

UCB1/7; UCB2/8

Dimensions (mm) \varnothing 28 x 24

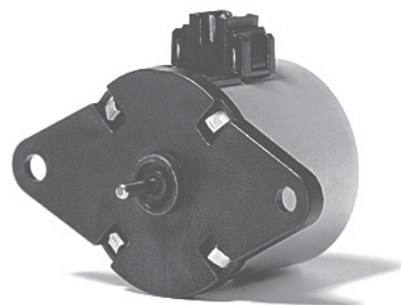
Step angle (°) 15

Holding torque*
(cNm) 1.3–2.3

Detent torque (cNm) 0.29

Winding bipolar/unipolar

Gear combination on request



* values for connector version (connection B or D) / values of lead wire version (connection N) are up to 20 % lower

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 _{therm}	29 K/W
Thermal class	130 (B) according to DIN EN 60085 : 2004
Approval	standard
Mounting	any position
Electrical connection	connector type D or N
Protection	IP30 according to DIN EN 60529 : 2000
Weight	54 g
Rotor stalling	motor can be stopped when voltage is applied, without being overheated
Bearings	Sintered bronze, self-lubricating

Order Reference

Type	Stepper Motor				UCB	1	0	N	24 Ω	R	B
Configuration	1	bipolar, standard magnet	7	bipolar, stronger magnet							
	2	unipolar, standard magnet	8	unipolar, stronger magnet							
Rotor shaft, mounting	3	centring 8 mm, shaft 2.0 mm, screw plate	E	centring 10 mm, shaft 2.0 mm, screw plate							
	4	centring 8 mm, shaft 1.5 mm, screw plate	K	centring 10 mm, shaft 1.5 mm, screw plate							
	0	centring 8 mm, shaft 2.0 mm, clip	A	centring 10 mm, shaft 2.0 mm, clip							
	1	centring 8 mm, shaft 1.5 mm, clip	C	centring 10 mm, shaft 1.5 mm, clip							
Approval	N	Approval Standard									
Resistance	see next pages; Resistance per winding for bipolar or unipolar										
Direction	R	reversible									
Connection	D	see next pages „Connection Types“									
	N										

Technical Data

bipolar

		UCB1	UCB7
Holding torque M_H^*	cNm	1.7	2.8
Detent torque M_S	cNm	0.2	0.45
Rotor inertia J_R	gcm ²	2.1	2.4
Steps per revolution		24	
Direction of rotation	V	reversible	

Specific Technical Data Lead Wire Versions

		12	24	6	24
Rated voltage UN	V				
Duty cycle	%	100	100	100	100
Resistance R_{20}	Ω	90	380	24	10
Winding code		03	04	18	19

Specific Technical Data Connector Versions

		12	24	6
Rated voltage UN	V			
Duty cycle	%	100	100	100
Resistance R_{20}	Ω	90	380	24
Winding code		01	02	07

unipolar

		UCB2	UCB8
Holding torque M_H^*	mNm	1.3	2.1
Detent torque M_S	mNm	0	0.45
Rotor inertia J_R	gcm ²	2.1	2.4
Steps per revolution		24	
Direction of rotation	V	reversible	

Specific Technical Data Lead Wire Versions

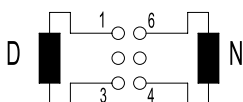
		12	24	6
Rated voltage UN	V			
Duty cycle	%	100	100	100
Resistance R_{20}	Ω	90	380	24
Winding code		10	11	12

Specific Technical Data Connector Versions

		12	24
Rated voltage UN	V		
Duty cycle	%	100	100
Resistance R_{20}	Ω	90	380
Winding code		01	02

* values of connector version (connection B or D) / values of lead wire version are up to 20 % lower

