

Hydraulically pilot operated check valves C4V allow free flow from A to B. The counter-flow direction is blocked. When pressure is applied to control port X, the ring chamber flow from B to A is released.

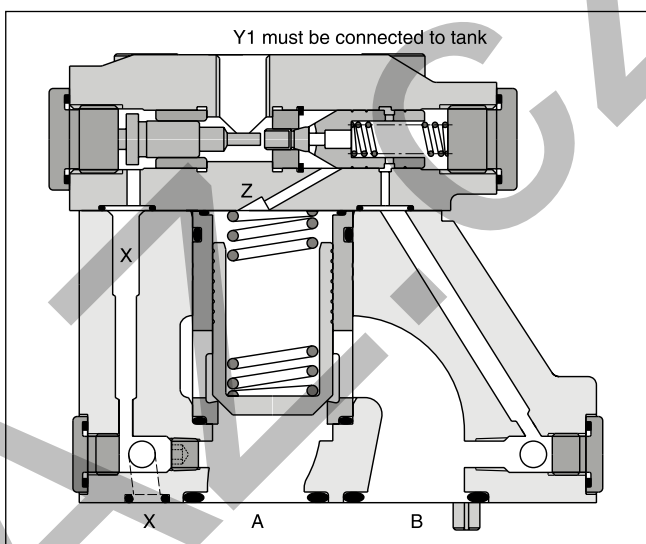
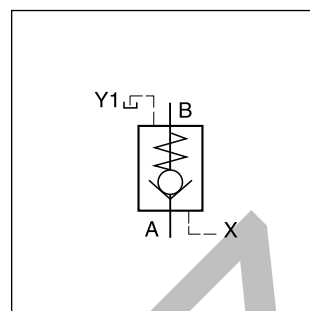
Up to four different pilot control ratios are available (see ordering code).

### Function

When no pressure is applied to the X-port, the flow from B to A is blocked, because the pressure in B is also in effect on top of the poppet.

Pressurizing the X port relieves the area on top of the poppet to the drain port and allows flow from B to A.

The seat design of the SVL valve series provides leak-free separation of port A and B in the closed position.



