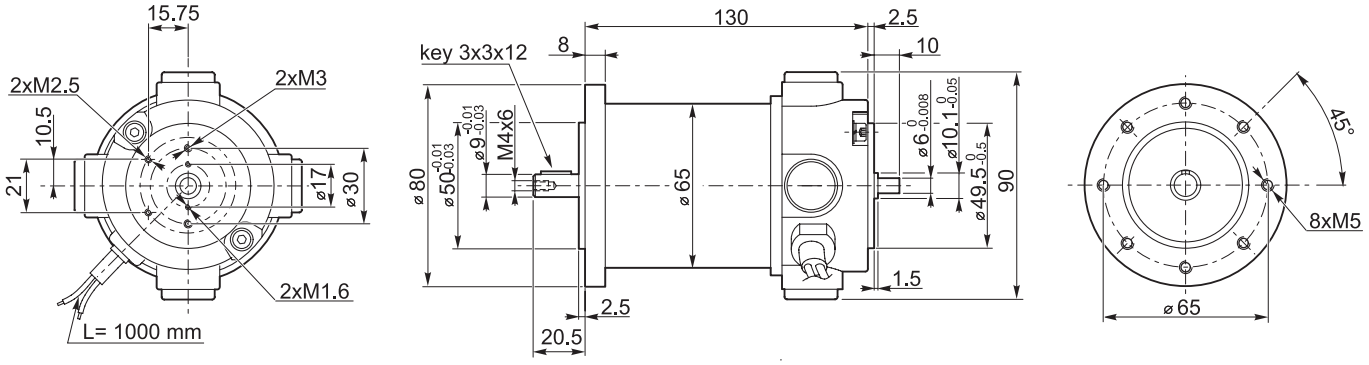
Caratteristiche / *Features*

Costruzione	Tubolare, senza ventilazione
Grandezza	Ø 65 mm
Potenza	250 W S2 (180 W S1)
Magneti	4 magneti in terre rare
Supporti	Cuscinetti a sfera
Fori di montaggio	8
Alimentazione	Bassa tensione, 12 o 24 Vcc
Spazzole	N° 4 di composto grafite-rame
Cavo di alimentazione	Lunghezza: 1000 mm
Bisporgenza	Standard

Construction	*Tubular, without fan*
Size	*Ø 65 mm*
Power	*250 W S2 (180 W S1)*
Magnets	*4 rare earth magnets*
Bearings	*Ball bearings*
Mounting holes	*8*
Power supply	*Low voltage, 12 or 24 Vdc*
Brushes	*4 brushes made of graphite/copper composite*
Electric cable	*Length: 1000 mm*
Rear Shaft	*Standard*

Tipo *Type*	S	Pn [W]	V [V]	I [A]	IC	FF	Mn [Nm]	n_1 [min^{-1}]	IP	Kg
ND180.120	**S1**	180	12	20	F	1	0.57	3000	20	1.95
	S2 20'	250		30			0.80			
ND180.240	**S1**	180	24	10			0.57			
	S2 20'	250		14			0.80			

Dimensioni / *Dimensions*



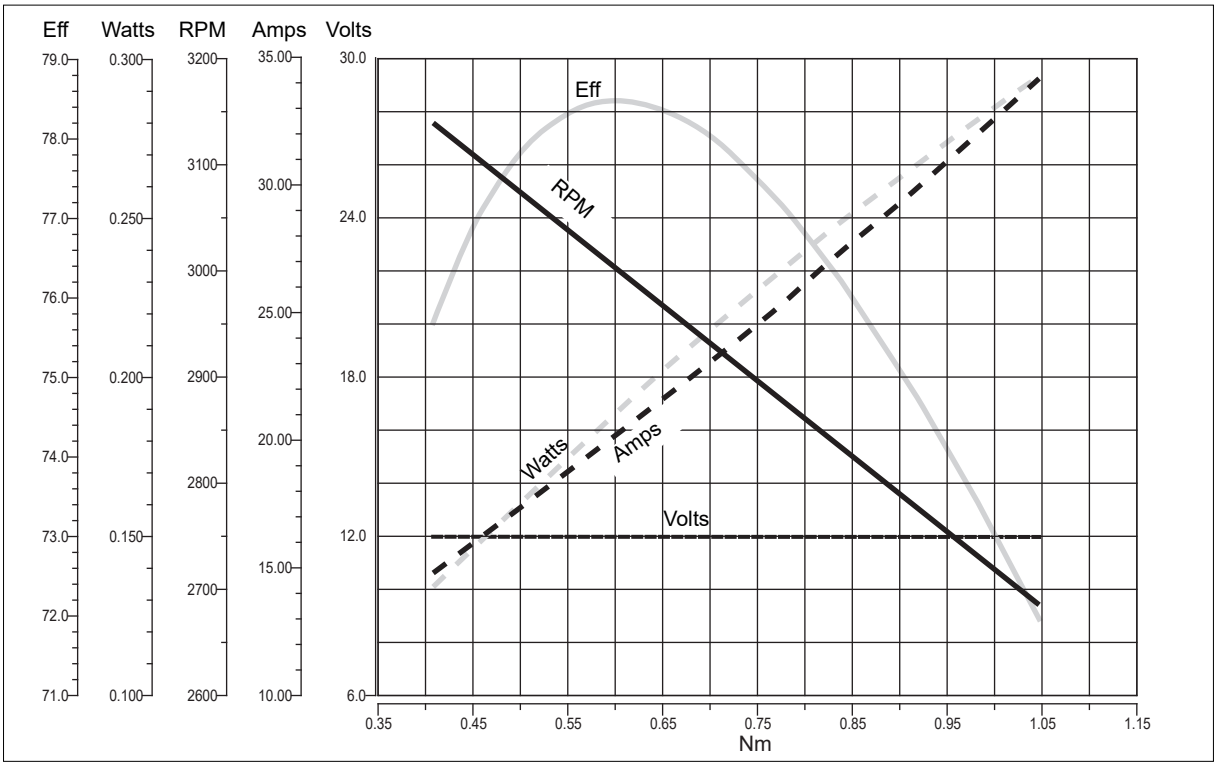
Freno / *Brake* → G9

Encoder → G9

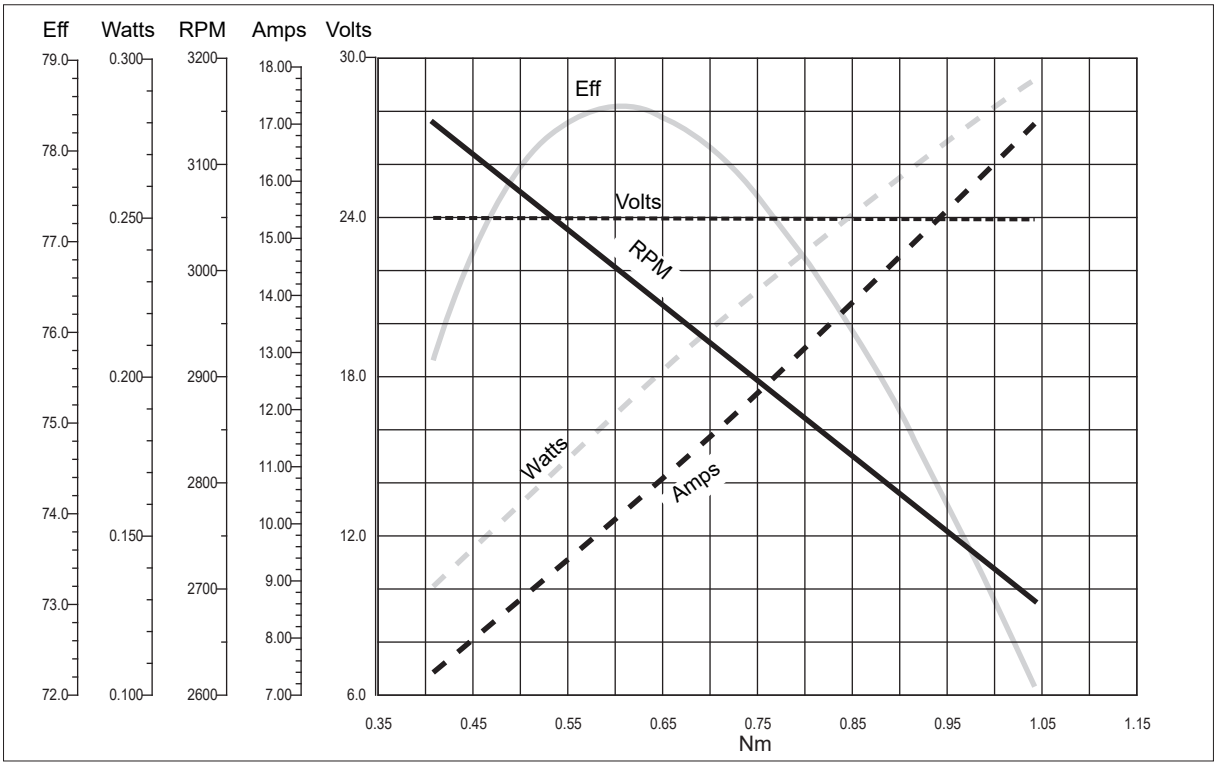
ND180.120 - ND180.240

Prestazioni / *Performances*

ND180.120



ND180.240



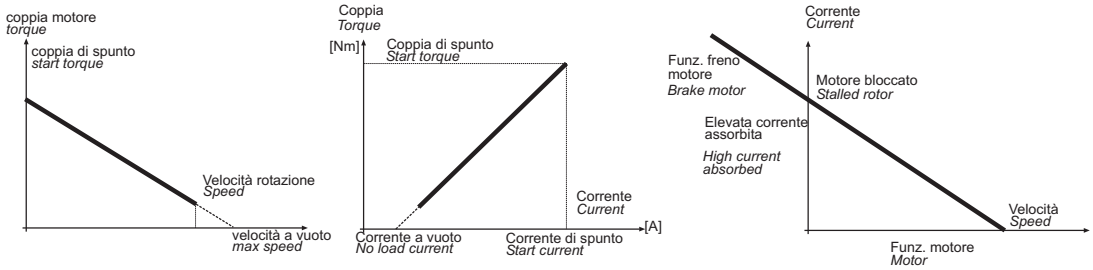
ND

Legenda / Glossario dei grafici

Key / Diagram Glossary

Dato un motore in CC, la velocità di rotazione è funzione lineare della coppia; così pure la corrente assorbita è una funzione lineare della coppia. Velocità e corrente variano in maniera sensibile al variare del carico.

With a DC motor, the rotational speed is a linear function of the torque. In the same way, the absorbed current is also a linear function of the torque. Speed and current change a lot against applied torque.

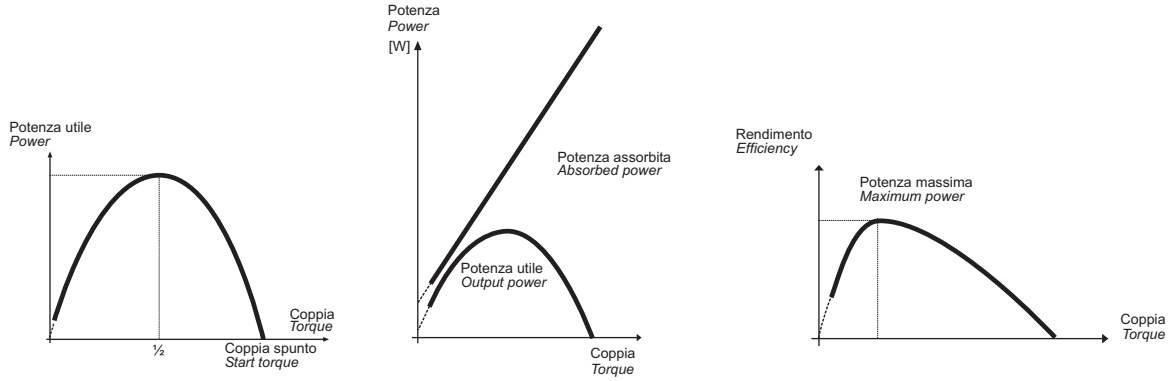


La potenza utile (potenza all'albero) si ricava dalla formula:

$$Pn\ [W] = Mn \cdot S = \frac{2\pi}{60} \cdot n_1 \cdot Mn$$

The output power is calculated using the formula:

$$Pn\ [W] = Mn \cdot S = \frac{2\pi}{60} \cdot n_1 \cdot Mn$$



Poiché la tensione di alimentazione è costante mentre la corrente è linearmente crescente al crescere della coppia, l'andamento della potenza assorbita è una retta crescente. Dal rapporto tra la potenza meccanica e la potenza assorbita si ottiene il grafico dell'efficienza.

Since the supply voltage is constant, whereas the current increases in a linear manner as the torque increases, the absorbed power trend is a straight line going up. Efficiency is shown from the ratio between the output power and the absorbed power.

Formule utili

Useful formulas

$$\eta = \frac{Pn}{Pa}$$

$$Pa = V \cdot I$$

$$Pn = V \cdot I \cdot \eta$$

$$Pn = Mn \cdot Sv$$

$$Sv = \frac{n_1}{9.55}$$

[HP] · 746 = [W].
Esempio 2 HP = circa 1500 W.

$$\eta = \frac{Pn}{Pa}$$

$$Pa = V \cdot I$$

$$Pn = V \cdot I \cdot \eta$$

$$Pn = Mn \cdot Sv$$

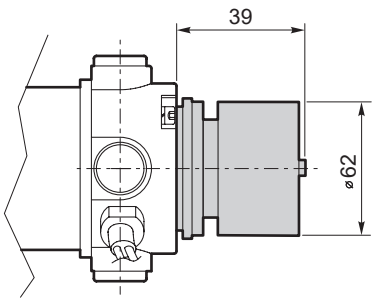
$$Sv = \frac{n_1}{9.55}$$

[HP] · 746 = [W].
Example 2 HP = approx. 1500 W.

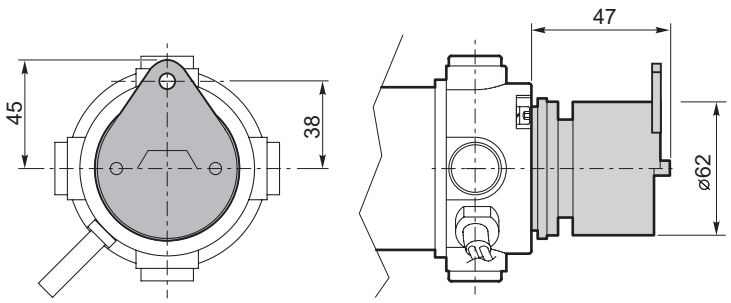
S	—	Servizio	*Duty*
Pn	[W]	Potenza in uscita	*Rated power*
Pa	[W]	Potenza assorbita	*Absorbed power*
Mn	[Nm]	Coppia nominale	*Rated torque*
V	[V]	Tensione	*Voltage*
I	[A]	Corrente assorbita	*Absorbed current*
n_1	[min^{-1}]	Numero giri motore	*Motor speed*
Sv	[rad/s]	Velocità angolare	*Angular speed*
IC	—	Classe d'isolamento termico	*Thermal insulation class*
FF	—	Fattore di forma	*Form factor*
IP	—	Classe di protezione	*Protection class*
η	—	Rendimento	*Efficiency*
Kg	—	Peso	*Weight*

Freno / *Brake*

ND...BR Freno / *Brake*



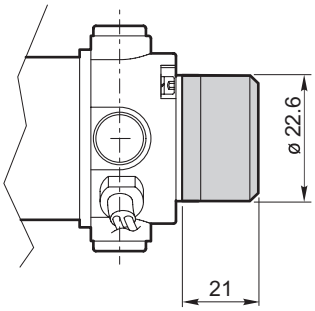
ND...BRL Freno con leva di sblocco/ *Brake with hand release*



	Pn [W]	V [V]	Mn [Nm]	n_1 [min^{-1}]
Caratteristiche del freno / *Break features*	14	12	1.8	3000
		24		

Encoder

ND...ME22



Nota: Fornito con cavo lungo 300 mm
Note: Supplie with cavle 300 mm long

Risoluzione Encoder (CPR) / *Encoder Resolution (CPR)*	Numero di canali / *Number of channels*	Tensione d'alimentazione / *Power supply*
001	2	5 VdC - TTL
100		
300		

Per risoluzioni encoder non standard, si prega di contattare il nostro Servizio Tecnico.
For non-standard encoder resolution, please contact our Technical Department.

Note/*Notes*

TRANSTECNO®
the modular gearmotor

AT

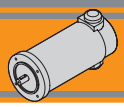
MOT.

Linear Actuators

Ferrite

Motori applicabili
Motori elettrici CC - EC
Applicable motors
DC Electric motors - EC





	Indice	*Index*	Pag. Page
	Caratteristiche tecniche	*Technical features*	**H2**
	Simbologia	*Symbols*	**H2**
	Grado di protezione IP	*IP enclosures protection indexes*	**H3**
	Classe di isolamento termico	*Insulation class*	**H3**
	Tipi di servizio IEC	*IEC duty cycle ratings*	**H3**
EC070.12E **EC070.24E**	Caratteristiche	*Features*	**H4**
	Dimensioni	*Dimensions*	**H4**
	Prestazioni	*Performances*	**H5**
EC100.120 **EC100.240** **EC100.24E**	Caratteristiche	*Features*	**H6**
	Dimensioni	*Dimensions*	**H6**
	Prestazioni	*Performances*	**H7**
EC180.120 **EC180.240** **EC180.24E**	Caratteristiche	*Features*	**H8**
	Dimensioni	*Dimensions*	**H8**
	Prestazioni	*Performances*	**H19**
EC250.120 **EC250.240**	Caratteristiche	*Features*	**H10**
	Dimensioni	*Dimensions*	**H10**
	Prestazioni	*Performances*	**H11**
EC350.120 **EC350.240**	Caratteristiche	*Features*	**H12**
	Dimensioni	*Dimensions*	**H12**
	Prestazioni	*Performances*	**H13**
	Legenda / Glossario dei grafici	*Key / Diagram Glossary*	**H14**
	Formule utili	*Useful formulas*	**H14**
	Freni	*Brakes*	**H15**
	Encoder	*Encoder*	**H16**

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Caratteristiche tecniche

Le caratteristiche principali dei motori elettrici CC a magneti permanenti in ferrite EC sono:

- Campo magnetico generato da magneti permanenti in ferrite
- Costruzione tubolare, senza ventilazione
- Disponibili in 6 grandezze: diametro 65, 81, 104, 110 mm
- Alimentazione a bassa tensione, 12 o 24 Vcc
- Potenze disponibili da 100 a 500 W S2
- Elevate coppie di spunto
- Elevate coppie e potenze in dimensioni compatte

Technical features

The main features of EC ferrite permanent magnets DC electric motors range are:

- *Magnetic field generated by permanent ferrite magnets*
- *Tubular construction, without fan*
- *Available in 6 sizes: diameter 65, 81, 104, 110 mm*
- *Low voltage power supply, 12 or 24 Vdc*
- *Power ratings available from 100 to 500 W S2*
- *High starting torque*
- *High torque and output power with compact package*

Classe di isolamento termico

Gli avvolgimenti del rotore sono soggetti a surriscaldamento, come pure altre parti del motore. Il grado di isolamento indica la massima temperatura ammissibile oltre la quale l'isolante della matassa e l'isolante di tutte le parti soggette ad elevato riscaldamento perde le caratteristiche di buon isolante, con pericolo di danneggiamento del motore.

Thermal insulation class

The windings of the rotor can overheat just like other parts of the motor too. The degree of insulation indicates the maximum allowable temperature above which the insulation of the windings, as well as that of all the parts which heat up to a high temperature, loses its insulating properties and the motor therefore risks being damaged.

Servizio

Rappresenta la relazione tra il tempo di lavoro ed il tempo di riposo del motore. Servizio continuo (S1) = funzionamento continuo del motore a pieno carico.

Servizio intermittente (S2, S3, etc...) = periodi alternati di lavoro e di riposo tali da raffreddare il motore. Dato un motore, la potenza espressa per servizio continuo è inferiore a quella per servizio intermittente.

Duty cycle

This represents the relationship between the time the motor operates and the time it remains stationary. Continuous operation (S1) = the motor operates non-stop under full load.

Intermittent operation (S2, S3, etc.) = alternating periods of work and rest so that the motor can cool down. The output power for continuous operation is lower than that for intermittent operation.