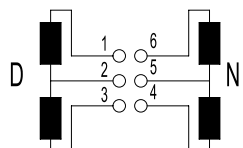
Circuit diagram bipolar



		step			
		I	II	III	IV
connector	1	+	+	-	-
	3	-	-	+	+
	4	-	+	+	-
	6	+	-	-	+

→ counter clockwise rotation
 ← clockwise rotation

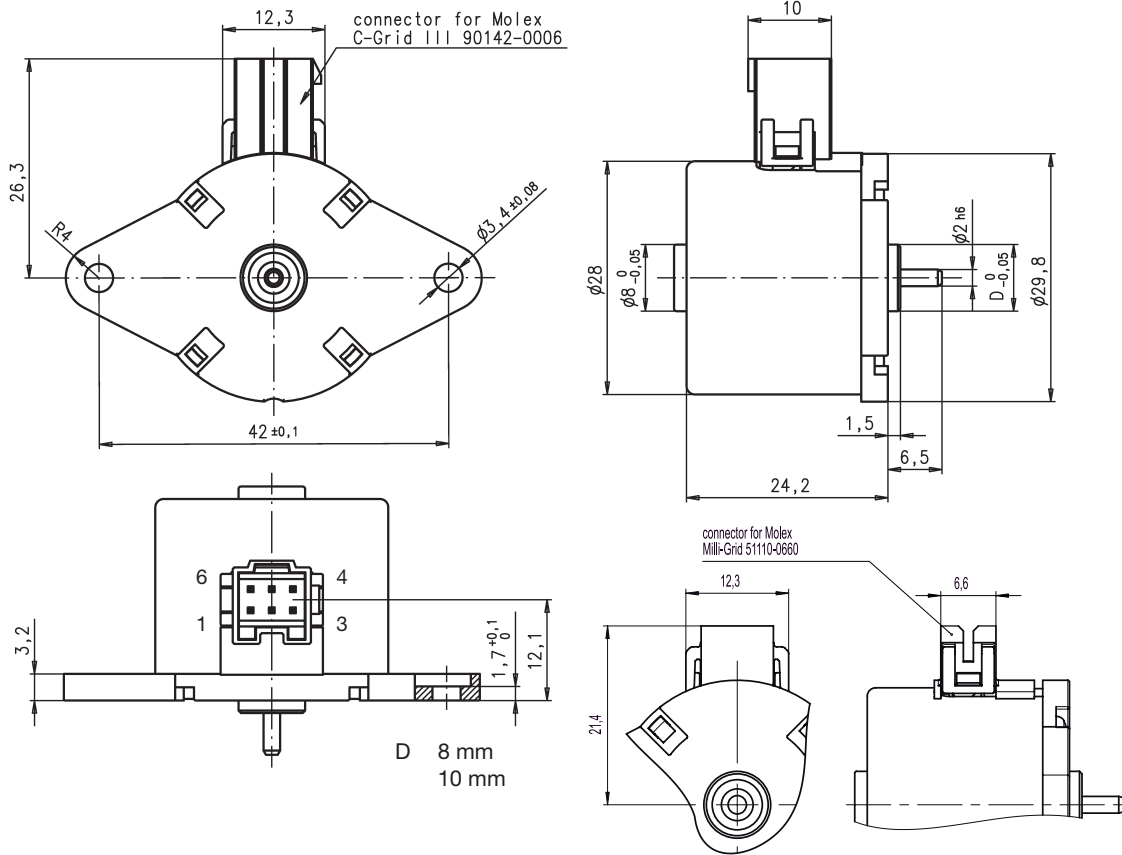
unipolar



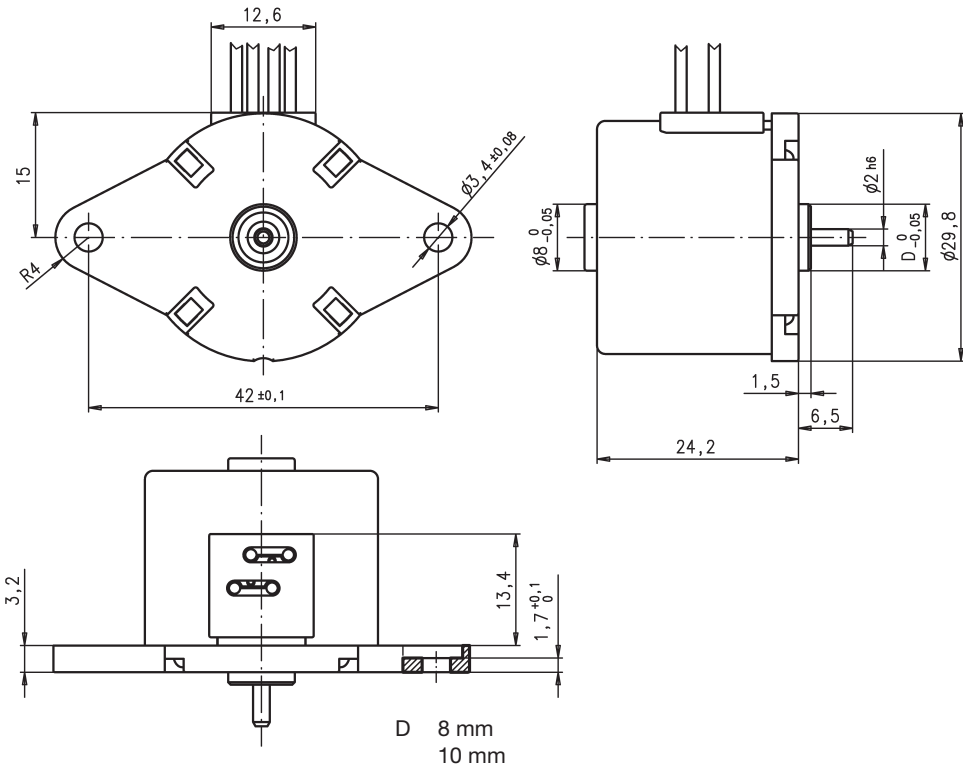
		step			
		I	II	III	IV
connector	1			-	-
	2	+	+	+	+
	3	-	-		
	4	-			-
	5	+	+	+	+
	6		-	-	

