

Modello 9000S

- Motore a magneti permanenti CE
- Motore A.C. monofase-trifase CE
- Riduttore vite senza fine - ruota elicoidale
- Stelo filettato trapezoidale e ricircolo di sfere
- Asta traslante in acciaio cromato
- Lubrificazione a grasso
- IP 50 / IP 65
- Temperatura di funzionamento -10°C +60°C
- Impiego intermittente S3 30% (5 min)*
- Fine corsa, potenziometro ed encoder a richiesta

(*) Per impieghi diversi contattare il Ns Ufficio Tecnico

Model 9000S

- Permanent magnet motor CE
- Three phase or single phase motor CE
- Worm gearbox
- ACME lead screw and ballscrew
- Chrome plated steel push rod
- Lubrication by grease
- IP 50 / IP 65
- Temperature range -10°C +60°C
- Intermittent duty S3 30% (5 min)*
- Limit switches, potentiometer and encoder on request

(*) For any special duty please contact our offices

9000S (Vdc)

Fmax [N]	Velocità [mm/s]	Versione	Taglia motore	Giri motore [rpm]	Rapporti Riduzione	Diametro vite [mm]	Passo [mm]	Rendimento
Fmax [N]	Speed [mm/s]	Version	Motor size	Motor speed [rpm]	Gearbox Reduction Ratio	Screw diameter [mm]	Pitch [mm]	Efficiency
1500	60	M01	76	4000	4/35	18	8	0,30
1800	45	M02	76	4000	3/36	18	8	0,27
2800	30	M03	76	4000	4/35	18	4	0,27
3500	20	M04	76	4000	3/36	18	4	0,24
4500	15	M05	76	4000	2/37	18	4	0,21
9000	7	M06	76	4000	1/37	18	4	0,20

9000S-VRS (ballscrew) (Vdc)

Fmax [N]	Velocità [mm/s]	Versione	Taglia motore	Giri motore [rpm]	Rapporti Riduzione	Diametro vite [mm]	Passo [mm]	Rendimento
Fmax [N]	Speed [mm/s]	Version	Motor size	Motor speed [rpm]	Gearbox Reduction Ratio	Screw diameter [mm]	Pitch [mm]	Efficiency
6000	35	M01	76	4000	4/35	16	5	0,7
7000	25	M02	76	4000	3/36	16	5	0,6
9000	15	M03	76	4000	2/37	16	5	0,6
9000	10	M04	76	4000	1/37	16	5	0,5

9000S (Vac)

Fmax [N]	Vel. [mm/s]	Versione	Taglia motore	Potenza mot. [kW]	Giri motore [rpm]	Rapporti Riduzione	D. vite [mm]	Passo [mm]	Rendimento
Fmax [N]	Speed [mm/s]	Version	Motor size	Motor Power [kW]	Motor speed [rpm]	Gearbox Red. Ratio	Screw D [mm]	Pitch [mm]	Efficiency
800	40	M01	IEC50	0,13	2800	4/35	18	8	0,30
1000	30	M02	IEC50	0,13	2800	3/36	18	8	0,27
1250	20	M03	IEC50	0,09	1400	4/35	18	8	0,30
2250	10	M04	IEC50	0,09	1400	4/35	18	4	0,27
3500	5	M05	IEC50	0,09	1400	2/37	18	4	0,21
7000	2,5	M06	IEC50	0,09	1400	1/37	18	4	0,20

9000S-VRS (ballscrew) (Vac)

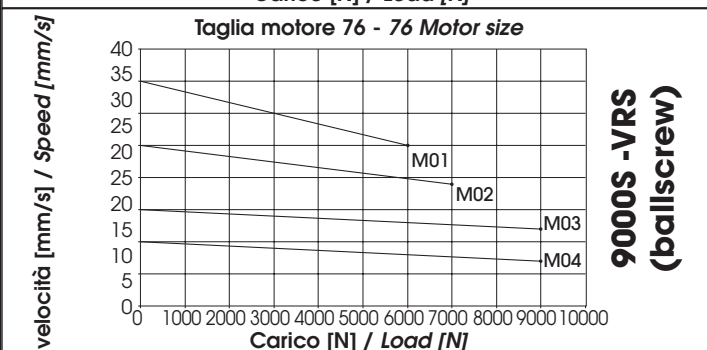
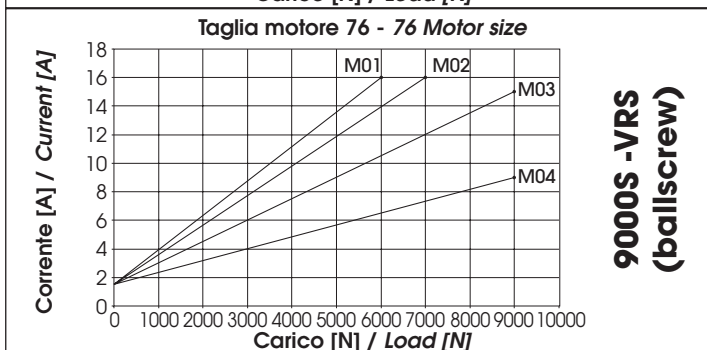
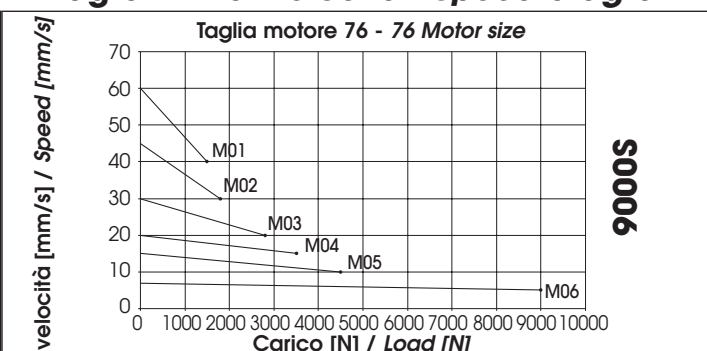
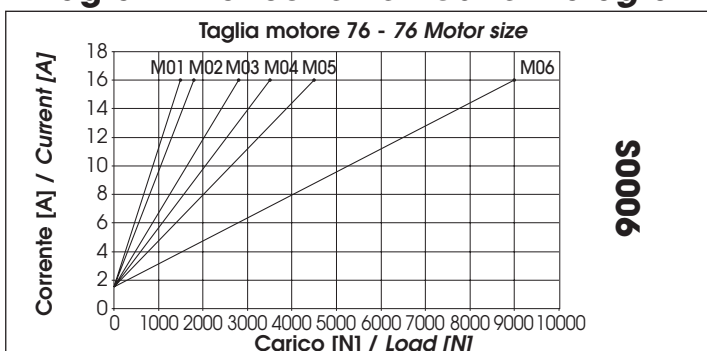
Fmax [N]	Vel. [mm/s]	Versione	Taglia motore	Potenza mot. [kW]	Giri motore [rpm]	Rapporti Riduzione	D. vite [mm]	Passo [mm]	Rendimento
Fmax [N]	Speed [mm/s]	Version	Motor size	Motor Power [kW]	Motor speed [rpm]	Gearbox Red. Ratio	Screw D [mm]	Pitch [mm]	Efficiency
3000	25	M01	IEC50	0,13	2800	4/35	16	5	0,7
3800	20	M02	IEC50	0,13	2800	3/36	16	5	0,6
4500	12	M03	IEC50	0,09	1400	4/35	16	5	0,7
7500	6	M04	IEC50	0,09	1400	2/37	16	5	0,6
9000	3	M05	IEC50	0,09	1400	1/37	16	5	0,5

Nota: con motore Vac monofase il valore "Fmax [N]" diminuisce del 35%.

Note: "Fmax [N]" is 35% lower when a single phase motor is used

Diagrammi di corrente - Current diagram

Diagrammi di velocità - Speed diagram

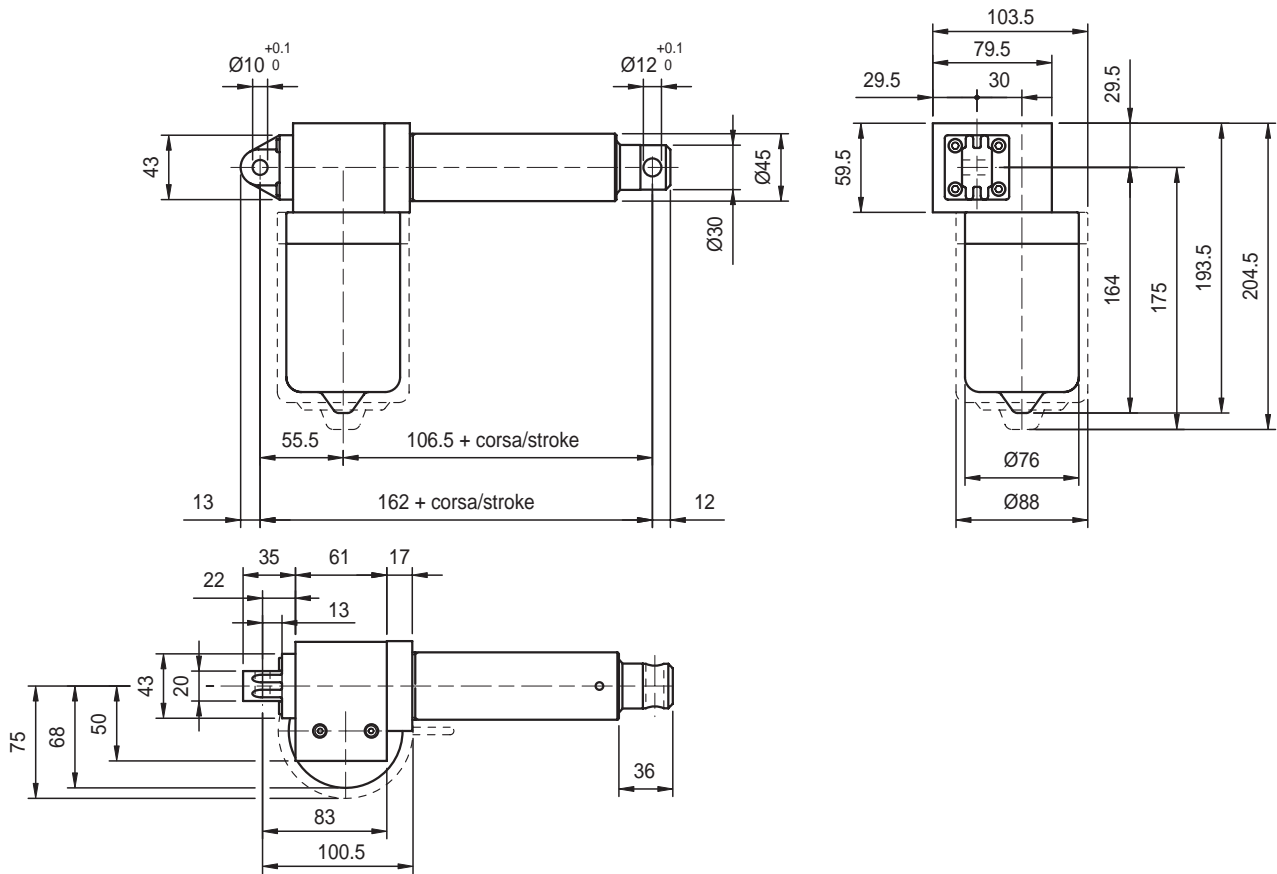


Diagrammi riferiti alla tensione di alimentazione 24Vdc. Per tensione 12Vdc raddoppiare il valore di corrente e ridurre il valore di carico del 20%. Per tensione 36Vdc ridurre il valore di corrente del 30% e lasciare inalterata la velocità.

