

## Stepper Motors

Linear

### UCE 1/5; UCE 2/6

Dimensions (mm)	∅ 28 x 31
Travel (mm)	10/13
Travel per step (mm)	0.021
Thread pitch (mm)	1.0
Speed (mm/s) at 200 Hz	4,16
Step angle (°)	7,5
Max. Force (N)*	17–50



\*Depends on winding, frequency and lifetime required.  
Drive against end stops only permissible after clarification of operating conditions and approval by Saia-Burgess.

### Standard Data

Climatic class	„wide-spread“ according to DIN IEC 60721-2-1
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	B according to DIN IEC 600 85
Approval	standard
Mounting	any position
Electrical connection	connector type B, D, or N
Protection	IP 40 according to DIN EN 60529
Weight	67 g
Rotor stalling	motor can be stopped when voltage is applied, without being overheated
Bearings	ball bearing

### Order Reference

Type	Stepper Motor	UCE	13	N	24 Ω	B	1A
Configuration	13 bipolar, standard magnet	53 bipolar, stronger magnet					
	23 unipolar, standard magnet	63 unipolar, stronger magnet					
Approval	N						
Resistance	see next page, Resistance per winding for bipolar or unipolar						
Connector	B see page 98 „UC-Series - Connector Types“ D N						
Shaft	1A Travel 10 mm ± 0,7 mm						
	1B Travel 13 mm ± 0,7 mm						

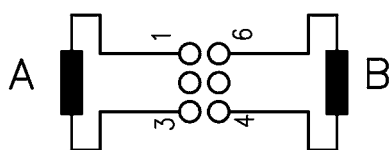
# UCE

## Technical Data

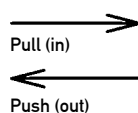
bipolar	type		UCE1	UCE1	UCE5	UCE5
	Operating frequency	Hz	100	200	100	200
	max. Push/Pull force *	30% ED 100% ED	N N	49 42	42 28	50 49
unipolar	type		UCE2	UCE2	UCE6	UCE6
	Operating frequency	Hz	100	200	100	200
	max. Push/Pull force *	30% ED 100% ED	N N	35 21	28 17	49 29
Rated voltage $U_N$ :		V	6	12	24	
Resistance per winding $R_{20}$		$\Omega$	24	90	380	
Steps per revolution			24			
Steps per mm			24			
Duty cycle			100 %			
Winding temperature $T_{max}$		$^{\circ}C$	130			
Linear travel max.		mm	10/13			
Axial play at 20 N force		mm	< 0,25			

\* measured at 23  $^{\circ}C$ , lifetime depends on load characteristics and ambient conditions

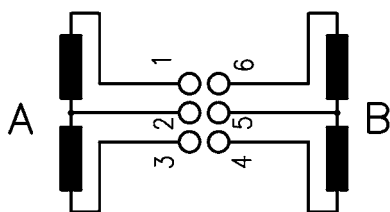
Circuit diagram bipolar



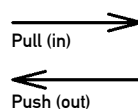
	0	I	II	III	IV
1	+	+	-	-	+
3	-	-	+	+	-
4	-	+	+	-	-
6	+	-	-	+	+



