

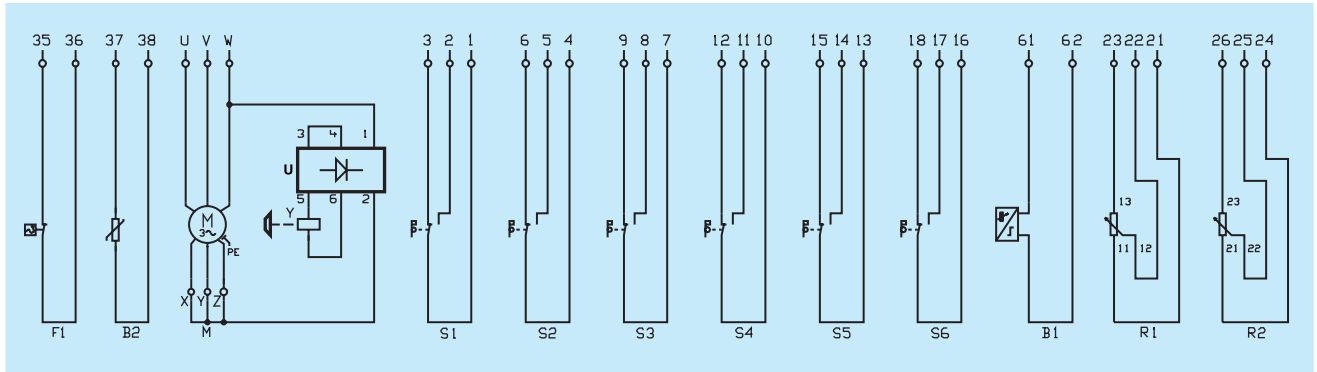
Wiring Instruction

for RACO - Electric Actuator (Type 1 + 6)

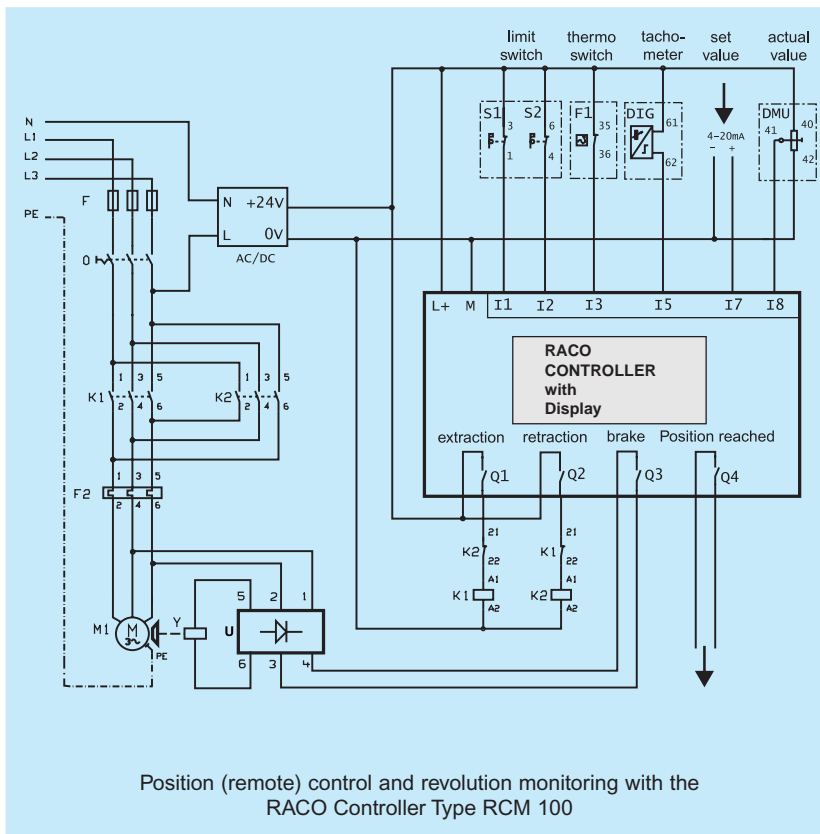
and RACO - Linear Actuator with RACO-Motor