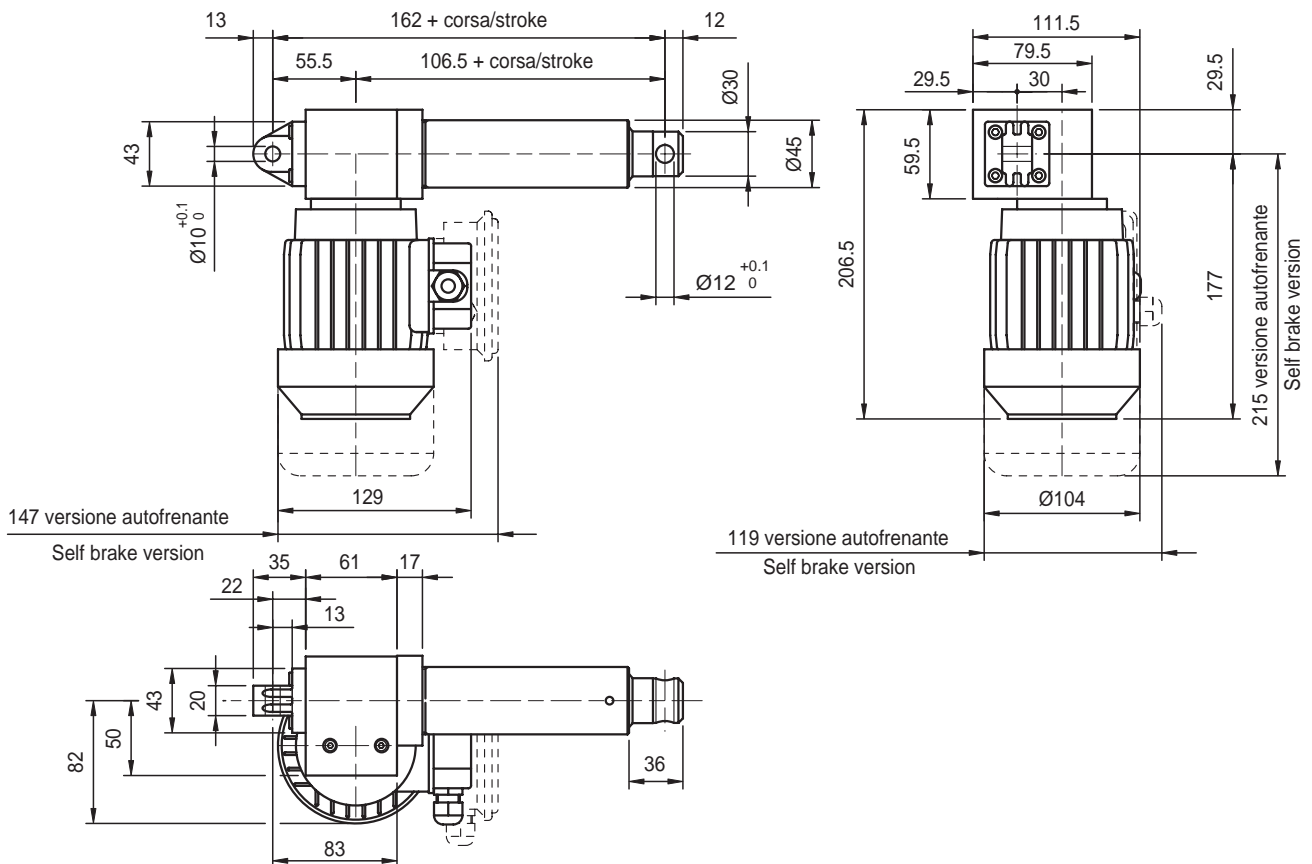
Per una corretta scelta dell'attuatore idoneo alla Vs. applicazione si devono utilizzare le informazioni tecniche che trovate nel fascicolo "Guida alla Scelta degli Attuatori e dei Martinetti Elettromeccanici".

Diagrams valids for 24Vdc power supply. For 12Vdc power supply currents are doubled and loads are 20% slower. For 36Vdc power supply currents are 30% lower and speeds remain the same. Elements and technical information available in "Electromechanical Actuators + Jack Choice Guideline" have to be carefully considered in order to perform a proper actuator selection according to your application.