Fattore di forma

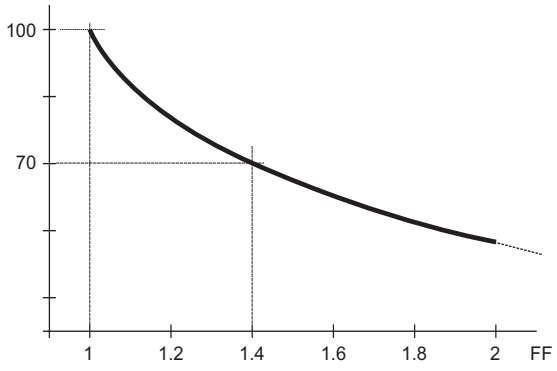
Indica quanta componente spuria alternata è presente nella alimentazione CC del motore. Più alto è il fattore ed inferiore è l'efficienza del motore. Alimentatori ad SCR = F.F 1.40. Alimentazione pura da batteria = FF 1. Alimentazione da transistori (modulazione PWM) = FF 1.05.

Qualitativamente l' andamento della coppia (percentuale) rispetto al fattore di forma è indicato nel grafico seguente:

Form factor

It indicates how much spurious alternating current is present in the D.C. motor power supply. The higher the factor, the lower the motor's efficiency. SCR power supplies = F.F 1.40. Battery supply = FF 1 Transistor supply (PWM modulation) = FF 1.05.

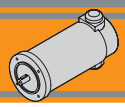
The graph below indicates the torque trend (percentage) in relation to the form factor.



Simbologia

Symbols

S	—	Servizio / *Duty*	**M_{Br}**	[Nm]	Coppia nominale del freno / *Brake motor torque*
Pn	[W]	Potenza in uscita / *Rated power*	**n_1 max**	[min^{-1}]	Velocità massima / *Max speed*
Pa	[W]	Potenza assorbita / *Absorbed power*	**T_r**	[ms]	Tempo di inserzione / *Engaging time*
Mn	[Nm]	Coppia nominale / *Rated torque*	**T_f**	[ms]	Tempo di disimpegno / *Disengaging time*
V	[V]	Tensione / *Voltage*	**IC**	—	Classe d'isolamento termico / *Thermal insulation class*
I	[A]	Corrente assorbita / *Absorbed current*	**FF**	—	Fattore di forma / *Form factor*
n1	[min-1]	Numero giri motore / *Motor speed*	**IP**	—	Classe di protezione / *Protection class*
Sv	[rad/s]	Velocità angolare / *Angular speed*	**η**	—	Rendimento / *Efficiency*
Pe	[W]	Potenza elettrica del freno / *Brake electric power*	**Kg**	—	Peso / *Weight*



Grado di protezione IP

IP enclosures protection indexes

Indica il grado di isolamento meccanico del corpo motore.
1ª cifra protezione alla penetrazione di corpi solidi.

2ª cifra protezione contro la penetrazione d'acqua.

Indicates the degree of mechanical insulation of the motor body.
1st figure indicating level of protection against the penetration of solid bodies.

2nd figure: indicating degree to which the motor is waterproof.

0	Non protetto / *No protection*	**0**	Non protetto / *No protection*
1	Protetto da corpi solidi superiori a Ø 50 mm. *Protected against solid matters (over Ø 50 mm)*	**1**	Protetto contro la caduta verticale di gocce d'acqua. *Protected against drops of water falling vertically*
2	Protetto da corpi solidi superiori a Ø 12 mm. *Protected against solid matters (over Ø 12 mm)*	**2**	Protetto contro la caduta verticale di gocce d'acqua con inclinazione max di 15° *Protected against drops of water falling up to 15°*
3	Protetto da corpi solidi superiori a Ø 2,5 mm. *Protected against solid matters (over Ø 2,5 mm)*	**3**	Protetto contro la pioggia. *Rain proof fixture*
4	Protetto da corpi solidi superiori a Ø1 mm. *Protected against solid matters (over Ø1 mm)*	**4**	Protetto contro gli spruzzi. *Splash proof fixture*
5	Protetto contro la polvere *Dust proof*	**5**	Protetto contro getti d'acqua *Water jet proof*
6	Totalmente protetto contro la polvere *Fully dust proof*	**6**	Protetto dalle ondate *Wave proof*
7	N.A.	**7**	Protetto contro immersione *Watertight immersion fixture.*
8	N.A.	**8**	Protetto contro immersione/sommersione prolungata *Watertight immersion fixture for a long time.*

Classe di isolamento termico

Insulation class

Classe / *Class*	Δ t °C Temp. ambiente: 40°C *Ambient temperature: 40°C*
A	65°C
B	90°C
F	115°C
H	140°C

Tipi di servizio IEC

IEC duty cycle ratings

S1	**Servizio continuo.** Funzionamento a carico costante per una durata sufficiente al raggiungimento dell' equilibrio termico.	***Continuous duty.*** *The motor works at a constant load for enough time to reach temperature equilibrium*
S2	**Servizio di durata limitata.** Funzionamento a carico costante per una durata inferiore a quella necessaria al raggiungimento dell' equilibrio termico, seguito da un periodo di riposo tale da riportare il motore alla temperatura ambiente.	***Short time duty****. The motor works at a constant load, but not long enough to reach temperature equilibrium, and the rest periods are long enough for the motor to reach ambient temperature.*
S3	**Servizio periodico intermittente.** Sequenze di cicli identici di marcia e di riposo a carico costante, senza raggiungimento dell' equilibrio termico. La corrente di spunto ha effetti trascurabili sul surriscaldamento del motore.	***Intermittent periodic duty.*** *Sequential, identical run and rest cycles with constant load. Temperature equilibrium is never reached. Starting current has little effect on temperature rise.*
S4	**Servizio periodico intermittente con avviamento.** Sequenza di cicli di funzionamento identici di avviamento, marcia e riposo a carico costante, senza raggiungimento dell'equilibrio termico. La corrente di spunto ha effetti sul riscaldamento del motore.	***Intermittent periodic duty with starting.*** *Sequential identical start, run and rest cycles with constant load. Temperature equilibrium is not reached, but starting current affects temperature rise.*
S5	**Servizio periodico intermittente con frenatura elettrica.** Sequenza di cicli di funzionamento identici di avviamento, marcia a carico costante, frenatura elettrica e riposo, senza raggiungimento dell'equilibrio termico.	***Intermittent periodic duty with electric braking.*** *Sequential, identical cycles of starting, running at constant load, electric braking and rest. Temperature equilibrium is not reached.*
S6	**Servizio periodico ininterrotto con carico intermittente.** Sequenza di cicli di lavoro identici con carico costante e senza carico. Non ci sono periodi di riposo.	***Continuous operation with intermittent load.*** *Sequential, identical cycles of running with constant load and running with no load. No rest periods.*
S7	**Servizio periodico ininterrotto con frenatura elettrica.** Sequenza di cicli di funzionamento identici di avviamento, marcia a carico costante e frenatura elettrica, senza periodi di riposo.	***Continuous operation with electric braking.*** *Sequential, identical cycles of starting, running at constant load and electric braking. No rest periods.*
S8	**Servizio periodico ininterrotto con variazioni di carico e di velocità.** Sequenza di cicli identici di avviamento, marcia a carico costante e velocità definita, seguiti da marcia a carico costante differente e velocità differente dalla precedente. Non ci sono periodi di riposo.	***Continuous operation with periodic changes in load and speed.*** *Sequential, identical, duty cycles of start, run at constant load and given speed, then run at other constant loads and speeds. No rest periods.*

EC070.12E - EC070.24E

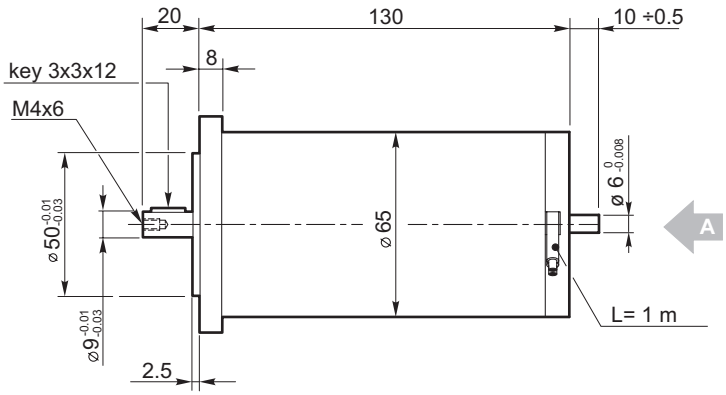
Caratteristiche / *Features*

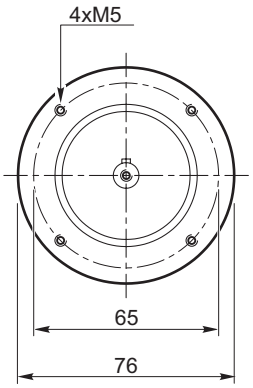
Costruzione	Tubolare, senza ventilazione
Grandezza	Ø 65 mm
Potenza	100 W S2
Magneti	2
Supporti	Cuscinetti a sfera
Fori di montaggio	4
Alimentazione	Bassa tensione, 12 o 24 Vcc
Spazzole	N° 2 interne di composto grafite-rame
Cavo di alimentazione	Lunghezza: 1000 mm

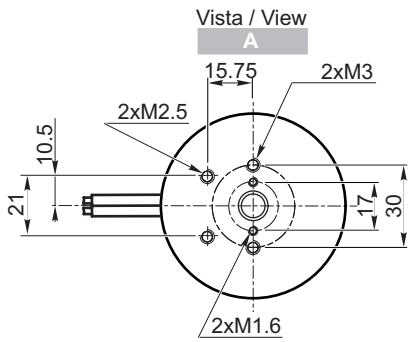
Construction	*Tubular, without fan*
Size	*Ø 65 mm*
Power	*100 W S2*
Magnets	*2*
Bearings	*Ball bearings*
Mounting holes	*4*
Power supply	*Low voltage, 12 or 24 Vdc*
Brushes	*2 inside brushes made of graphite/copper composite*
Electric cable	*Length: 1000 mm*

Tipo *Type*	S	Pn [W]	V [V]	I [A]	IC	FF	Mn [Nm]	n_1 [min^{-1}]	IP	Kg
EC070.12E	**S1**	70	12	8.4	F	1	0.22	3000	20	1.7
	S2 30'	100		11.8			0.31			
EC070.24E	**S1**	70	24	4.2			0.22			
	S2 30'	100		5.9			0.31			

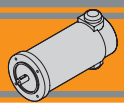
Dimensioni / *Dimensions*







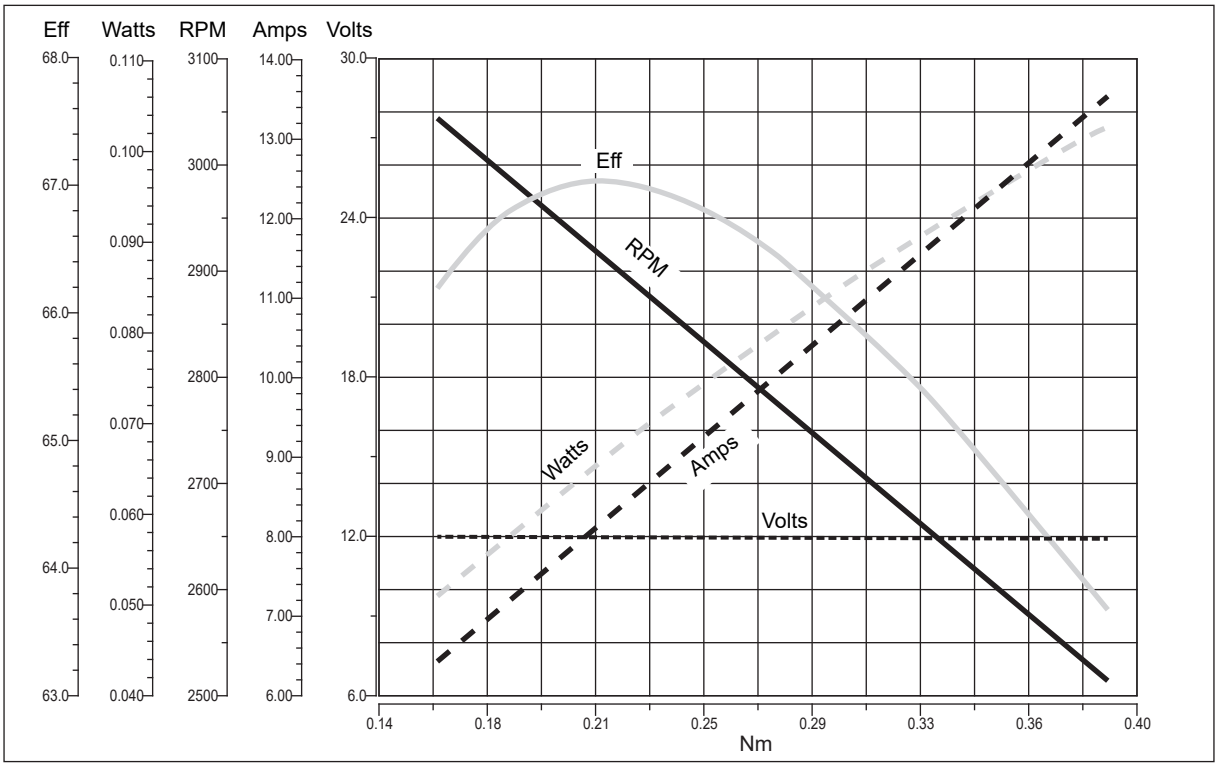
Freno / *Brake* H15
Encoder H16



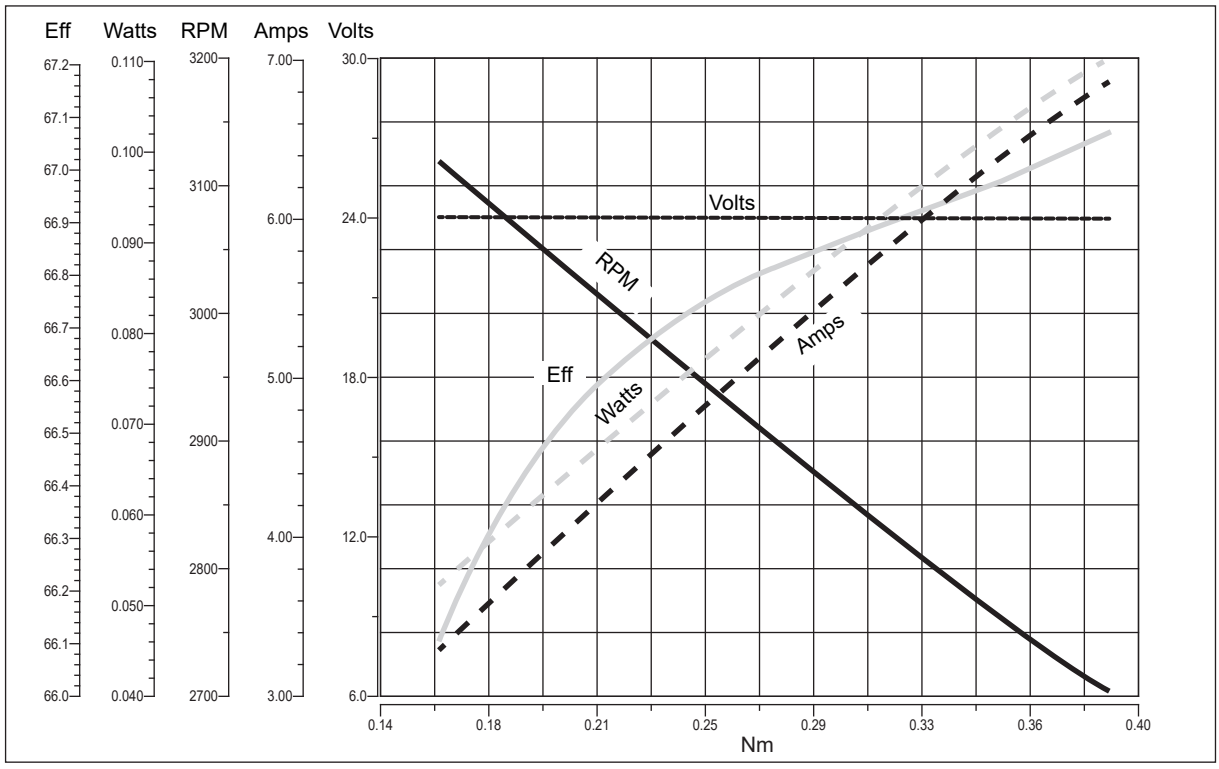
EC070.12E - EC070.24E

Prestazioni ***Performances***

EC070.12E



EC070.24E



EC100.120 - EC100.240 - EC100.24E

Caratteristiche / *Features*

Costruzione	Tubolare, senza ventilazione
Grandezza	Ø 80 mm
Potenza	140 W S2 (100 W S1)
Magneti	2
Supporti	Cuscinetti a sfera
Fori di montaggio	4
Alimentazione	Bassa tensione, 12 o 24 Vcc
Spazzole	N° 2 di composto grafite-rame
Dimensione spazzole	LxPxH = 17.1 x 6.5 x 16.7 mm
Cavo di alimentazione	Lunghezza: 1000 mm
Bisporgenza	Standard solo EC100.24E

Construction	*Tubular, without fan*
Size	*Ø 80 mm*
Power	*140 W S2 (100 W S1)*
Magnets	*2*
Bearings	*Ball bearings*
Mounting holes	*4*
Power supply	*Low voltage, 12 or 24 Vdc*
Brushes	*2 inside brushes made of graphite/copper composite*
Brushes size	*LxWxH = 17.1 x 6.5 x 16.7 mm*
Electric cable	*Length: 1000 mm*
Rear shaft	*Standard only EC100.24E*

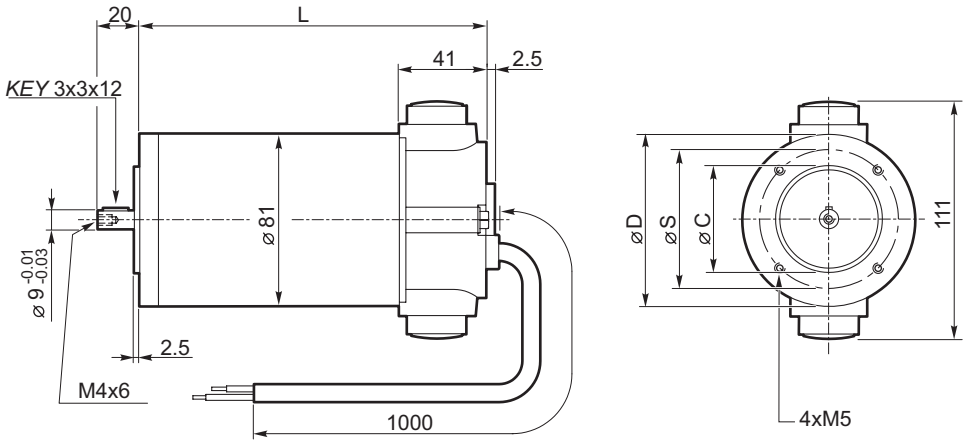
Tipo *Type*	S	Pn [W]	V [V]	I [A]	IC	FF	Mn [Nm]	n_1 [min^{-1}]	IP	Kg
EC100.120	**S1**	100	12	12	F	1	0.31	3000	40	2.7
	S2 25'	140		16.8			0.43			
EC100.240	**S1**	100	24	6			0.31			
	S2 25'	140		8.4			0.43			
EC100.24E	**S1**	100		6			0.31		20	
	S2 25'	140		8.4			0.43			

Dimensioni / *Dimensions*

EC100.120
EC100.240

56 B14	
L	153
D	80
S	65
C (-0.01 / -0.03)	50
63B14*	
L	155
D	90
S	75
C (-0.01 / -0.03)	60

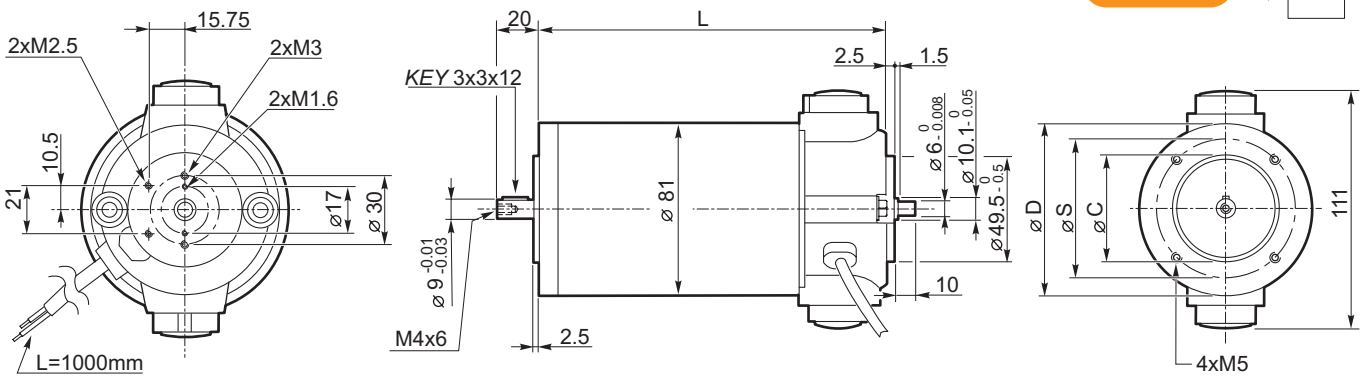
* Usare boccola 9/11
** Use sleeve 9/11*