Wiring Diagram

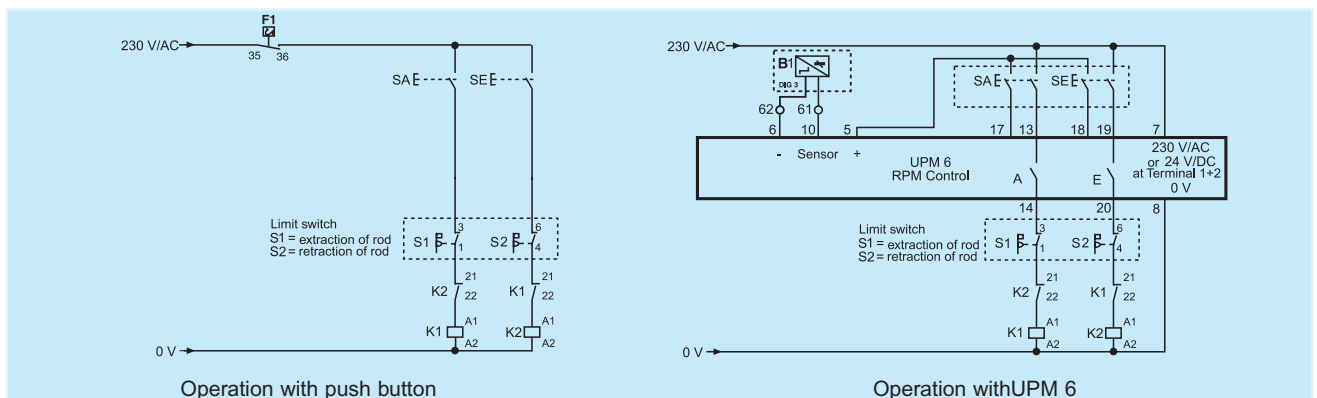


Wiring examples



Explanation for above figures

- M** RACO-Motor
- Y** For units for positioning: Electric magnetic brake type L (power release)
For Fail-Safe units: Electric magnetic brake type B (power off release)
The connection of the electric magnetic brake Y is with 230 V, 50 Hz via the terminals 1 and 2 of the installed rectifier. If there is not 230 V, 50 Hz it must be provided an intertransformer. Normally the brakes are switched by a one-phase voltage. If there is a dc-switching (for getting shorter switching times) you have to contact instead the bridges between the terminals 3 and 4 either closing contacts at brake type L or open contacts at brake type B.
- F1** Thermal contacts as winding protection if the unit is without B1 and B2
- B1** Impulse emitter for thrust overload monitoring device Type UPM at the unit or in the switch board.
- B2** Thermistor contacts (3 in line) for full motor protection.
- F2** Thermistor trigger relay KAG 1.
- S1, 3, 5** Limit switches (5A/250V-), adjustable variably (consider adjustment instructions), for the forward moving (running out)
- S2, 4, 6** Limit switches (5A/250V-), adjustable variably (consider adjustment instructions), for the reverse moving (running in)
- R1** Potentiometer 1 k Ohm, 1,5 W as emitter for electronic limit switch DW, continuous position indicating via power supply NG or as actual value transmitter at stroke proportional RACO remote control FS
- R1+R2** Tandem potentiometer