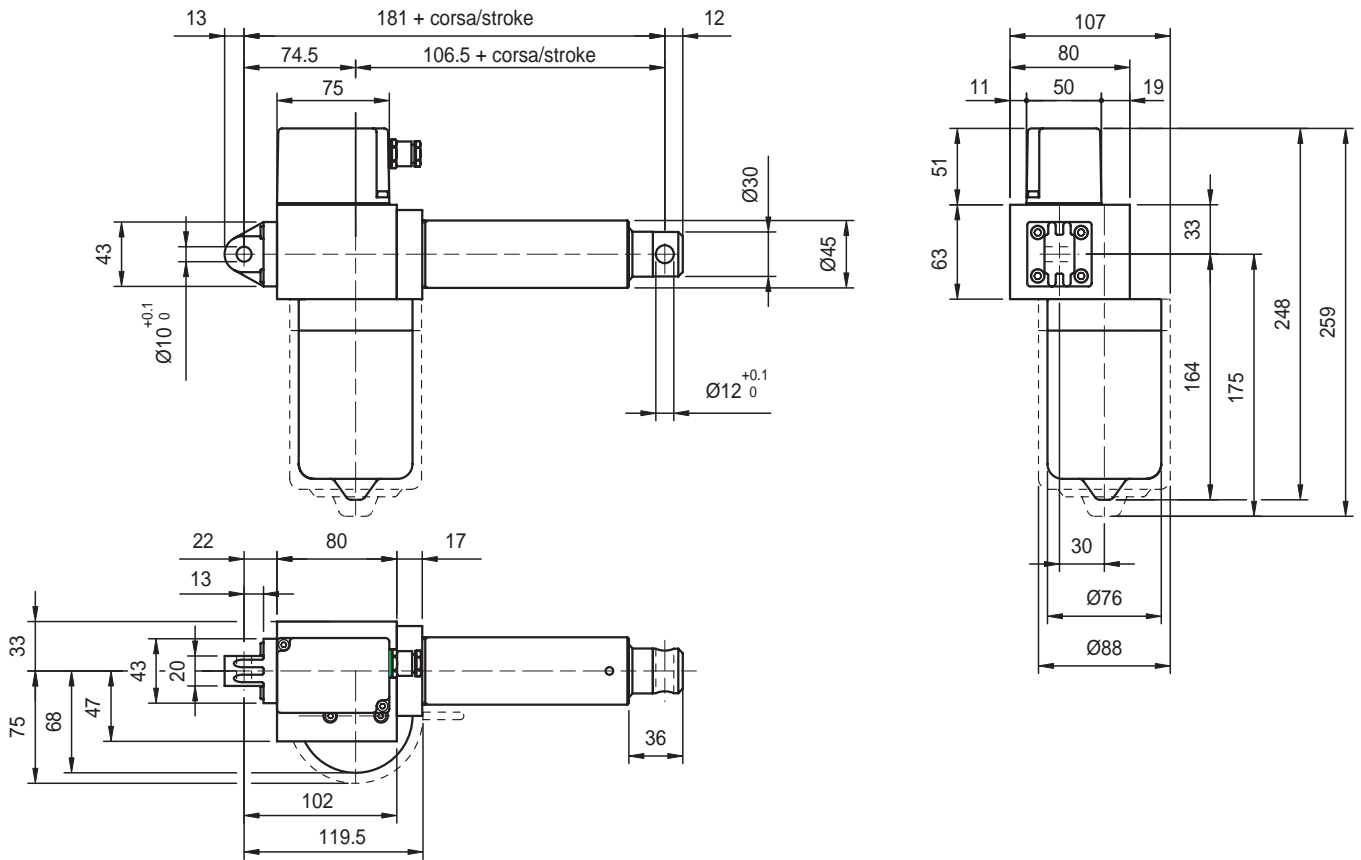
9000S - Versione C.C. / D.C. Version



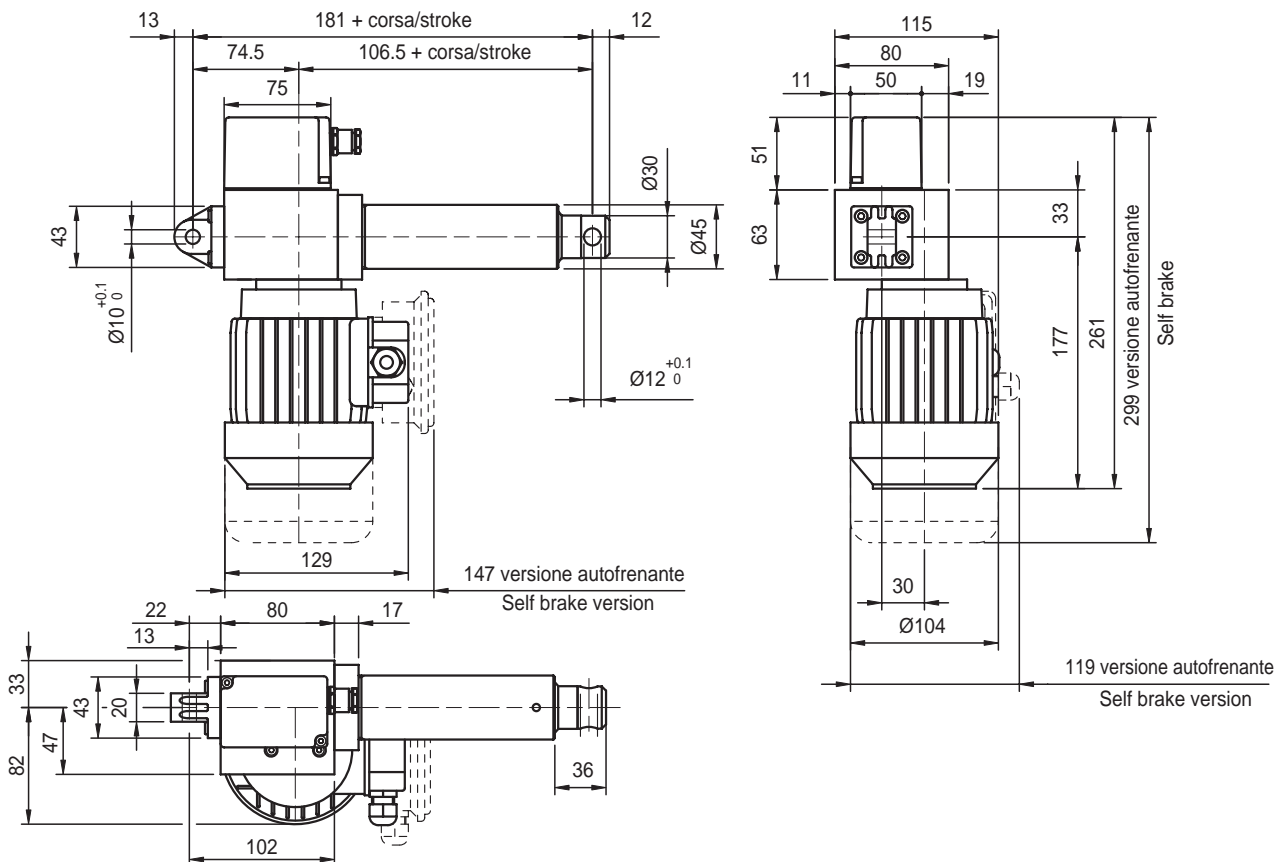
9000S - Versione C.A. / A.C. Version



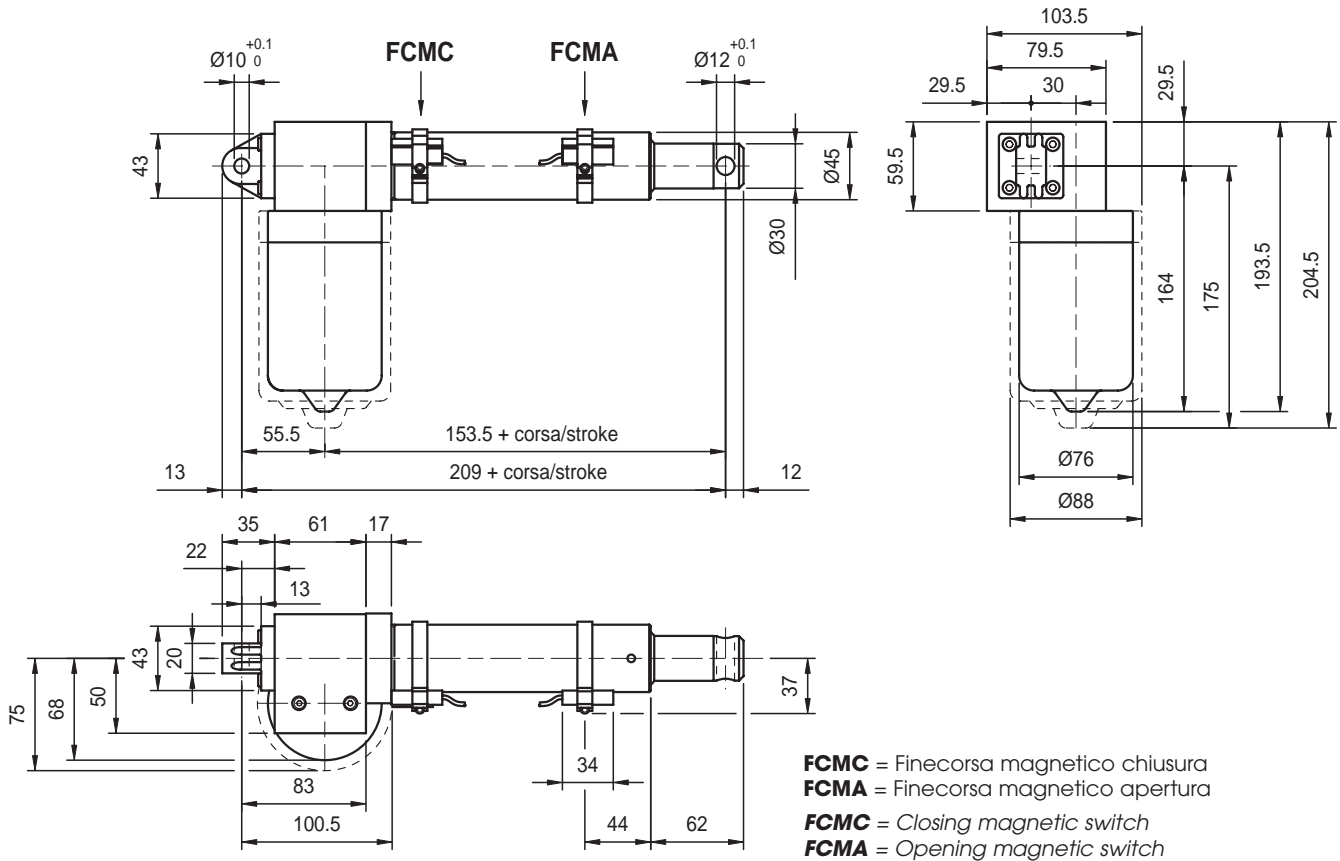
9000S-F - Versione C.C. / D.C. Version



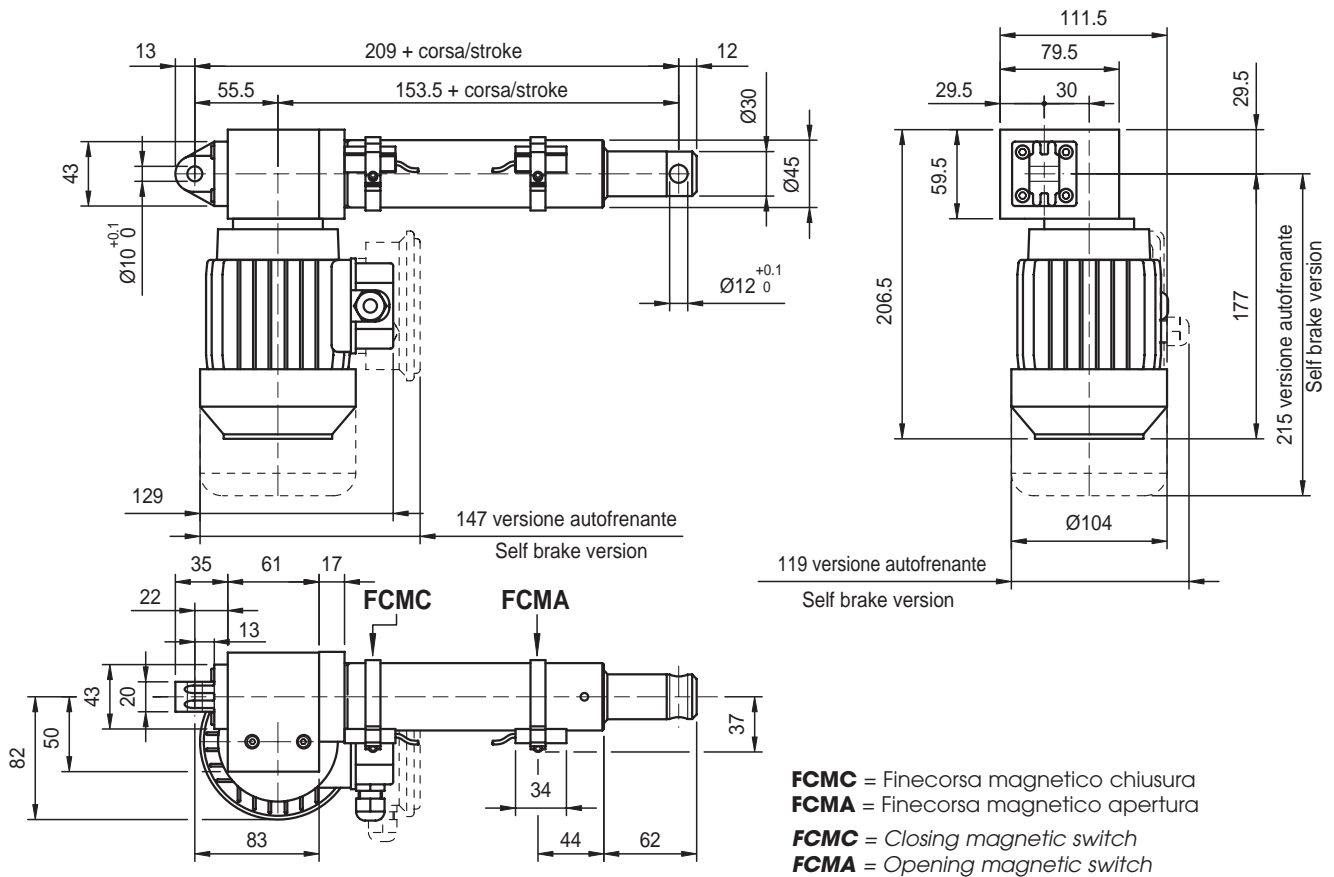
9000S-F - Versione C.A. / A.C. Version



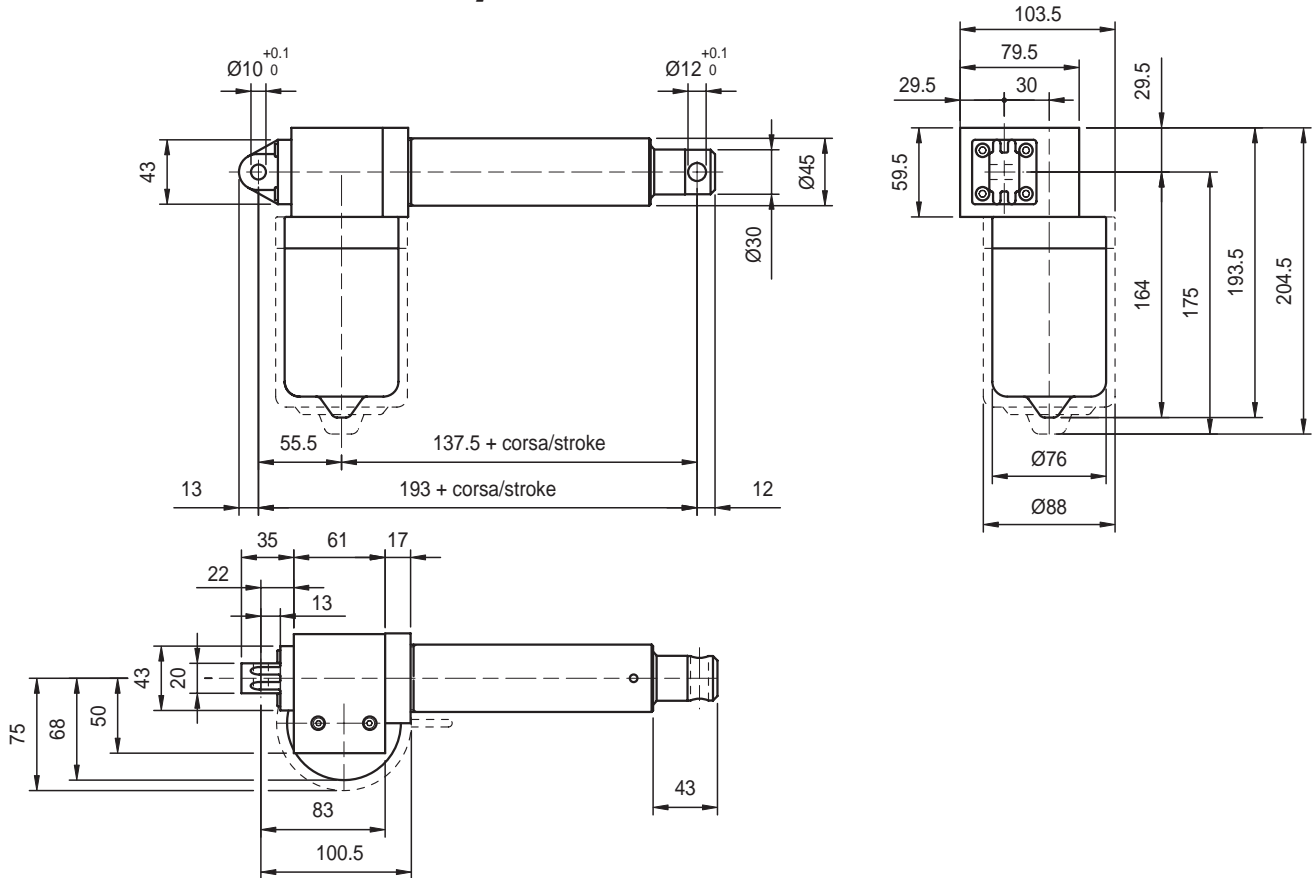
9000S-FCM - Versione C.C. / D.C. Version