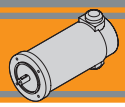


Freno / *Brake* → H15

Encoder → H16

EC100.24E

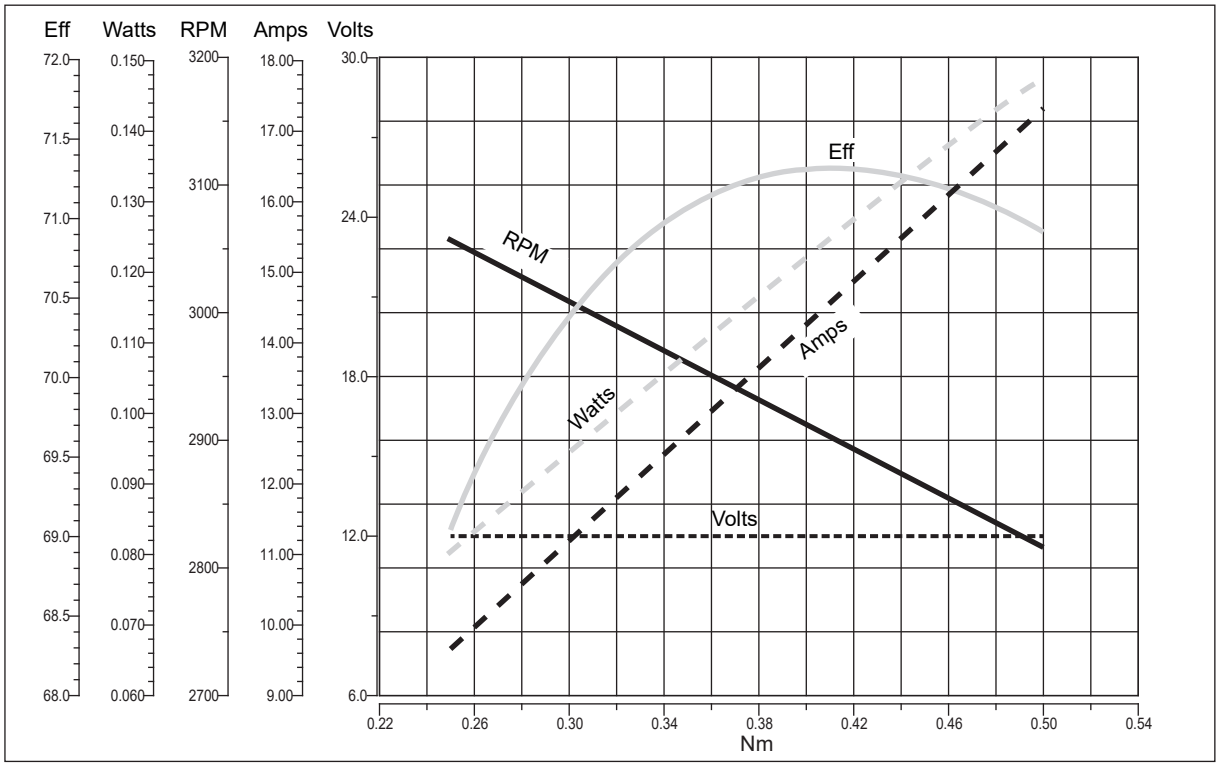




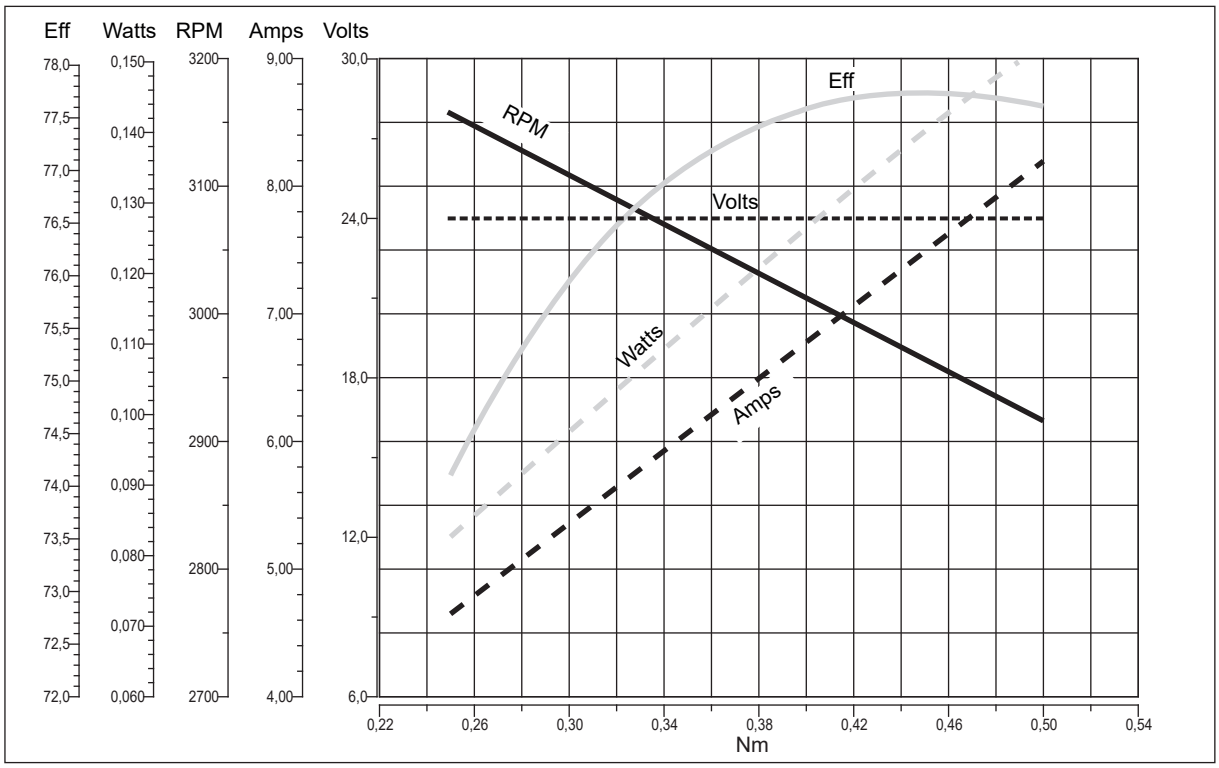
EC100.120 - EC100.240 - EC100.24E

Prestazioni ***Performances***

EC100.120



EC100.240 - EC100.24E



EC180.120 - EC180.240 - EC180.24E

Caratteristiche / *Features*

Costruzione	Tubolare, senza ventilazione
Grandezza	Ø 80 mm
Potenza	250 W S2 (180 W S1)
Magneti	2
Supporti	Cuscinetti a sfera
Fori di montaggio	4
Alimentazione	Bassa tensione, 12 o 24 Vcc
Spazzole	N° 2 di composto grafite-rame
Dimensione spazzole	LxPxH = 17.1 x 6.5 x 16.7 mm
Cavo di alimentazione	Lunghezza:1000 mm
Bisporgenza	Standard solo EC180.24E

Construction	*Tubular, without fan*
Size	*Ø 80 mm*
Power	*250 W S2 (180 W S1)*
Magnets	*2*
Bearings	*Ball bearings*
Mounting holes	*4*
Power supply	*Low voltage, 12 or 24 Vdc*
Brushes	*2 inside brushes made of graphite/copper composite*
Brushes size	*LxPxH = 17.1 x 6.5 x 16.7 mm*
Electric cable	*Length: 1000 mm*
Rear shaft	*Standard only EC180.24E*

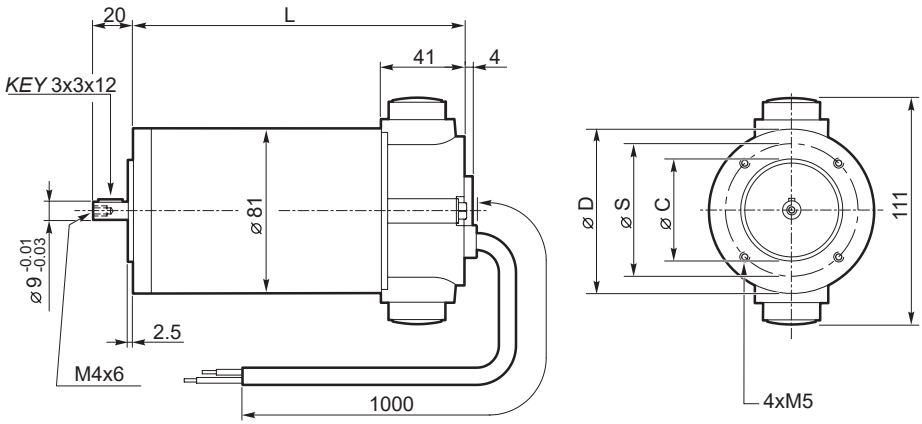
Tipo *Type*	S	Pn [W]	V [V]	I [A]	IC	FF	Mn [Nm]	n_1 [min^{-1}]	IP	Kg
EC180.120	**S1**	180	12	21.5	F	1	0.57	3000	40	3.4
	S2 25'	250		30			0.8			
EC180.240	**S1**	180	24	10.8			0.57			
	S2 25'	250		15			0.8			
EC180.24E	**S1**	180		10.8			0.57		20	
	S2 25'	250		15			0.8			

Dimensioni / *Dimensions*

EC180.120
EC180.240

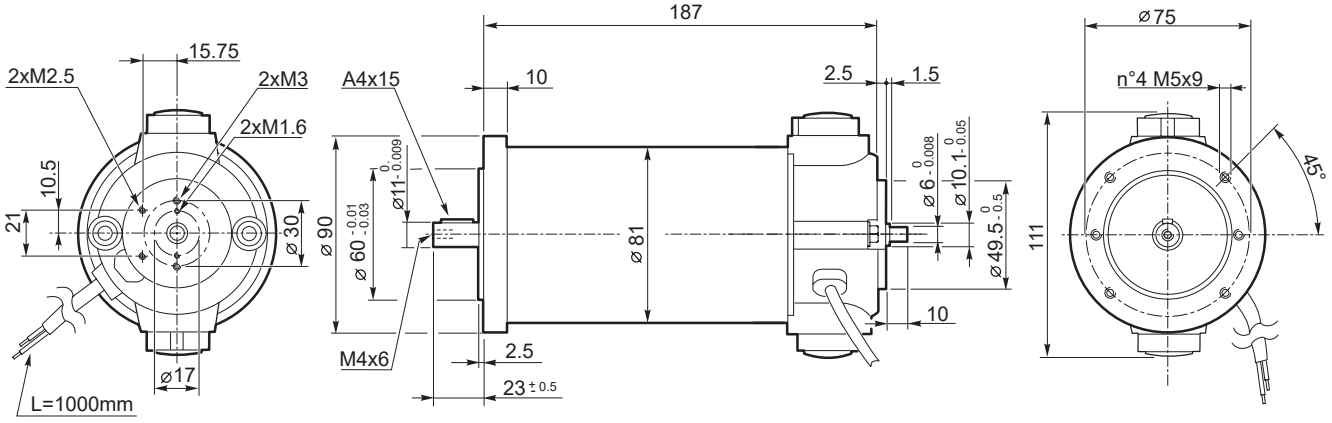
56 B14	
L	185
D	80
S	65
C (-0.01 / -0.03)	50
63B14*	
L	187
D	90
S	75
C (-0.01 / -0.03)	60

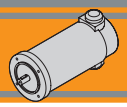
* Usare boccola 9/11
** Use sleeve 9/11*



Freno / *Brake* → H15
Encoder → H16

EC180.24E

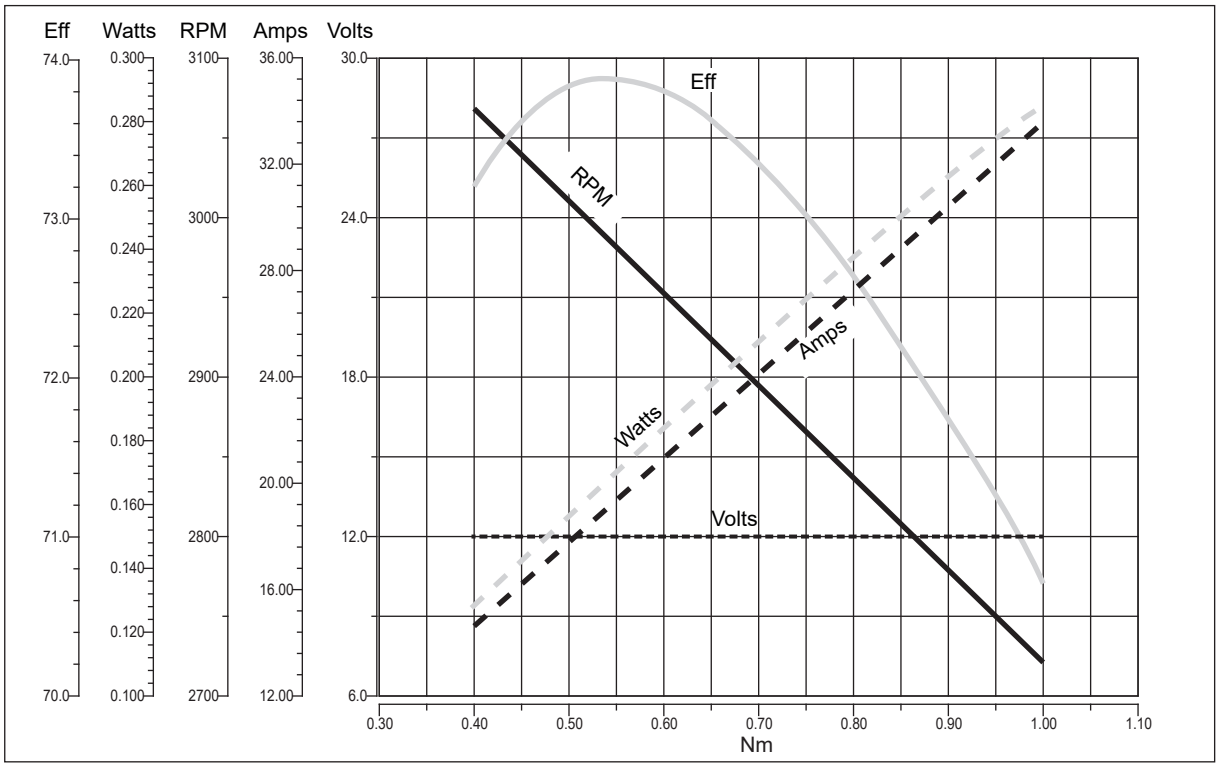




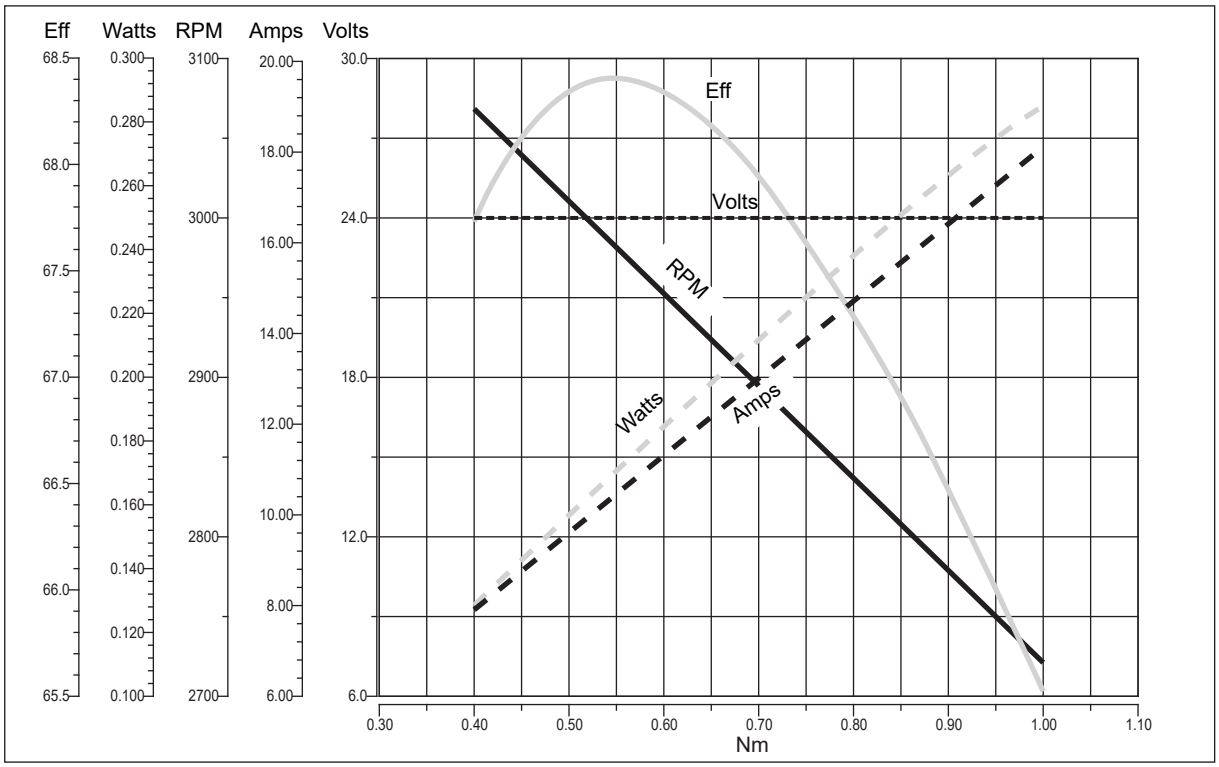
EC180.120 - EC180.240 - EC180.24E

Prestazioni ***Performances***

EC180.120



EC180.240 - EC180.24E



EC250.120 - EC250.240

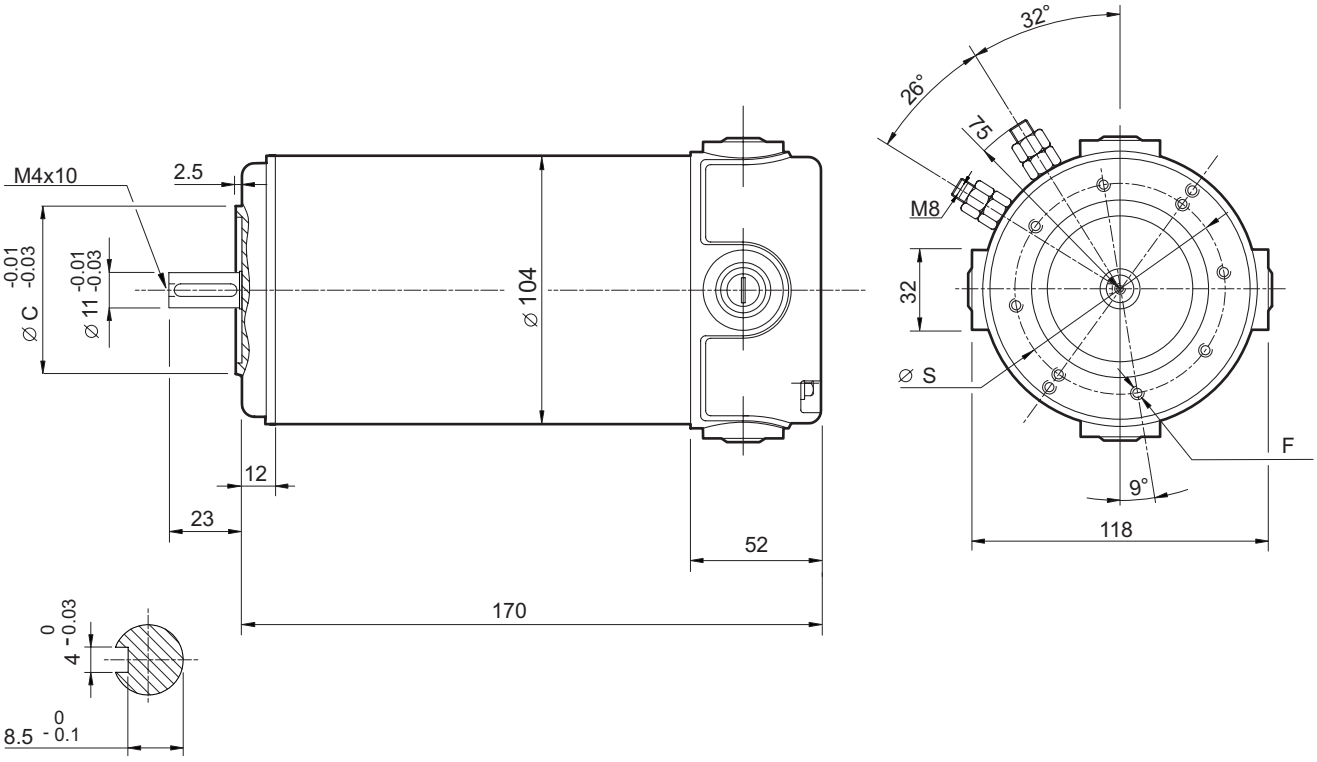
Caratteristiche / *Features*

Costruzione	Tubolare, senza ventilazione
Grandezza	Ø 104 mm
Potenza	350 W S2 (250 W S1)
Magneti	4
Supporti	Cuscinetti a sfera
Fori di montaggio	8
Alimentazione	Bassa tensione, 12 o 24 Vcc
Spazzole	N° 4 di composto grafite-rame
Dimensione spazzole	LxPxH = 18.9 x 9.5 x 16.7 mm
Terminali	2 con doppio dado di fissaggio