### Ordering code

|  |                                     |               |                             |                |                  |  |                  |                                 |         |        |  |  |             |               |                 |       |   |       |                 |       |                 |        |                                     |     |     |     |   |  |      |      |     |     |     |     |     |     |  |
|--|-------------------------------------|---------------|-----------------------------|----------------|------------------|--|------------------|---------------------------------|---------|--------|--|--|-------------|---------------|-----------------|-------|---|-------|-----------------|-------|-----------------|--------|-------------------------------------|-----|-----|-----|---|--|------|------|-----|-----|-----|-----|-----|-----|--|
| <b>C4V</b>   |                                     | <b>—</b>      | <b>5</b>                    | <b>9</b>       |                  |  | <b>B</b>         |                                 |         |        |  |  |             |               |                 |       |   |       |                 |       |                 |        |                                     |     |     |     |   |  |      |      |     |     |     |     |     |     |  |
| Check valve<br>pilot operated  | Nominal<br>size                     |               | Max.<br>pressure<br>350 bar | Y1-port<br>G¼" | Opening<br>ratio | Approx.<br>cracking<br>pressure  | Design<br>series | Seal                            | Options |        |  |  |             |               |                 |       |   |       |                 |       |                 |        |                                     |     |     |     |   |  |      |      |     |     |     |     |     |     |  |
| <table><tr><td>Code</td><td>Nominal size</td></tr><tr><td>03</td><td>NG10</td></tr><tr><td>06</td><td>NG25</td></tr><tr><td>10</td><td>NG32</td></tr></table>                                    | Code                                | Nominal size  | 03                          | NG10           | 06               | NG25   | 10               | NG32                            |         |        |  |  |             |               |                 |       | <table><tr><td>Code</td><td>Optionen</td></tr><tr><td>omit</td><td>Standard</td></tr><tr><td>013</td><td>Position control<br/>with protection</td></tr></table> | Code  | Optionen        | omit  | Standard        | 013    | Position control<br>with protection |     |     |     |   |  |      |      |     |     |     |     |     |     |  |
| Code   | Nominal size                        |               |                             |                |                  |  |                  |                                 |         |        |  |  |             |               |                 |       |   |       |                 |       |                 |        |                                     |     |     |     |   |  |      |      |     |     |     |     |     |     |  |
| 03   | NG10                                |               |                             |                |                  |  |                  |                                 |         |        |  |  |             |               |                 |       |   |       |                 |       |                 |        |                                     |     |     |     |   |  |      |      |     |     |     |     |     |     |  |
| 06   | NG25                                |               |                             |                |                  |  |                  |                                 |         |        |  |  |             |               |                 |       |   |       |                 |       |                 |        |                                     |     |     |     |   |  |      |      |     |     |     |     |     |     |  |
| 10   | NG32                                |               |                             |                |                  |  |                  |                                 |         |        |  |  |             |               |                 |       |   |       |                 |       |                 |        |                                     |     |     |     |   |  |      |      |     |     |     |     |     |     |  |
| Code   | Optionen                            |               |                             |                |                  |  |                  |                                 |         |        |  |  |             |               |                 |       |   |       |                 |       |                 |        |                                     |     |     |     |   |  |      |      |     |     |     |     |     |     |  |
| omit   | Standard                            |               |                             |                |                  |  |                  |                                 |         |        |  |  |             |               |                 |       |   |       |                 |       |                 |        |                                     |     |     |     |   |  |      |      |     |     |     |     |     |     |  |
| 013  | Position control<br>with protection |               |                             |                |                  |  |                  |                                 |         |        |  |  |             |               |                 |       |   |       |                 |       |                 |        |                                     |     |     |     |   |  |      |      |     |     |     |     |     |     |  |
| <table><tr><td>Code</td><td>Opening ratio</td></tr><tr><td>1</td><td>1 : 1</td></tr><tr><td>3</td><td>3 : 1</td></tr><tr><td>8</td><td>8 : 1</td></tr><tr><td>9</td><td>10 : 1</td></tr></table> | Code                                | Opening ratio | 1                           | 1 : 1          | 3                | 3 : 1  | 8                | 8 : 1                           | 9       | 10 : 1 |  | <table><tr><td>Code</td><td>Opening ratio</td></tr><tr><td>E <sup>1)</sup></td><td>1 : 1</td></tr><tr><td>F <sup>1)</sup></td><td>3 : 1</td></tr><tr><td>G <sup>1)</sup></td><td>8 : 1</td></tr><tr><td>H <sup>1)</sup></td><td>10 : 1</td></tr></table> | Code        | Opening ratio | E <sup>1)</sup> | 1 : 1 | F <sup>1)</sup>   | 3 : 1 | G <sup>1)</sup> | 8 : 1 | H <sup>1)</sup> | 10 : 1 |                                     |     |     |     |   | <table><tr><td>Code</td><td>Seal</td></tr><tr><td>1</td><td>NBR</td></tr><tr><td>5</td><td>FPM</td></tr></table> | Code | Seal | 1   | NBR | 5   | FPM |     |     |  |
| Code   | Opening ratio                       |               |                             |                |                  |  |                  |                                 |         |        |  |  |             |               |                 |       |   |       |                 |       |                 |        |                                     |     |     |     |   |  |      |      |     |     |     |     |     |     |  |
| 1  | 1 : 1                               |               |                             |                |                  |  |                  |                                 |         |        |  |  |             |               |                 |       |   |       |                 |       |                 |        |                                     |     |     |     |   |  |      |      |     |     |     |     |     |     |  |
| 3  | 3 : 1                               |               |                             |                |                  |  |                  |                                 |         |        |  |  |             |               |                 |       |   |       |                 |       |                 |        |                                     |     |     |     |   |  |      |      |     |     |     |     |     |     |  |
