

## UCL1/7; UCL2/8

Dimensions (mm)	∅ 28 x 31
Travel (mm)	10/13
Travel per step (mm)	0.041
Speed (mm/s) at 200 Hz	8.33
Max. Force (N)*	35



\*Depends on winding, frequency and lifetime required.  
 Drive against end stops only permissible after clarification of operating conditions and approval by Saia Motors.  
 Radial forces on the shaft will reduce life time and performance.

## Standard Data

Climatic class	wide-spread according to DIN IEC 60721-2-1 : 1992
Ambient temperature operation	°C -15 ... +60
Ambient temperature storage	°C -20 ... +100
Thermal resistance at f=0 R <sub>therm</sub>	29 K/W
Thermal class	130 (B) according to DIN EN 60085 : 2004
Approval	standard
Mounting	any position
Electrical connection	connector type C, D
Protection	IP40 according to DIN EN 60529 : 2000
Weight	67 g
Rotor stalling	motor can be stopped when voltage is applied, without being overheated
Bearings	ball bearing

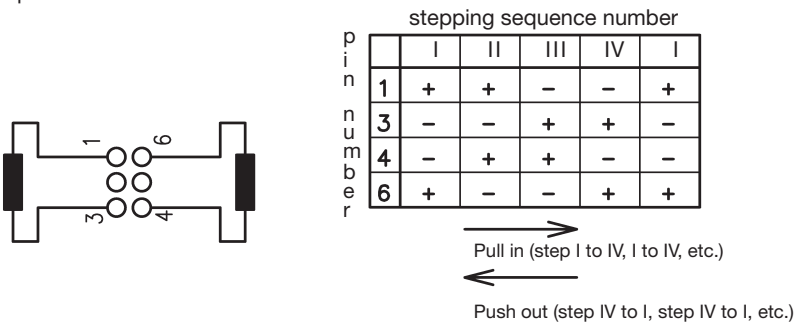
## Order Reference

Type	Stepper Motor	UCL	13	N	01	D	1B
Configuration	13 bipolar, standard magnet	73 bipolar, stronger magnet					
	23 unipolar, standard magnet	83 unipolar, stronger magnet					
Approval	N						
Resistance	see next page, Resistance per winding for bipolar or unipolar						
Connection	C see pages 151, „Connection Types“						
	D						
Shaft	1B Travel 13 mm ± 0.7 mm (other standard shafts see under dimensions)						

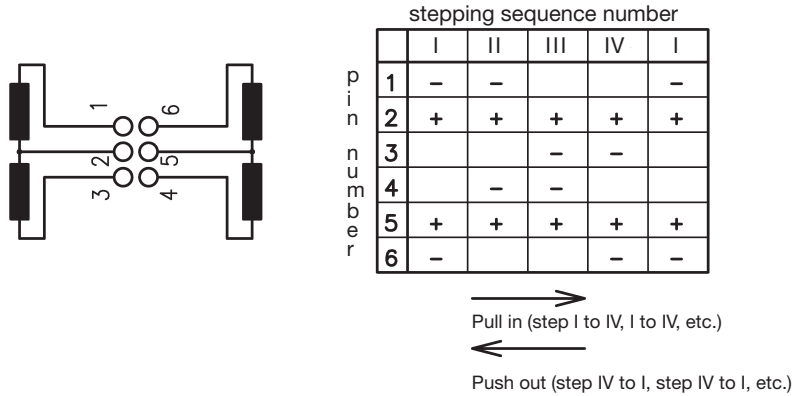
## Technical Data

bipolar	Rated voltage $U_N$ :	V	6	12	24
	Duty cycle	%	100	100	100
	Resistance $R_{20}$	$\Omega$	24	90	380
	Winding code		05	02	018
unipolar	Rated voltage $U_N$ :	V	6	12	24
	Duty cycle	%	100	100	100
	Resistance $R_{20}$	$\Omega$	24	90	380
	Winding code		07	08	01
Travel per step		mm	0.042		
Winding temperature $T_{max}$		$^{\circ}C$	130		
Axial play at $\pm 20$ N force		mm	< 0.25		