Construction	*Tubular, without fan*
Size	*Ø 104 mm*
Power	*350 W S2 (250 W S1)*
Magnets	*4*
Bearings	*Ball bearings*
Mounting holes	*8*
Power supply	*Low voltage, 12 or 24 Vdc*
Brushes	*4 inside brushes made of graphite/copper composite*
Brushes size	*LxPxH = 18.9 x 9.5 x 16.7 mm*
Leads terminals	*2, with double nut*

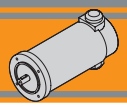
Tipo *Type*	S	Pn [W]	V [V]	I [A]	IC	FF	Mn [Nm]	n_1 [min^{-1}]	IP	Kg
EC250.120	**S1**	250	12	30	F	1	0.8	3000	40	4.15
	S2 25'	350		38.5			1.12			
EC250.240	**S1**	250	24	15			0.8			
	S2 25'	350		20.5			1.12			

Dimensioni / *Dimensions*



	63 B14	71 B14*
S	75	85
C (-0.01 / -0.03)	60	70
F	8 - M5	8 - M6

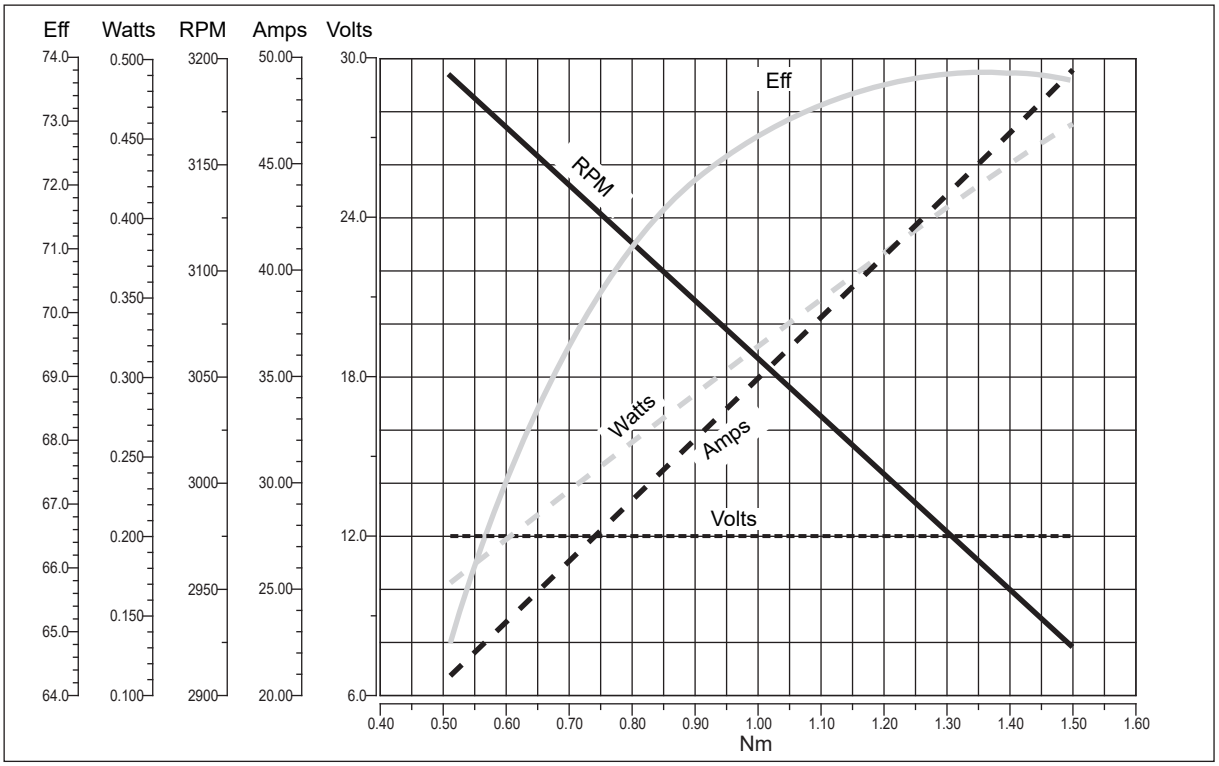
* Usare boccola 11/14
** Use sleeve 11/14*



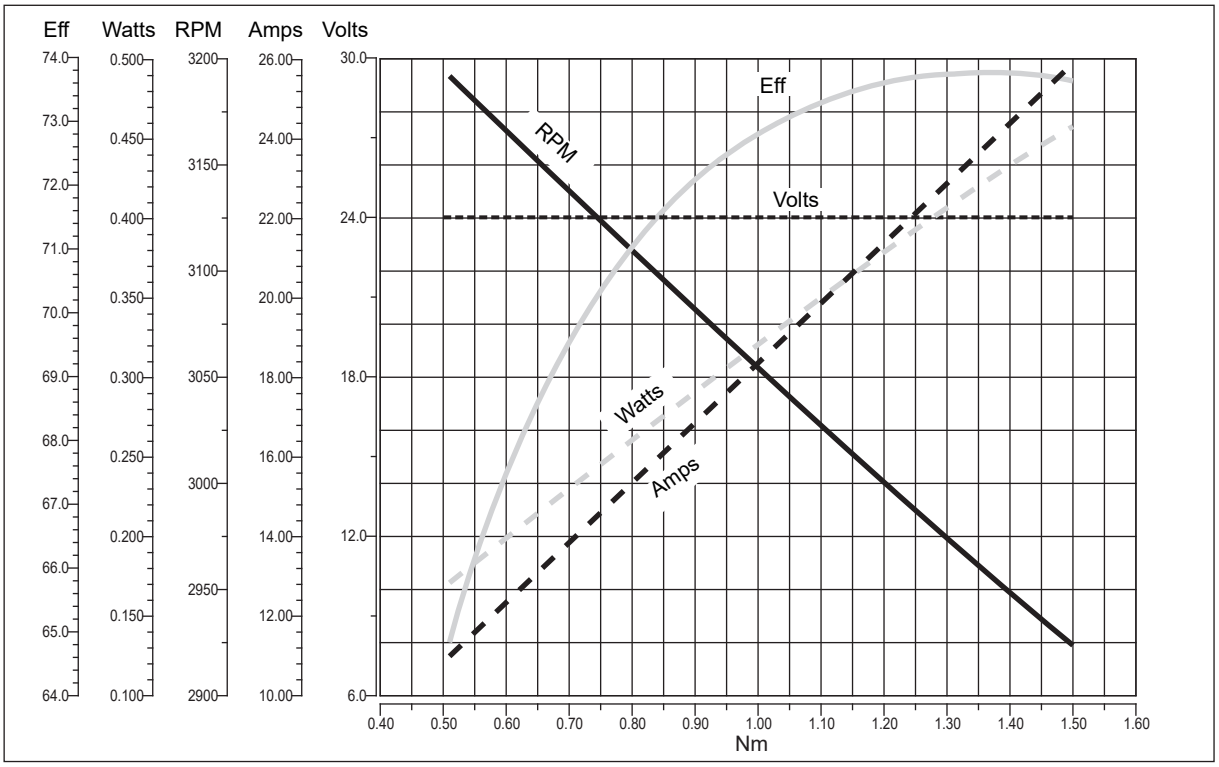
EC250.120 - EC250.240

Prestazioni / *Performances*

EC250.120



EC250.240



EC350.120 - EC350.240

Caratteristiche / *Features*

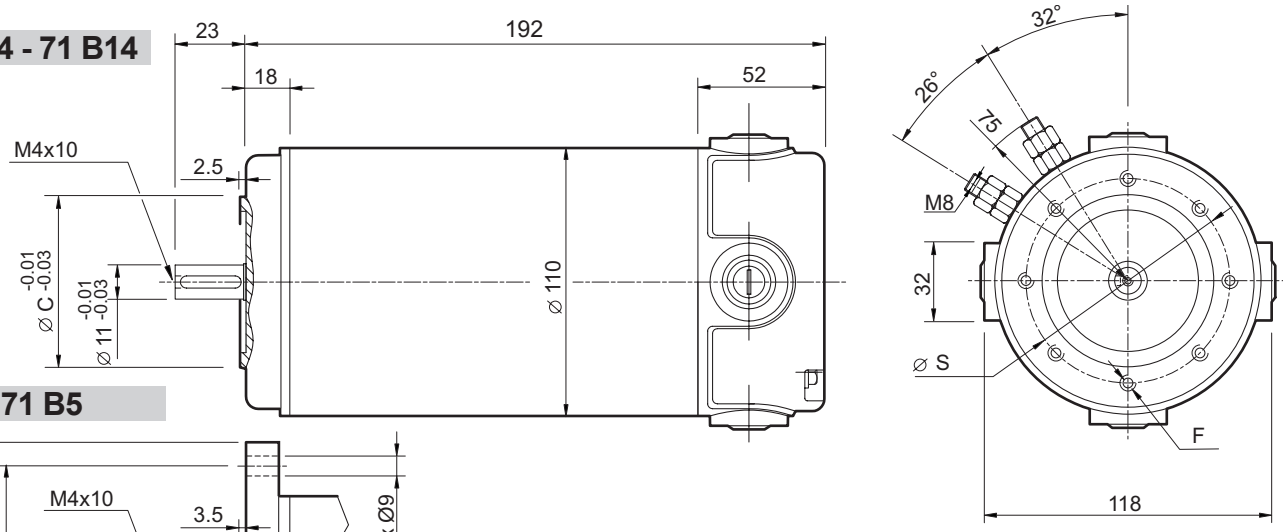
Costruzione	Tubolare, senza ventilazione
Grandezza	Ø 110 mm
Potenza	500 W S2 (350 W S1)
Magneti	4
Supporti	Cuscinetti a sfera
Fori di montaggio	8
Alimentazione	Bassa tensione, 12 o 24 Vcc
Spazzole	N° 4 di composto grafite-rame
Dimensione spazzole	LxPxH = 18.9 x 9.5 x 16.7 mm
Terminali	2 con dadi di fissaggio
Freno	Elettromagnetico

Construction	*Tubular, without fan*
Size	*Ø 110 mm*
Power	*500 W S2 (350 W S1)*
Magnets	*4*
Bearings	*Ball bearings*
Mounting holes	*8*
Power supply	*Low voltage, 12 or 24 Vdc*
Brushes	*4 brushes made of graphite/copper composite*
Brushes size	*LxPxH = 18.9 x 9.5 x 16.7 mm*
Leads terminals	*2, with double nut*
Brake	*Electromagnetic*

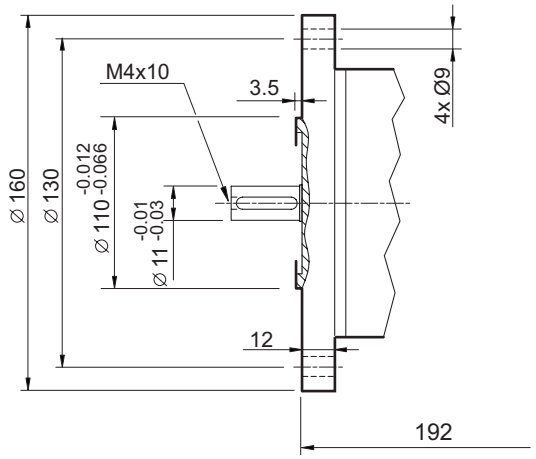
Tipo *Type*	S	Pn [W]	V [V]	I [A]	IC	FF	Mn [Nm]	n_1 [min^{-1}]	IP	Kg
EC350.120	**S1**	350	12	42	F	1	1.12	3000	40	5.1
	S2 30'	500		58.8			1.57			
EC350.240	**S1**	350	24	21			1.12		40	5.3
	S2 30'	500		29.4			1.57			

Dimensioni / *Dimensions*

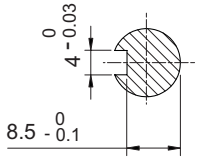
63 B14 - 71 B14



71 B5



Freno / *Brake* → H15



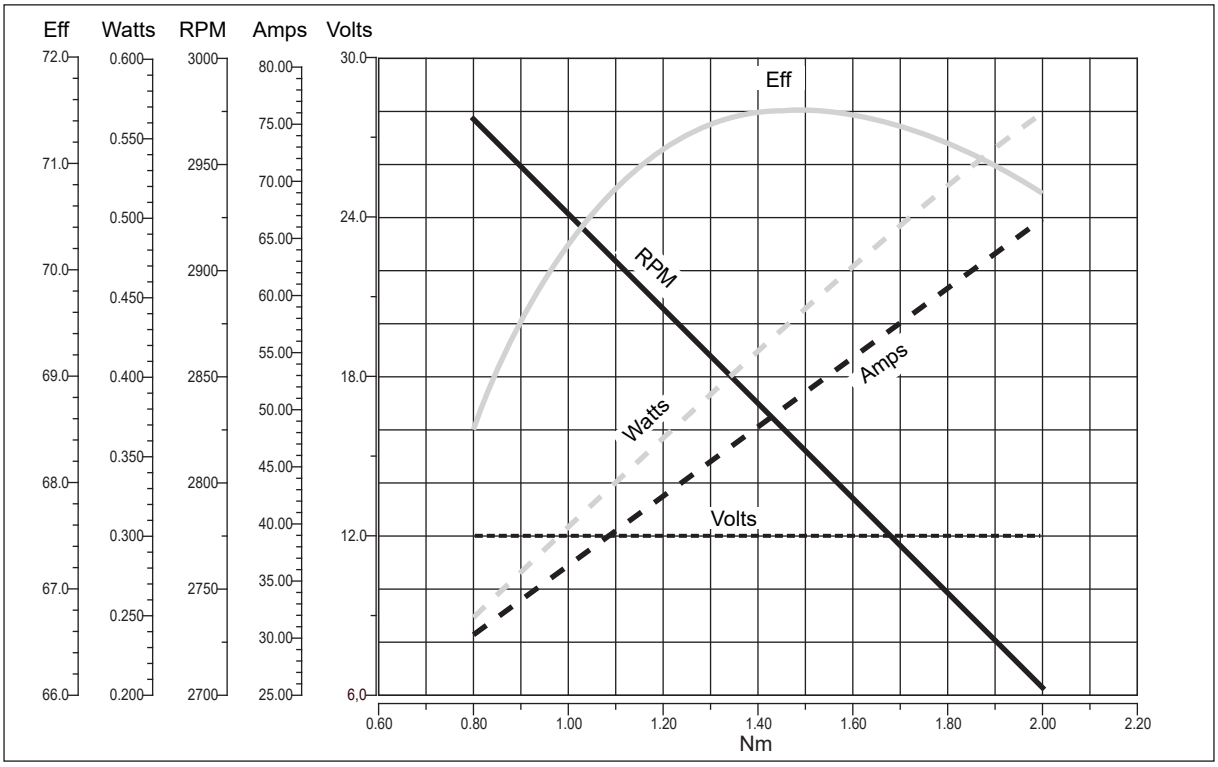
	63 B14	71 B14*
S	75	85
C (-0.01 / -0.03)	60	70
F	8 - M5	8 - M6

* Usare boccola 11/14
** Use sleeve 11/14*

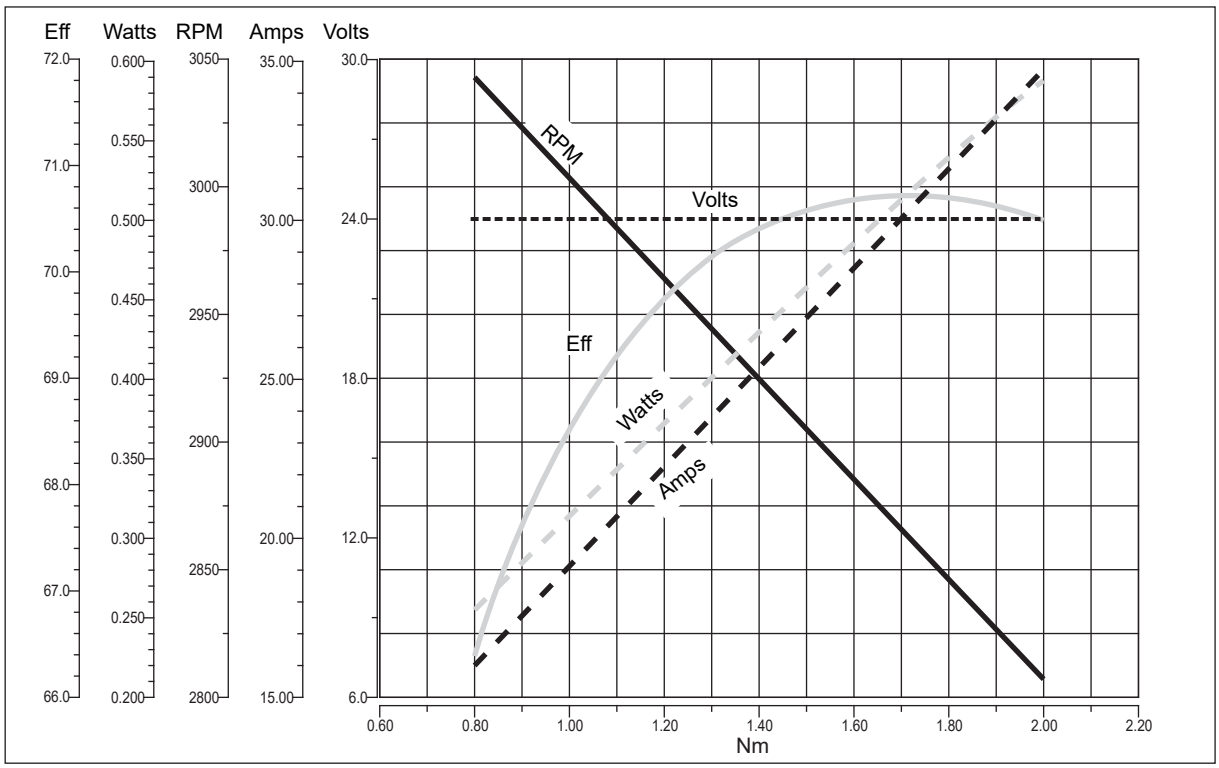
EC350.120 - EC350.240

Prestazioni ***Performances***

EC350.120



EC350.240



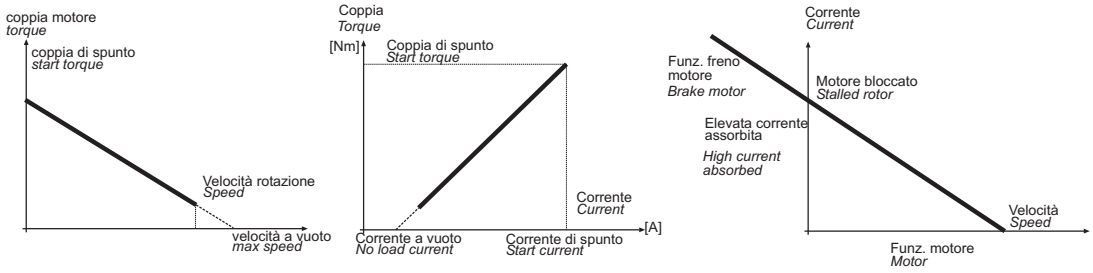
EC

Legenda / Glossario dei grafici

Key / Diagram Glossary

Dato un motore in C.C, la velocità di rotazione è funzione lineare della coppia; così pure la corrente assorbita è una funzione lineare della coppia. Velocità e corrente variano in maniera sensibile al variare del carico.

