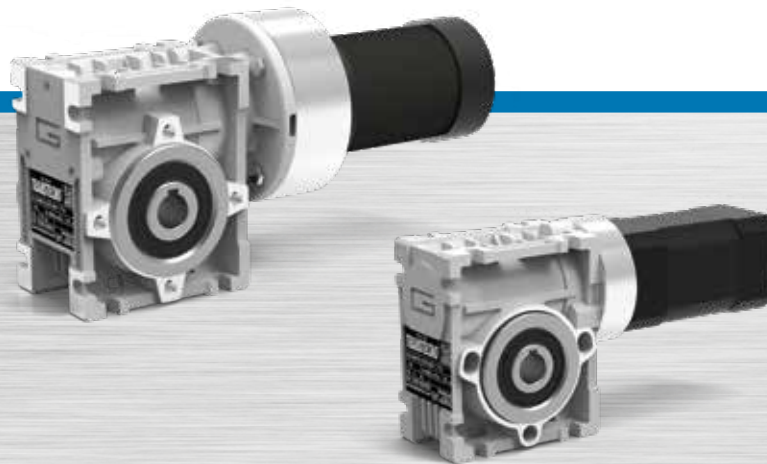
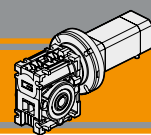


Micro motoriduttori brushless CC a vite senza fine Micro brushless DC wormgearmotors

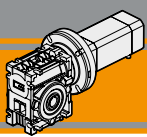




Indice	Index	Pag. Page
Caratteristiche tecniche	<i>Technical features</i>	G2
Designazione	<i>Classification</i>	G2
Simbologia	<i>Symbols</i>	G2
Lubrificazione	<i>Lubrication</i>	G2
Carichi radiali	<i>Radial loads</i>	G3
Dati di dentatura	<i>Toothing data</i>	G3
Rendimento	<i>Efficiency</i>	G3
CM026 con motore brushless	<i>CMn6 with brushless motor</i>	G4
CM030 con motore brushless	<i>CM30 with brushless motor</i>	G6
Dimensioni	<i>Dimensions</i>	G8
Opzioni	<i>Options</i>	G8
Accessori	<i>Accessories</i>	G9

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Micro motoriduttori brushless CC a vite senza fine Micro brushless DC wormgearmotors

Caratteristiche tecniche

Technical features


Le caratteristiche principali dei motoriduttori brushless CC a vite senza fine della serie CM sono:

The main features of brushless DC wormgearmotors range CM are:

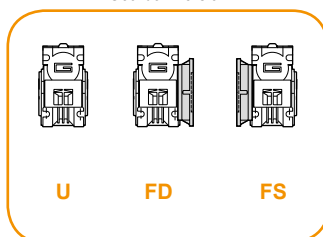
- Alimentazione in bassa tensione 24/36 Vcc
- Possibilità di montaggio encoder
- Coppie motore disponibili da 0,12 a 0,43Nm
- Elettronica di comando integrata IE (opzionale)
- Carcasce dei riduttori in pressofusione di alluminio
- Lubrificazione permanente con olio sintetico
- Low voltage power supply 24/36 Vdc
- Suitable for encoder assembly
- Motor torque ratings available from 0,12 up to 0,43Nm
- Built in electronic drives IE (optional)
- Die-cast aluminium housings
- Permanent synthetic oil long life lubrication

Designazione

Classification

RIDUTTORE / GEARBOX				MOTORE / MOTOR		
CM	026	20	U	BL012.240	24V	IE
Tipo Type	Grandezza Size	Rapporto in Ratio in	Versione Version	Tipo Type	Tensione Voltage	Opzioni Options
CM	026 030	Vedere tabelle See tables	U F	BL012.240 BL018.240 BL025.24E BL032.240 BL043.240	24V 36V	IE Encoder 

Versione Riduttore
Gearbox Version



Simbologia

Symbols

Ns	n° stadi / No. stages	Pn	[W]	Potenza nominale / Nominal power
in	rapporto nominale / nominal ratio	V	[V]	Tensione / Voltage
ir	rapporto reale / real ratio	I	[A]	Assorbimento / Current
M _n	[Nm] coppia in uscita in funzionamento continuativo S1 output torque for continuous operation S1	IC		Classe di isolamento termico / Thermal insulation class
Rd	rendimento dinamico / efficiency	FF		Fattore di forma / Form factor
R ₂	[N] massimo carico radiale al centro dell'albero uscita max. radial load at output shaft centre	n ₁	[Rpm]	Giri / Speed
A ₂	[N] massimo carico assiale / max. axial load	IP		Grado di protezione / Enclosure protection
		Kg		Peso / Weight

Lubrificazione

Lubrication

I riduttori a vite senza fine della serie CM026 e CM030 sono lubrificati a vita con olio sintetico di viscosità 320 e possono essere installati in qualunque posizione di montaggio.

Permanent synthetic oil long-life lubrication allow to use CM026 and CM030 wormgearbox range in all mounting position.

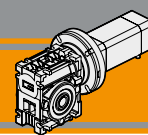
Temperatura ambiente 0 ÷ 40 °C (in assenza di congelamento ed in assenza di condensa).

Ambient temperature 0 ÷ 40 °C (in the absence of freezing and condensation).

Per temperature diverse, contattare nostro UT.

