

Application The DS series rotary servodrives, with their obliquely symmetrical die-cast housings, are very suitable for installation in small spaces, where they can be used for the adjustment of air flaps. The top section can be removed at right angles to the drive shaft. The power train is completely enclosed by the die-cast housing with a double seal groove.

Types	Torque	Actuating time for 90° angle of rotation
DS415	13 Nm	40s
DS515	15 Nm	54s
DS615	15 Nm	67s
DS670	70 Nm	60s

Assembly Any installation position is possible. The unit can be attached at the three M6 holes in the housing (12 mm deep) or by means of the W wall console (accessory). If the cable packing box or the drive shaft point upward, you must protect the housing bushings from moisture.

Installation With 1.5 mm² connection lines according to VDE rules and local regulations. Lines for power supply and safety voltage should be laid separately.

Connection According to terminal diagram or system-related terminal diagram. Power supply: 230 V, 50 Hz.

Servo-direction

Voltage to terminals	1 - 2	1 - 3
Servo-direction of drive spindles		

Changing the servo-direction Switch unit to zero-voltage state and exchange connection lines of terminal 2 with those of terminal 3 and of terminal 52 with those of 53.

In the case of additional installed parts, their connection lines must also be switched, e.g.:

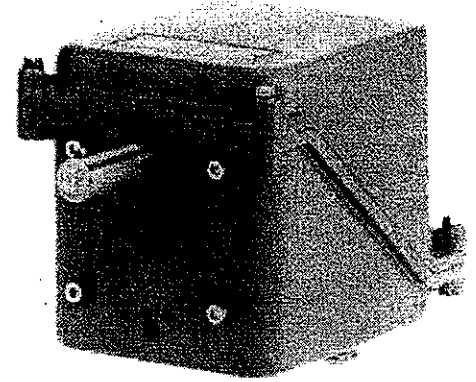
Additional travel-reversing switch E: Terminals 41, 42, 44 with 61, 62, 64

Feedback resistor R1 Terminals 12 with 13

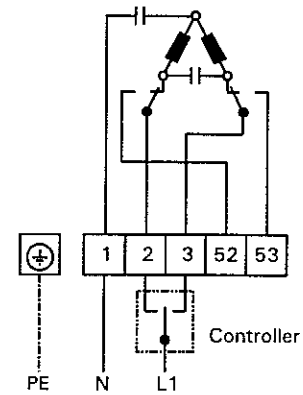
Changing the actuating range The DS rotary servodrives are set in the factory to an actuating range of 90° angle of rotation. The rotary servodrive must be switched to a zero-voltage state in order to make changes in the actuating range.

Two cams are located in the servodrive for actuating range adjustment (see drawing on rear). The two cams switch over the engine travel-reversing switch to the flap end positions and thus interrupt the engine circuit. If the basic adjustment of the actuating range made in the factory does not coincide with the system rod, the actuating range can be changed with the types that have no R1 feedback resistor between 0-130° angle of rotation by readjusting the cams (use SW2 hexagon socket wrench).

With the DS (-R1) series rotary servodrives (with R1 feedback resistor), the potentiometer already performs the full rotation movement with an actuating range of 90°.

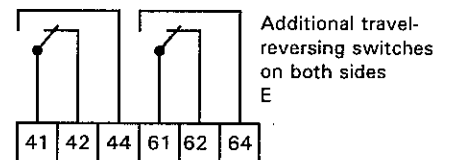


Connection



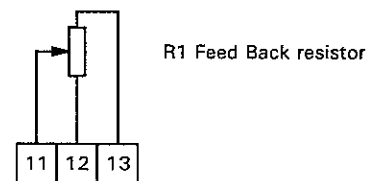
Power supply 230 V, 50 Hz

Installed parts



Additional travel-reversing switches on both sides E

In the case of servo direction 1 - 2 = travel-reversing switch 41-42/44
 In the case of servo direction 1 - 3 = travel-reversing switch 61-62/64

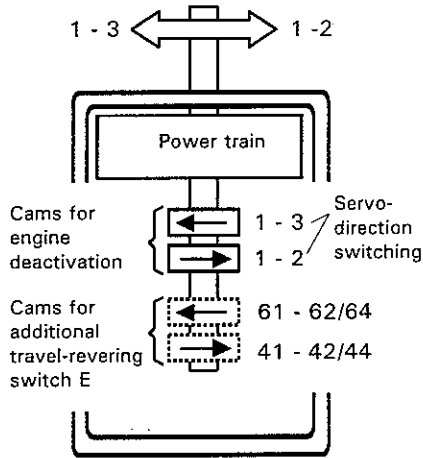
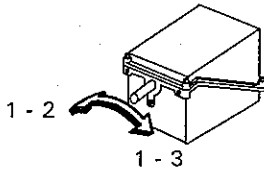


R1 Feed Back resistor

In the case of servo direction 1 - 2 = R1: 11 - 12 runs towards 0 Ohm
 In the case of servo direction 1 - 3 = R1: 11 - 13 runs towards 0 Ohm

Changing the actuating range

Servo-direction with voltage to terminals 1-2 or 1-3



View from above, enclosure hood removed

Changing the actuating range

This means that the rotation range of the DS (-R1) series rotary servodrive can only be set between 0..90°. Additional installed parts operating in dependence on the actuating path, such as the additional travel-reversing switch E and the R1 feedback resistor, must be re-adjusted after any changes in the actuating range.

Technical data

Power supply/ actuating signal	Three-step signal, 230 V 50 Hz DS415..615 5 VA DS670 14 VA
Angle of rotation	0-90°, infinitely adjustable. Actuating time: 40..67 s (see "Types" section)
Torque	DS415 13 Nm DS515 15 Nm DS615 15 Nm DS670 70 Nm
Drive shaft	DS415..615 Ø 12 x 40 mm DS670 Ø 18 x 50 mm
Protective type	IP65
Ambient temperature	0..50°C
Installation position	any

Maintenance

The rotary servodrives are designed for continuous operation under the most rigorous conditions. The spur gears of the power train should be provided with additional lubrication only as needed. For DS 415..615 servodrives we recommend rolling-contact bearing grease, e.g. H442 from Deutsche Calypsolgesellschaft, Nickel KG. For DS 670 we recommend Catenera KSB 6.



The servodrive must be switched to a zero-voltage state prior to removing the enclosure hood.

Accessories

- E Additional travel-reversing switches on both sides 3A ~ / 250 ~
- K12 Spring clutch 100 N for DS415..615
- K51 Spring clutch 500 N for DS670
- KG 2 ball joints
- L- Actuating lever
- R1 Feedback resistor
- W Wall console

Dimensions