With a D.C. motor, the rotational speed is a linear function of the torque. In the same way, the absorbed current is also a linear function of the torque. Speed and current change a lot against applied torque.

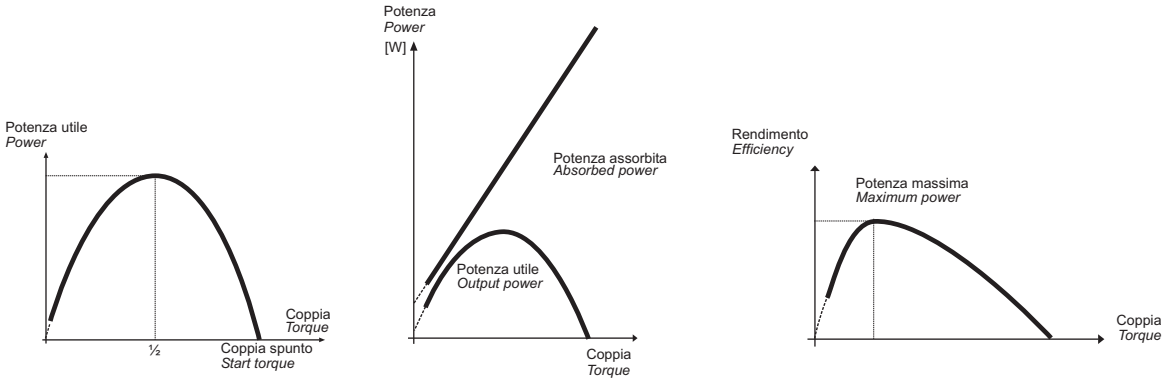


La potenza utile (potenza all' albero) si ricava dalla formula:

$$Pn\ [W] = Mn \cdot S = \frac{2\pi}{60} \cdot n_1 \cdot Mn$$

The output power is calculated using the formula:

$$Pn\ [W] = Mn \cdot S = \frac{2\pi}{60} \cdot n_1 \cdot Mn$$



Poiché la tensione di alimentazione è costante mentre la corrente è linearmente crescente al crescere della coppia, l'andamento della potenza assorbita è un retta crescente. Dal rapporto tra la potenza meccanica e la potenza assorbita si ottiene il grafico dell'efficienza.

Since the supply voltage is constant, whereas the current increases in a linear manner as the torque increases, the absorbed power trend is a straight line going up. Efficiency is shown from the ratio between the output power and the absorbed power.

Formule utili

Useful formulas

$$\eta = \frac{Pn}{Pa}$$

$$Pa = V \cdot I$$

$$Pn = V \cdot I \cdot \eta$$

$$Pn = Mn \cdot Sv$$

$$Sv = \frac{n_1}{9.55}$$

[HP] · 746 = [W].
Esempio 2 HP = circa 1500 W.

$$\eta = \frac{Pn}{Pa}$$

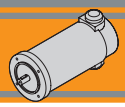
$$Pa = V \cdot I$$

$$Pn = V \cdot I \cdot \eta$$

$$Pn = Mn \cdot Sv$$

$$Sv = \frac{n_1}{9.55}$$

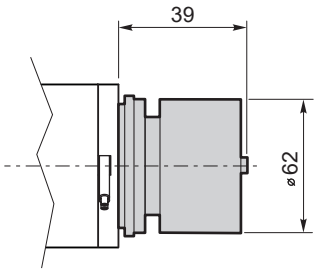
[HP] · 746 = [W].
Example 2 HP = approx. 1500 W.



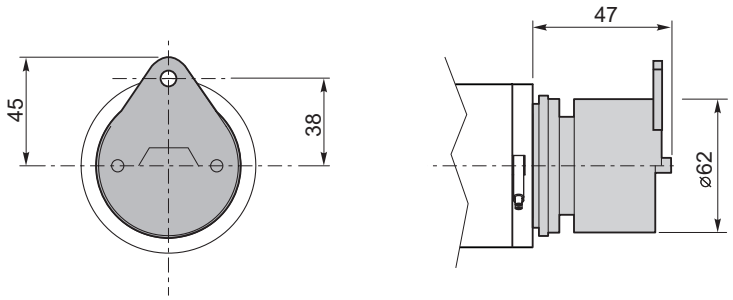
Freno / *Brake*

Freno con leva di sblocco/ *Brake with hand release*

EC070...BR

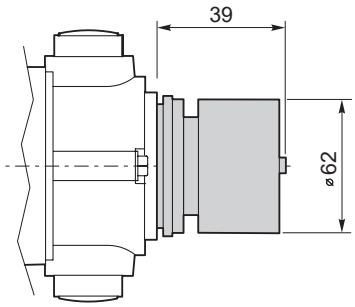


EC070...BRL

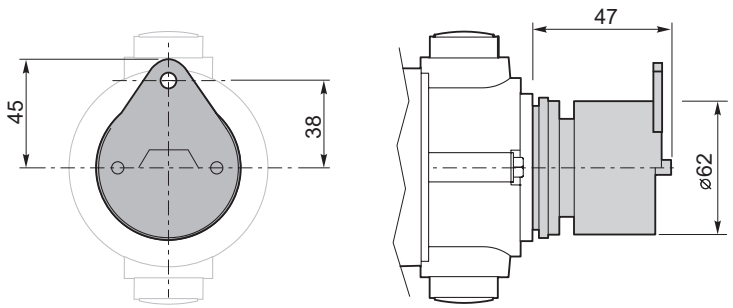


	Pn [W]	V [V]	Mn [Nm]	n_1 [min^{-1}]
Caratteristiche del freno / *Break features*	14	12 24	1.8	3000

EC100.24E BR
EC180.24E BR

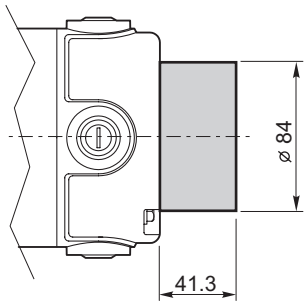


EC100.24E BRL
EC180.24E BRL

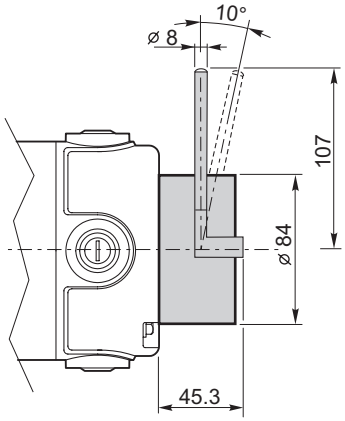


	Pn [W]	V [V]	Mn [Nm]	n_1 [min^{-1}]
Caratteristiche del freno / *Break features*	14	12 24	1.8	3000

EC350...BR



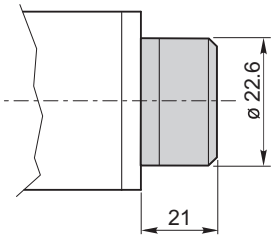
EC350...BRL



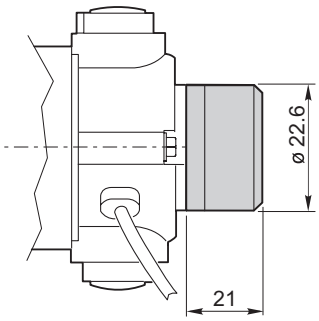
	Pn [W]	V [V]	Mn [Nm]	n_1 [min^{-1}]
Caratteristiche del freno / *Break features*	25	12 24	5	3000

Encoder ***Encoder***

EC070.12E ME22
EC070.24E ME22



EC100.24E ME22
EC180.24E ME22



Risoluzione Encoder (CPR) / *Encoder Resolution (CPR)*	Numero di canali / *Number of channels*	Tensione d'alimentazione / *Power supply*
001	2	5 VdC - TTL
100		
300		

Per risoluzioni encoder non standard, si prega di contattare il nostro Servizio Tecnico.

For non-standard encoder resolution, please contact our Technical Department.

Nota: Fornito con cavo lungo 300 mm

Note: Supplie with cavle 300 mm long

TRANSTECNO®
the modular gearmotor

AT

MOT.

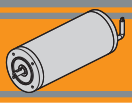
Linear Actuators

Ferrite

IP66 TRANSTECNO

Motori applicabili
Motori elettrici CC - EC IP66
Applicable motors
DC Electric motors - EC IP66







	Indice	*Index*	Pag. *Page*
EC070.120.66 EC070.240.66	Caratteristiche	*Features*	I2
	Dimensioni	*Dimensions*	I2
	Prestazioni	*Performances*	I3
EC100.120.66 EC100.240.66	Caratteristiche	*Features*	I4
	Dimensioni	*Dimensions*	I4
	Prestazioni	*Performances*	I5
EC180.120.66 EC180.240.66	Caratteristiche	*Features*	I6
	Dimensioni	*Dimensions*	I6
	Prestazioni	*Performances*	I7
EC250.120.66 EC250.240.66	Caratteristiche	*Features*	I8
	Dimensioni	*Dimensions*	I8
	Prestazioni	*Performances*	I9
EC350.120.66 EC350.240.66	Caratteristiche	*Features*	I10
	Dimensioni	*Dimensions*	I10
	Prestazioni	*Performances*	I11

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EC070.120.66 - EC070.240.66

Caratteristiche / *Features*

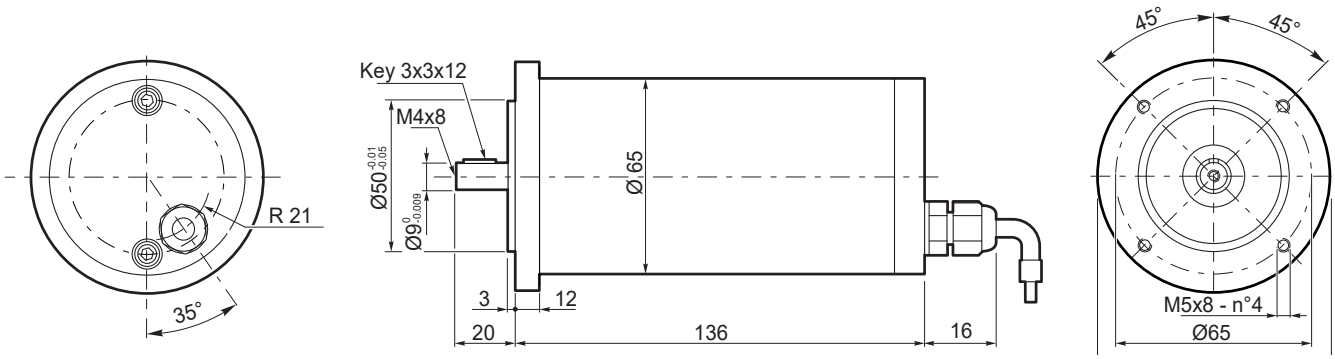
Costruzione	Tubolare, senza ventilazione
Grandezza	Ø 65 mm
Potenza	100 W S2 (70 W S1)
Magneti	2
Supporti	Cuscinetti a sfera
Fori di montaggio	4
Alimentazione	Bassa tensione, 12 o 24 Vcc
Spazzole	N° 2 interne di composto grafite-rame
Cavo di alimentazione	Lunghezza: 1000 mm

Construction	*Tubular, without fan*
Size	*Ø 65 mm*
Power	*100 W S2 (70 W S1)*
Magnets	*2*
Bearings	*Ball bearings*
Mounting holes	*4*
Power supply	*Low voltage, 12 or 24 Vdc*
Brushes	*2 inside brushes made of graphite/copper composite*
Electric cable	*Length: 1000 mm*

Tipo *Type*	S	Pn [W]	V [V]	I [A]	IC	FF	Mn [Nm]	n_1 [min^{-1}]	IP	Kg
EC070.120.66	**S1**	70	12	8.4	F	1	0.22	3000	66	1.7
	S2 30'	100		11.8			0.31			
EC070.240.66	**S1**	70	24	4.2			0.22			
	S2 30'	100		5.9			0.31			

Dimensioni / *Dimensions*

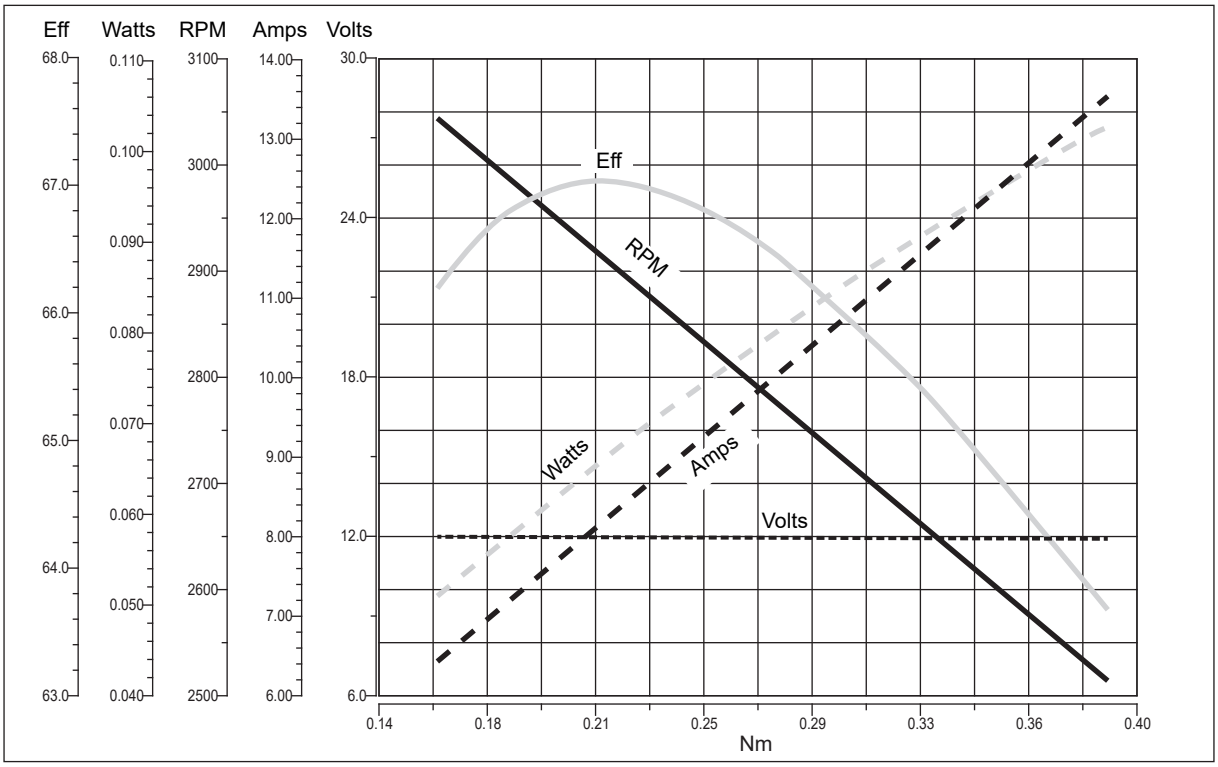
EC070.120.66
EC070.240.66



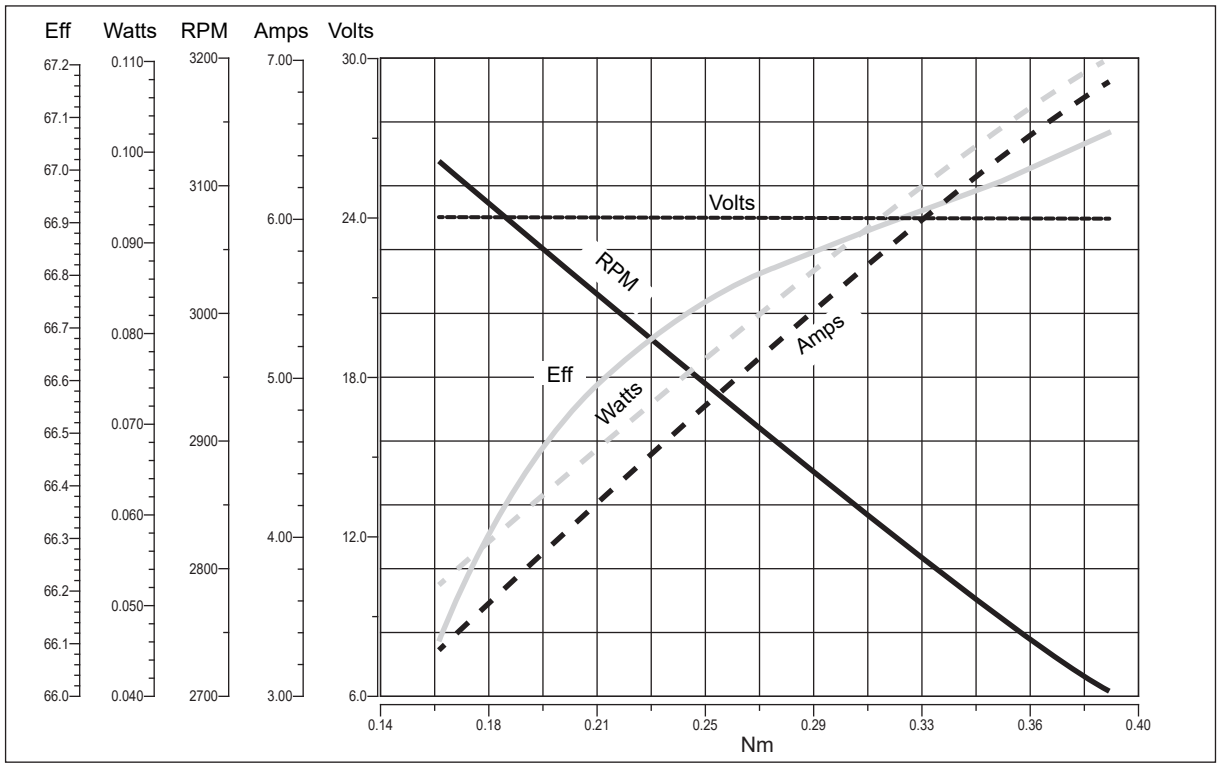
EC070.120.66 - EC070.240.66

Prestazioni / *Performances*

EC070.120.66



EC070.240.66



ECIP66

EC100.120.66 - EC100.240.66

Caratteristiche / *Features*

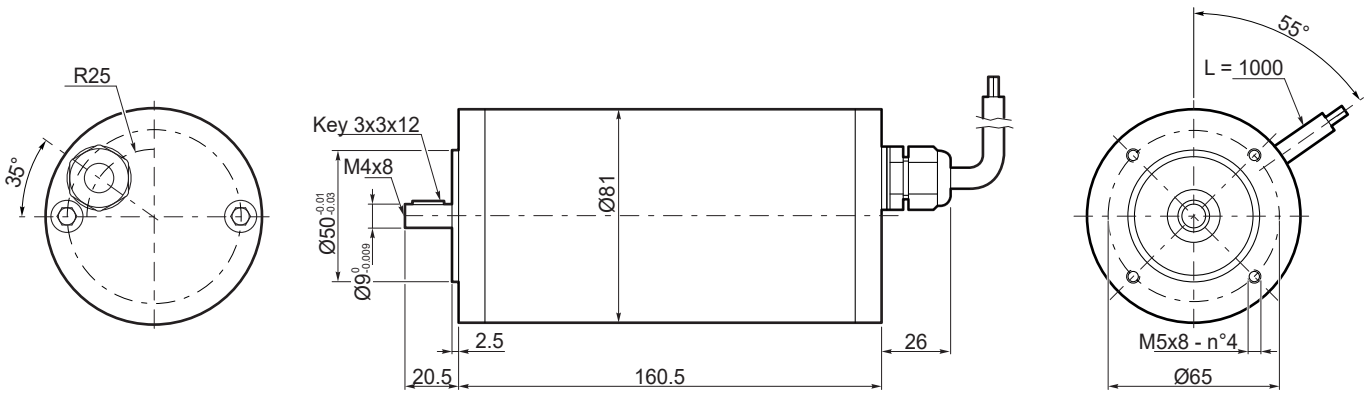
Costruzione	Tubolare, senza ventilazione
Grandezza	Ø 80 mm
Potenza	140 W S2 (100 W S1)
Magneti	2
Supporti	Cuscinetti a sfera
Fori di montaggio	4
Alimentazione	Bassa tensione, 12 o 24 Vcc
Cavo di alimentazione	Lunghezza: 1000 mm