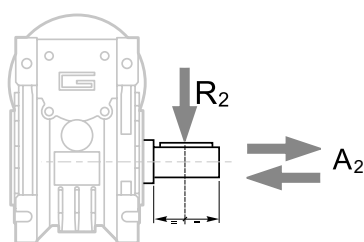
For temperature outside this range please contact our technical dept.

	Quantità di olio (litri) / Oil quantity (litres)					
	B3	B8	B6	B7	V5	V6
CM026	0.015					
CM030	0.03					



Carichi radiali

Radial loads

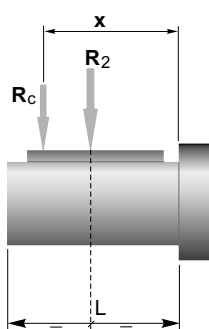


$$A_2 = R_2 \times 0.2$$

n ₂ [min ⁻¹]	R ₂ [N]	
	CM026	CM030
187	400	674
140	490	743
93	580	851
70	610	936
56	610	1008
47	610	1069
35	610	1179
28	610	1270
23	610	1356
18	610	1471
14	610	1600

Quando il carico radiale risultante non è applicato sulla mezza-
ria dell'albero occorre calcolare quello effettivo con la seguente
formula:

When the resulting radial load is not applied on the centre line
of the shaft it is necessary to calculate the effective load with the
following formula:



$$R_c = \frac{R_2 \cdot a}{(b+x)} \leq R_{2MAX}$$

$$R \leq R_c$$

a, b = valori riportati nella tabella
a, b = values given in the table

	CM	
	026	030
a	56	65
b	43	50
R _{2MAX}	610	1600

Dati di dentatura

Toothing data

	Dati della coppia vite-corona Worm wheel data	Rapporto / Ratio											
		5	7.5	10	15	20	25	30	40	50	60	80	100
CM026	Z	6	4	3	2	2		1	1	1	1		
	β	34° 35'	24° 41'	19° 1'	12° 57'	10° 30'		6° 33'	5° 17'	4° 26'	3° 49'		
CM030	Z	6	4	3	2	2	2	1	1	1	1	1	1
	β	27° 4'	24° 28'	18° 50'	12° 49'	10° 23'	8° 43'	6° 29'	5° 14'	4° 23'	3° 46'	2° 57'	2° 25'

Rendimento

Efficiency

	n ₁ [min ⁻¹]	Rendimento Efficiency	Rapporto / Ratio											
			5	7.5	10	15	20	25	30	40	50	60	80	100
CM026	2800	Rd	0.89	0.87	0.85	0.83	0.80		0.73	0.68	0.64	0.60		
		Rs	0.72	0.71	0.68	0.61	0.56		0.46	0.41	0.36	0.34		
CM030	2800	Rd	0.89	0.88	0.86	0.84	0.81	0.78	0.74	0.70	0.65	0.62	0.57	0.52
		Rs	0.72	0.67	0.63	0.55	0.50	0.43	0.39	0.35	0.31	0.27	0.23	0.21

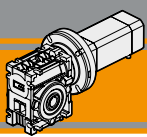
Reversibilità e irreversibilità

Reversibility and irreversibility

La tabella sottostante riporta a titolo puramente
indicativo i vari gradi di reversibilità/irreversibilità
nei riduttori a vite senza fine in funzione del rendi-
mento dinamico Rd e statico Rs.

The table below is provided for reference purposes
only. It contains the various degrees of reversibi-
lity/irreversibility of wormgearboxes in relation to
dynamic Rd and static Rs efficiency.

Rd	Reversibilità e irreversibilità dinamica	Dynamic reversibility and irreversibility
> 0.60	Reversibilità dinamica	Dynamic reversibility
0.50 - 0.60	Reversibilità dinamica incerta	Uncertain dynamic reversibility
0.40 - 0.50	Buona irreversibilità dinamica	Good dynamic irreversibility
<0.40	Irreversibilità dinamica	Dynamic irreversibility
Rs	Reversibilità e irreversibilità statica	Static reversibility and irreversibility
> 0.55	Reversibilità statica	Static reversibility
0.50 - 0.55	Reversibilità statica incerta	Uncertain static reversibility
<0.50	Irreversibilità statica	Static irreversibility



