

UCC1/7

Dimensions (mm)	Ø 28 x 31
Travel (mm)	10/13
Voltage (V) **	12-230
Speed (mm/s)	
50 Hz	4.16
60 Hz	5
Max. Force (N)*	35

* Depends on winding, frequency and lifetime required. Values for connector versions (C, D) / lead wire versions (N) up to 20 % lower.
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.

** regard circuit diagram and connector type



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
Winding coil temperature increase	K 60
Approval	standard
Mounting	any position
Electrical connection	connector type C, D, N
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

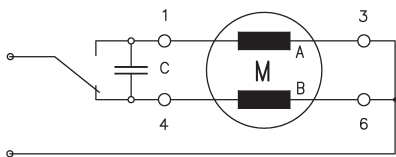
Order Reference

Type	Synchronous Motor	UCC	13	N	B4	D	1B
Configuration	13 standard magnet	73 stronger magnet					
Approval	N						
Voltage/frequency	see next pages						
Connection	C see next pages "Connection Types" and page 145 "Connection Types" for B						
Shaft	1B Travel 13 mm ± 0.7 mm (other standard shafts see under dimensions)						

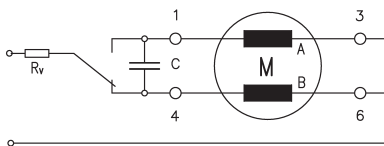
Technical Data

Rated frequency	Axial speed	Hz	50		
	Tolerance of voltage	mm/s	4.16		
	Linear travel max.		standard power supply system +10% / -10%		
	Axial play at ± 20 N force	mm	10/13		
	Winding temperature T _{max}	mm	< 0.25		
			130		
Circuit diagram	Rated voltage U _N	V	12	24	110 ¹⁾
	Duty cycle	%	100	100	100
	Resistance R ₂₀	Ω	53	210	5000
	Capacitor C ₅₀	μF/V ±10%	18/20	4.7/40	0.22/200
	Winding code		B1	B4	C8

Parallel circuit 12 V, 24 V, 48 V

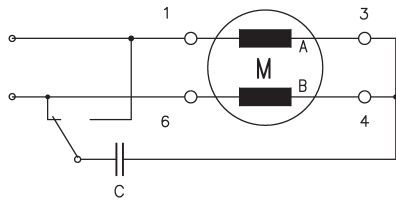


Parallel circuit 230 V (only for connector N)
with 110 V motor and resistor R_V

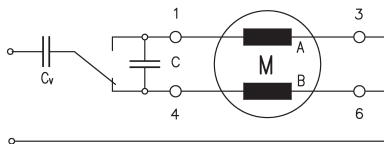


R_V = 5.6 kΩ, 3 W

Series circuit 110 V (only for connector N)