Construction	*Tubular, without fan*
Size	*Ø 80 mm*
Power	*140 W S2 (100 W S1)*
Magnets	*2*
Bearings	*Ball bearings*
Mounting holes	*4*
Power supply	*Low voltage, 12 or 24 Vdc*
Electric cable	*Length: 1000 mm*

Tipo *Type*	S	Pn [W]	V [V]	I [A]	IC	FF	Mn [Nm]	n_1 [min^{-1}]	IP	Kg
EC100.120.66	**S1**	100	12	12	F	1	0.31	3000	66	2.7
	S2 25'	140		16.8			0.43			
EC100.240.66	**S1**	100	24	6			0.31			
	S2 25'	140		8.4			0.43			

Dimensioni / *Dimensions*

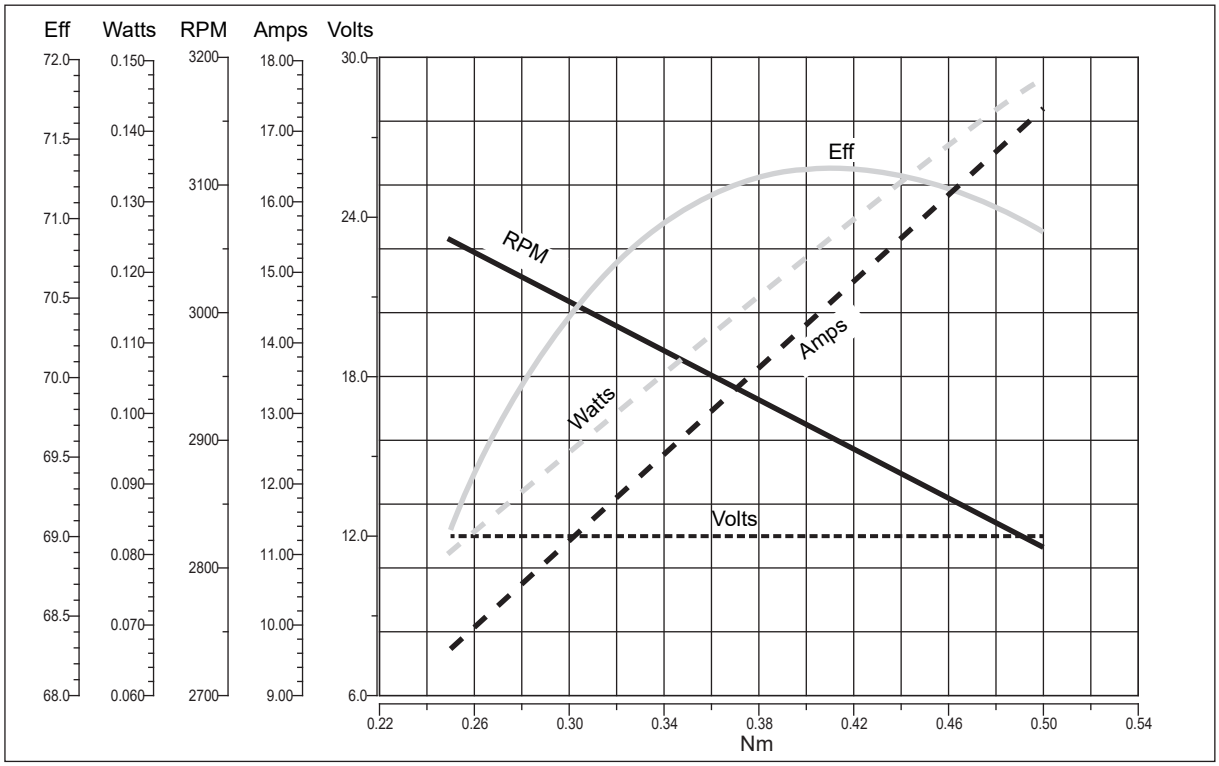
EC100.120.66
EC100.240.66



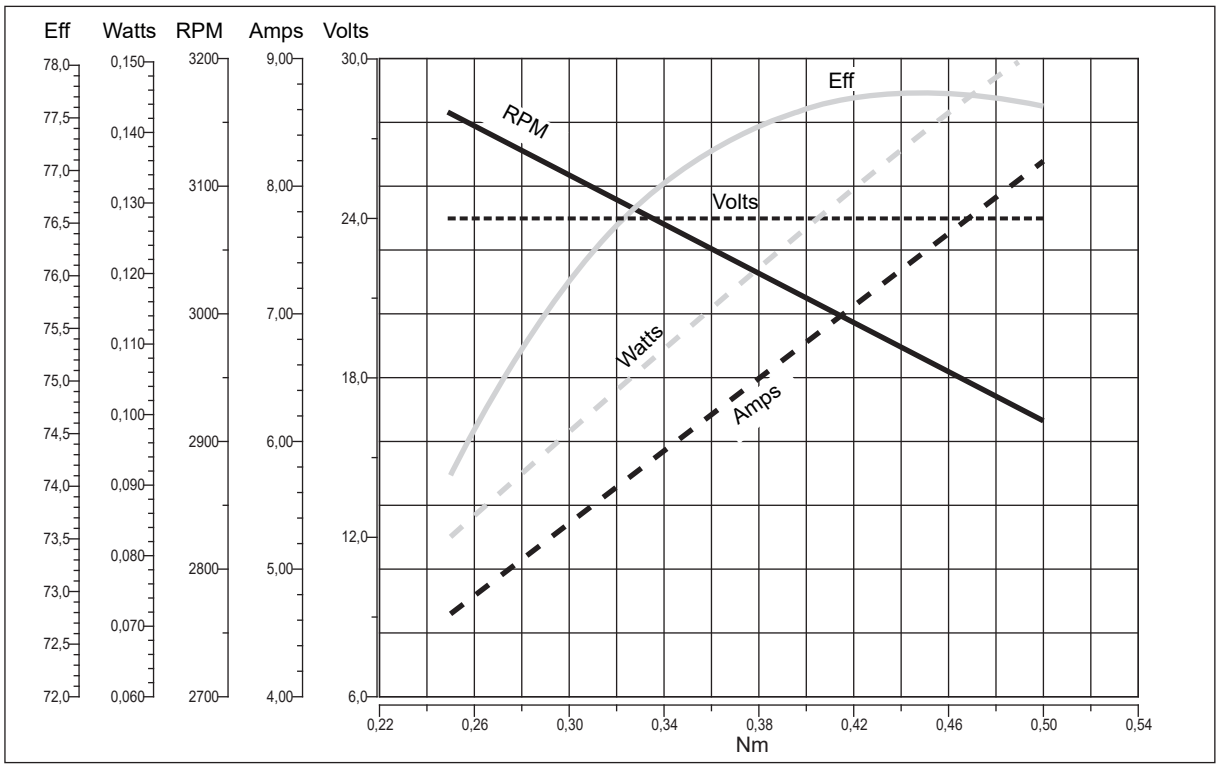


Prestazioni ***Performances***

EC100.120.66



EC100.240.66



EC180.120.66 - EC180.240.66

Caratteristiche / *Features*

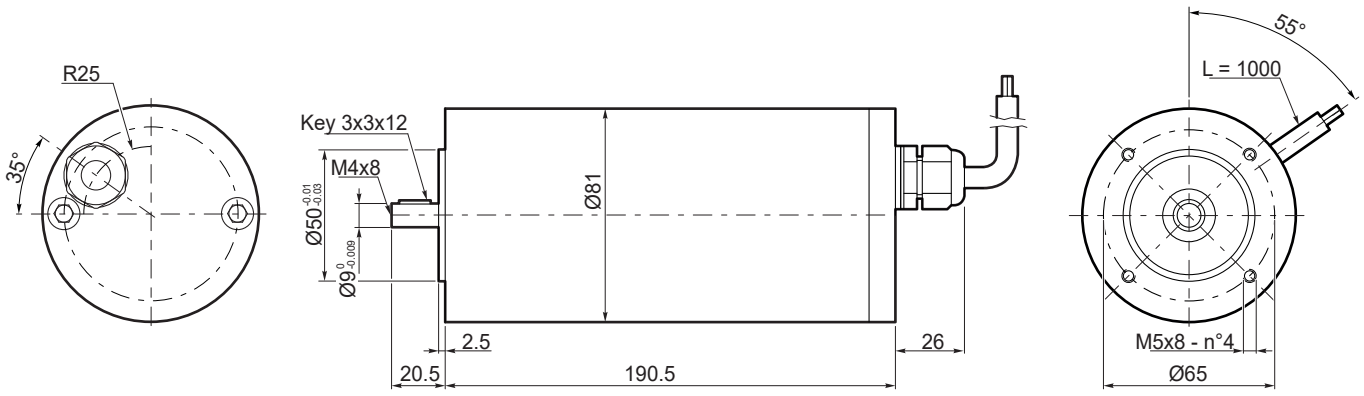
Costruzione	Tubolare, senza ventilazione
Grandezza	Ø 80 mm
Potenza	250 W S2 (180 W S1)
Magneti	2
Supporti	Cuscinetti a sfera
Fori di montaggio	4
Alimentazione	Bassa tensione, 12 o 24 Vcc
Cavo di alimentazione	Lunghezza:1000 mm

Construction	*Tubular, without fan*
Size	*Ø 80 mm*
Power	*250 W S2 (180 W S1)*
Magnets	*2*
Bearings	*Ball bearings*
Mounting holes	*4*
Power supply	*Low voltage, 12 or 24 Vdc*
Electric cable	*Length: 1000 mm*

Tipo *Type*	S	Pn [W]	V [V]	I [A]	IC	FF	Mn [Nm]	n_1 [min^{-1}]	IP	Kg
EC180.120.66	**S1**	180	12	21.5	F	1	0.57	3000	66	3.4
	S2 25'	250		30			0.8			
EC180.240.66	**S1**	180	24	10.8			0.57			
	S2 25'	250		15			0.8			

Dimensioni / *Dimensions*

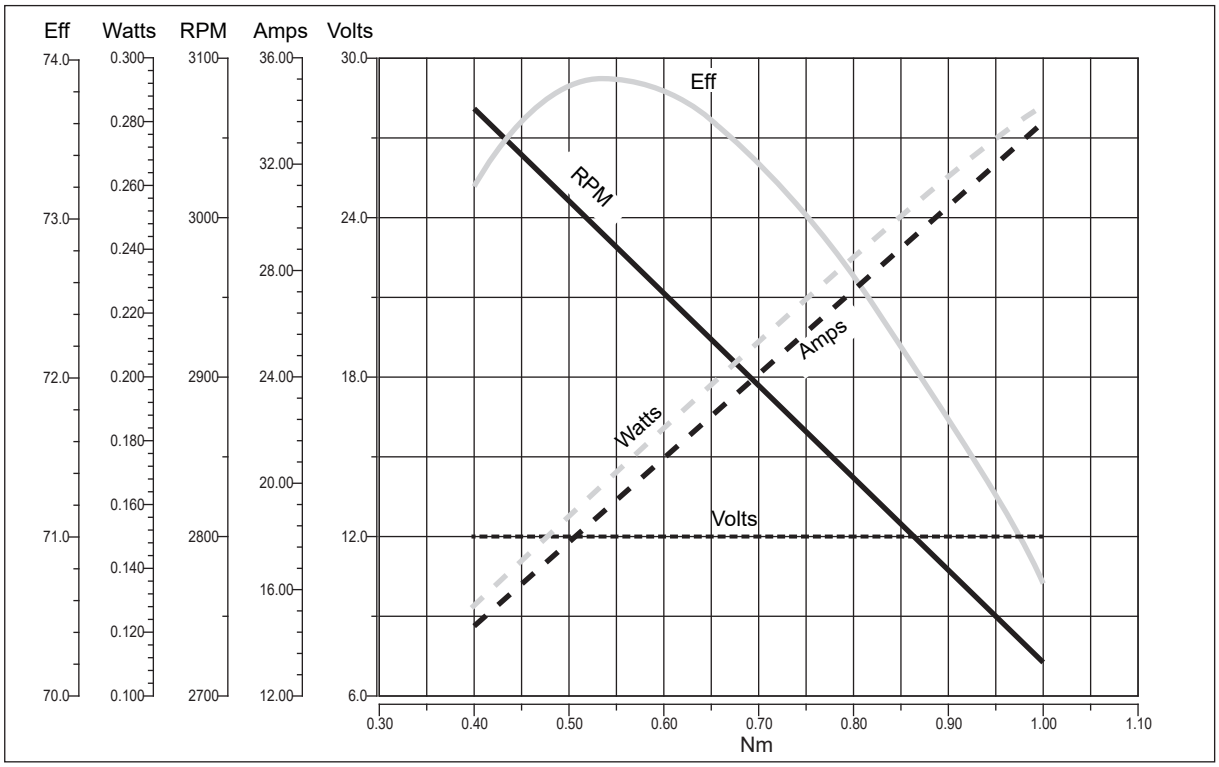
EC180.120.66
EC180.240.66



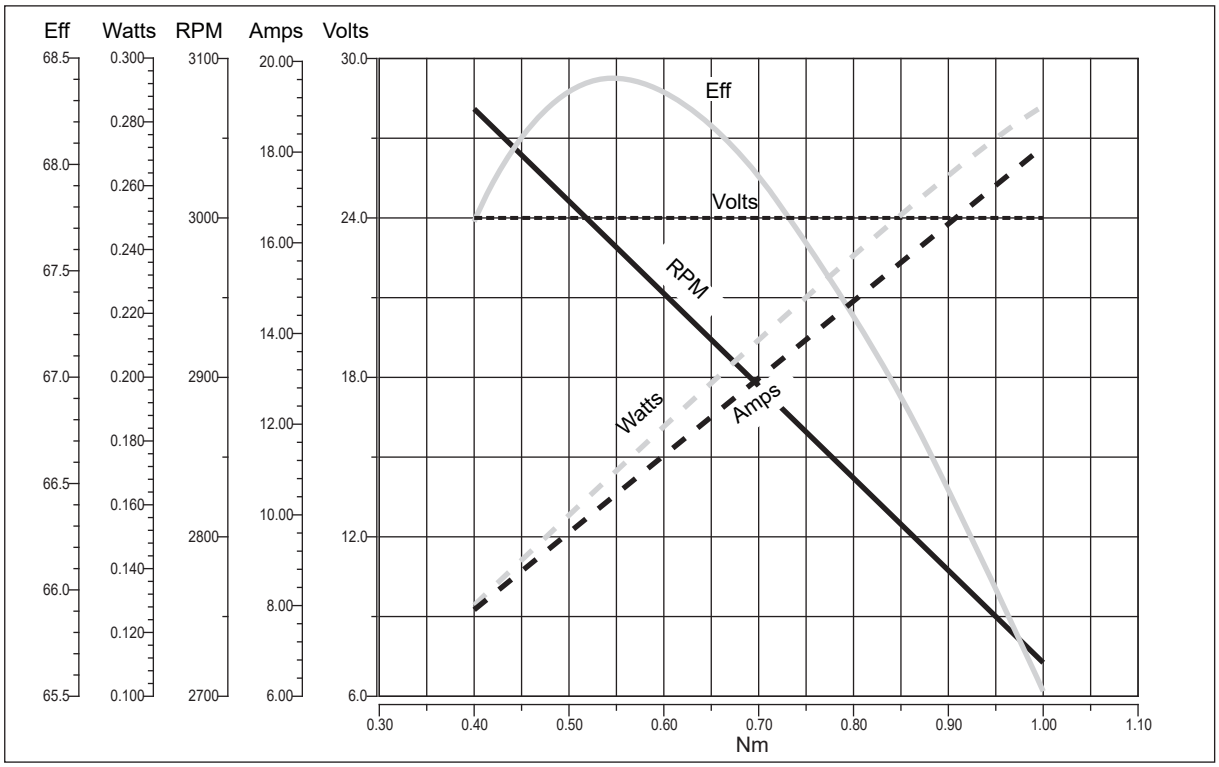
Prestazioni

Performances

EC180.120.66



EC180.240.66



EC250.120.66 - EC250.240.66

Caratteristiche / *Features*

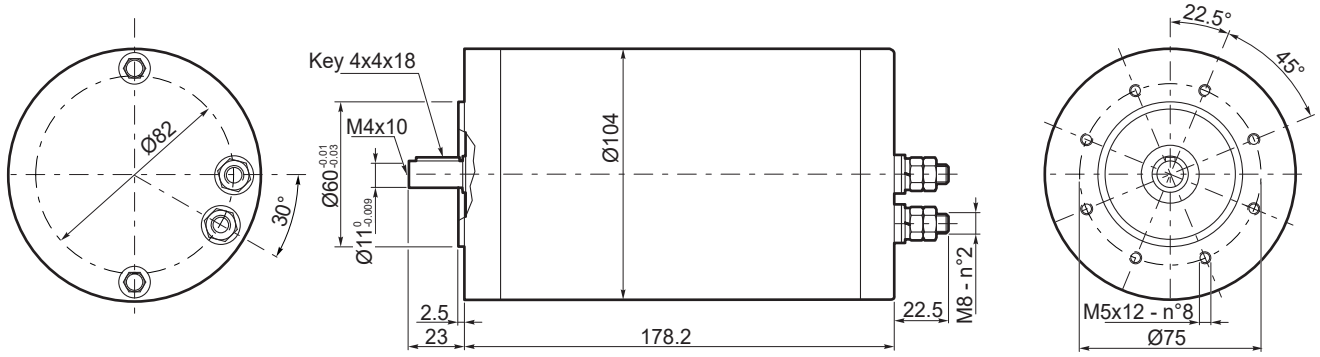
Costruzione	Tubolare, senza ventilazione
Grandezza	Ø 104 mm
Potenza	350 W S2 (250 W S1)
Magneti	4
Supporti	Cuscinetti a sfera
Fori di montaggio	8
Alimentazione	Bassa tensione, 12 o 24 Vcc
Terminali	2 con doppio dado di fissaggio

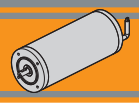
Construction	*Tubular, without fan*
Size	*Ø 104 mm*
Power	*350 W S2 (250 W S1)*
Magnets	*4*
Bearings	*Ball bearings*
Mounting holes	*8*
Power supply	*Low voltage, 12 or 24 Vdc*
Leads terminals	*2, with double nut*

Tipo *Type*	S	Pn [W]	V [V]	I [A]	IC	FF	Mn [Nm]	n_1 [min^{-1}]	IP	Kg
EC250.120.66	**S1**	250	12	30	F	1	0.8	3000	66	4.15
	S2 25'	350		38.5			1.12			
EC250.240.66	**S1**	250	24	15			0.8			
	S2 25'	350		20.5			1.12			