Micro motoriduttori brushless CC a vite senza fine

Micro brushless DC wormgearmotors

CM026 con motore brushless CC

CM026 with DC brushless motor

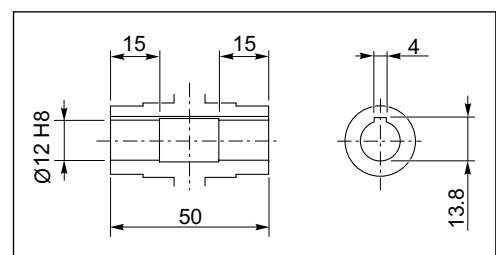
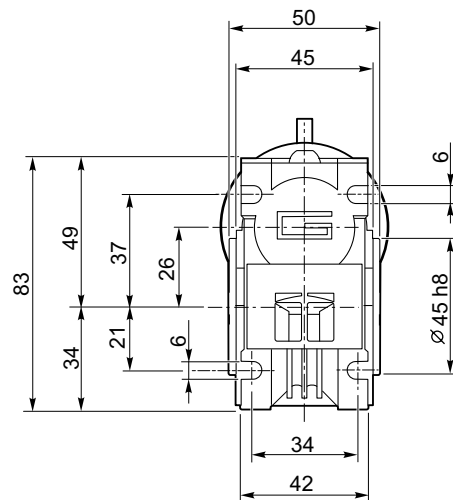
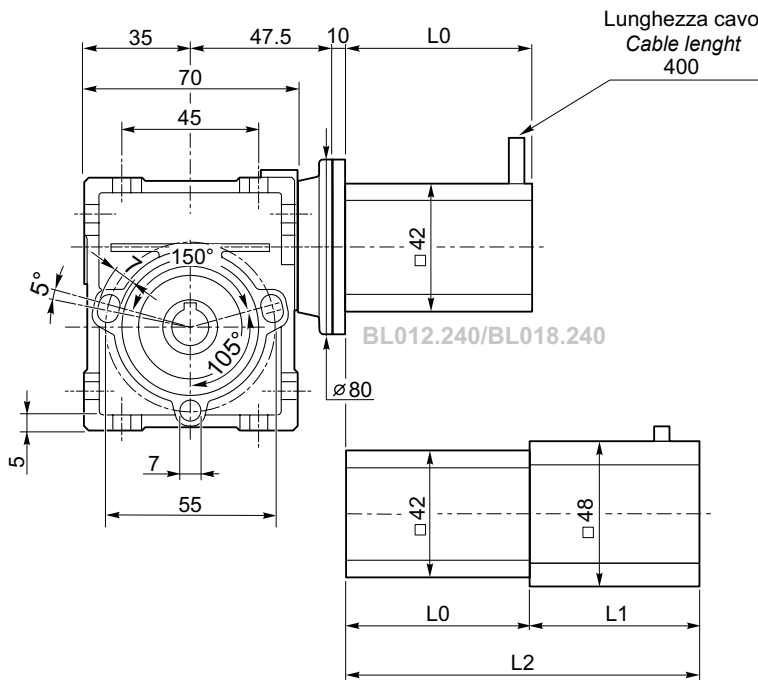
CM026			BL012.240				BL018.240					
n ₁ =3000 rpm			Coppia nominale Rated torque 24V		Coppia massima Peak torque 24V		Coppia nominale Rated torque 24V		Coppia massima Peak torque 24V			
			[Nm]	[rpm]	[Nm]	[rpm]	[Nm]	[rpm]	[Nm]	[rpm]		
ir	M _n [Nm]	Kg	5	10	0.56	800	1.11	800	0.82	800	1.65	800
7.5	11		0.82	533	1.63	533	1.21	533	2.41	533		
10	11		1.06	400	2.13	400	1.57	400	3.15	400		
15	11		1.56	267	3.11	267	2.30	267	4.61	267		
20	11		2.00	200	4.00	200	2.96	200	5.92	200		
30	12		2.74	133	5.48	133	4.05	133	8.10	133		
40	11		3.40	100	6.80	100	5.03	100	10.06	100		
50	10		4.00	80	8.00	80	5.92	80	11.84	80		
60	9		4.50	67	9.00	67	6.66	67	13.32	67		

Nota: le caselle in colore grigio indicano il superamento della coppia massima sopportata dal riduttore per il servizio in S1.

N.B.: boxes in grey indicate that maximum torque withstood by gear reducer for service in S1 is exceeded.

Tipo Type	Numero di poli Number of poles	Numero di fasi Number of phase	Tensione Rated voltage [V]	Numero di giri Rated speed [rpm]	Coppia nominale Rated torque [Nm]	Potenza nominale Rated power [W]
BL012.240	8	3	24	4000	0.125	52.5
BL018.240	8	3	24	4000	0.185	77.5
Tipo Type	Coppia massima Peak torque [Nm]	Corrente nominale Rated current [A]	Resistenza Resistance [ohm]	Induttanza Inductance [mH]	Corrente massima Peak current [A]	Peso Weight [kg]
BL012.240	0.25	3.5	0.8	1.2	7.0	0.45
BL018.240	0.37	5.0	0.55	0.8	10.0	0.65

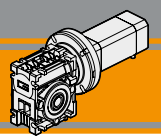
Azionamenti
Drives



Albero lento cavo / Hollow output shaft

BL012.240-IE/BL018.240-IE

Tipo Type	L0	L1	L2
BL012.240	61	-	-
BL012.240-IE	61	44	105
BL018.240	81	-	-
BL018.240-IE	81	56	137



CM026 con motore brushless CC

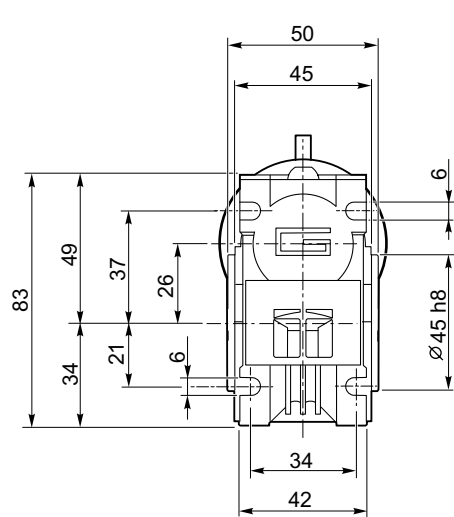
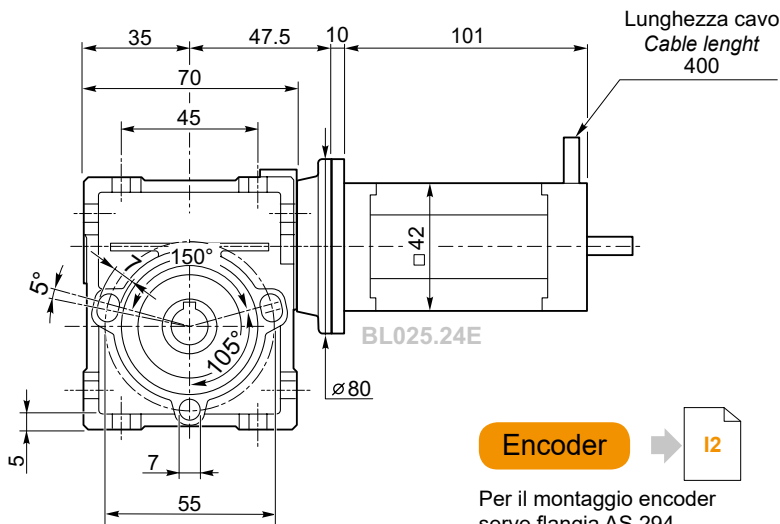
CM026 with DC brushless motor