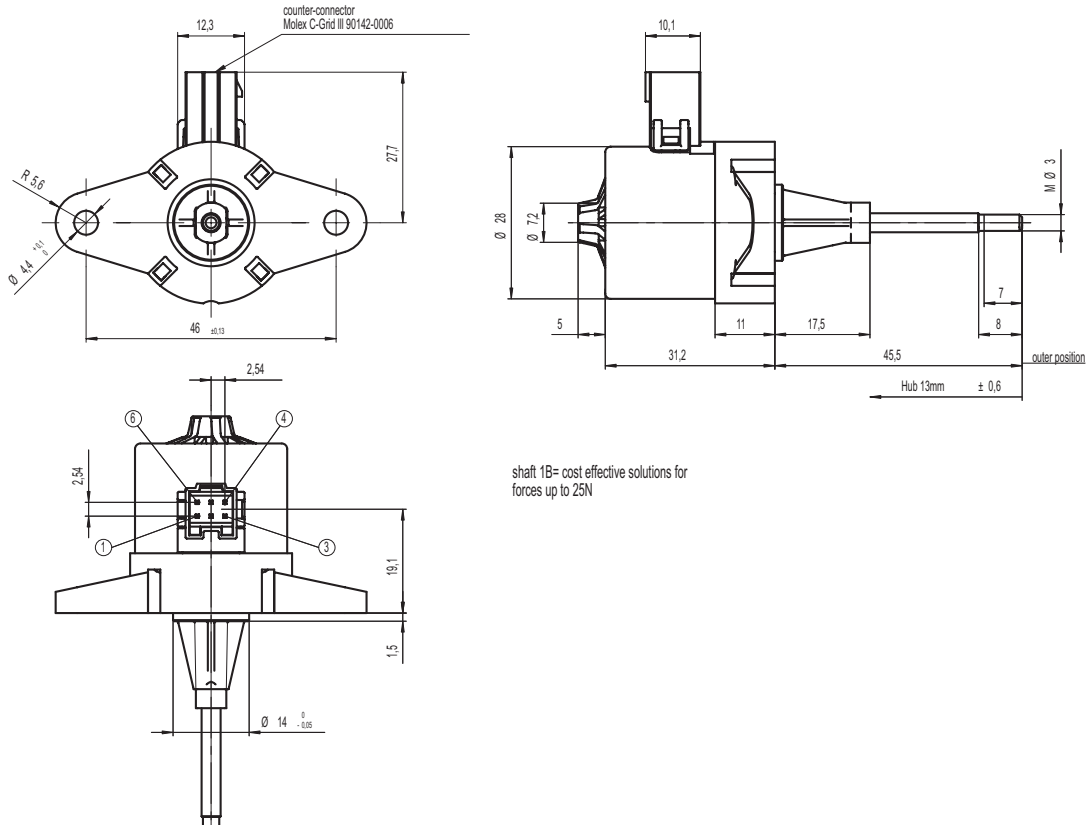
Circuit diagram bipolar



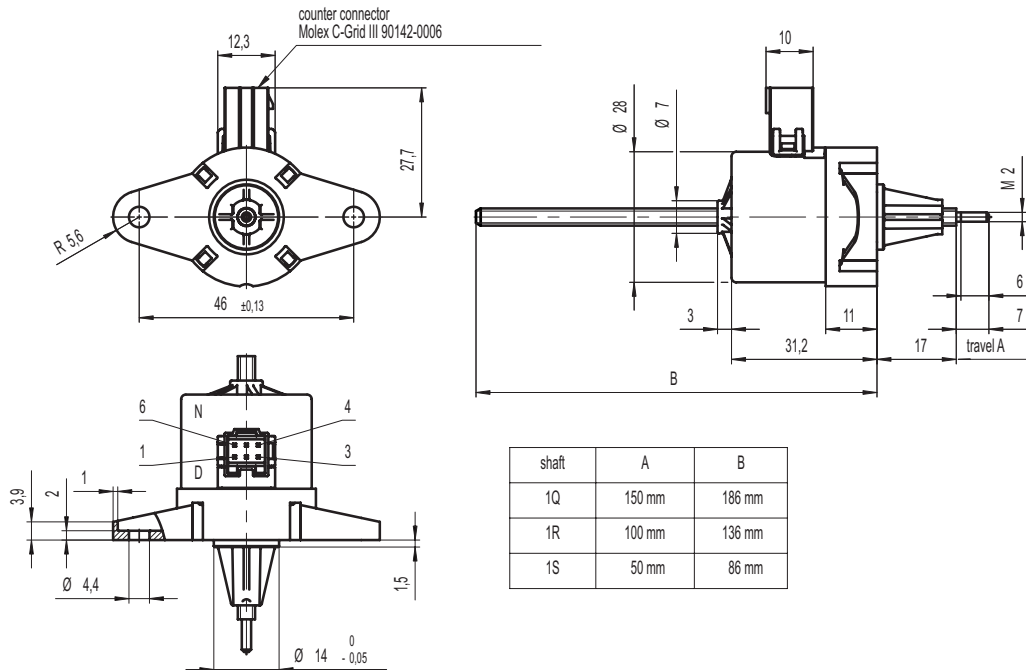
unipolar



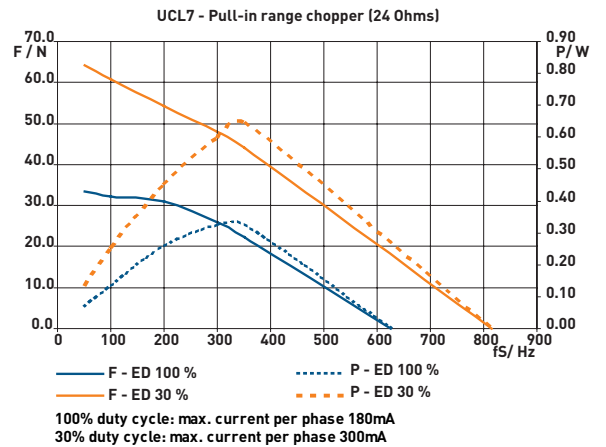
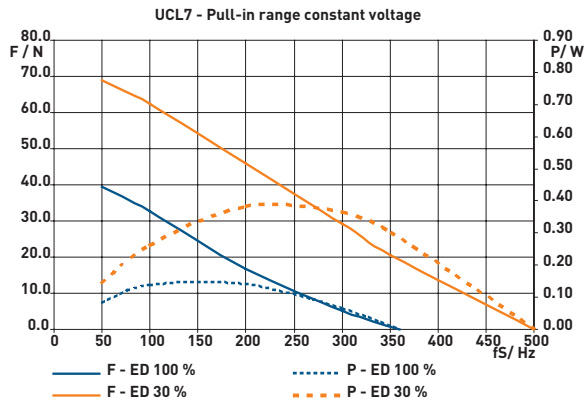