Dimensioni / *Dimensions*

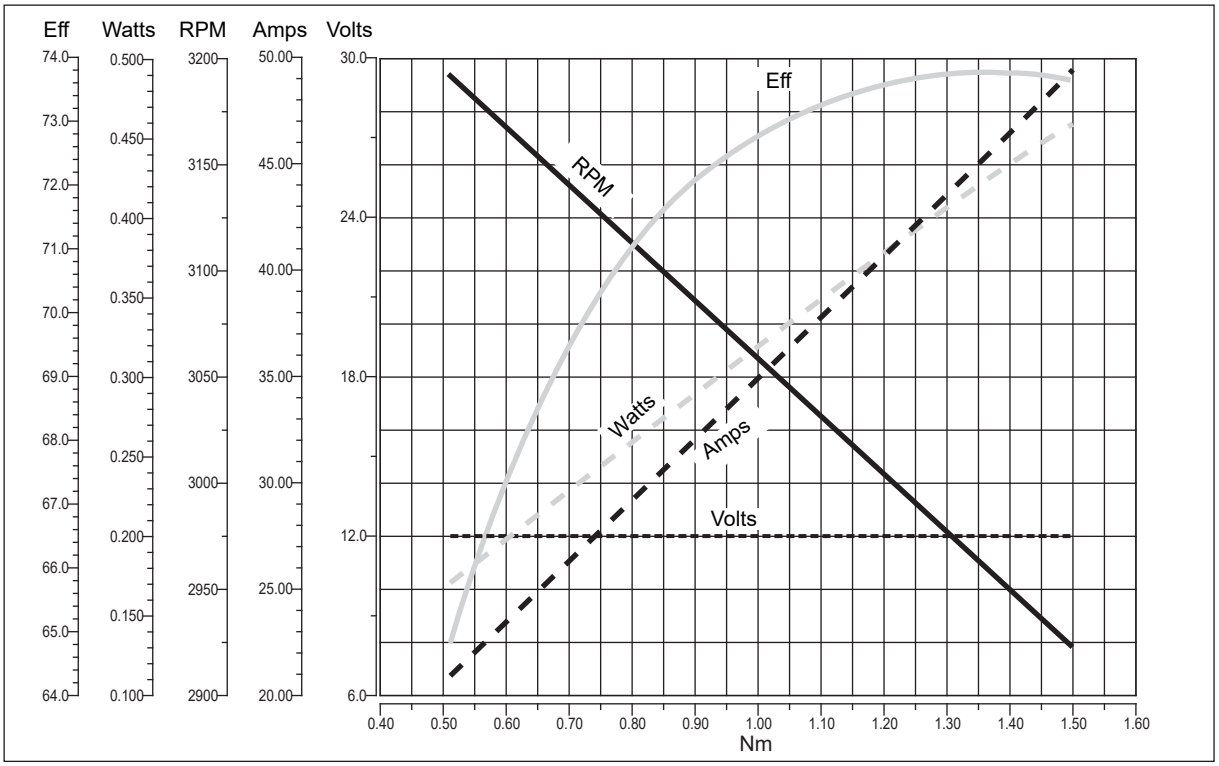
EC250.120.66
EC250.240.66



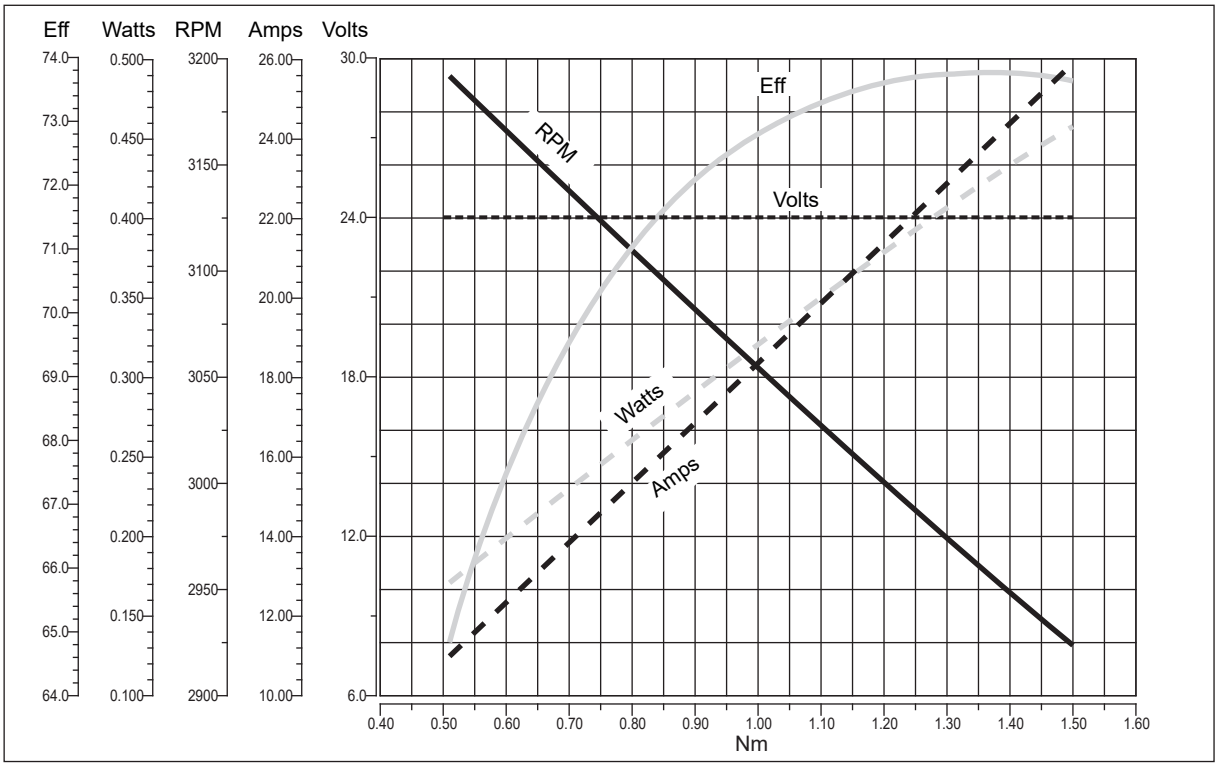


Prestazioni ***Performances***

EC250.120.66



EC250.240.66



EC350.120.66 - EC350.240.66

Caratteristiche / *Features*

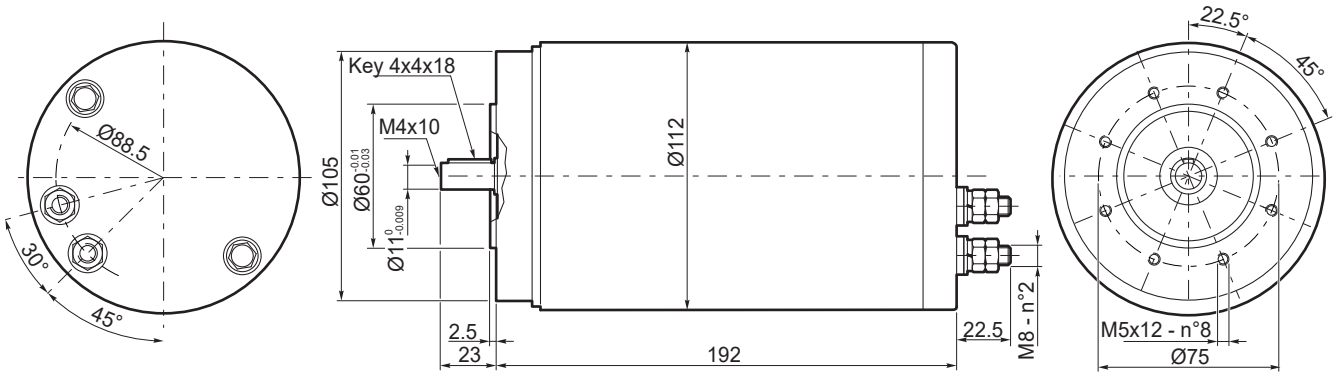
Costruzione	Tubolare, senza ventilazione
Grandezza	Ø 110 mm
Potenza	500 W S2 (350 W S1)
Magneti	4
Supporti	Cuscinetti a sfera
Fori di montaggio	8
Alimentazione	Bassa tensione, 12 o 24 Vcc
Terminali	2 con dadi di fissaggio

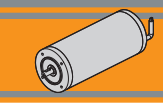
Construction	*Tubular, without fan*
Size	*Ø 110 mm*
Power	*500 W S2 (350 W S1)*
Magnets	*4*
Bearings	*Ball bearings*
Mounting holes	*8*
Power supply	*Low voltage, 12 or 24 Vdc*
Leads terminals	*2, with double nut*

Tipo *Type*	S	Pn [W]	V [V]	I [A]	IC	FF	Mn [Nm]	n_1 [min^{-1}]	IP	Kg
EC350.120.66	**S1**	350	12	42	F	1	1.12	3000	66	5.1
	S2 30'	500		58.8			1.57			
EC350.240.66	**S1**	350	24	21			1.12			5.3
	S2 30'	500		29.4			1.57			

Dimensioni / *Dimensions*

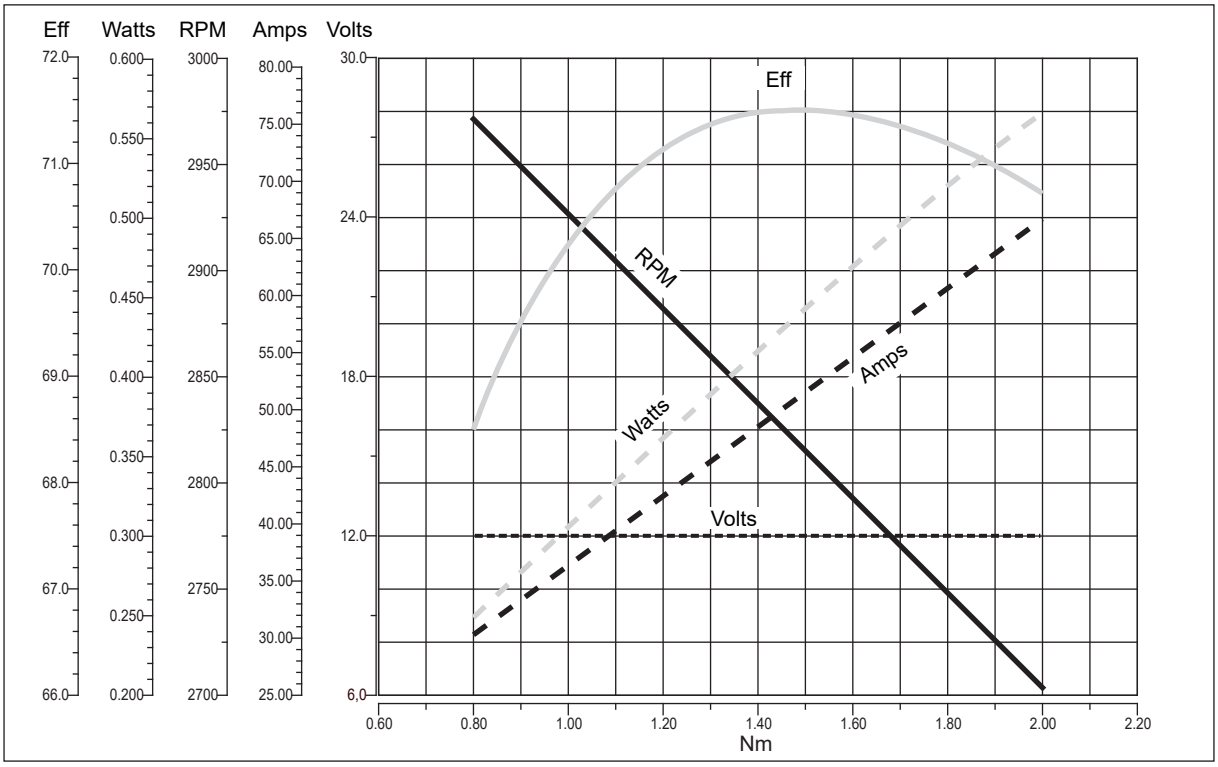
EC350.120.66
EC350.240.66



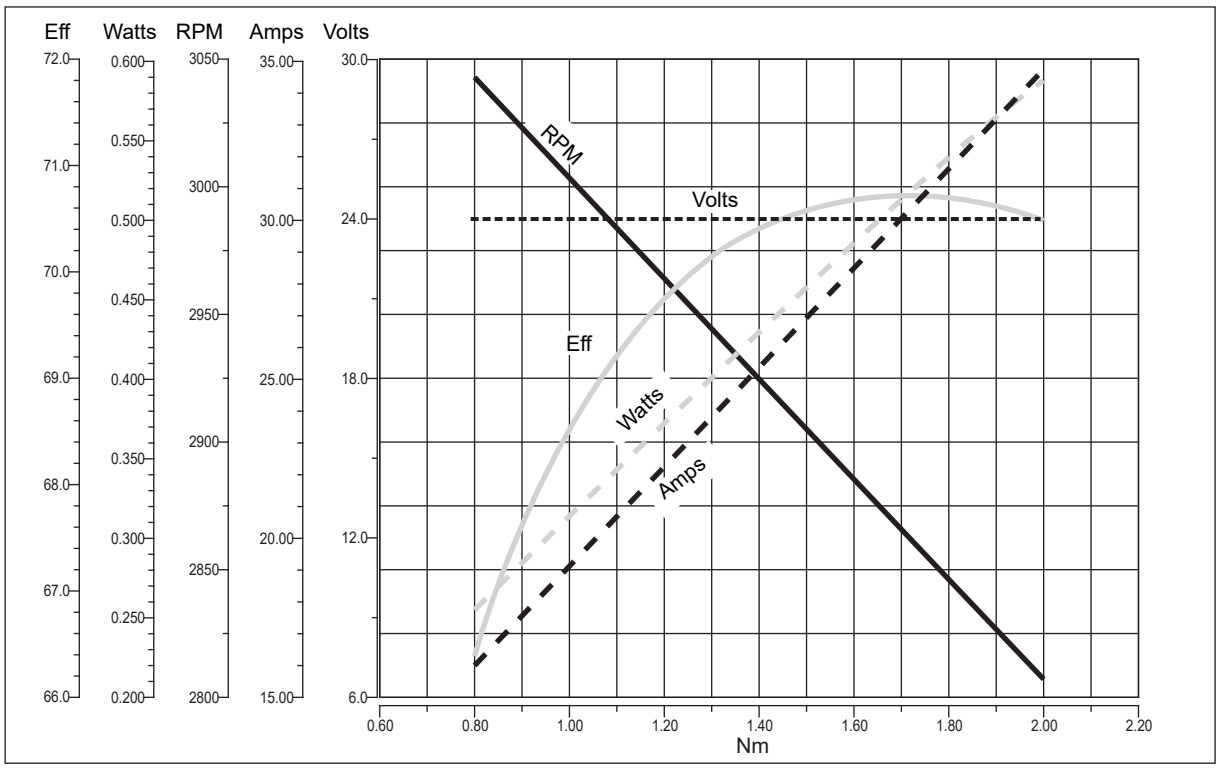


Prestazioni ***Performances***

EC350.120.66



EC350.240.66



Note/*Notes*

TRANSTECNO®
the modular gearmotor

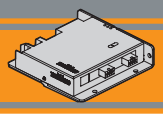
AT

MOT.

Linear Actuators

Azionamenti per motori CC
DC motor controls





	Indice	*Index*	Pag. *Page*
PLN19-8	Schema dei collegamenti	*Main connection diagram*	**L2**
	Caratteristiche tecniche	*Technical features*	**L2**
	Dimensioni	*Dimensions*	**L3**
	Opzioni	*Options*	**L3**
PLN20 PLN40	Schema dei collegamenti	*Main connection diagram*	**L4**
	Caratteristiche tecniche	*Technical features*	**L5**
	Dotazioni	*Equipment*	**L5**
	Manuale	*User manual*	**L5**
	Dimensioni	*Dimensions*	**L6**
	GUIDA alla selezione dell'azionamento	*Drive selection GUIDE*	**L7**
	Note	*Note*	**L8**

PLN

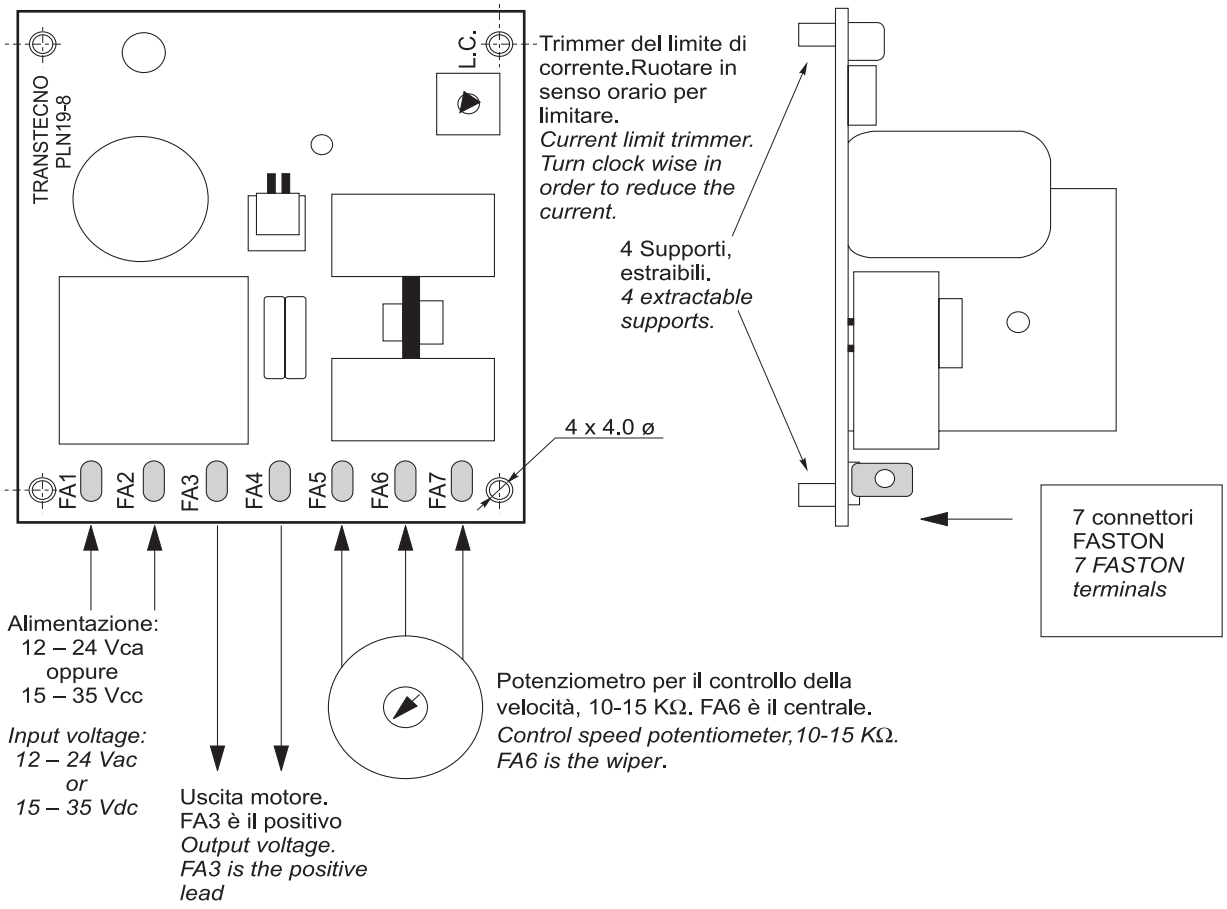
Questa sezione annulla e sostituisce ogni precedente edizione o revisione. Qualora questa sezione non Vi sia giunta in distribuzione controllata, l'aggiornamento dei dati ivi contenuto non è assicurato. **In tal caso la versione più aggiornata è disponibile sul nostro sito internet www.transtecno.com**

This section replaces any previous edition and revision. If you obtained this catalogue other than through controlled distribution channels, the most up to date content is not guaranteed. ***In this case the latest version is available on our web site www.transtecno.com***

AZIONAMENTO UNIDIREZIONALE PWM PER LA REGOLAZIONE DI VELOCITA' DEI MOTORI A CORRENTE CONTINUA A BASSA TENSIONE

LOW VOLTAGE SINGLE DIRECTION PWM DC MOTORS CONTROL

SCHEMA DEI COLLEGAMENTI - MAIN CONNECTION DIAGRAM



Attenzione: se si scollega il potenziometro con la scheda alimentata, il motore ruota alla velocità nominale.