CM026			BL025.24E			
n ₁ =3000 rpm			Coppia nominale Rated torque 24V		Coppia massima Peak torque 24V	
ir	M _n [Nm]	Kg	[Nm]	[rpm]	[Nm]	[rpm]
5	10	0.8	1.11	800	2.23	800
7.5	11		1.63	533	3.26	533
10	11		2.13	400	4.25	400
15	11		3.11	267	6.23	267
20	11		4.00	200	8.00	200
30	12		5.48	133	10.95	133
40	11		6.80	100	13.60	100
50	10		8.00	80	16.00	80
60	9		9.00	67	18.00	67

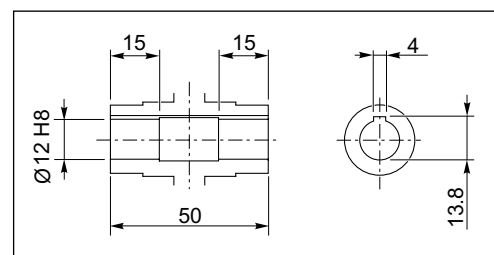
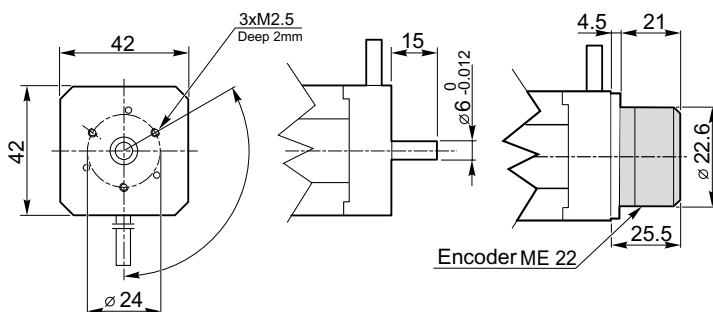
Nota: le caselle in colore grigio indicano il superamento della coppia massima sopportata dal riduttore per il servizio in S1.

N.B.: boxes in grey indicate that maximum torque withstood by gear reducer for service in S1 is exceeded.

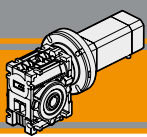
Tipo Type	Numero di poli Number of poles	Numero di fasi Number of phase	Tensione Rated voltage [V]	Numero di giri Rated speed [rpm]	Coppia nominale Rated torque [Nm]	Potenza nominale Rated power [W]
BL025.24E	8	3	24	4000	0.25	105
Tipo Type	Coppia massima Peak torque [Nm]	Corrente nominale Rated current [A]	Resistenza Resistance [ohm]	Induttanza Inductance [mH]	Corrente massima Peak current [A]	Peso Weight [kg]
BL025.24E	0.5	7.0	0.3	0.5	21	0.8



Per il montaggio encoder serve flangia AS 294
Encoder assembling needs flange AS 294



Albero lento cavo / Hollow output shaft



Micro motoriduttori brushless CC a vite senza fine

Micro brushless DC wormgearmotors

CM030 con motore brushless CC

CM30 with DC brushless motor

CM030			BL032.240			
n ₁ =3000 rpm			Coppia nominale Rated torque 24V		Coppia massima Peak torque 24V	
ir	M _n [Nm]	Kg	[Nm]	[rpm]	[Nm]	[rpm]
5	13	1.2	1.42	600	2.84	600
7.5	15		2.11	400	4.22	400
10	16		2.75	300	5.50	300
15	16		4.03	200	8.06	200
20	14		5.18	150	10.36	150
25	15		6.24	120	12.48	120
30	18		7.10	100	14.20	100
40	16		8.96	75	17.92	75
50	15		10.4	60	20.80	60
60	14		11.90	50	23.80	50
80	12		14.59	38	29.18	38
100	11		16.64	30	33.28	30

Nota: le caselle in colore grigio indicano il superamento della coppia massima sopportata dal riduttore per il servizio in S1.

N.B.: boxes in grey indicate that maximum torque withstood by gear reducer for service in S1 is exceeded.