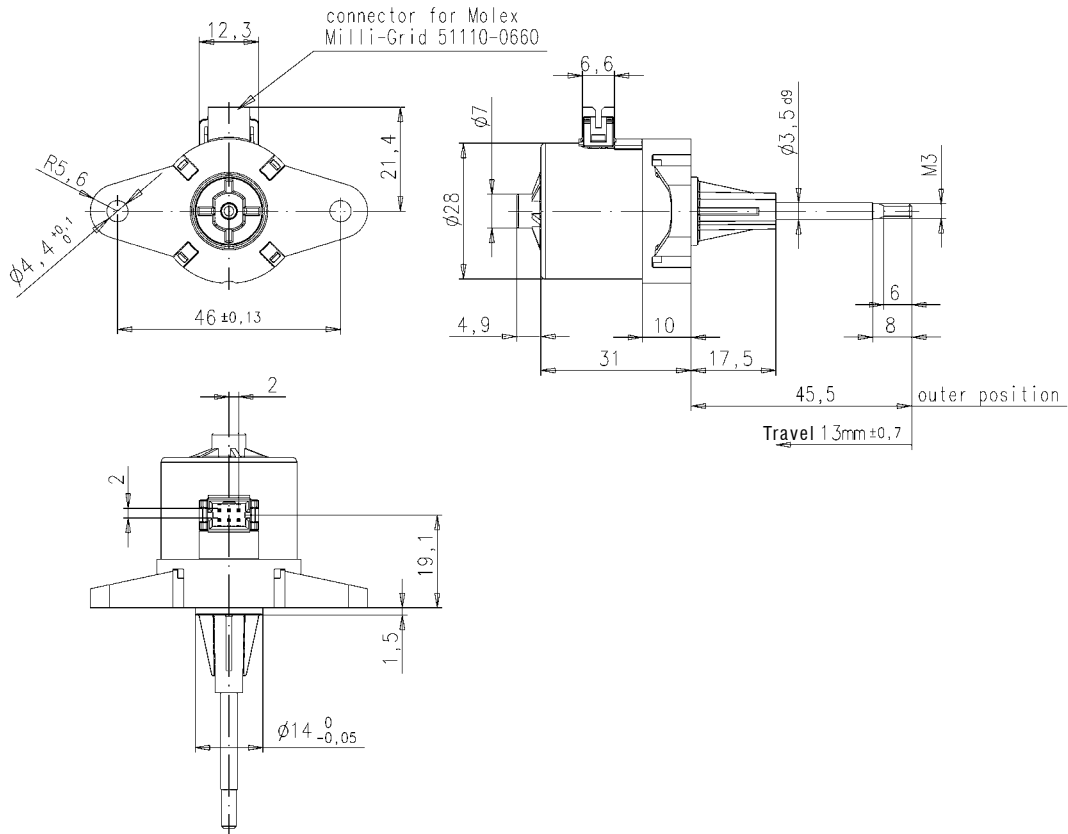
unipolar



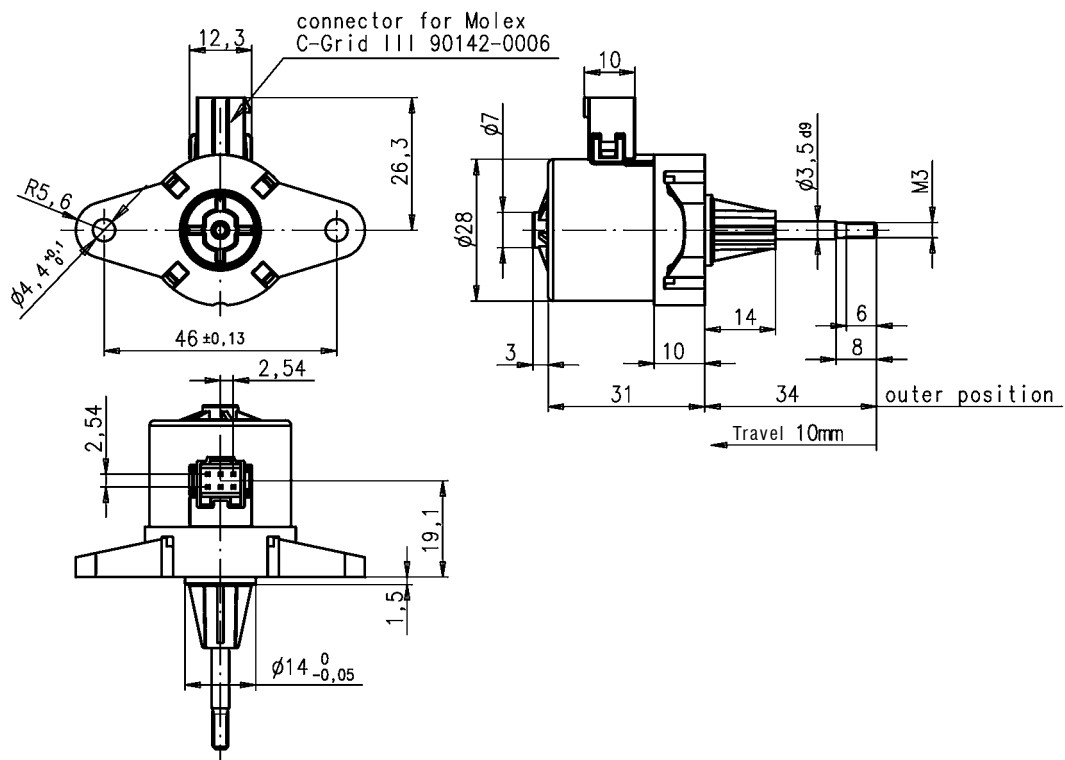
	0	I	II	III	IV
1	-	-			-
2	+	+	+	+	+
3			-	-	
4		-	-		
5	+	+	+	+	+
6	-			-	-