| 8  | 8 : 1                               |               |                             |                |                  |  |                  |                                 |         |        |  |  |             |               |                 |       |   |       |                 |       |                 |        |                                     |     |     |     |   |  |      |      |     |     |     |     |     |     |  |
| 9  | 10 : 1                              |               |                             |                |                  |  |                  |                                 |         |        |  |  |             |               |                 |       |   |       |                 |       |                 |        |                                     |     |     |     |   |  |      |      |     |     |     |     |     |     |  |
| Code   | Opening ratio                       |               |                             |                |                  |  |                  |                                 |         |        |  |  |             |               |                 |       |   |       |                 |       |                 |        |                                     |     |     |     |   |  |      |      |     |     |     |     |     |     |  |
| E <sup>1)</sup>  | 1 : 1                               |               |                             |                |                  |  |                  |                                 |         |        |  |  |             |               |                 |       |   |       |                 |       |                 |        |                                     |     |     |     |   |  |      |      |     |     |     |     |     |     |  |
| F <sup>1)</sup>  | 3 : 1                               |               |                             |                |                  |  |                  |                                 |         |        |  |  |             |               |                 |       |   |       |                 |       |                 |        |                                     |     |     |     |   |  |      |      |     |     |     |     |     |     |  |
| G <sup>1)</sup>  | 8 : 1                               |               |                             |                |                  |  |                  |                                 |         |        |  |  |             |               |                 |       |   |       |                 |       |                 |        |                                     |     |     |     |   |  |      |      |     |     |     |     |     |     |  |
| H <sup>1)</sup>  | 10 : 1                              |               |                             |                |                  |  |                  |                                 |         |        |  |  |             |               |                 |       |   |       |                 |       |                 |        |                                     |     |     |     |   |  |      |      |     |     |     |     |     |     |  |
| Code   | Seal                                |               |                             |                |                  |  |                  |                                 |         |        |  |  |             |               |                 |       |   |       |                 |       |                 |        |                                     |     |     |     |   |  |      |      |     |     |     |     |     |     |  |
| 1  | NBR                                 |               |                             |                |                  |  |                  |                                 |         |        |  |  |             |               |                 |       |   |       |                 |       |                 |        |                                     |     |     |     |   |  |      |      |     |     |     |     |     |     |  |
| 5  | FPM                                 |               |                             |                |                  |  |                  |                                 |         |        |  |  |             |               |                 |       |   |       |                 |       |                 |        |                                     |     |     |     |   |  |      |      |     |     |     |     |     |     |  |
|  |                                     |               |                             |                |                  | <table><tr><td>Code</td><td colspan="4">Approx. cracking pressure [bar]</td></tr><tr><td></td><td colspan="2">Flow A to B</td><td colspan="2">Flow B to A</td></tr><tr><td></td><td>C4V03</td><td>C4V06/10</td><td>C4V03</td><td>C4V06/10</td></tr><tr><td>2</td><td>1.0</td><td>1.0</td><td>1.5</td><td>1.7</td></tr><tr><td>4</td><td>4.0</td><td>3.5</td><td>5.5</td><td>6.0</td></tr><tr><td>6</td><td>2.0</td><td>2.2</td><td>3.0</td><td>3.8</td></tr></table> | Code             | Approx. cracking pressure [bar] |         |        |  |  | Flow A to B |               | Flow B to A     |       |   | C4V03 | C4V06/10        | C4V03 | C4V06/10        | 2      | 1.0                                 | 1.0 | 1.5 | 1.7 | 4 | 4.0  | 3.5  | 5.5  | 6.0 | 6   | 2.0 | 2.2 | 3.0 | 3.8 |  |
| Code   | Approx. cracking pressure [bar]     |               |                             |                |                  |  |                  |                                 |         |        |  |  |             |               |                 |       |   |       |                 |       |                 |        |                                     |     |     |     |   |  |      |      |     |     |     |     |     |     |  |
|  | Flow A to B                         |               | Flow B to A                 |                |                  |  |                  |                                 |         |        |  |  |             |               |                 |       |   |       |                 |       |                 |        |                                     |     |     |     |   |  |      |      |     |     |     |     |     |     |  |
|  | C4V03                               | C4V06/10      | C4V03                       | C4V06/10       |                  |  |                  |                                 |         |        |  |  |             |               |                 |       |   |       |                 |       |                 |        |                                     |     |     |     |   |  |      |      |     |     |     |     |     |     |  |
| 2  | 1.0                                 | 1.0           | 1.5                         | 1.7            |                  |  |                  |                                 |         |        |  |  |             |               |                 |       |   |       |                 |       |                 |        |                                     |     |     |     |   |  |      |      |     |     |     |     |     |     |  |
| 4  | 4.0                                 | 3.5           | 5.5                         | 6.0            |                  |  |                  |                                 |         |        |  |  |             |               |                 |       |   |       |                 |       |                 |        |                                     |     |     |     |   |  |      |      |     |     |     |     |     |     |  |
| 6  | 2.0                                 | 2.2           | 3.0                         | 3.8            |                  |  |                  |                                 |         |        |  |  |             |               |                 |       |   |       |                 |       |                 |        |                                     |     |     |     |   |  |      |      |     |     |     |     |     |     |  |