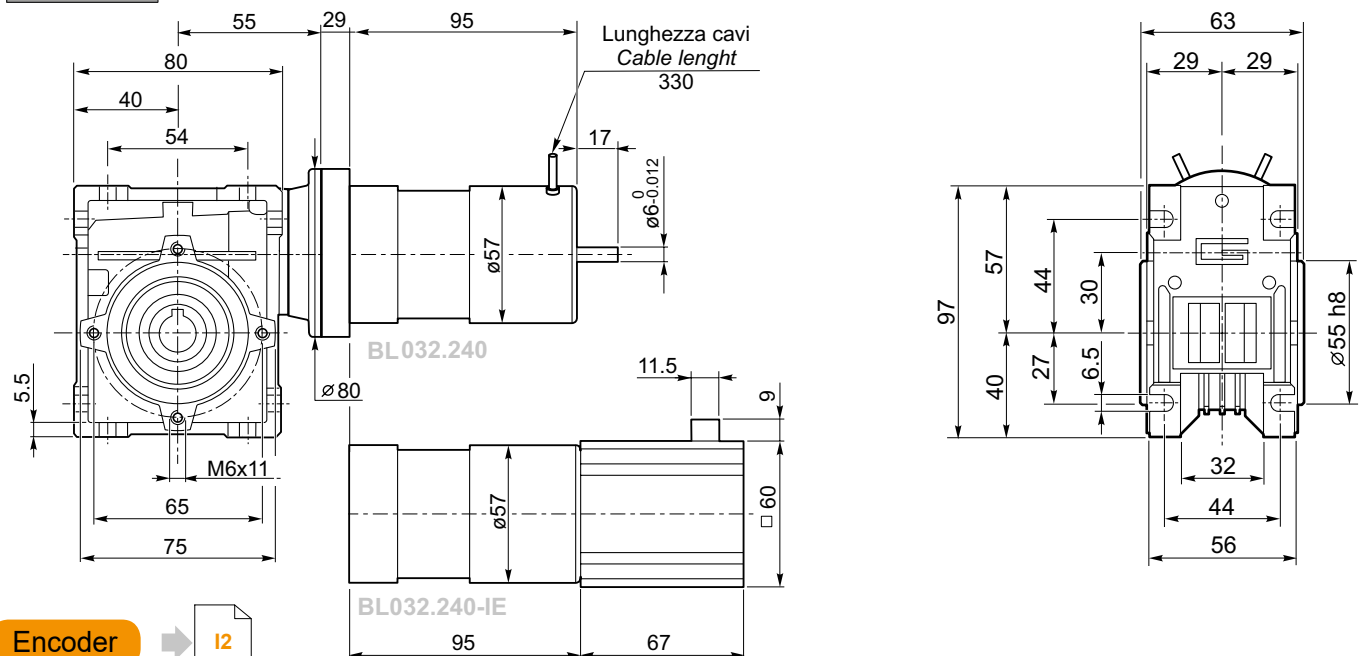
Tipo Type	Numero di poli Number of poles	Numero di fasi Number of phase	Tensione Rated voltage [V]	Numero di giri Rated speed [rpm]	Coppia nominale Rated torque [Nm]	Potenza nominale Rated power [W]
BL032.240	4	3	24	3000	0.32	100
Tipo Type	Coppia massima Peak torque [Nm]	Corrente nominale Rated current [A]	Resistenza Resistance [ohm]	Induttanza Inductance [mH]	Corrente massima Peak current [A]	Peso Weight [kg]
BL032.240	0.64	5.0	0.45	1.4	10.0	1.0

Nota: è possibile alimentare i motori a 36V
Vedere dati coppia/giri a pag. D14 - D16

Note: Motors can be driven at 36V
Torque/speed motor data at pag. D14 - D16

Azionamenti
Drives

H2



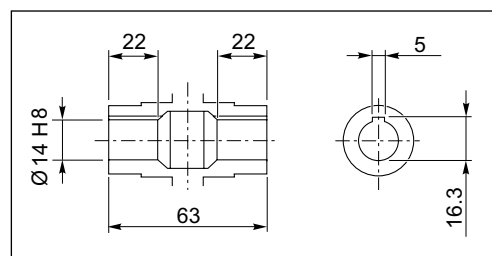
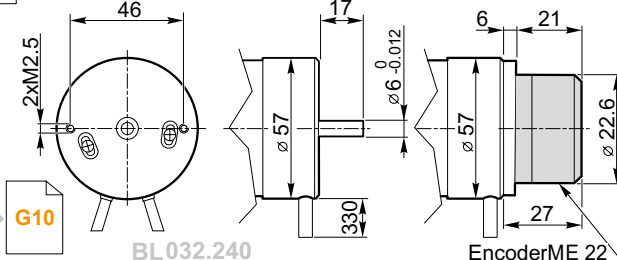
Encoder

I2

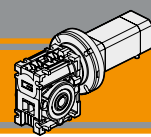
Per il montaggio encoder
serve flangia AS 294
Encoder assembling
needs flange AS 294

Freno / Brake

G10



Albero lento cavo / Hollow output shaft



CM030 con motore brushless CC

CM30 with DC brushless motor

CM030			BL043.240			
n ₁ =3000 rpm			Coppia nominale Rated torque 24V		Coppia massima Peak torque 24V	
ir	M _n [Nm]	Kg	[Nm]	[rpm]	[Nm]	[rpm]
5	13	1.2	1.91	600	3.82	600
7.5	15		2.84	400	5.67	400
10	16		3.70	300	7.39	300
15	16		5.42	200	10.83	200
20	14		6.96	150	13.92	150
25	15		8.39	120	16.77	120
30	18		9.54	100	19.08	100
40	16		12.04	75	24.08	75
50	15		13.98	60	27.95	60
60	14		15.99	50	31.98	50
80	12		19.61	38	39.21	38
100	11		22.36	30	44.72	30

Nota: le caselle in colore grigio indicano il superamento della coppia massima sopportata dal riduttore per il servizio in S1.