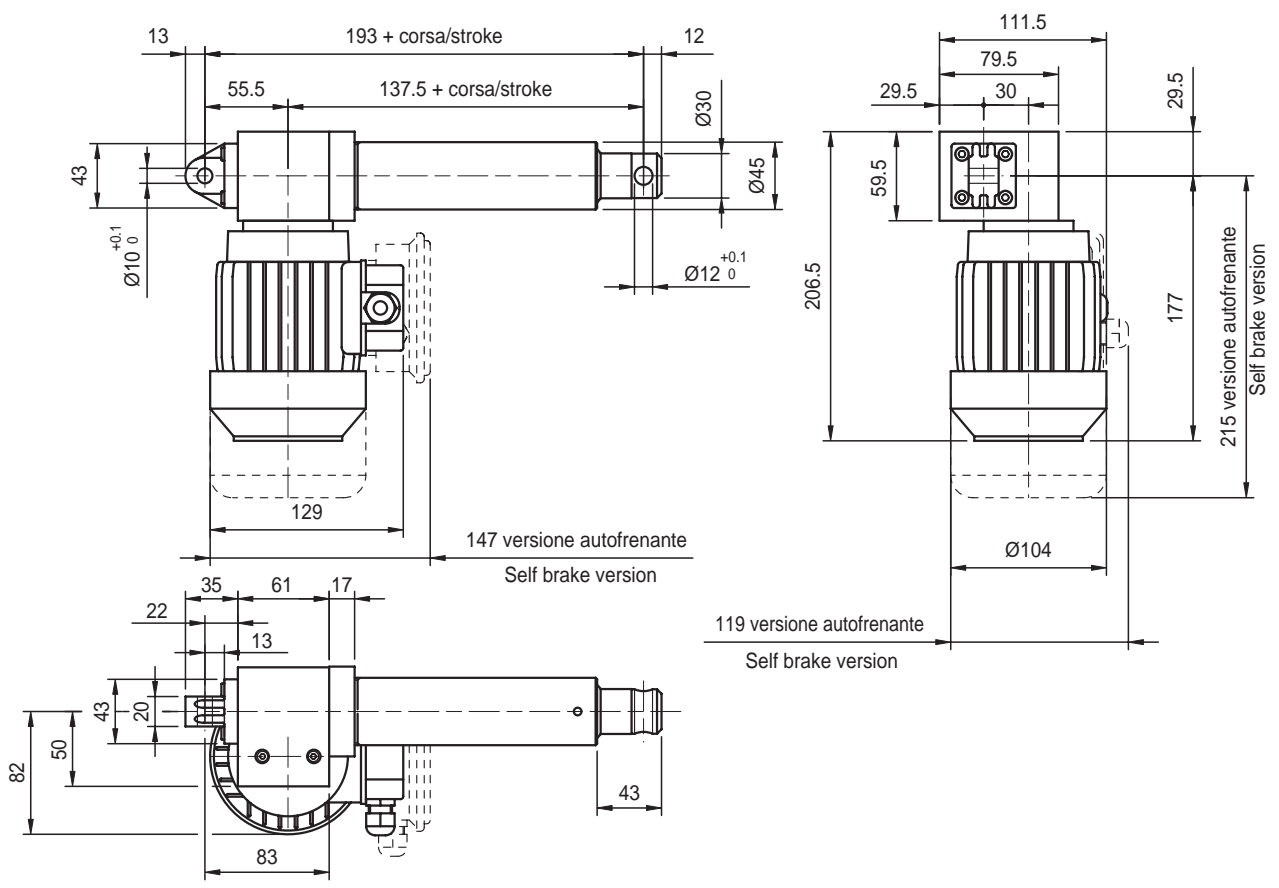
9000S-FCM - Versione C.A. / A.C. Version



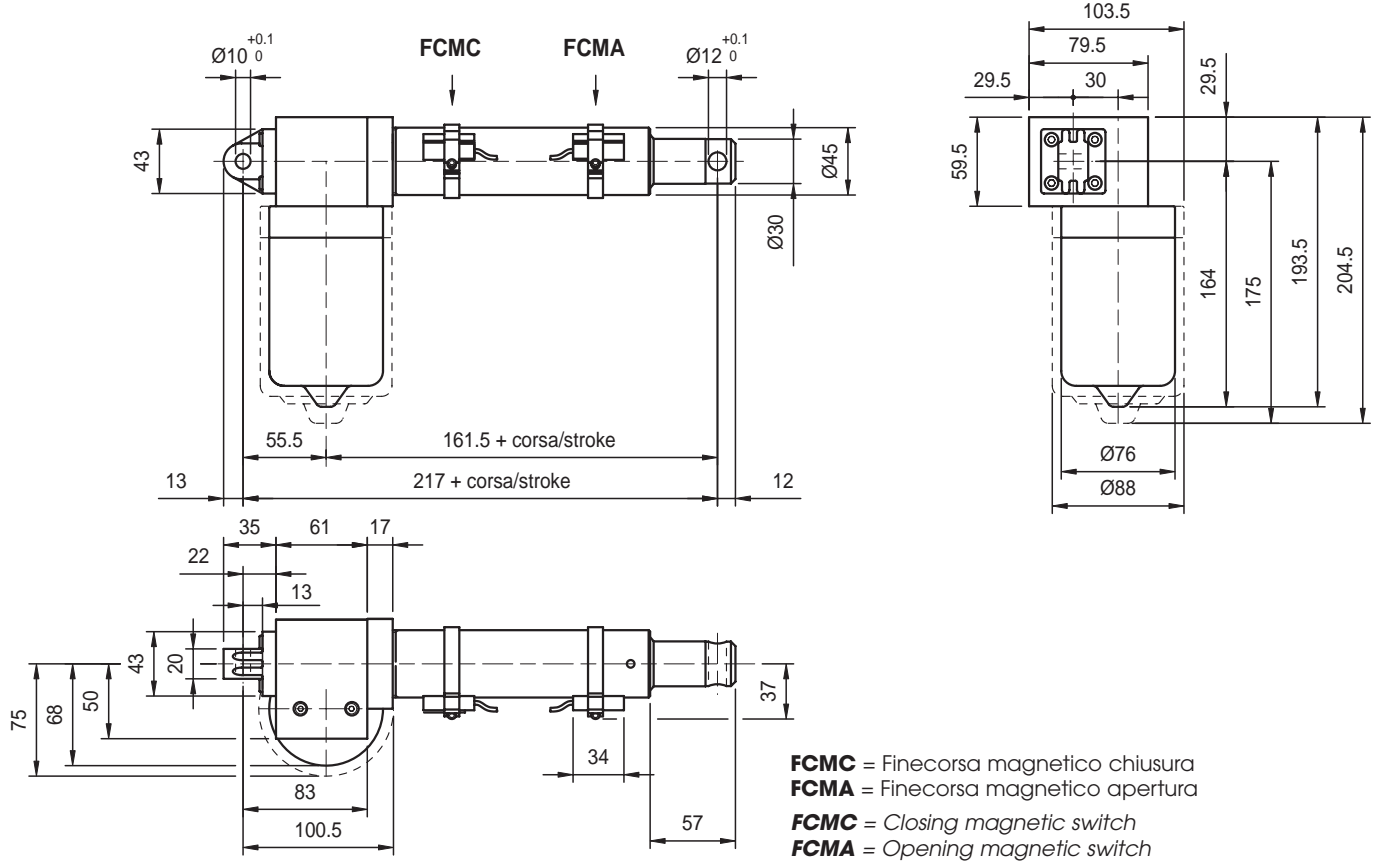
9000S-VRS - Versione C.C. / D.C. Version



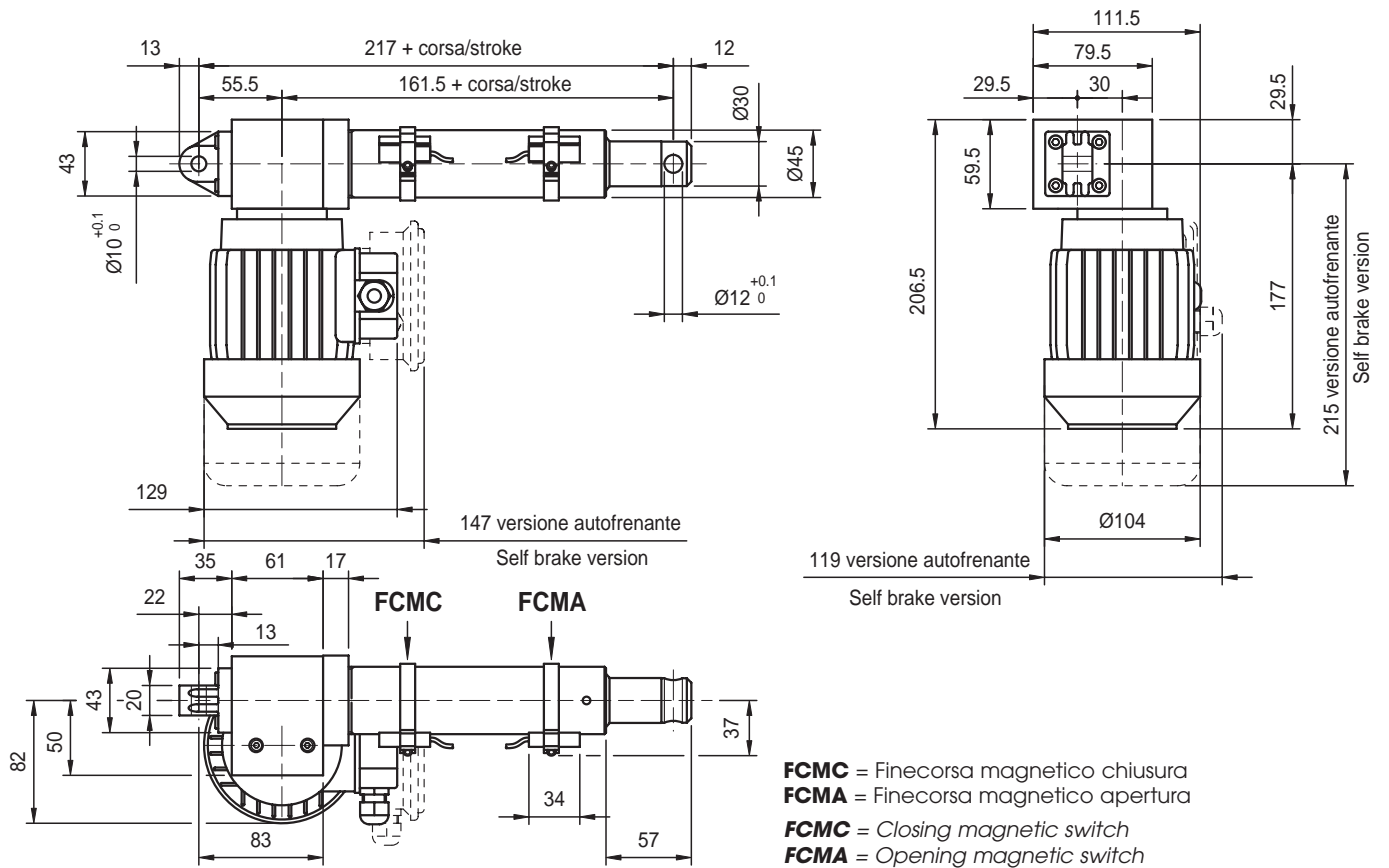
9000S-VRS - Versione C.A. / A.C. Version