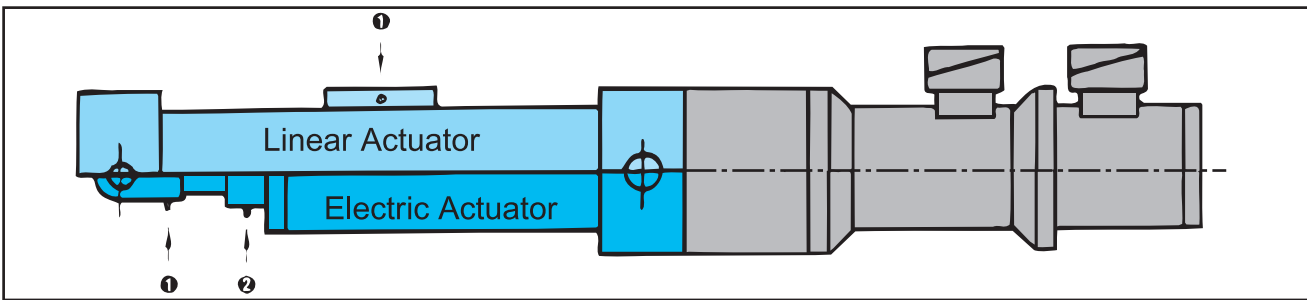


Note - safety instruction

Before putting the actuator in operation it has to be considered that the actuator should not be operated without an end position limiting system. If the actuator is not equipped with RACO limit switches, there must be a limit switching system installed at the outer construction, to prevent any damage.

for RACO - Electric Actuator (Type 1 + 6)

and RACO - Linear Actuator (Type 4)



Check of maintenance sequence for the thrust unit: Alignment of the RACO electrical actuator and tightening of all attachment screws. Radial and torsion forces acting on the axis of the RACO electrical cylinder are not permitted!

A) Electric Actuator (Type 1)

The thrust tube is sealed with wiper seals located in the front cap, to protect the inside of the actuator against dust or humidity. The actuator is factory lubricated, as specified in the table below, and ready for installation. As an option a double sealing system with dirt & ice wiper can be provided.

For re-lubrication use grease fitting ② to lubricate the thrust tube and ① for screw and nut system. Use less grease for fitting ② to generate a thin film of lubricant on the thrust tube. For lubrication fitting ① use grease filling as mentioned in the table below.

B) Electric Linear Actuator (Type 4)

The carriage track of linear actuator is covered by a magnetic band to protect the internal screw system. The screw system is equipped with a grease depot for a long time lubrication. A re-lubrication should be done via grease fitting ① in different stroke positions, if necessary. The grease intake is similar to the actuator type 1 in size 6.

C) Electric Actuator COMPACT (Type 6)

The electric actuator type 6 / compact series in size 2, 4 & 6 are equipped with a long life lubrication for the estimated operation time. These actuators are maintenance free, if no other lubrication is mentioned in the documentation. For size 7 compact up to 800 mm stroke follow the recommendation to size 7 type 1 listed below.

Type of grease

Electric Actuator / Electric Linear Actuator	Type 1 / Size 2 to 8	Type 1 / Size 2 to 8
	Type 6 / Size 6 and 7	Type 6 / Size 6 and 7
	Type 4 / Size 6	Type 4 / Size 6
	with ACME and Ball Screw	with ACME and Ball Screw
Denomination	Standard grease	Low temperature grease
Type of grease	KP2K-20 DIN 51502	KP1K-30 DIN 51502
Ambient temperature	-20° bis +120°C	-30° bis +120°C
Thickener	Li	Li
NGLI-class DIN 51815	2	00
Additive	EP-ingredients	EP-ingredients

Refilling quantities (in grams)

Type Size	Stroke in mm										Re-lubrication in grease fitting ①:
	up to 300	up to 500	up to 800	up to 1000	up to 1500	up to 2000	up to 3000	up to 5000	up to 6000		
2 + 3	10	15	20	25							Acme screw version after approx. 10.000 switching or 1 year. Ball screw version after approx. 100.000 switching or 1 year. Size 2 lubrication only via grease fitting ②
4	15	20	25	30							
5	20	30	40	50							
6	20	30	40	50	60	70	90	110	120		
7	30	40	50	60	80	100					
8	40	50	60	70	90	110					

RACO-Motors

free of maintenance!

Gear-Motors

see separate maintenance instructions!



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