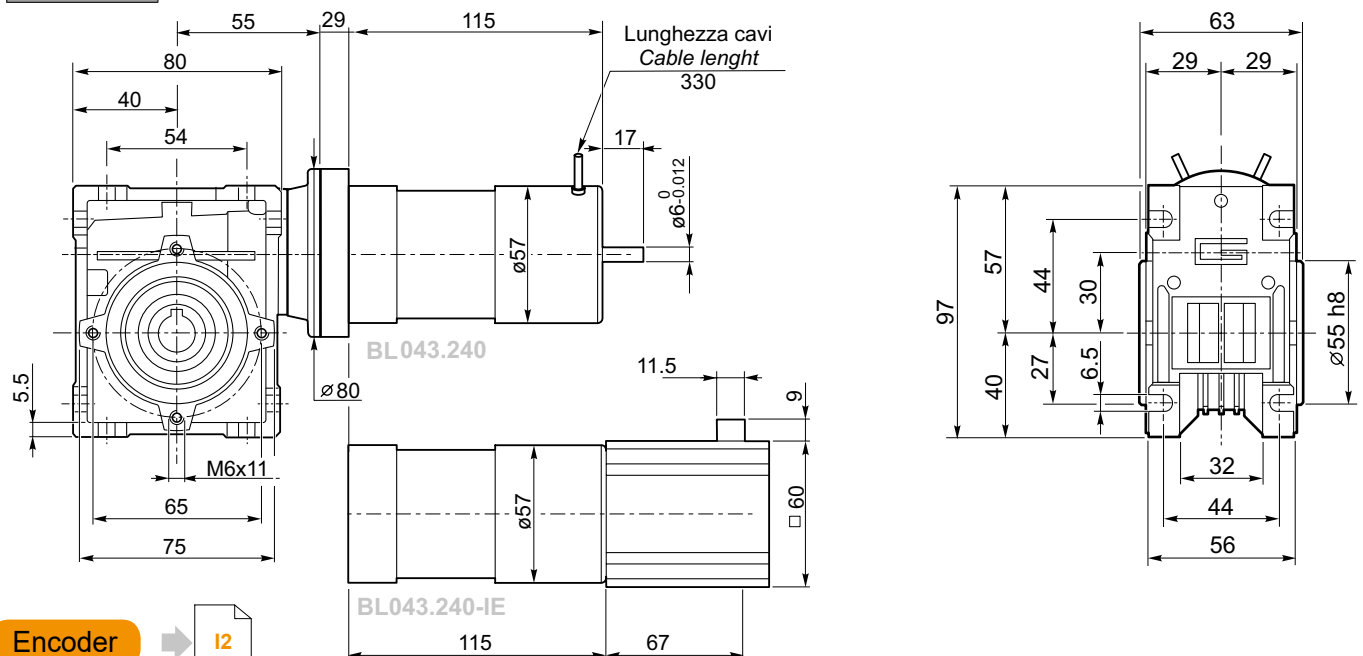
N.B.: boxes in grey indicate that maximum torque withstood by gear reducer for service in S1 is exceeded.

Tipo Type	Numero di poli Number of poles	Numero di fasi Number of phase	Tensione Rated voltage [V]	Numero di giri Rated speed [rpm]	Coppia nominale Rated torque [Nm]	Potenza nominale Rated power [W]
BL043.240	4	3	24	3000	0.43	130
Tipo Type	Coppia massima Peak torque [Nm]	Corrente nominale Rated current [A]	Resistenza Resistance [ohm]	Induttanza Inductance [mH]	Corrente massima Peak current [A]	Peso Weight [kg]
BL043.240	0.86	6	0.35	1.0	12.0	1.25

Nota: è possibile alimentare i motori a 36V
Vedere dati coppia/giri a pag. D14 - D16

Note: Motors can be driven at 36V
Torque/speed motor data at pag. D14 - D16

Azionamenti
Drives



Encoder



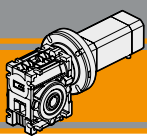
Per il montaggio encoder
serve flangia AS 294
Encoder assembling
needs flange AS 294

Freno / Brake



Brushless
DC

CM

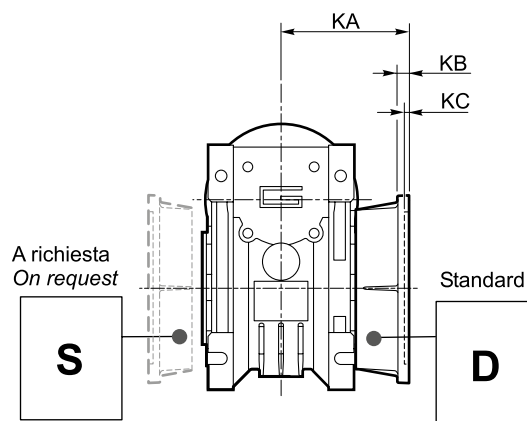
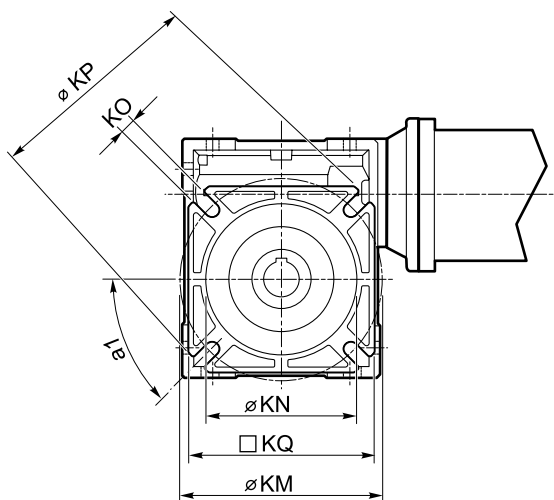