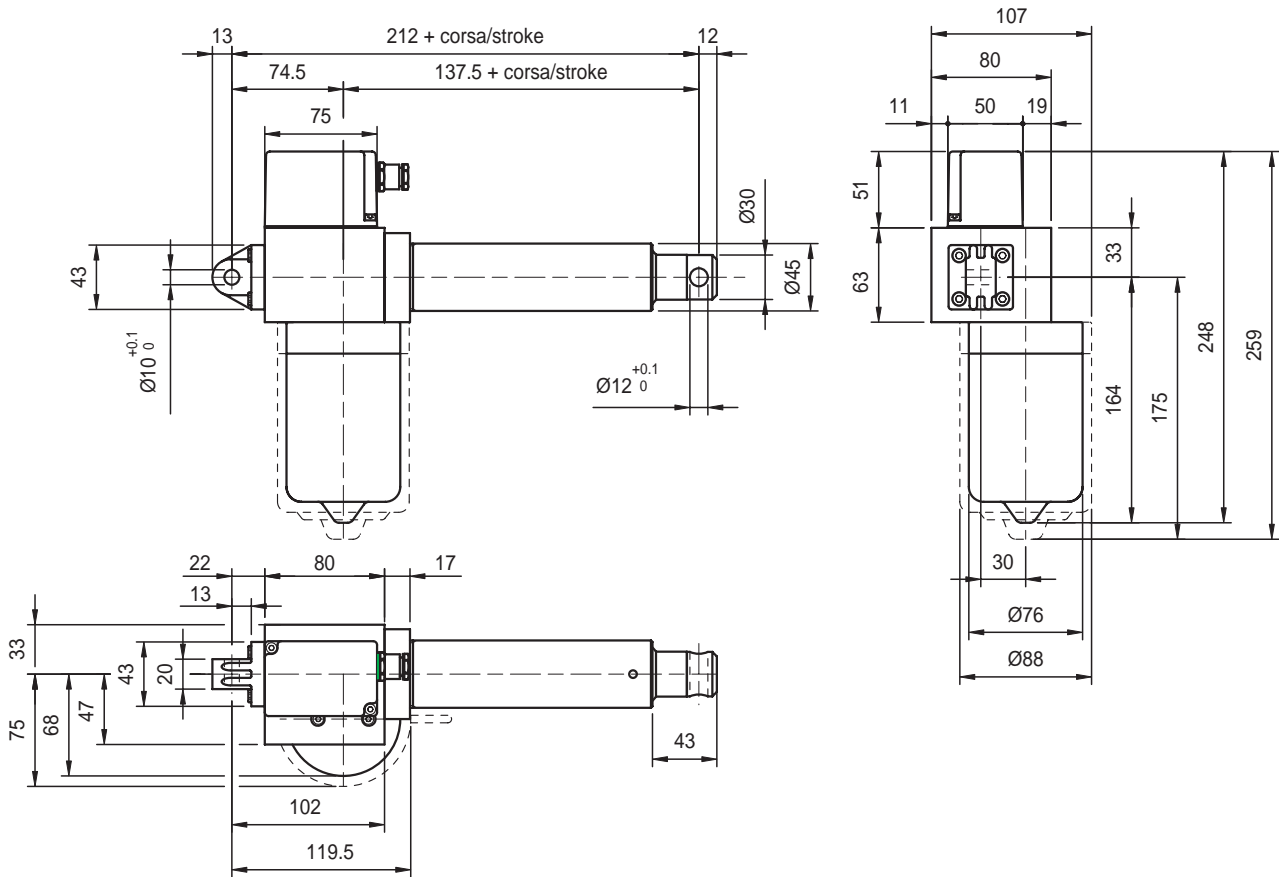
9000S-VRS-FCM - Versione C.C. / D.C. Version



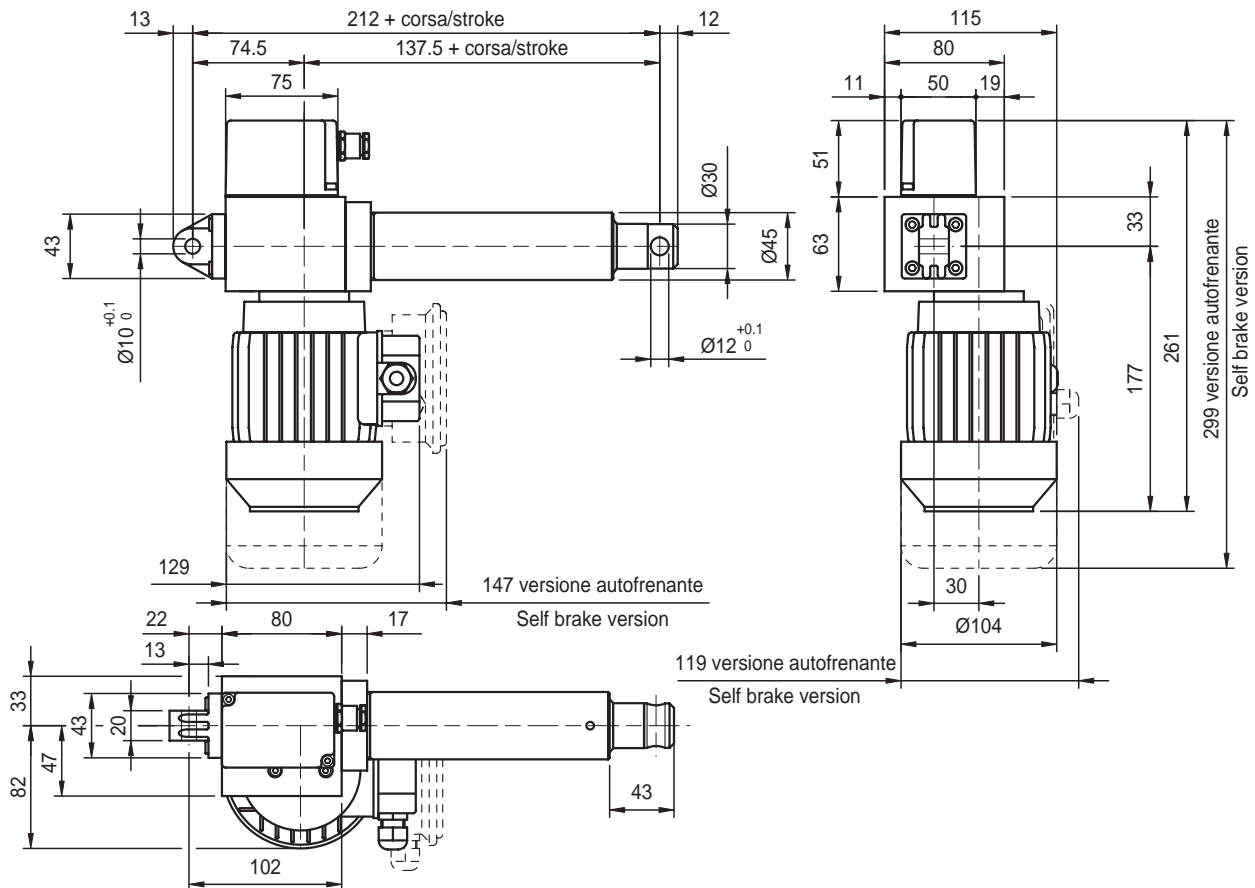
9000S-VRS-FCM - Versione C.A. / A.C. Version



9000S-VRS-F - Versione C.C. / D.C. Version

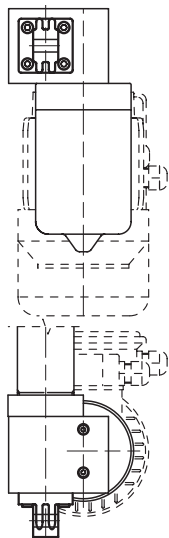


9000S-VRS-F - Versione C.A. / A.C. Version

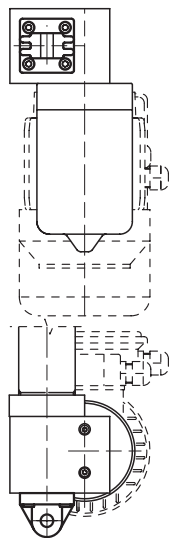


Attacco posteriore

Rear end



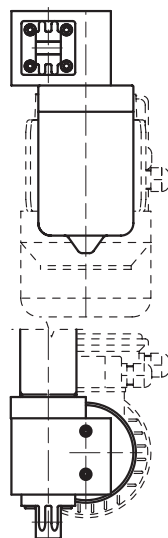
P1
(Standard)