Warning: *if speed pot is disconnected when the board is powered, the motor runs at its maximum speed.*

Caratteristiche tecniche

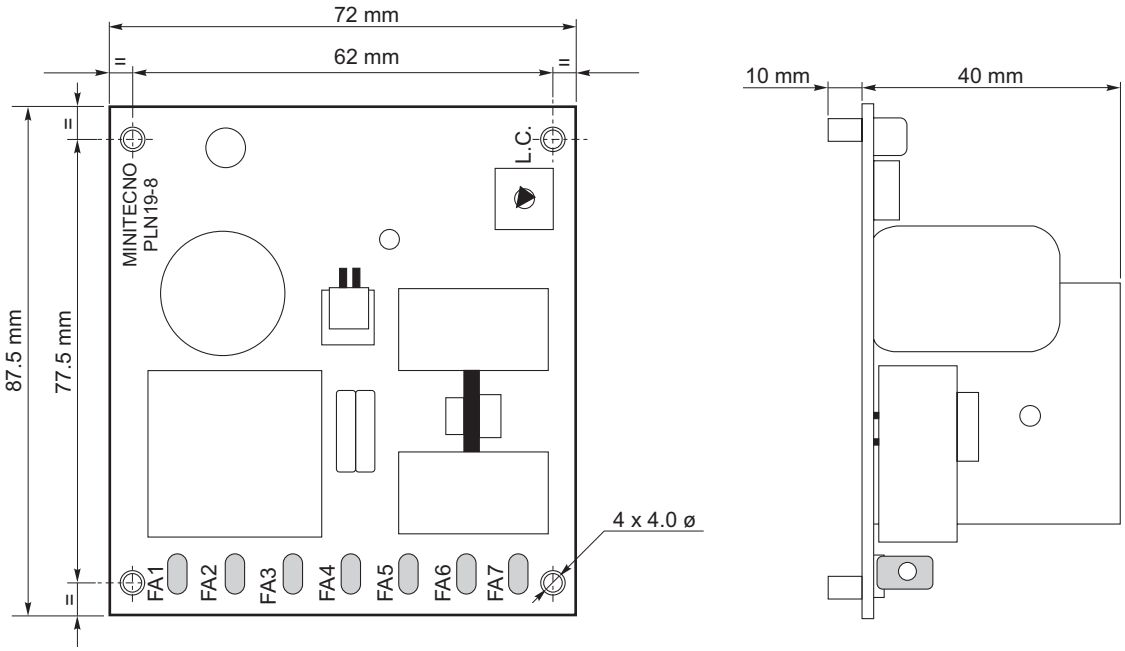
Technical features

- Alimentazione ai terminali FA1 e FA2:
  12 - 24 Vca oppure 15 - 35 Vcc.
- Regolazione della velocità mediante potenziometro 10-15 KΩ.
- Trimmer di Limitazione della corrente, per adattare la scheda anche a motori di piccole potenze. Per limitare l' erogazione di corrente, ruotare in senso orario il trimmer.
- Uscita motore ai terminali FA3 e FA4, regolabile da 0 a Vcc MAX che è proporzionale alla tensione di ingresso. Con 35 Vcc di alimentazione, l'uscita MAX è circa 30 Vcc.
- Corrente di uscita (*): Massima corrente ammessa: 8 A in ambiente ventilato, servizio continuo.
- Peso: 0.120 Kg.

- *Line voltage at terminals FA1 and FA2:*
  12 – 24 Vac or 15 – 35 Vdc.
- *The speed of the drive is to be controlled by potentiometer, 10-15 KΩ.*
- *Current Limit trimmer, in order to suit the board for small motors. In order to limit the current, turn clock wise the trimmer.*
- *Output voltage from terminals FA3 and FA4, from 0 up to Vdc MAX which is proportional to the input voltage. With 35 Vdc input voltage, the max output voltage is about 30 Vdc.*
- *Output current (*): Maximum output current allowed: 8 A in a ventilated environment, continuous duty.*
- *Weight: 0.120 Kg.*

Dimensioni

Dimensions



Opzioni

Options

1. Potenziometro 10 kΩ
2. Supporto per montaggio su guida DIN

1. *Speed potentiometer 10 kΩ*
2. *DIN mounting support*

(*) il valore massimo di corrente motore deve essere utilizzato in **ambiente ventilato**. In ambienti non ventilati e per temperatura ambiente di 45 °C, ridurre la corrente motore massima a 4 A; servizio continuo.

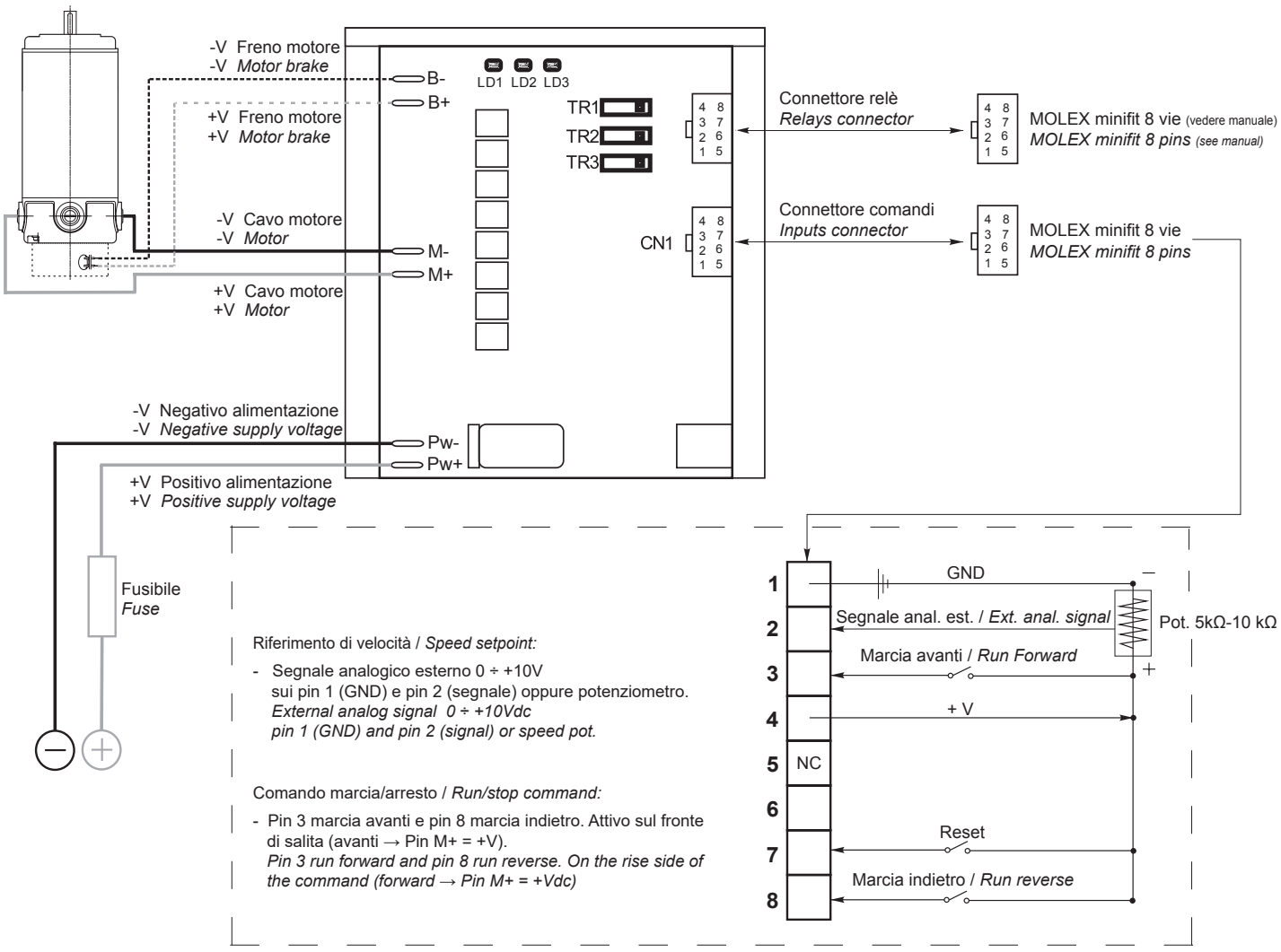
(*) *the maximum output current value must be used **in a ventilated environment.** Derate the maximum output current down to 4 A if the environment is not ventilated and the temperature is about 45 °C; continuous duty.*

PLN

AZIONAMENTO BIDIREZIONALE PWM PER LA REGOLAZIONE DI VELOCITA' DEI MOTORI A CORRENTE CONTINUA A BASSA TENSIONE

LOW VOLTAGE BIDIRECTIONAL PWM DC MOTORS CONTROL

SCHEMA DEI COLLEGAMENTI - MAIN CONNECTION DIAGRAM



Fusibile:
150-200% della corrente motore. Max 3 volte la corrente nominale della scheda, con intervento entro pochi secondi.

Fuse:
150-200 % rated motor current. Max 3 times rated current of the drive (trip time in few seconds).

Trimmer multigiro:

TR1: Accelerazione: selezione da 0.5 a 10 sec.

TR2: Limite di corrente: riduce il limite di corrente nominale da 100% a circa 30% (corrente di picco 3 volte la corrente selezionata).

TR3: Decelerazione: selezione da 0.5 a 10 sec.

Multiturn trimmers:

TR1: Acceleration time: from 0.5 to 10 sec.

TR2: Current limitation: rated current limited from 100% to about 30% (peak current 3 times the selected limited current).

TR3: Deceleration time: from 0.5 to 10 sec.

LED:

LD1: Visualizza lo stato di funzionamento con limite di corrente attivo (il motore assorbe più della corrente selezionata e l'azionamento opera in limitazione).

LD2: Stato dell'azionamento: lampeggio veloce e continuo = funzionamento normale, lampeggio lento e codificato = presenza di un allarme

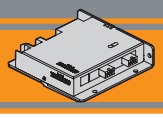
LD3: Segnalazione presenza alimentazione.

LED:

LD1: ON when the drive runs under current limitation (motor requires more than the rated current and drive supplies only limited current).

LD2: Status: quick continuous flash = drive ok, slow coded flash = fault).

LD3: Power ON



Caratteristiche tecniche

- Scheda bidirezionale a transistor a ricircolo di corrente.
- Selezionabili i seguenti parametri (mediante trimmer):
  - rampa di accelerazione: 0.5 - 10 sec
  - rampa di decelerazione: 0.5 - 10 sec
  - limite corrente 100%-30% circa
- Temperatura di lavoro: 0°C / +40°C (allarme sotto zero)
- Diagnostica tramite LED
- Frequenza di commutazione: 16kHz
- Dotata di coperchio
- Velocità regolabile con potenziometro 5-10 kΩ o con segnale 0-10 Vcc
- Limitazione della corrente regolabile
- Sensore termico di protezione

Technical features

- *Transistor bidirectional drive with regenerative current system.*
- *Following settings can be adjusted (by built in trimmers):*
  - *acceleration ramp: 0.5 - 10 sec*
  - *deceleration ramp: 0.5 - 10 sec*
  - *current limit 100% - about 30%*
- *Room temperature: 0°C / +40°C (alarm below zero)*
- *LED for system diagnosis*
- *Switching frequency: 16kHz*
- *Covered*
- *5-10 kΩ Speed pot. or 0-10 Vdc external signal for speed regulation*
- *Variable current limit*
- *Thermal sensor for protection*

Modello *Model number*	Tensione di alimentazione *DC input voltage* [Vdc]	Tensione di uscita *Motor voltage* [Vdc]*	Corrente di uscita nominale *DC load current* [A]	Corrente di picco motore *Maximum load current* [A]**	Campo di alimentazione *Power supply range* [Vdc]
PLN20	12 ÷ 24	0 ÷ Vin	20	60 (4 sec)	10 ÷ 30
PLN40	12 ÷24	0 ÷ Vin	40	120 (1 sec)	10 ÷ 30

* L'azionamento riduce la tensione nominale di 1-2 Vcc. Il fenomeno è normale e fisiologico. Se serve ottenere 24 ÷ 12 Vcc in uscita sotto ogni condizione di carico, si suggerisce di sovralimentare di un paio di volt.

** Un timer impone il limite con un andamento temporale iperbolico, cioè quanta più corrente eroga e tanto meno è il tempo per il quale ciò è ammesso, prima che appunto la scheda vada in limitazione. Alla corrente di picco (x 3 volte quella nominale) la scheda funziona per pochi secondi.

** The drive reduces the rated voltage of 1-2 Vdc. This is normal and physiological. If 24 ÷12 VDC output is required under all load conditions, it is advisable to supercharge a couple of volts.*

*** A timer imposes a limit with a temporary hyperbolic performance, which means the more current is requested, the less time is permitted with this current before the drive is limited. When the current reaches its peak (3 times the rated value) the drive will work for a few seconds.*

Dotazioni

Equipment

	PLN20 PLN40
Trimmer di selezione ACCEL, DECEL e LIMITE di CORRENTE / *Selection Trimmer ACCEL, DECEL, CURRENT LIMIT*	■
2 contatti: marcia avanti e marcia indietro / *2 contacts : forward and reverse*	■
Riferimento di velocità / *Speed setpoint reference*	■
3 LEDs di segnalazione / *3 LEDs signals*	■
Segnale di comando di eventuale freno negativo di stazionamento / *Command signal for possible negative electromagnetic brake*	■
Predisposizione per montaggio a libro e a zoccolo / *Arranged for 2 different ways of mounting*	■
Memorizzazione e segnalazione degli allarmi / *Memory storage and report of allarm*	■
2 ingressi digitali ausiliari / *2 auxiliary digital inputs*	■#
1 relè segnalazione allarmi / *Alarm output relays*	■

uno impegnato dal reset / *one comitted by reset*

PLN

Manuale

Per approfondimenti si raccomanda di scaricare il manuale d'uso dal nostro sito **www.transtecno.com** alla pagina dei prodotti.

User manual

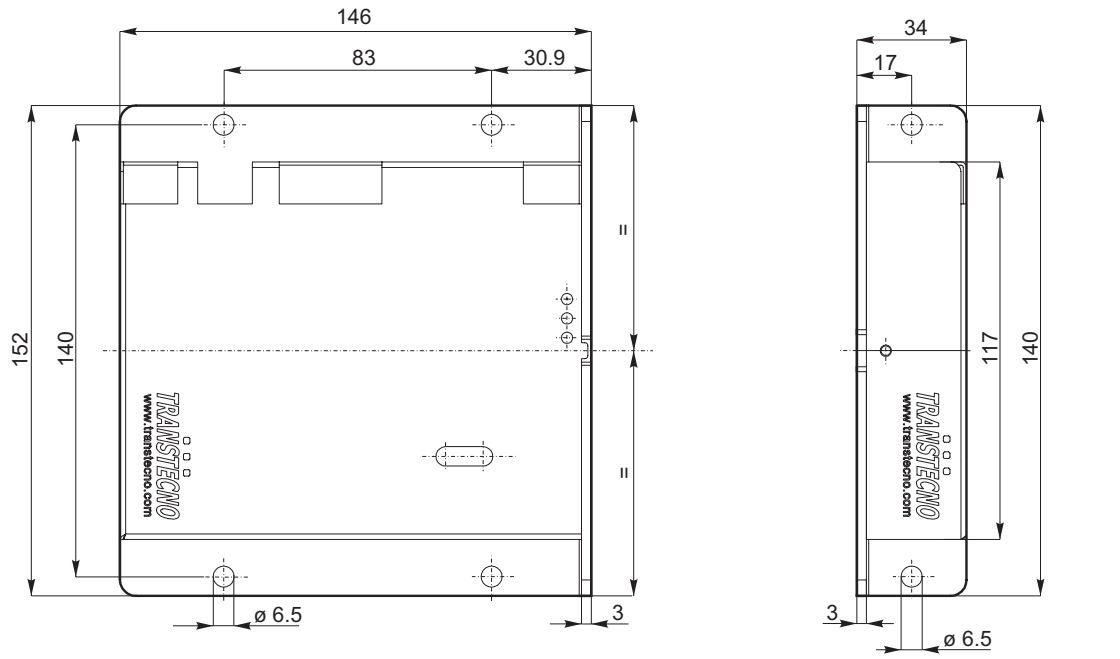
*Please, download the user manual for more information from our web site **www.transtecno.com** from the product page.*

AZIONAMENTO BIDIREZIONALE PWM PER LA REGOLAZIONE DI VELOCITA' DEI MOTORI A CORRENTE CONTINUA A BASSA TENSIONE

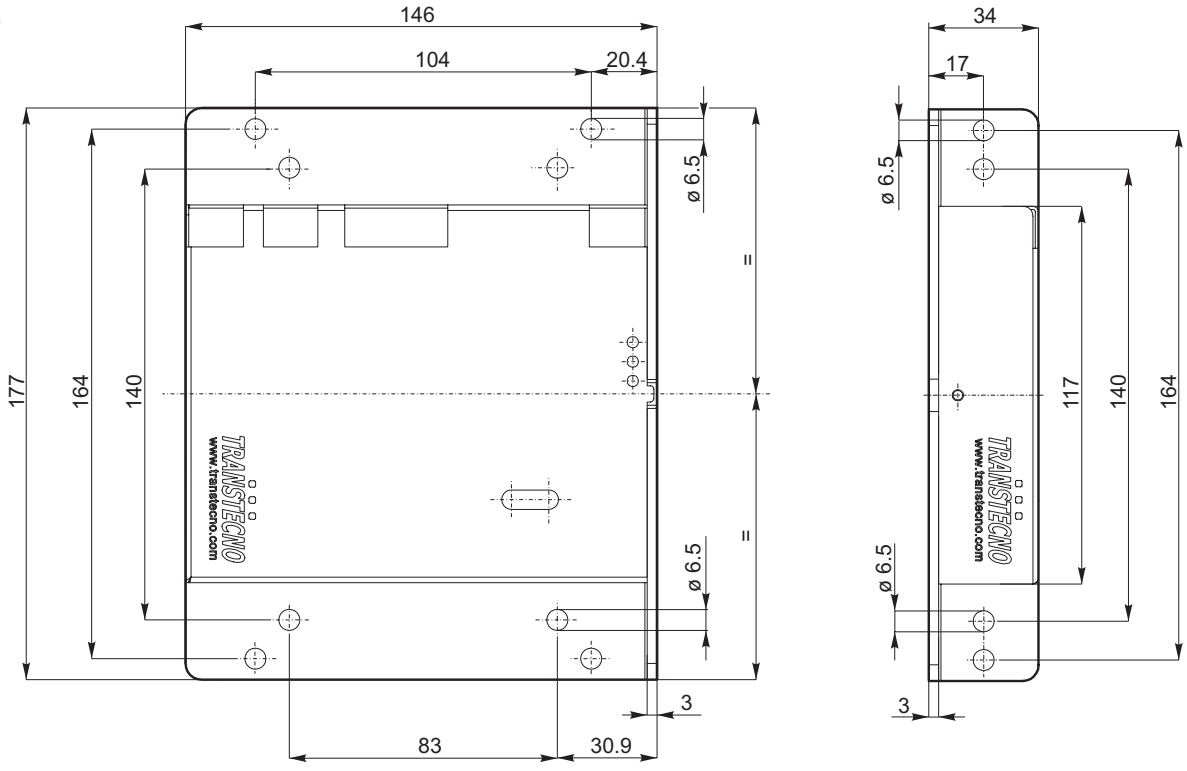
LOW VOLTAGE BIDIRECTIONAL PWM DC MOTORS CONTROL

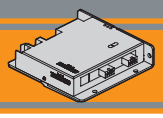
Dimensioni / *Dimensions*

PLN20



PLN40





GUIDA alla selezione dell'azionamento

Drive selection GUIDE

Corrente di uso del motore	≤	Corrente nominale dell'azionamento

Real motor current	≤	*Rated current of the drive*

Attenzione: la reale corrente assorbita dal motore può essere diversa da quella indicata in targhetta.

PLN19-8 = max 6 A

PLN20 = max 22 A

PLN40 = max 44 A

Vedere sotto la tabella per esemplificazioni

Warning: the real absorbed current by the motor can be different from the one written on the nameplate.

PLN19-8 = max 6 A

PLN20 = max 22 A

PLN40 = max 44 A

See the table below for quick reference

Codice motore *Motor code*	Corrente motore *Motor current* **S1**	Scheda-Drive (servizio motore-motor duty) **S1**	Corrente motore *Motor current* **S2**	Scheda-Drive (servizio motore-motor duty) **S2**
EC020.120	3.2	PLN19-8 – PLN20	4	PLN19-8 – PLN20
EC020.240	1.5	PLN19-8 – PLN20	2	PLN19-8 - PLN20
EC035.120	5.2	PLN19-8 – PLN20	8	PLN20
EC035.240	2.6	PLN19-8 - PLN20	4	PLN19-8 - PLN20
EC050.120	6.8	PLN20	9.4	PLN20
EC050.240	3.4	PLN19-8 - PLN20	4.7	PLN19-8 - PLN20
EC070.120	8.4	PLN20	11.8	PLN20
EC070.240	4.2	PLN19-8 - PLN20	5.9	PLN19-8 - PLN20
EC100.120	12	PLN20	16.8	PLN20
EC100.240	6	PLN19-8 - PLN20	8.4	PLN20
EC100.24E	6	PLN19-8 - PLN20	8.4	PLN20
ND100.120	13.9	PLN20	19	PLN20
ND100.240	6.9	PLN20	9.0	PLN20
EC180.120	21.5	PLN20	30	PLN40
EC180.240	10.8	PLN20	15	PLN20
EC180.24E	10.8	PLN20	15	PLN20
ND180.120	20	PLN20	30	PLN40
ND180.240	10	PLN20	14	PLN20
EC250.120	30	PLN40	39	PLN40
EC250.240	15	PLN20	19.5	PLN20
EC350.240	21	PLN20	29.4	PLN40
EC350.240BR				
EC600.240	35.5	PLN40	47	PLN40
EC600.240BR				

Note/*Notes*

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