Micro motoriduttori brushless CC a vite senza fine Micro brushless DC wormgearmotors

Dimensioni

Dimensions

CM.../... F... Flange uscita / Output flanges

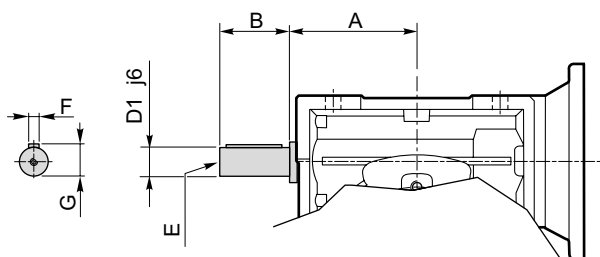


CM	CM..F								
	a1	KA	KB	KC	KM	KN _{H8}	KO	KP	KQ
026	45°	45	6	4.5	55-69	40	6.5(n.4)	75	70
030	45°	54.5	6	4	68	50	6.5(n.4)	80	70

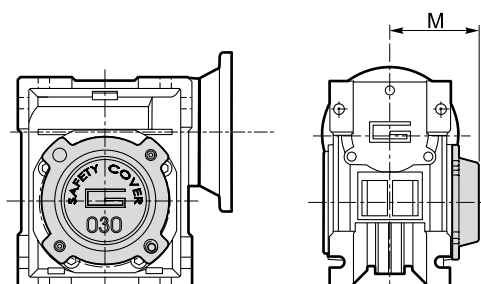
Opzioni

Options

VS - Vite sporgente / Extended input shaft

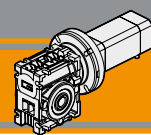


SC - Safety cover



	A	B	D ₁ j6	E	F	G
CM 030	45	20	9	M4	3	10.2

	M
CM 030	47

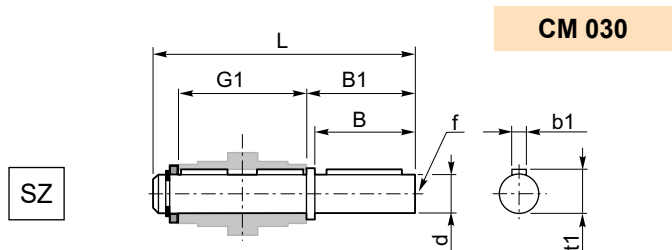
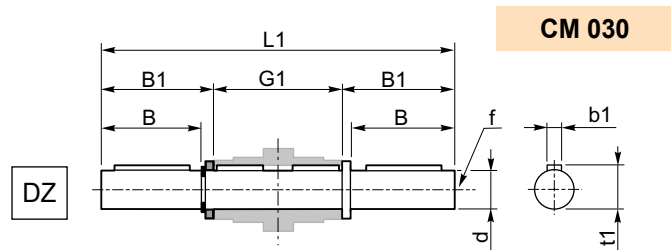


Accessori

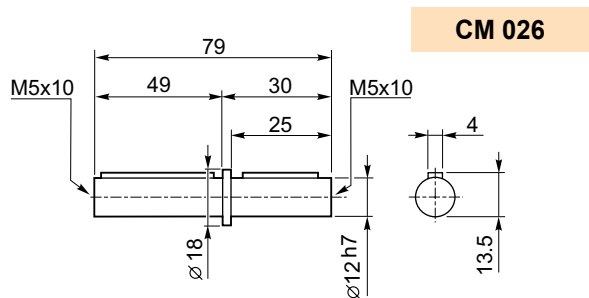
Accessories

Albero lento

Output shaft



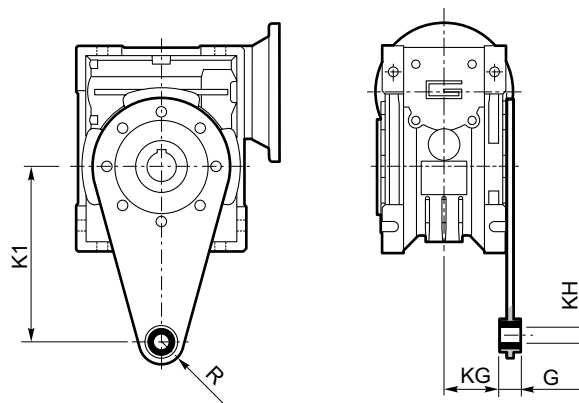
	d h7	B	B1	G1	L	L1	f	b1	t1
CM 030	14	30	32.5	63	102	128	M6	5	16