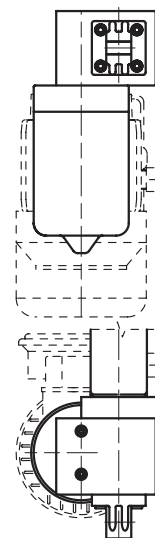
P2
Ruotato di 90° / 90° rotated

Orientamento motore

Motor side



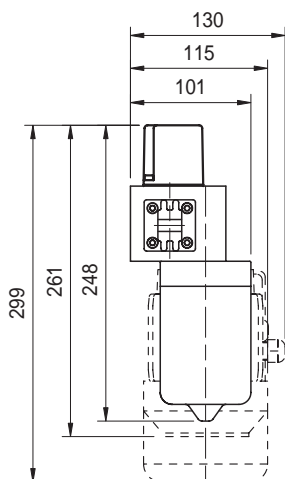
M0



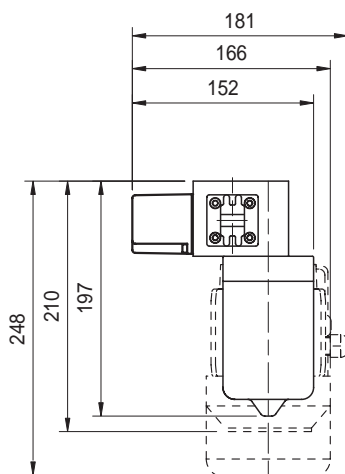
M1

Orientamento gruppo fine corsa

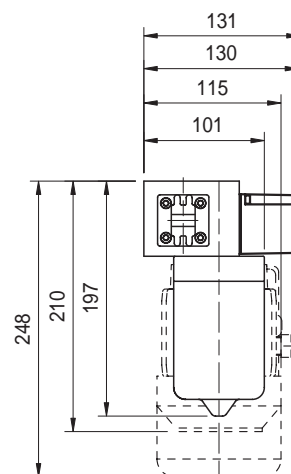
Limit switches box side



FC1
(Standard)



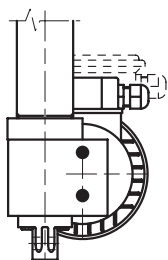
FC2



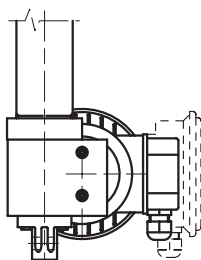
FC3

Orientamento morsettiera

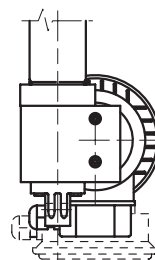
E-box side



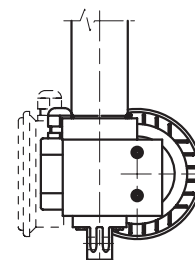
1
(Standard)



2

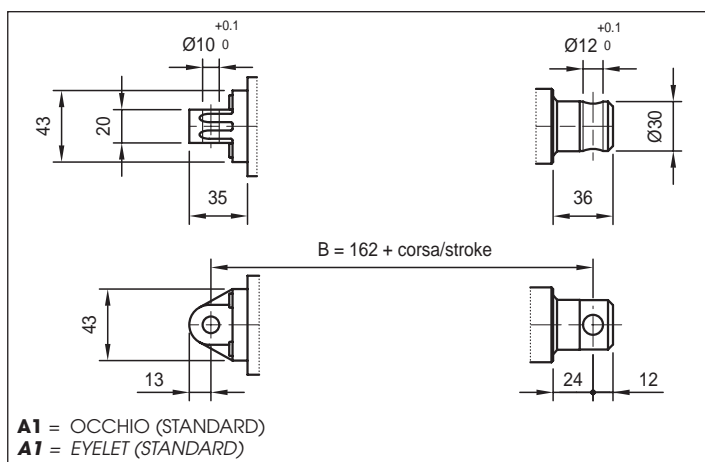


3

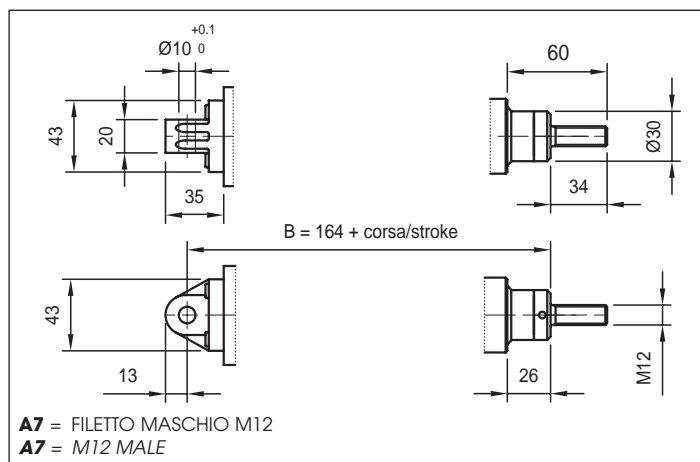
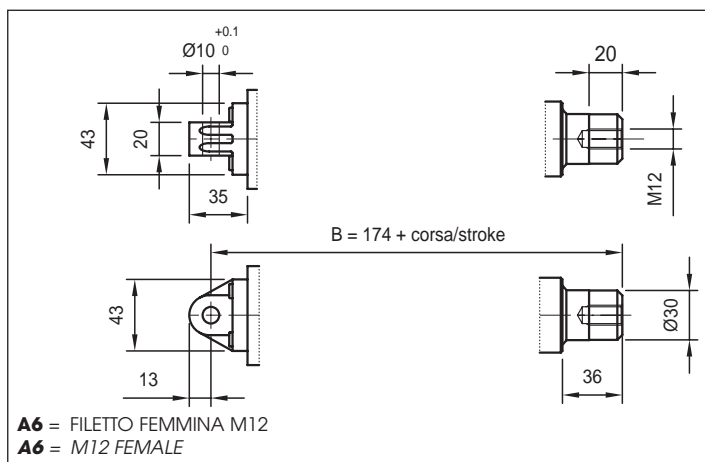
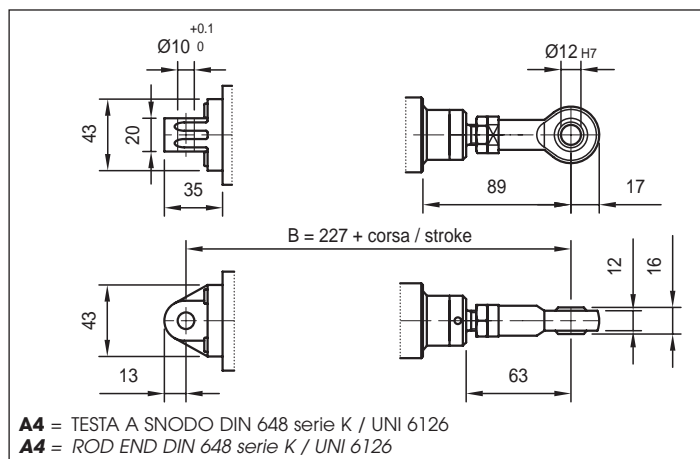
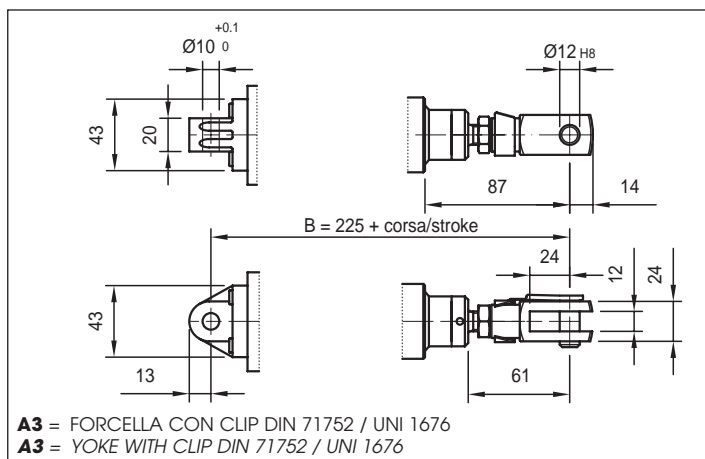
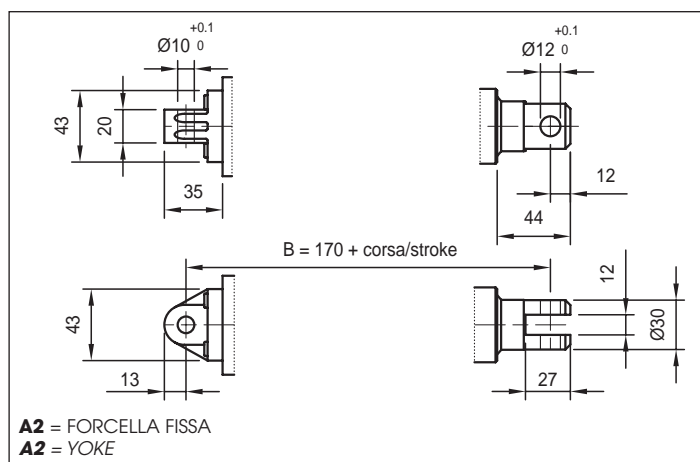


4

Attacchi anteriori



Front ends



NB: Variazioni quota "B" in base al modello

Note: "B" dimension variations depending on model

9000S = Vedi figure / See pictures

9000S-F = + 19 mm.

9000S-FCM = + 47 mm.

9000S-VRS = + 31 mm.

9000S-VRS-FCM = + 55 mm.

9000S-VRS-F = + 50 mm.

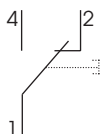
**Dispositivi Controllo Corsa
Elettrici / Elettronici**
**Electric/Electronic
Stroke Control Devices**
Fine corsa F
Limit switches F

Prestazioni / Performances	Tipo / Type	
	XCF	XGG <small>SPECIALE A RICHIESTA SPECIAL REQUEST</small>
Tensione / Voltage	250 Vac	230 Vac / 30 Vdc
Carico resistivo / Resistive load	10 A	16 A
Carico motore / Motor load	2 A	6 A

Caratteristiche tecniche micro

Le caratteristiche dei microinterruttori di finecorsa montati sono le seguenti:

- Alloggiamento: PA66 rinforzato con fibra di vetro (XCF)
Resina fenolica/melaminica termo-saldada (XGG)
- Meccanismo: azione a scatto con molla in acciaio inox (XCF) - bronzo/berillio (XGG).
Un contatto in scambio NC/NO



- Contatti: argento
- Terminali: dorati
- Vita meccanica: minimo 5×10^6 (XCF) - 3×10^5 (XGG)
azionamenti non impulsivi.