→ counter clockwise rotation
 ← clockwise rotation

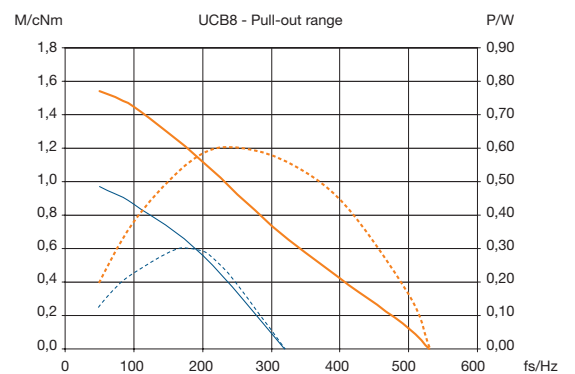
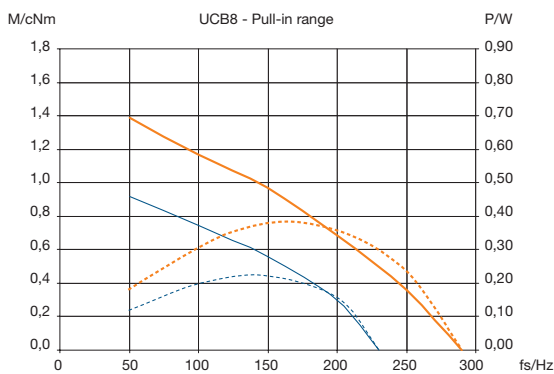
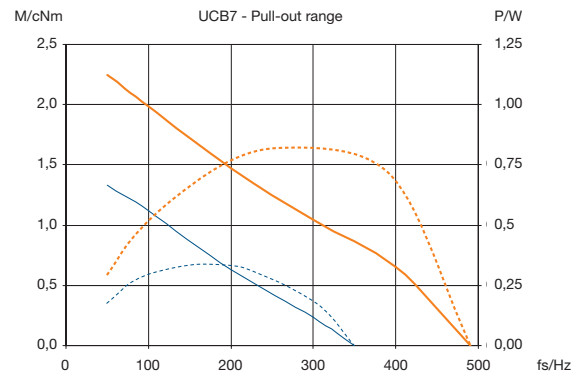
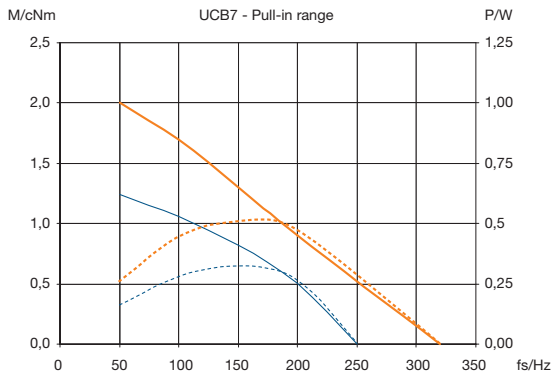
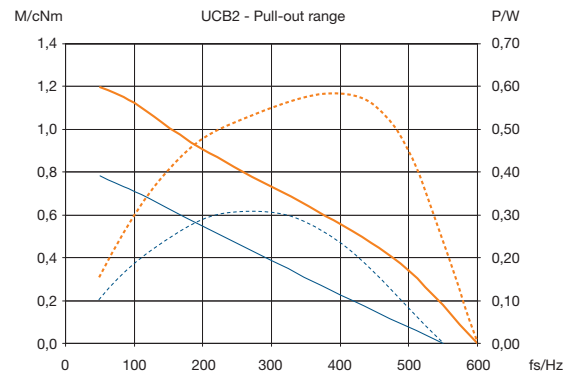
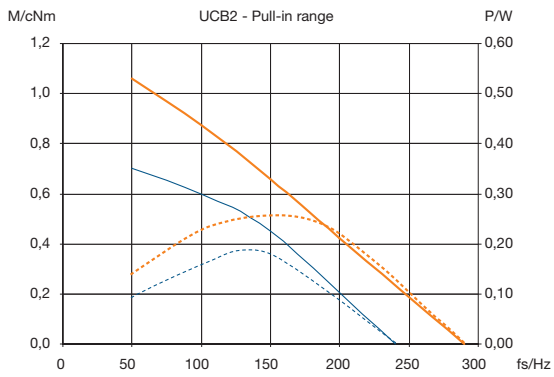
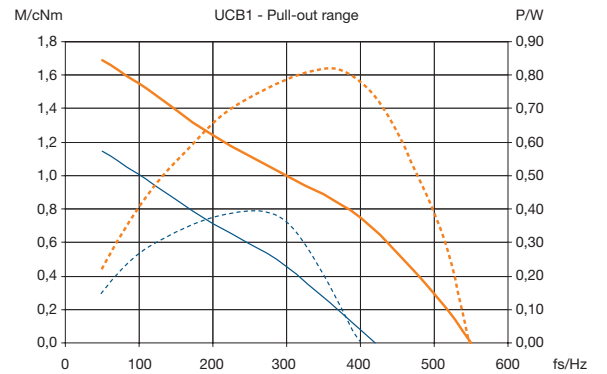
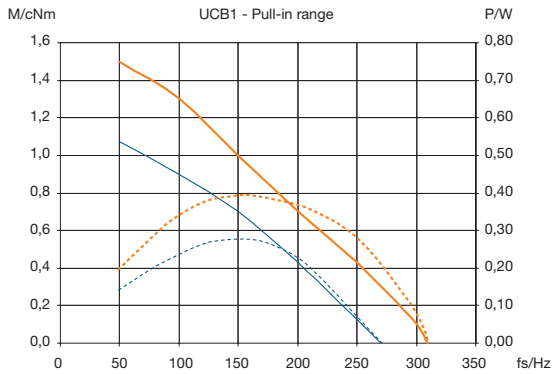
Dimensions Version with Connector D



Version with Connector N



Performance Chart



— M - Duty cycle 30 %
— M - Duty cycle 100%

- - - P - Duty cycle 30 %
- - - P - Duty cycle 100 %