## HYDAC)|INTERNATIDNAL <br> Ball Valves <br> with Electrical Limit Controls





PN up to 500
DN up to 50

Model code (Limit switch)
(also example order)

## KHM-G2-1114-16X E 1. 000

## Designation

Type of ball valve

## Limit control

$\mathrm{E}=$ Limit switch (position switch)

## Monitored switching position

1 = Monitoring of ball valve in open position
$2=$ Monitoring of ball valve in closed position
3 = Monitoring of ball valve in open and closed positions

## Limit switch code

000 = Limit switch to DIN EN 50041 - type A
100 = Adapted for limit switch to DIN EN 50041 - type A
. . . = On request, almost all commercially available
makes and protection classes can be supplied.

## Examples of different models

E-1. 100


E-2.000


E-3.000


## Limit switch



Model code (Inductive proximity switch)
(also order example)

## Designation

Type of ball valve

## Limit control

I = Inductive proximity switch

## Monitored switching position

1 = Monitoring of ball valve in open position
2 = Monitoring of ball valve in closed position
3 = Monitoring of ball valve in open and closed positions

## Proximity switch code

200 = With built-in cylindrical proximity switch M12 to DIN EN 60947 type: IA
300 = Adapted for cylindrical proximity switch M12 to DIN EN 60947 Type: IA.
. . . = On request; almost all commercially available makes and protection classes can be supplied.

## Examples of different models


inductive proximity switch


Technical specifications

| Limit switch: | To DIN EN 50041 Form A, metal enclosure <br> with roller lever |
| :--- | :--- |
| Position switch: | $1 \mathrm{~N} / \mathrm{C}$ contact and 1 N/O contact |
| Switch equipment: | IP 67 |
| Protection class: | 500 V AC |
| Insulation group: | 10 A |
| Continuous current: | 300 V AC |
| Nominal voltage: | $30 \times 10^{6}$ switching cycles |
| Mechanical service life: | $6 \times 10^{3}$ switching cycles per hour |
| Switching frequency: | $-40^{\circ} \mathrm{C}$ to $+85^{\circ} \mathrm{C}$ |
| Permitted ambient temperature: | $\mathrm{Cylindrical} \mathrm{form} \mathrm{M12} \mathrm{to} \mathrm{DIN} \mathrm{EN} \mathrm{60947}$ |
| Inductive proximity switch: | 4 mm |
| Type of construction: | Normally open contact / PNP logic |
| Rated switching distance: | IP 67 |
| Output: | $10-30 \mathrm{~V}$ DC (including residual ripple) |
| Protection type: | $12-24 \mathrm{~V}$ DC |
| Operating voltage: | $\leq 200 \mathrm{~mA}$ |
| Nominal voltage: | $<11 \mathrm{~mA}$ |
| Switching current: | $10 \%$ |
| Current consumption without load: | 800 Hz |
| Switching hysteresis: | $-25^{\circ} \mathrm{C}$ to $+70^{\circ} \mathrm{C}$ |
| Switching frequency: | LED |
| Permitted ambient temperature: | $\mathrm{Cable} \mathrm{3} \mathrm{conductor}$,5 m long |
| Function display: |  |

## DIMENSIONS

BALL VALVE WITH LIMIT SWITCH
KHB - E-3.000


| DN | L | b | h |
| :--- | :--- | :--- | :--- |
| $04 / 06$ | 155 | 90 | 75 |
| $08 / 10 / 13$ | 155 | 90 | 75 |
| 16 | 155 | 90 | 82 |
| 20 | 155 | 90 | 87 |
| 25 | 155 | 90 | 90 |
| 32 | 155 | 90 | 103 |
| 40 | 155 | 90 | 109 |
| 50 | 155 | 90 | 115 |

BALL VALVE WITH INDUCTIVE PROXIMITY SWITCH M12 KHB - I-3.200


| DN | L | b | h |
| :--- | :--- | :--- | :--- |
| 06 | 45 | 47 | 59 |
| $08 / 10 / 13$ | 46 | 47 | 51 |
| 16 | 46 | 47 | 54 |
| 20 | 49 | 60 | 61 |
| 25 | 49 | 60 | 64 |
| 32 | 50 | 60 | 78 |
| 40 | 50 | 60 | 84 |
| 50 | 50 | 60 | 91 |

## Spare Parts

Retrofit kit for electrical switching position monitoring can be supplied on request.

## NOTE

The information in this brochure relates to the operating conditions and applications described.
For applications and operating conditions not described, please contact the relevant technical department.
Subject to technical modifications.
E 5.522.3/11.13