Dimensions Version with connector B, 13 mm travel



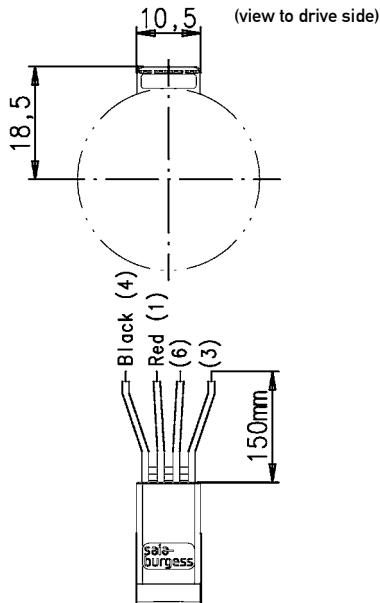
Version with connector D, 10 mm travel



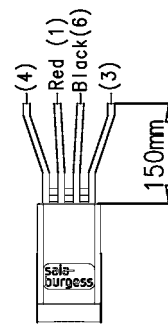
# UC-Series

## Connector Types

Cable connector **Connector N** (start serial production 04/2005)

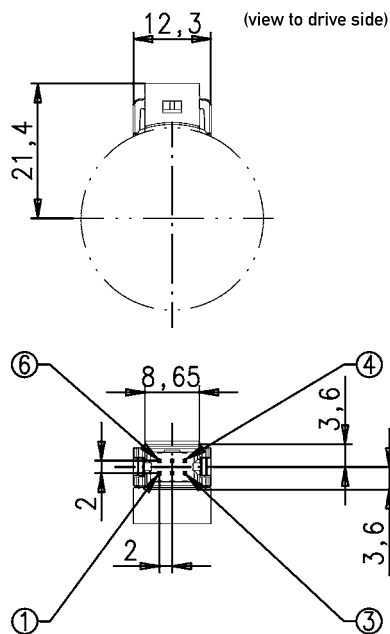


up to 48 V  
for bipolar stepper motors  
for synchronous motors (parallel circuit)



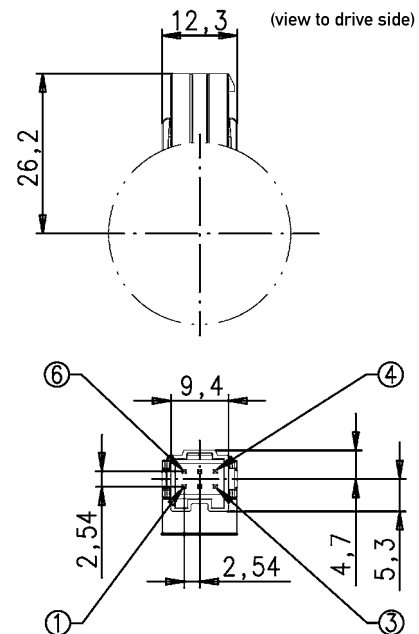
different cable colours for 110 V  
synchronous motors in series circuit

Connector Molex **Connector B**  
for Molex Milli-Grid 51110-0660



up to 48 V  
for bipolar and unipolar stepper motors  
for synchronous motors

**Connector D**  
for Molex C-Grid III 90142-006



up to 48 V  
for bipolar and unipolar stepper motors  
for synchronous motors