Parallel circuit 230 V (only for connector N)
with 110 V motor and capacitor C_V



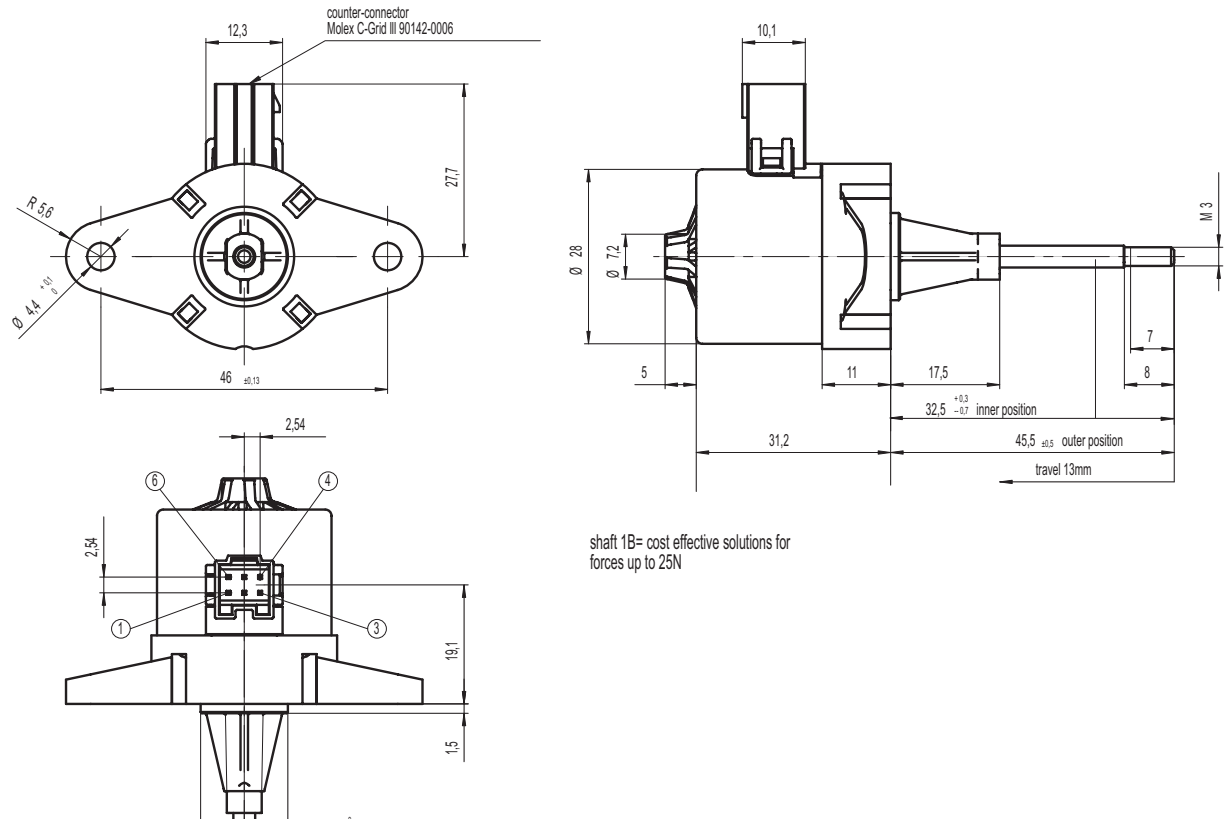
C_V = 0.33 μF, 250 VAC

- switch to
- 1 Pull (in)
 - 4 Push (out)
 - 6 Push (out)
(for series circuit)

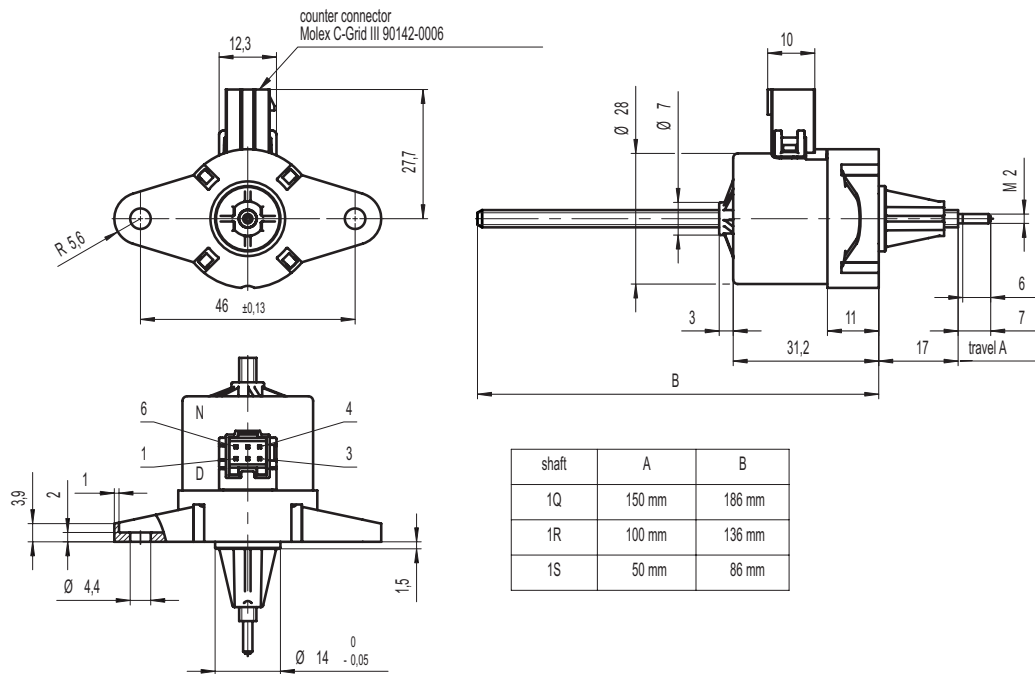
¹⁾ 110 V version available with 150 mm lead wires AWG26 only
Standard versions:

