

SPINDLE LIMIT SWITCH**OS**

CE



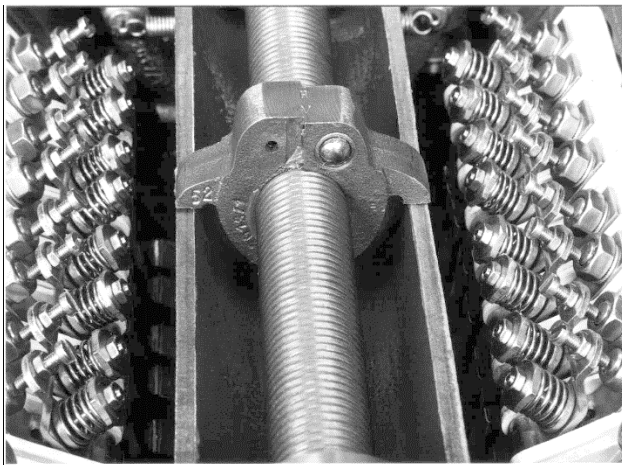
- **Counting the number of revolutions of a shaft for 2 limit positions**
- **Up to 380 A**
- **Up to 8 contacts**
- **Snap-action**
- **Direct actuation, positive drive**
- **Large overrun**

Spindle limit switches of this type are equipped with an input shaft which functions as spindle in the inner part of the switch. When this shaft gets rotated, a travelling nut on the spindle moves along the spindle. The path of this travelling nut is limited on both sides by adjustable stops. When a stop is reached by the nut, the contacts are actuated.

Switches type OS are available with up to 8 contacts. Each contact can be ordered with an own switching characteristic, NO or NC, only left, only right or at both stops. When reaching the stop, all contacts commutate simultaneously in snap-action characteristic with positive action. Behind the stops there is a sufficient overrun. A precise and stepless adjustment of both limit stops can easily be effected inside the housing. When rotating and leaving the limit stop in direction to the regular working range the contacts are switching back automatically. Version <w> offers a latching of the switching mechanism in actuated position which can only be released manually (see <versions>)).

The IP55 housing is made of cast-iron. Both terminal boxes (one for the incoming cables and one for the outgoing cables) have two threaded cable ducts each.

The mounting position is upright on the feet. The switch should be filled with transformer oil (i.e. our oil type <oil VDE 0370>) for longtime reliable service. The switch can be in service without oil with reduced switching capacities and yearly maintenance. In this case the mounting position is free.



Inside the switch:

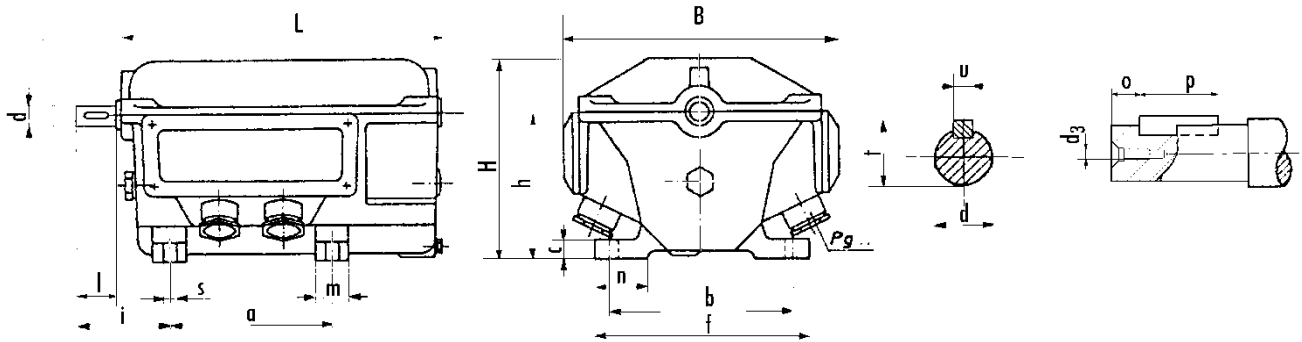
Spindle with
travelling nutContact springs
and screws for
adjustment
of clearance**Versions**

- With a second, free shaft butt on the backside of the switch for further coupling . Reference <K>
- With latching after actuation and manual release. Reference <W>