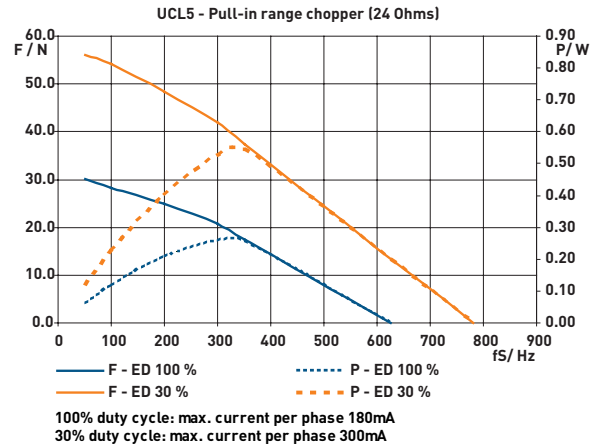
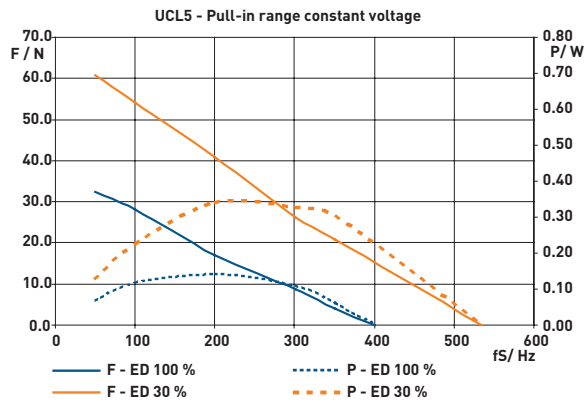
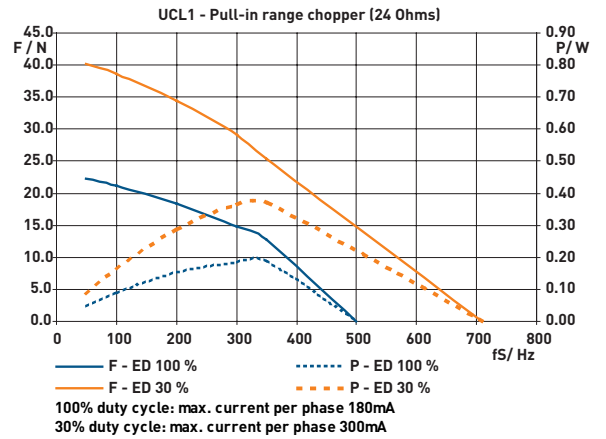
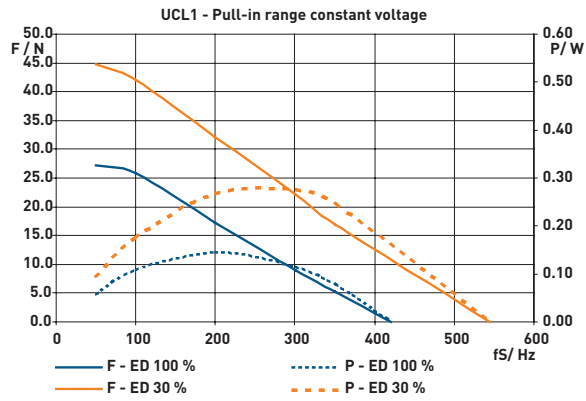
Dimensions Version with Connector D, with 13 mm travel, shaft 1B and 1E