Shaft type (see dimensions)	Order code
1B	UCC13NC8N1BZ4
1E	UCC13NC8N1EZ4
1S	UCC13NC8N1SZ4
1R	UCC13NC8N1RZ4
1Q	UCC13NC8N1QZ4

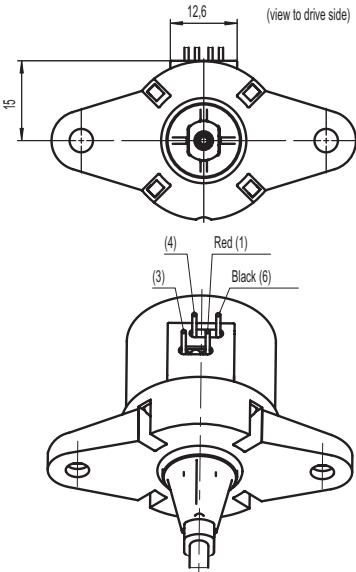
Dimensions Version with Connector D, with 13 mm travel, shaft 1B and 1E



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



Dimensions 110 V version with lead wires



different lead colours for 110V (230V)
for rotary synchronous motors in serials circuit

Force		connector version		lead wire version	
		50 Hz	60 Hz	50 Hz	60 Hz
UCC1	100 %	38 N	40 N	30 N	33 N
	30%	46 N	48 N	37 N	39 N
UCC7	100 %	45 N	47 N	37 N	40 N
	30%	55 N	56 N	46 N	48 N

UCK 1/7

Dimensions (mm)	Ø 28 x 31
Travel (mm)	10/13
Voltage (V) **	12-230
Speed (mm/s)	
50 Hz	8.33
60 Hz	10
Max. Force (N)*	35



* Depends on winding, frequency and lifetime required. Values for connector versions (C, D) / lead wire versions (N) up to 20 % lower.
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.

** regard circuit diagram and connector type

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
Winding coil temperature increase	K 60
Approval	standard
Mounting	any position
Electrical connection	connector type C, D, N
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

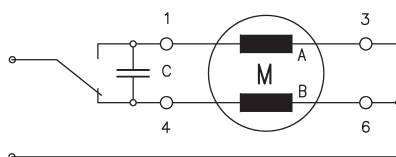
Order Reference

Type	Synchronous Motor	UCK	13	N	B4	D	1B
Configuration	13 standard magnet	73 stronger magnet					
Approval	N						
Voltage/frequency	see next page						
Connection	C see next pages "Connection Types" and page 145 "Connection Types" for B						
Shaft	1B Travel 13 mm ± 0.7 mm (other standard shafts see under dimensions)						

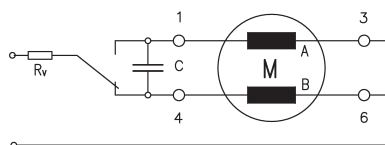
Technical Data

Rated frequency	Hz	50		
Speed	mm/s	8.33		
Tolerance of voltage		standard power supply system +10% / -10%		
Axial play at 20 N force	mm	< 0.25		
Duty cycle		100 %		
Winding temperature T_{max}		130		
Rated voltage U_N	V	12	24	110 ¹⁾
Duty cycle	%	100	100	100
Resistance R_{20}	Ω	59	230	5500
Capacitor C_{50}	$\mu F / V \pm 10\%$	22/20	5.6/40	0.27/200
Winding code		B1	B4	C8/H8