Switches technicals features

Limit Switches Features following:

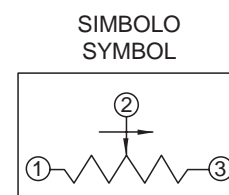
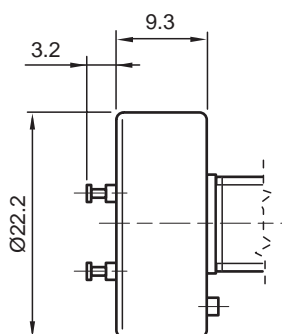
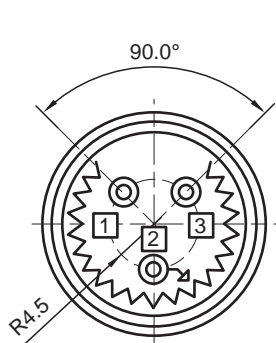
- Housing: Glass fibre reinforce PA66 (XCF)
Phenolic-melamine thermosetting (XGG)
- Mechanism: Snap-action coil spring mechanism with:
stainless steel spring (XCF) -
beryllium/bronze spring (XGG).
Changeover, normally-closed / normally-open

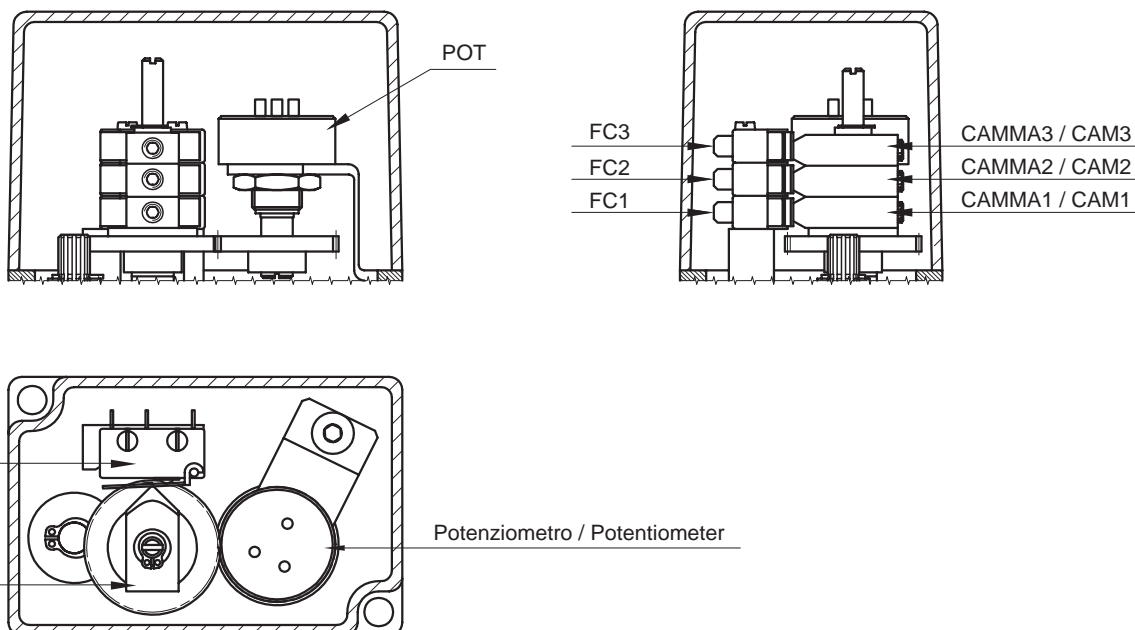


- Contacts: fine silver
- Terminals: gold flashed
- Mechanical life: 5×10^6 (XCF) - 3×10^5 (XGG)
cycle minimum (impact free actuation).

Potenziometro rotativo
Spinning potentiometer

Prestazioni / Performances	Tipo / Type (A)
Angolo max. di lavoro / Max. angle	$340^\circ \pm 3^\circ$
Resistenza Ohm / Resistance	1K / 5K / 10K (standard)
Alimentazione consigliata / Voltage	MAX 10 V
Linearità indipendente / Independent linearity	$\pm 2\%$
Tolleranza / Tolerance	$\pm 20\%$
Coefficiente deriva termica / Temperature coefficient of resistance	600 ppm / °C

Potenziometro "A"
Potentiometer "A"


Gruppo controllo corsa
Control devices group


FC 1 - micro inferiore
 FC 2 - micro centrale
 FC 3 - micro superiore
 CAMMA 1 - camma inferiore
 CAMMA 2 - camma centrale
 CAMMA 3 - camma superiore
 POT - potenziometro

FC 1 - lower microswitch
 FC 2 - middle microswitch
 FC 3 - upper microswitch
 CAM 1 - lower cam
 CAM 2 - middle cam
 CAM 3 - upper cam
 POT - potentiometer

Nota Bene: la combinazione fine corsa + potenziometro dev'essere valutata con il nostro Ufficio Tecnico.

N.B.: microswitches + potentiometer version pls. ask our Technical Dept.

Fine corsa magnetici FCM
Magnetic limit switches FCM

Prestazioni / Performances	Tipo / Type		
	DSM 1 H 425	DSL 1 C 225	DSL 4 N 225
Tensione in DC / DC voltage	3 / 110 V	3 / 30 V	6 / 30 V
Tensione in AC / AC voltage	3 / 110 V	3 / 30 V	/
Corrente a 25°C / 25°C Current	0,5 A	0,1 A	0,20 A
Potenza / Power	20 VA	6 VA	4 W
Tempo inserzione / ON time	0,5 ms	0,5 ms	0,8 ms
Tempo disinserzione / OFF time	0,02 ms	0,1 ms	0,3 ms
Cavo alimentazione / Supply cable	PVC 2 x 0,14 mm	PVC 2 x 0,14 mm	PVC 3 x 0,14 mm
Lunghezza cavo / Cablelength	2500 mm		
Protezione / Protection	IP67		

Circuito H (DSM)

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

Circuit H (DSM)

Circuit with Reed switch normally closed protected by a varistor against overvoltages caused when switching off, with indicator.

Circuito N - PNP (DSL)

Circuito con effetto di Hall normalmente aperto con uscita PNP.

Protetto contro l'inversione di polarità e contro picchi di sovratensione.

LED GIALLO: presenza tensione (solo DSM). LED VERDE: carico inserito (LED giallo per DSL).

Circuito C (DSL)

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

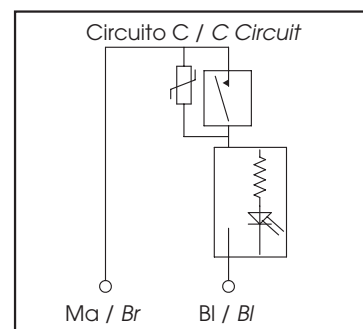
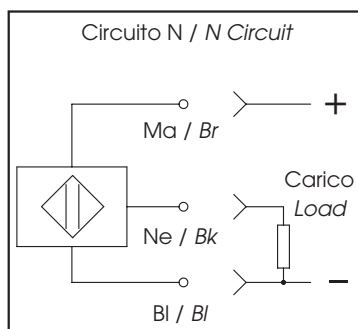
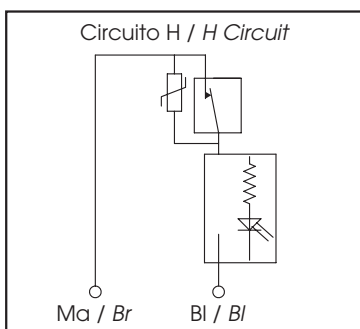
Circuit N - PNP (DSL)

Circuit with Hall-effect switch normally open with outlet PNP, protections against overvoltages spikes and reverse of polarity.

Yellow LED: Voltage in (only for DSM). Green LED: Load in (yellow LED for DSL).

Circuit C (DSL)

Circuit with Reed switch normally open protected by a varistor against overvoltages caused when switching off, with indicator.



Caratteristiche tecniche Encoder

Encoder incrementale bidirezionale con (standard) e senza impulso di zero IP54.

Impulsi giro disponibili: 50 / 100 / 200 / 400 / 500 / 512 / 1000 / **1024 (standard)** / 2000 / 2048

Circuiti d'uscita disponibili: Line Drive 5 Vdc (standard) / Push Pull 24 Vdc / Open Collector NPN 10 -30 Vdc / Open Collector PNP 10 -30 Vdc.

- Applicato sui motori in C.A.

Encoder technical specs

Bidirectional incremental encoder, with (standard) or without zero-pulse, protection IP54.

Available ppr: 50 / 100 / 200 / 400 / 500 / 512 / 1000 / **1024 (standard)** / 2000 / 2048

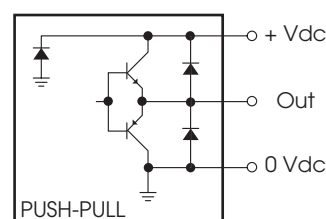
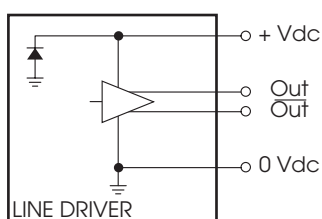
Available output circuits: Line Drive 5 Vdc (standard) / Push Pull 24 Vdc / Open Collector NPN 10 -30 Vdc / Open Collector PNP 10 -30 Vdc.

- Incremental encoder installed directly on AC motors.

Encoder

Rosso / Red	±Vdc
Nero / Black	0 Vdc
Verde / Green	A
Giallo / Yellow	B
Blu / Blue	Z
Marrone / Brown	-A
Arancione / Orange	-B
Bianco / White	-Z

Encoder



Riferimento Sigla d'ordinazione

Fine Corsa Meccanici:

2FC1 = 2 Micro XCF
 3FC1 = 3 Micro XCF } — Versioni Standard
 2FC2 = 2 Micro XGG
 3FC2 = 3 Micro XGG

2FCD2 = 2 Micro cablati con diodi XGG
 3FCD2 = 3 Micro di cui 2 cablati con diodi XGG }
 Solo per motori DC
 e per carichi fino a 6A
 di assorbimento

Fine Corsa Magnetici:

2FCM0 = 2 Sensori DSM.1H
 2FCM1 = 2 Sensori DSL.1C - (Standard)
 2FCM2 = 2 Sensori DSL.4N
 3FCM0 = 3 Sensori DSM.1H
 3FCM1 = 3 Sensori DSL.1C - (Standard)
 3FCM2 = 3 Sensori DSL.4N

Potenzimetri:

POT01A = 1 k Ohm
 POT05A = 5 k Ohm
 POT10A = 10 k Ohm

Encoder:

E05 = Push Pull 1024 ppr
 E06 = Line Drive 1024 ppr (standard)
 E07 = Open Collector NPN
 E08 = Open Collector PNP } Solo su Motore C.A.

