

UAL 1/5; UAL 2

Dimensions (mm)	20 x 30
Travel (mm)	15
Travel per step (mm)	0.021/0.033
Thread pitch (mm)	0.5/0.8
Speed (mm/s) at 200 Hz	4.16/6.66
Step angle (°)	15
Max. Force (N)*	40



*Depends on winding, frequency and lifetime required.

Limited application of the motor driving against end stop is available under required technical and operating conditions. JE will provide specifics of such conditions upon request. JE will not be responsible for product warranty or any liabilities associated with the application of drive against end stop if such application is used without following JE's instructions.

Radial forces on the shaft will reduce life time and performance.

Note: All force and power output values are minimum values, at rated voltage and motor temperature 23°C.

Standard Data

Climatic class	wide-spread according to DIN IEC 60721-2-1 : 2015
Ambient temperature operation	°C -15 ... +60
Ambient temperature storage	°C -20 ... +100
Thermal resistance at f=0 R _{therm}	47 K/W
Thermal class	130 (B) according to DIN EN 60085 : 2008
Approval	standard
Mounting	any position
Electrical connection	lead wire with CT connector
Protection	IP40 according to DIN EN 60529 : 2014
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	01	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					
Approval	N	standard					
Winding code	see next page, resistance per winding for bipolar or unipolar						
Connection	E	100 mm lead wire with CT connector					
Shaft	1A	Travel 15 mm ± 0.7 mm (others on request)					

All specifications are representative only and maybe subject to variation. For confirmation of values, please contact Johnson Electric.
Please also read "Saia Motors Important Notes" on catalog or at www.johnsonelectric.com/SaiaMotorsNotes



Technical Data

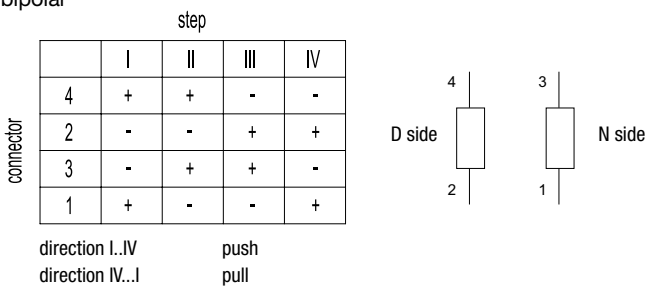
Steps per mm		48
Winding temperature T_{max}	°C	130
Linear travel max.	mm	15
Axial play at 20 N force	mm	0.25

unipolar versions available upon request

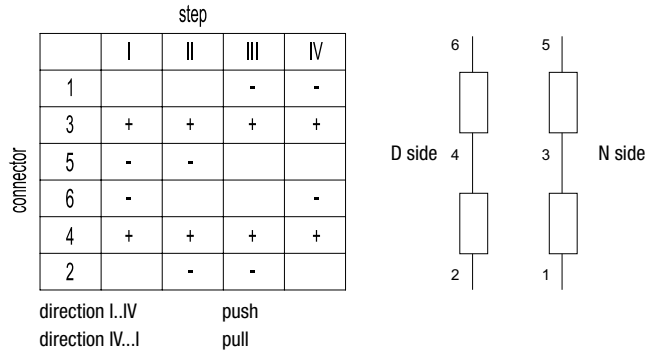
bipolar	Rated voltage U_N	V	6	12	24
	Duty cycle	%	100	100	100
	Resistance R_{20}	Ω	40	150	610
	Winding code		03	01	04