Circuit diagram Parallel circuit 12 V, 24 V, 48 V



Parallel circuit 230 V (only for connector N)
with 110 V motor and resistor R_V

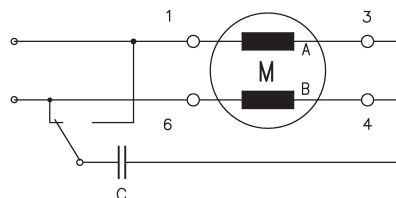


$R_V = 5.6 \text{ k}\Omega, 3 \text{ W}$

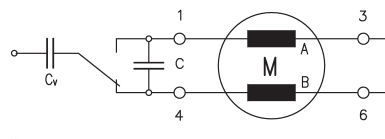
switch to

- 1 Pull (in)
- 4 Push (out)
- 6 Push (out)
(for series circuit)

Series circuit 110 V (only for connector N)



Parallel circuit 230 V (only for connector N)
with 110 V motor and capacitor C_V

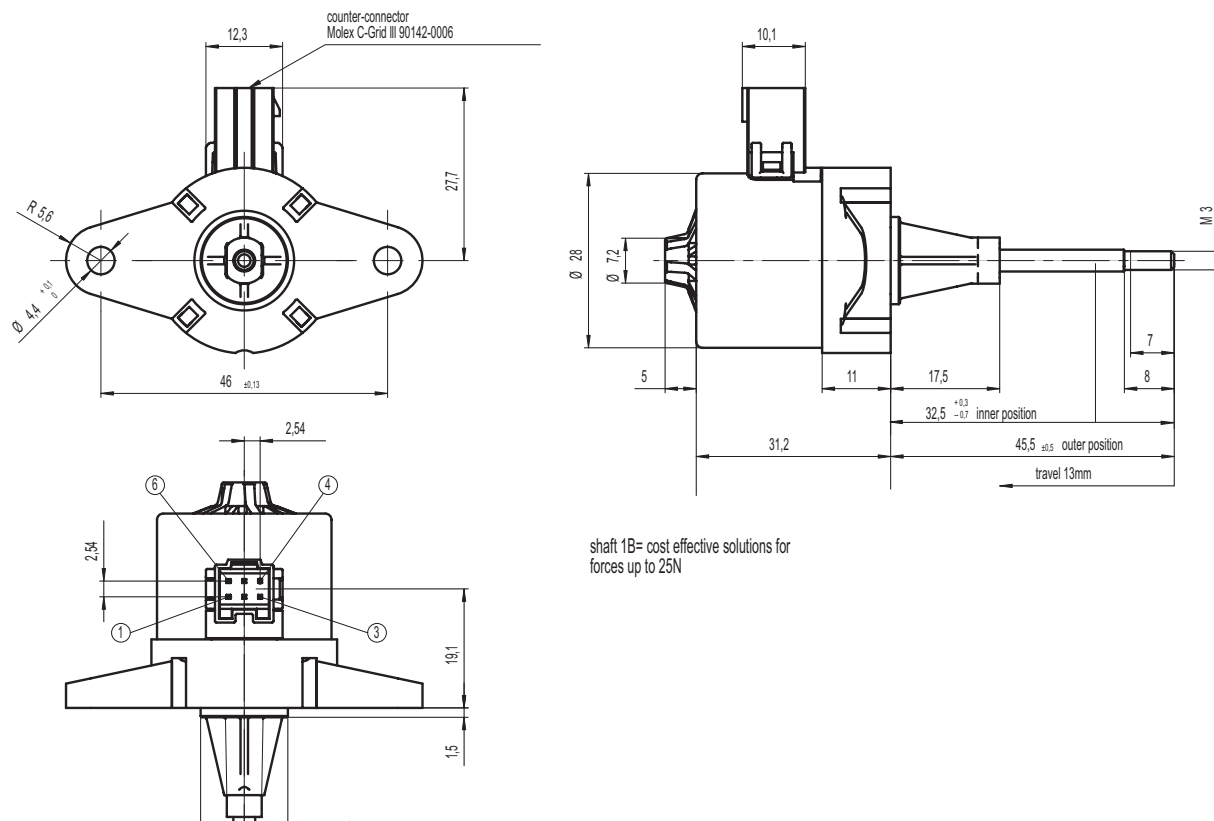


$C_V = 0.33 \mu F, 250 \text{ VAC}$

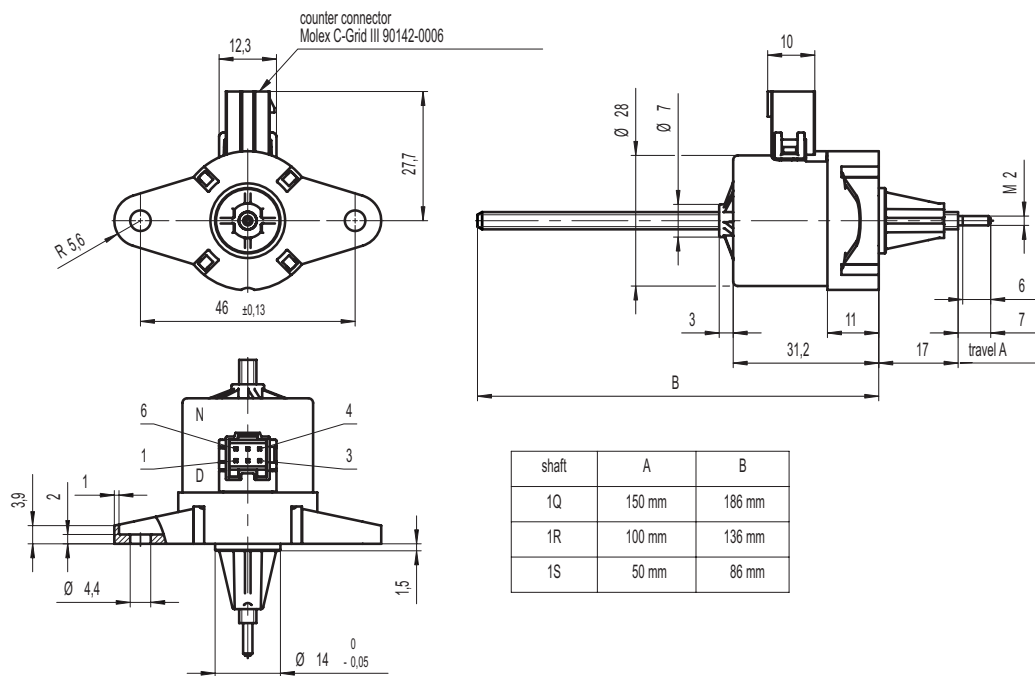
¹⁾ 110 V version available with 150 mm lead wires AWG26 only