E13 = Encoder non contemplato
 (indicare le caratteristiche nel disegno d'assieme)

Ordering Key references

Mechanical limit switches:

2FC1 = 2 Microswitches XCF
 3FC1 = 3 Microswitches XCF } — Standard Versions
 2FC2 = 2 Microswitches XGG
 3FC2 = 3 Microswitches XGG

2FCD2 = 2 XGG Microswitches diode-wired
 3FCD2 = 3 XGG Microswitches, 2 of them diode-wired }
 For DC motors only
 and for loads
 up to 6A

Magnetic limit switches:

2FCM0 = 2 Sensors DSM.1H
 2FCM1 = 2 Sensors DSL.1C - (Standard)
 2FCM2 = 2 Sensors DSL.4N
 3FCM0 = 3 Sensors DSM.1H
 3FCM1 = 3 Sensors DSL.1C - (Standard)
 3FCM2 = 3 Sensors DSL.4N

Potentiometers:

POT01A = 1 k Ohm
 POT05A = 5 k Ohm
 POT10A = 10 k Ohm

Encoder:

E05 = Push Pull 1024 ppr
 E06 = Line Drive 1024 ppr (standard)
 E07 = Open Collector NPN
 E08 = Open Collector PNP } With AC motor only

E13 = Special encoder (advise features in drawing)

Guida alla scelta della motorizzazione - *Motor choice guideline*

TIPO MOTORE / MOTOR TYPE

Versione / Version: **CC** = corrente continua / **DC** = *direct current*
CA = corrente alternata / **AC** = *alternate current*
PD = PAM a disegno / *Special motorflange (provide drawing)*

Tensione / Voltage: CC / DC = V12 / V24 / V36 / V48
 CA / AC = 230/400/50 - 190/330/50 - 208/360/50 - 400/690/50
 277/480/60 - 220/380/60 - 254/440/60 - 480/830/60 - **MT** = Multitensione / *Multivoltage*
 230/50 (monofase / *1-phase*)

Tipo / Type: (Solo per CA / *only for AC*)

- T** = trifase / *3-phase*
- M** = monofase / *1-phase*
- AT** = trifase autofrenante / *3-phase with brake*
- AM** = monofase autofrenante / *1-phase with brake*
- ME** = monofase con condensatore elettronico / *1-phase with starting capacitor*
- AE** = monofase con condensatore elettronico autofr. / *1-phase with brake and starting capacitor*

Grandezza / Size: CC / DC: D.76 / D.90
 CA / AC: IEC 50

N° Poli / Poles: **CA / AC:** 2 / 4
N° Giri / RPM's: **CC / DC:** 3000 RPM / 4000 RPM / 5000 RPM

Potenza CA / AC Power: kW

IEC IEC	kW trifase / 3-phase			kW monofase / 1-phase		
	2POLI 2POLES	4POLI 4POLES	6POLI 6POLES	2POLI 2POLES	4POLI 4POLES	6POLI 6POLES
50	0,13	0,09	-	0,12	0,09	-

VARIANTI MOTORE / MOTOR OPTIONALS

Flangia tipo / Motorflange type: PAM50 DIS (omettere / *leave blank*)

Tipo servizio / Service rate: **S1 / S2 / S3**

Classe isolamento / Insulation class: **F** = standard (**non indicare**) / *standard (leave blank)*
Specificare solo se diversa / Advise only if different than "F"

Grado Protezione / Degree protection: **IP55** (non indicare / *leave blank*)
IP65
TP = tropicalizzato / *tropicalization*
ALTRO / OTHER (indicare / *advise*)

Freno / Brake: **FECC** = freno elettromagnetico in CC / *DC brake*
FECA = freno elettromagnetico in CA / *AC brake*
SENZA = omettere / **NO BRAKE** = *leave blank*

Opzioni / Options: **LS** = leva sblocco / *hand release lever* (non indicare / *leave blank*)
AB = albero bisporgente / *2' shaft*
IN = avvolgimento per inverter / *winding for inverters*
ALTRO / OTHER = indicare per esteso / *advise*
SENZA / NONE = omettere / *leave blank*

SIGLA DI ORDINAZIONE - ORDERING KEY

9000S / 0250 / M01 / CA-400-50-T-50-4-0,09 / S1+AB / M1 / 1 / E05 / 2FC2 / POT01A / FC1 / IP65 / P1 / A1 / A+B / N.DIS

MODELLO / MODEL: _____

9000S
9000S-F
9000S-FCM
9000S-VRS
9000S-VRS-FCM
9000S-VRS-F

CORSA / STROKE: mm _____
es. 250 mm = 0250

VELOCITÀ / SPEED: mm/s Pag. 1 _____

Versione / Version C.C.: M01 / M02 / M03 / M04 / M05 / M06 } TPN
Versione / Version C.A.: _____

Versione / Version C.C.: M01 / M02 / M03 / M04 } VRS
Versione / Version C.A.: M01 / M02 / M03 / M04 / M05 } _____

M00 = Velocità non contemplate / Speed to be provided

Versione PAM / PAM Version:

Indicare Rapporto Riduzione + Passo Stelo
Advise reduction ratio and screw pitch

MOTORE / MOTOR: Pag. 14 _____

Indicare solo con motore: / Advise only if with motor:

In C.A.: versione / tensione / tipo / grandezza / n° poli / potenza
version / voltage / type / size / n° poles / power

In C.C.: versione / tensione / grandezza / n° giri
version / voltage / size / Rpm

In versione predisposizione motore "PAM" indicare: 0

In version with motorflange only PAM: 0

In versione PAM a Disegno indicare: PD

In version with special motorflange: PD

VARIANTI MOTORE / MOTOR OPTIONAL: Pag. 14 _____

Senza motore o con motore in C.C.: Omettere tutti i parametri sottoindicati

No motor or DC motor: leave all following parameters blank

Tipo Servizio: Indicare se diverso da S3 (standard)

Service rate: Advise if different than S3 (standard)

Classe isolamento: Indicare se diverso da F (standard)

Insulation class: Advise if different than F (standard)

Grado Protezione: Indicare se diverso da IP55 (standard)

Degree Protection: Advise if different than IP55 (standard)

Tipo freno: solo se autofrenante: ES, FECA

Brake type: for brakemotors only; ES, FECA

Opzioni: Indicare se richiesto ES, AB= Albero Bisporgente

Options: Advise if needed ES, AB= 2'shaft

ORIENTAMENTO MOTORE / MOTOR SIDE: Pag. 8 _____

M0 / M1

ORIENTAMENTO MORSETTIERA / E-BOX SIDE: Pag. 8 _____

1 (Standard), 2, 3, 4

Senza Motore / No Motor : Omettere / Leave blank

ENCODER / ENCODER: Pag. 13 _____

Senza / None: Omettere / Leave blank

FINE CORSA / LIMIT SWITCHES: Pag. 13 _____

Senza / None: Omettere / Leave blank

POTENZIOMETRO / POTENTIOMETER: Pag. 13 _____

Senza / None: Omettere / Leave blank

ORIENTAMENTO GRUPPO FINE CORSA / LIMIT SWITCHES SIDE: Pag. 8 _____

Senza / None: Omettere / Leave blank

GRADO PROTEZIONE / PROTECTION CLASS: _____

IP50 (Standard): Omettere / Leave blank

IP65

Altro / Other: Specificare / Advise

ATTACCO POSTERIORE / REAR END: Pag. 8 _____

P0 = Senza / None

P2 = Occhio / Eyelet (90°)

P1 = Occhio / Eyelet (standard)

P3 = Attacco a Disegno / Special (provide drawing)

ATTACCO ANTERIORE / FRONT END: Pag. 9 _____

A0 = Senza / None

A3 = Forcella + Clip / Yoke + Clip

A7 = Filetto Maschio M12 / M12 male

A1 = Occhio / Eyelet (Standard)

A4 = Testa a Snodo / Rod end

A9 = Attacco a Disegno / Special (provide drawing)

A2 = Forcella Fissa / Yoke

A6 = Filetto Femmina M12 / M12 female

OPZIONI / OPTIONS:

Senza / None: Omettere / Leave blank

E = Guarnizioni in Viton / Viton joints

A = Versione Inox / Stainless steel version

F = Verniciatura / Painting

B = Protezione Soffietto / Bellow

G = Chiocciola di Sicurezza / Safety nut

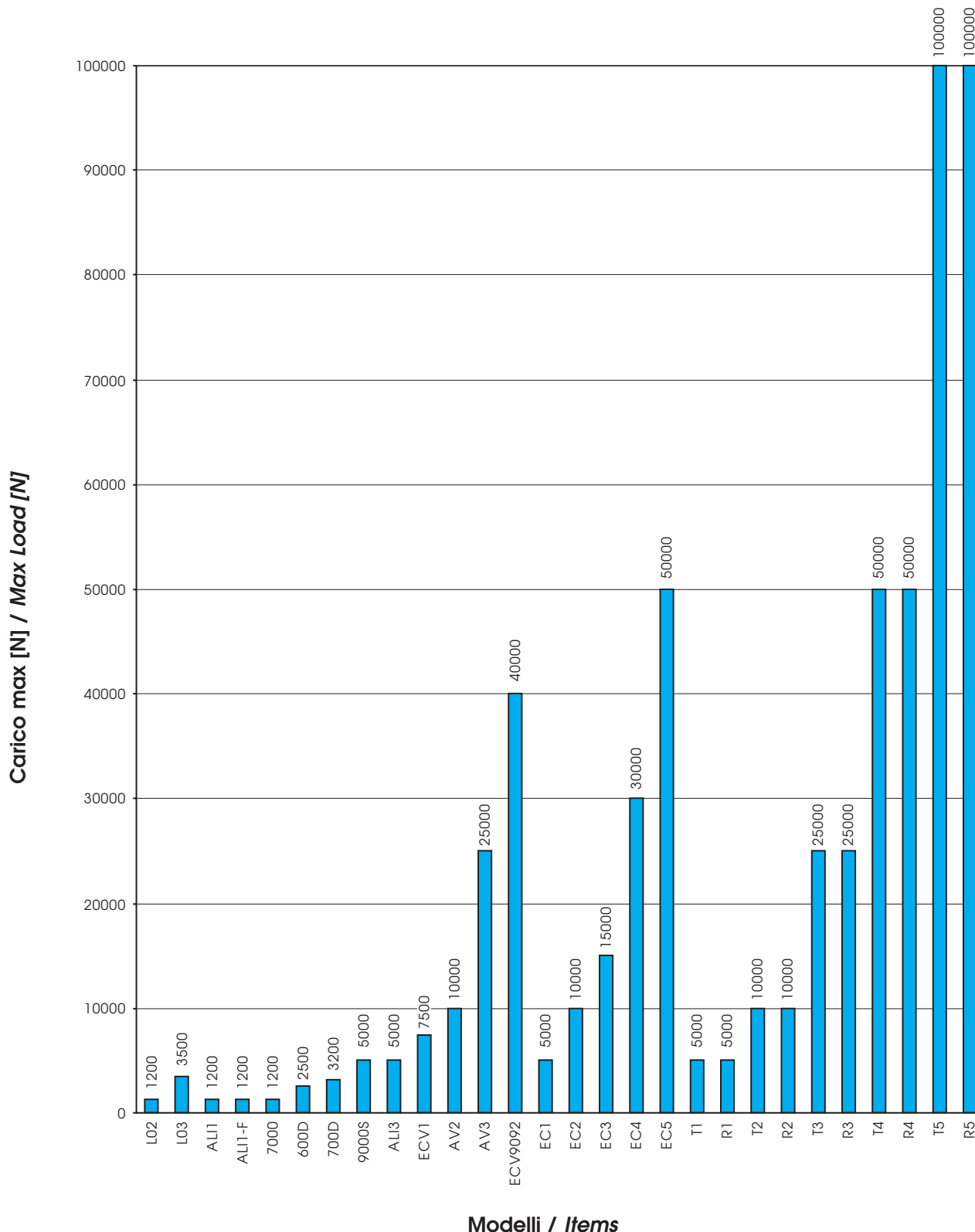
C = Vite Scoperta / Naked Screw

L = Antitrotazione / Anti-rotation device

VARIANTI / VERSIONS:

N° Disegno / Drawing number: Per Condizioni non Contemplate / Drawing to be provided

Senza / None: Omettere / Leave blank



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