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

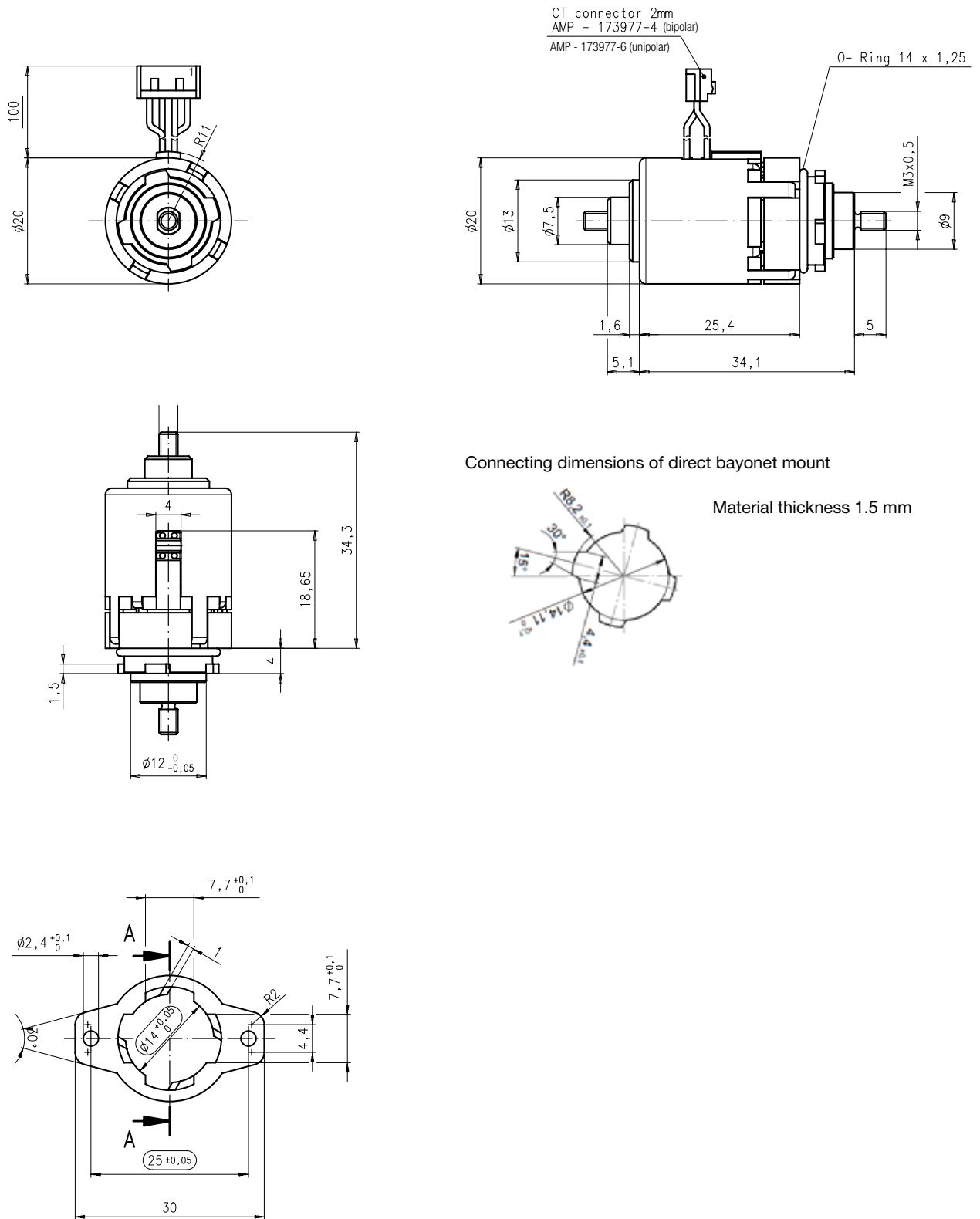
Circuit diagram bipolar



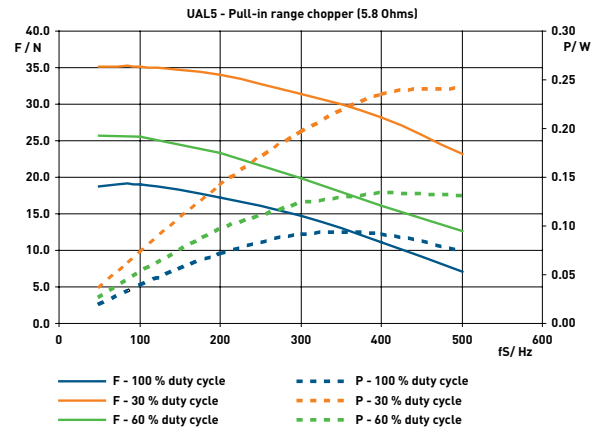
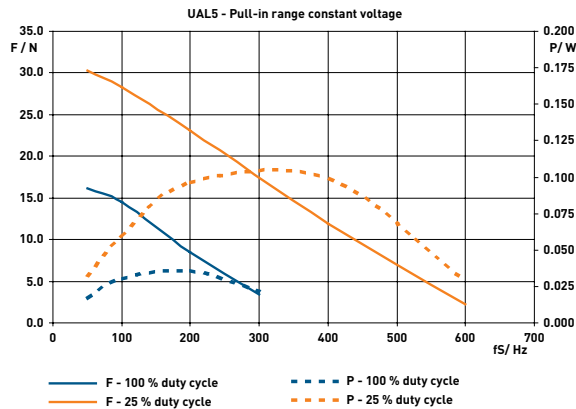
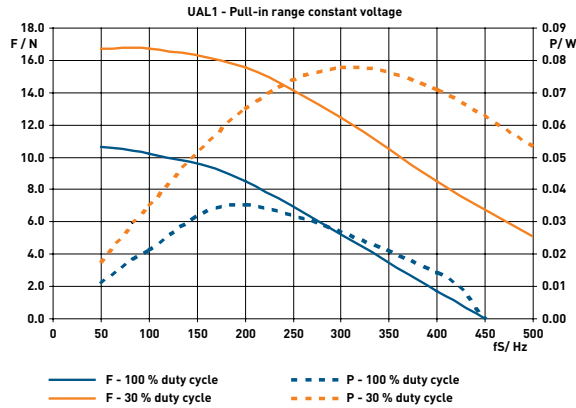
unipolar



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



Performance Chart



100% duty cycle: max. current per phase 300 mA
 60% duty cycle: max. current per phase 360 mA
 30% duty cycle: max. current per phase 500 mA