Standard versions:

Shaft type (see dimensions)	Order code
1B	UCK13NC8N1BZ2
1E	UCK13NC8N1EZ2
1S	UCK13NC8N1SZ2
1R	UCK13NC8N1RZ2
1Q	UCK13NC8N1QZ2

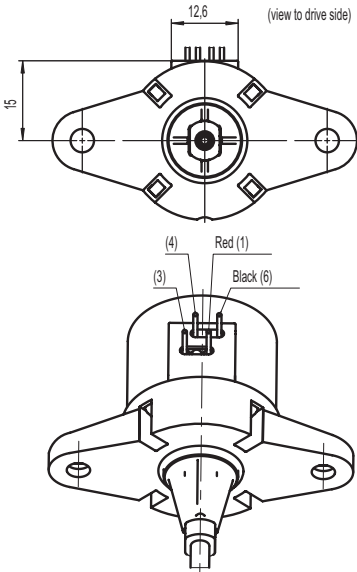
Dimensions Version with Connector D, with 13 mm travel, shaft 1B and 1E



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



Dimensions 110 V version with lead wires



different lead colours for 110V (230V)
for rotary synchronous motors in serials circuit

Force

		connector version		lead wire version	
		50 Hz	60 Hz	50 Hz	60 Hz
UCK1	100 %	31 N	32 N	21 N	21 N
	30%	41 N	48 N	27 N	30 N
UCK7	100 %	39 N	38 N	25 N	24 N
	30%	52 N	57 N	33 N	35 N