SPINDLE LIMIT SWITCH OS

Technical Data

| housing type | contact type | rated current A | rating AC cos phi=0,8 | | weight kg | spindle revolutions | | max speed min ⁻¹ | torque for actuation Nm | oil filling liter | cable ducts |
|--------------|--------------|-----------------|-----------------------|---------|-----------|---------------------|------------------|-----------------------------|-------------------------|-------------------|-------------|
| | | | 220V kW | 500V kW | | working range max | plus overrun max | | | | |
| OS0 | 10 | 10 | 4 | 7 | 11 | 48 | 11 | 120 | 6,5 | 1 | 2x2 M20 |
| OS1 | 40 | 40 | 11 | 22 | 23 | 60 | 20 | 120 | 15 | 2 | 2x2 M32 |
| OS2 | 60 | 60 | 17 | 33 | 30 | 60 | 20 | 120 | 15 | 3 | 2x2 M32 |
| OS3 | 100 | 100 | 28 | 55 | 44 | 60 | 20 | 120 | 20 | 5 | 2x2 M50 |
| OS4 | 200 | 200 | 56 | 98 | 56 | 90 | 20 | 120 | 20 | 7 | 2x2 M50 |
| OS4 | 300 | 300 | 70 | 145 | 58 | 90 | 20 | 120 | 20 | 7 | 2x2 M50 |
| OS4 | 380 | 380 | 90 | 180 | 58 | 90 | 20 | 120 | 20 | 7 | 2x2 M50 |



Dimensions (mm)

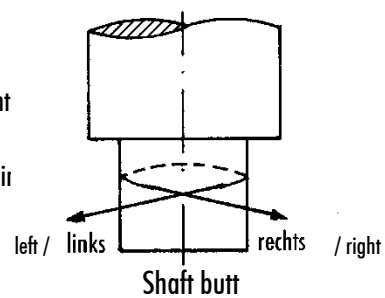
| housing | L | B | H | h | a | b | i | f | m | n | s | c | l | d | d ₃ | u | t | o | p |
|------------|-----|-----|-----|-----|-----|-----|-----|-----|----|----|----|----|----|-----------------|----------------|---|------|-----|----|
| OS0 | 238 | 212 | 145 | 95 | 130 | 120 | 60 | 145 | 28 | 40 | 11 | 15 | 27 | 12 ₆ | M4 | 4 | 13,6 | 5 | 16 |
| OS1 | 305 | 265 | 185 | 135 | 175 | 170 | 85 | 200 | 40 | 50 | 12 | 20 | 40 | 16 ₆ | M4 | 5 | 18,1 | 10 | 20 |
| OS2 | 343 | 282 | 210 | 160 | 200 | 200 | 95 | 230 | 40 | 50 | 14 | 22 | 40 | 20 ₆ | M5 | 6 | 22,5 | 7,5 | 25 |
| OS3 | 413 | 345 | 240 | 180 | 200 | 200 | 102 | 230 | 45 | 70 | 18 | 22 | 45 | 20 ₆ | M5 | 6 | 22,5 | 10 | 25 |
| OS4 | 510 | 352 | 240 | 180 | 335 | 200 | 102 | 230 | 45 | 70 | 18 | 22 | 45 | 20 ₆ | M5 | 6 | 22,5 | 10 | 25 |

Contacts

- A - NC, opens left and right
- B - NC, opens right only
- C - NC, opens left only
- D - NO, closes right only
- E - NO, closes left only
- F - NO, closes left and right
- G - „bridge“ for bridging a phase

„left“ means: to reach switching point by CCW turning

„right“ means: to reach switching point by CW turning



Ordering Information

Standard contact arrangements:

| contact arrangement | type |
|-----------------------|------------------|
| G - A - A | OSx-y/2 |
| A - A - A | OSx-y/3 |
| A - A - A - A | OSx-y/4 |
| C - B | OSx-x/2x1 |
| G - C - B - C - B | OSx-y/2x2 |
| C - B - C - B - C - B | OSx-y/2x3 |

(x = type of housing)
(y = type of contact)

individual contact arrangements, i.e.:

OS3-100/7 KA:F-C-B-C-B-C-B

OS

3

100

7

KA:F-C-B-C-B-C-B

spindle-limit-switch

housing, type 3

type of contact 100

7 contacts

contact arrangement:

3 NC, opens left only

3 NO, opens right only

1 NO, closes left and right