

UAL 1/5; UAL 2/6

Dimensions (mm)	∅ 20 × 30
Travel (mm)	15
Travel per step (mm)	0,021
Thread pitch (mm)	0,5
Speed (mm/s) at 200 Hz	4,16
Step angle (°)	15
Max. Force (N)*	28



*Depends on winding, frequency and lifetime required.

Drive against end stops only permissible after clarification of operating conditions and approval by Saia-Burgess.
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 _{therm}	47 K/W
Thermal class	B according to DIN EN 60085 : 2004
Approval	standard
Mounting	any position
Electrical connection	lead wire with CT connector
Protection	IP 40 according to DIN EN 60529 : 2000
Weight	33 g
Rotor stalling	motor can be stopped when voltage is applied, without being overheated
Bearings	ball bearing

Order Reference

Type	Stepper Motor	UAL	1E	N	150 Ω	E	1A
Configuration	1A bipolar, standard magnet, screw flange 1E bipolar, standard magnet, bayonet flange 2A unipolar, standard magnet, screw flange 2E unipolar, standard magnet, bayonet flange 5A bipolar, stronger magnet, screw flange 5E bipolar, stronger magnet, bayonet flange 6A unipolar, stronger magnet, screw flange 6E unipolar, stronger magnet, bayonet flange						
Approval	N standard						
Resistance	see next page, resistance per winding for bipolar or unipolar						
Connection	E 100 mm lead with CT connector						
Shaft	1A Travel 15 mm ± 0,7 mm (others on request)						

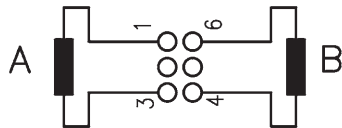
Technical Data

bipolar	type		UAL1	UAL1	UAL5	UAL5
	Operating frequency	Hz	100	200	100	200
	max. Push/Pull force *	25% duty cycle	-	-	28	23
		100% duty cycle	11	9	16	9
	Rated voltage U_N :	V	6	12	24	
	Resistance per winding R_{20}	Ω	24	90	380	
	Steps per mm		48			
	Duty cycle		100 %			
	Winding temperature T_{max} °C		130			
	Linear travel max.	mm	10/13			
	Axial play at ± 20 N force	mm	< 0,25			

unipolar versions available upon request

* measured at 23 °C, lifetime depends on load characteristics and ambient conditions

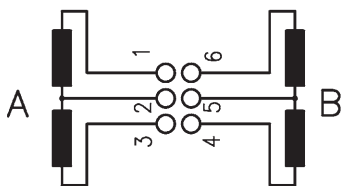
Circuit diagram bipolar



pin number	stepping sequence number				
	I	II	III	IV	I
1	+	+	-	-	+
3	-	-	+	+	-
4	-	+	+	-	-
6	+	-	-	+	+

Pull in (step I to IV, I to IV, etc.)
 Push out (step IV to I, step IV to I, etc.)

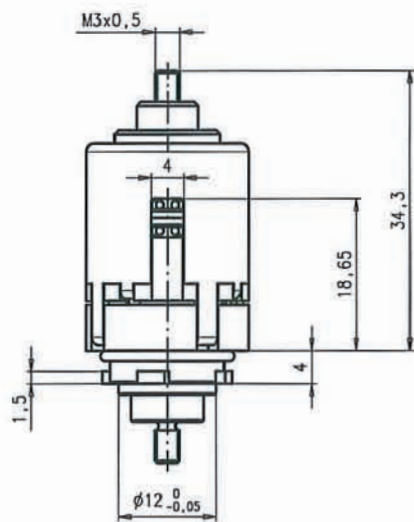
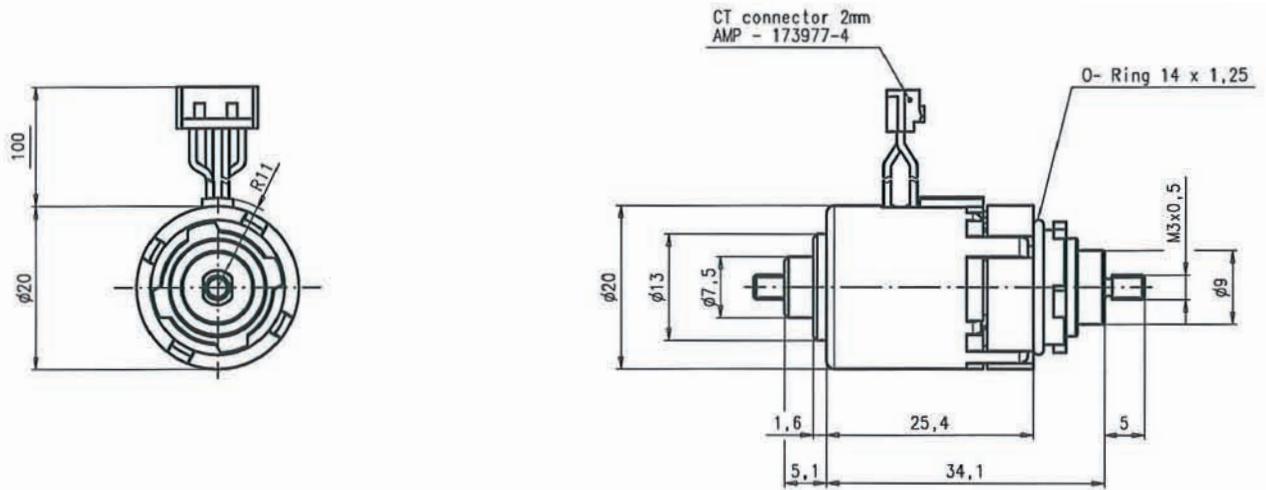
unipolar



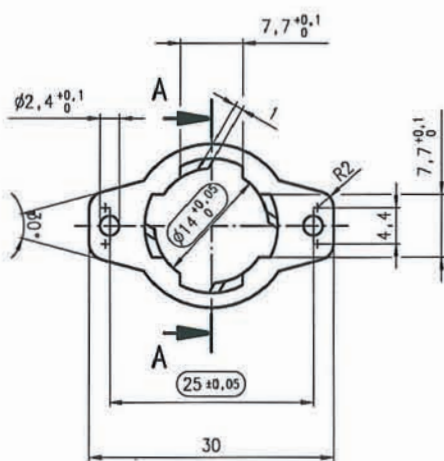
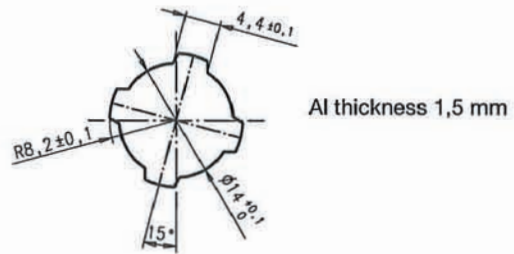
pin number	stepping sequence number				
	I	II	III	IV	I
1	-	-			-
2	+	+	+	+	+
3			-	-	
4		-	-		
5	+	+	+	+	+
6	-			-	-

Pull in (step I to IV, I to IV, etc.)
 Push out (step IV to I, step IV to I, etc.)

Dimensions Version with 100 mm leads and CT connector, 15 mm travel



Connecting dimensions bayonet mount



Performance Chart