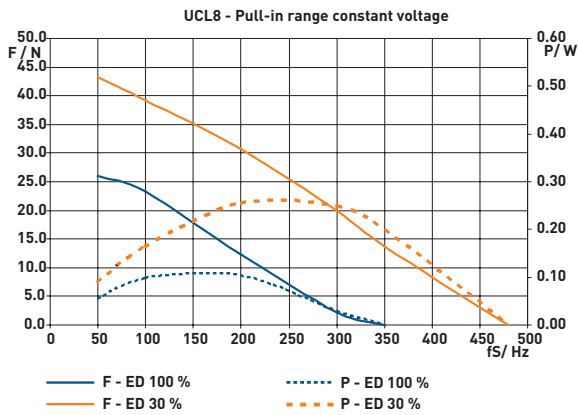
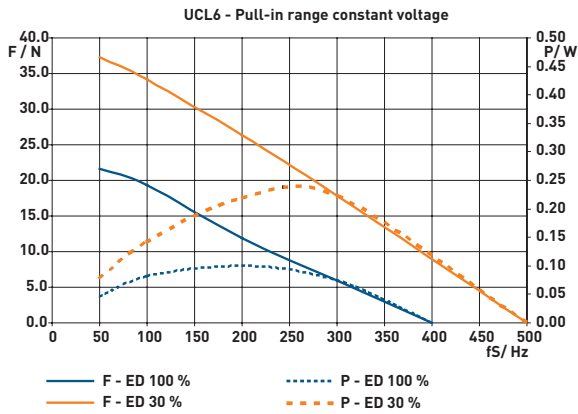
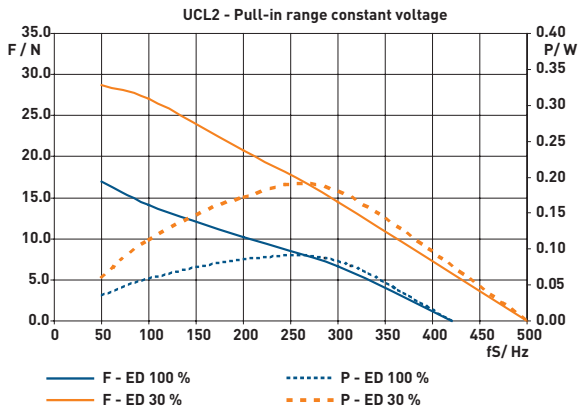
Version with Connector D, with 50..150 mm travel, shaft 1R, 1S, 1Q



## Performance Chart

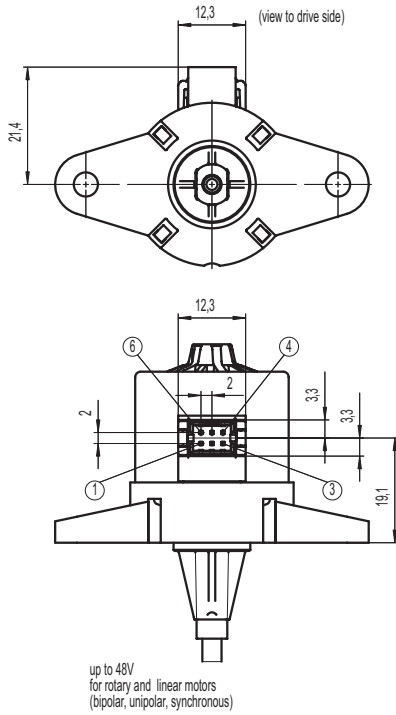


## Performance Chart

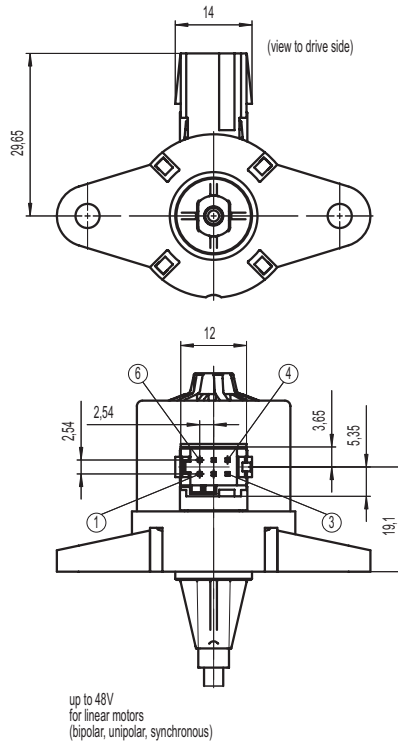


# Connection Types UC motors

Lead wire Connector B  
for Molex Milli-Grid 51110-0660



Connector C  
for Tyco Modu IV 0-1740209-6



Connector D  
for Molex C-Grid III 90142-006