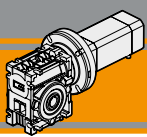


Braccio di reazione

Torque arm

	K1	G	KG	KH	R
CM 030	85	14	23	8	15



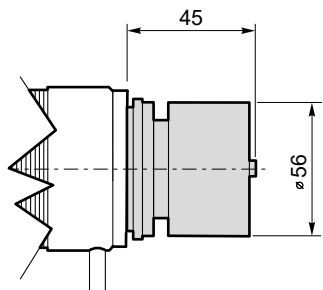


Freno

Brake

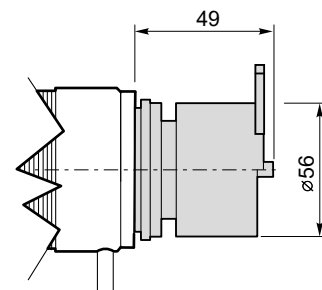
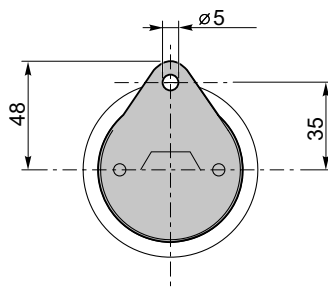
Freno / Brake

BL032...BR
BL043...BR



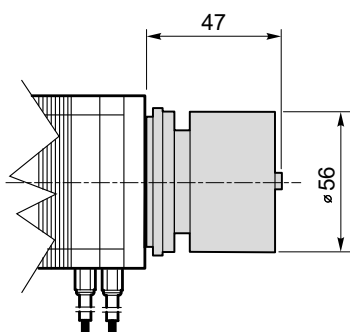
Freno con leva di sblocco/ Brake with hand release

BL032...BRL
BL043...BRL

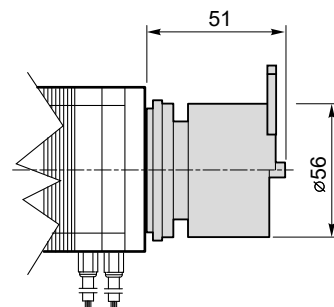
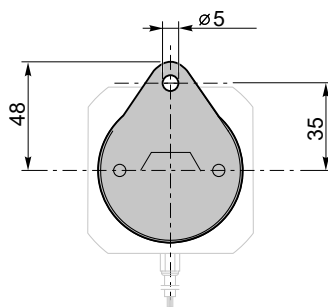


	P_n [W]	V [V]	M_n [Nm]	n₁ [min ⁻¹]
Caratteristiche del freno / Break features	14	12	2	3000
		24		

BL070...BR



BL070...BRL





	P_n [W]	V [V]	M_n [Nm]	n₁ [min ⁻¹]
Caratteristiche del freno / Break features	14	12	2	3000
		24		

**INTECNO SRL**

Via Caduti di Sabbiuno, 9/E
 40011 Anzola dell'Emilia (BO) - ITALY
 Tel: +39 051 19985350
 Fax: +39 051 19985361
 info@intecno-srl.com
 www.intecno-srl.com



 **MA TRANSTECNO S.A.P.I. DE C.V.**
 Av. Mundial # 176, Parque Industrial
 JM Apodaca, Nuevo León,
 C.P. 66600 - MEXICO
 Tel: +52 8113340920
 info@transtecno.com.mx
 www.transtecno.com.mx

 **TRANSTECNO IBÉRICA**
THE MODULAR GEARMOTOR, S.A.
 C/Enginy, 2 Nave 6 - 08850 Gavà (Barcelona) - SPAIN
 Tel: +34 931 598 950
 info@transtecno.es
 www.transtecno.es

 **SALES OFFICE INDIA**
 A/10, Anagha, S.N. Road, Mulund (W) Mumbai
 400080 - INDIA
 Tel: +91 9820614698
 Fax - Italy: +39 051 734943
 indiaoffice@transtecno.com

 **TRANSTECNO U.S.A. LLC**
 5440 S.W. 156th Place Miami,
 FL 33185 - USA
 Tel: +1 (305) 220-4423
 Fax: +1 (305) 220-5945
 usaoffice@transtecno.com

 **TRANSTECNO B.V.**
 De Stuwdam, 43 - Ind. Terrein Wieken/Vinkenhoef
 3815 KM Amersfoort - NETHERLANDS
 Tel: +31(0) 33 45 19 505
 Fax: +31(0) 33 45 19 506
 info@transtecno.nl
 www.transtecno.nl

 **SALES OFFICE SOUTH KOREA**
 D-304 Songdo BRC Smart Valley 30, Songdomirae-ro,
 Yeonsu-gu, Incheon, 406-840 - KOREA
 Tel: +82 70 8288 2107
 Fax: +82 32 815 2107
 Mobile: +82 10 5094 2107
 koreaoffice@transtecno.com

 **SALES OFFICE BRAZIL**
 Rua Dr. Freire Alemão 155 / 402 - CEP. 90450-060
 Auxiliadora Porto Alegre RS - BRAZIL
 Tel: +55 51 3251 5447
 Fax: +55 51 3251 5447
 Mobile: +55 51 811 45 962
 braziloffice@transtecno.com
 www.transtecno.com.br

 **SALES OFFICE FRANCE**
 12 Impasse des Mûriers
 38300 Ruy - FRANCE
 Tel: +33 (0) 6 85 12 09 87
 Fax - Italy: +39 051 734943
 franceoffice@transtecno.com
 www.transtecno.fr

 **SALES OFFICE OCEANIA**
 44 Northview drive, Sunshine west 3020
 Victoria - AUSTRALIA
 Ph +61 03 9312 4722
 Fax +61 03 9312 4714
 Mobile: +61 0438060997
 oceaniaoffice@transtecno.com
 www.transtecno.com.au

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TRANSTECNO
 group
 power transmissions

www.micro-intecno.com
 www.intecno-srl.com