## Technical data

| General                 |                 |                                      |      |
|-------------------------|-----------------|--------------------------------------|------|
| Nominal size            |                 | NG10                                 | NG25 |
| Subplate mounting       |                 | ISO 5781                             |      |
| Mounting position       |                 | Unrestricted                         |      |
| Ambient temperature     | [°C]            | -20...+60                            |      |
| MTTF <sub>D</sub> value | [years]         | 150                                  |      |
| Weight                  | [kg]            | 2.8                                  | 4.6  |
| Hydraulic               |                 |                                      |      |
| Max. operating pressure | [bar]           | 350                                  |      |
| Nominal flow            | [l/min]         | 150                                  | 270  |
| Fluid                   |                 | Hydraulic oil according to DIN 51524 |      |
| Fluid temperature       | [°C]            | -20...+70 (NBR: -25...+70)           |      |
| Viscosity, permitted    | [cSt] / [mm²/s] | 20...400                             |      |
| Viscosity, recommended  | [cSt] / [mm²/s] | 30...80                              |      |
| Filtration              |                 | ISO 4406 (1999); 18/16/13            |      |

## Position control

Position control by proximity switch with amplifier. The closed position is monitored.

Valve open: proximity switch activated.

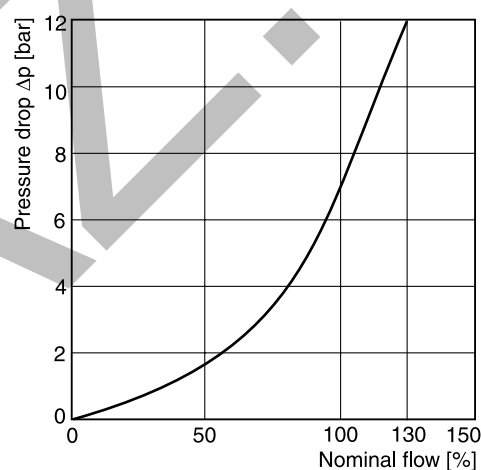
This proximity switch is pressure proof and has no wearing parts.

Note: Position control for C4V06 and C4V10 only.

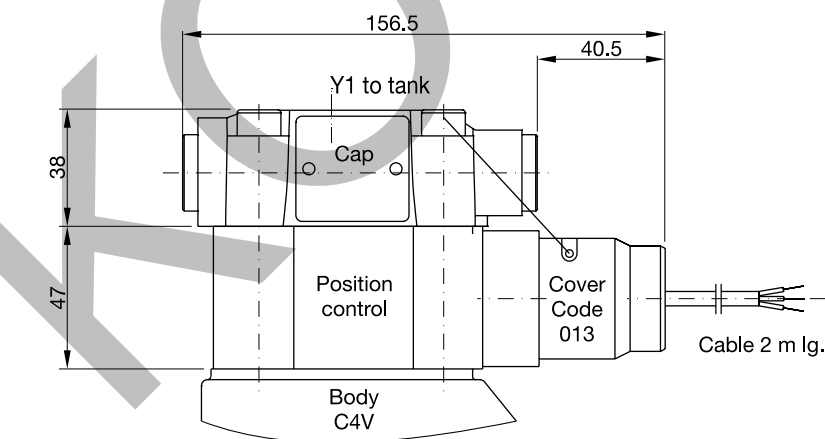
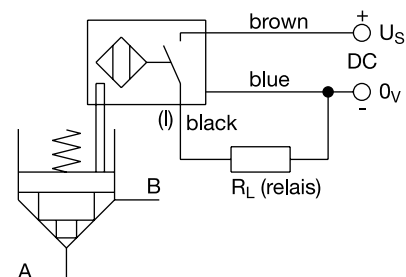
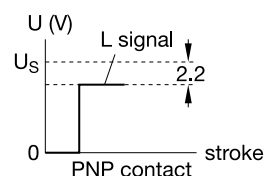
## Technical data proximity switch

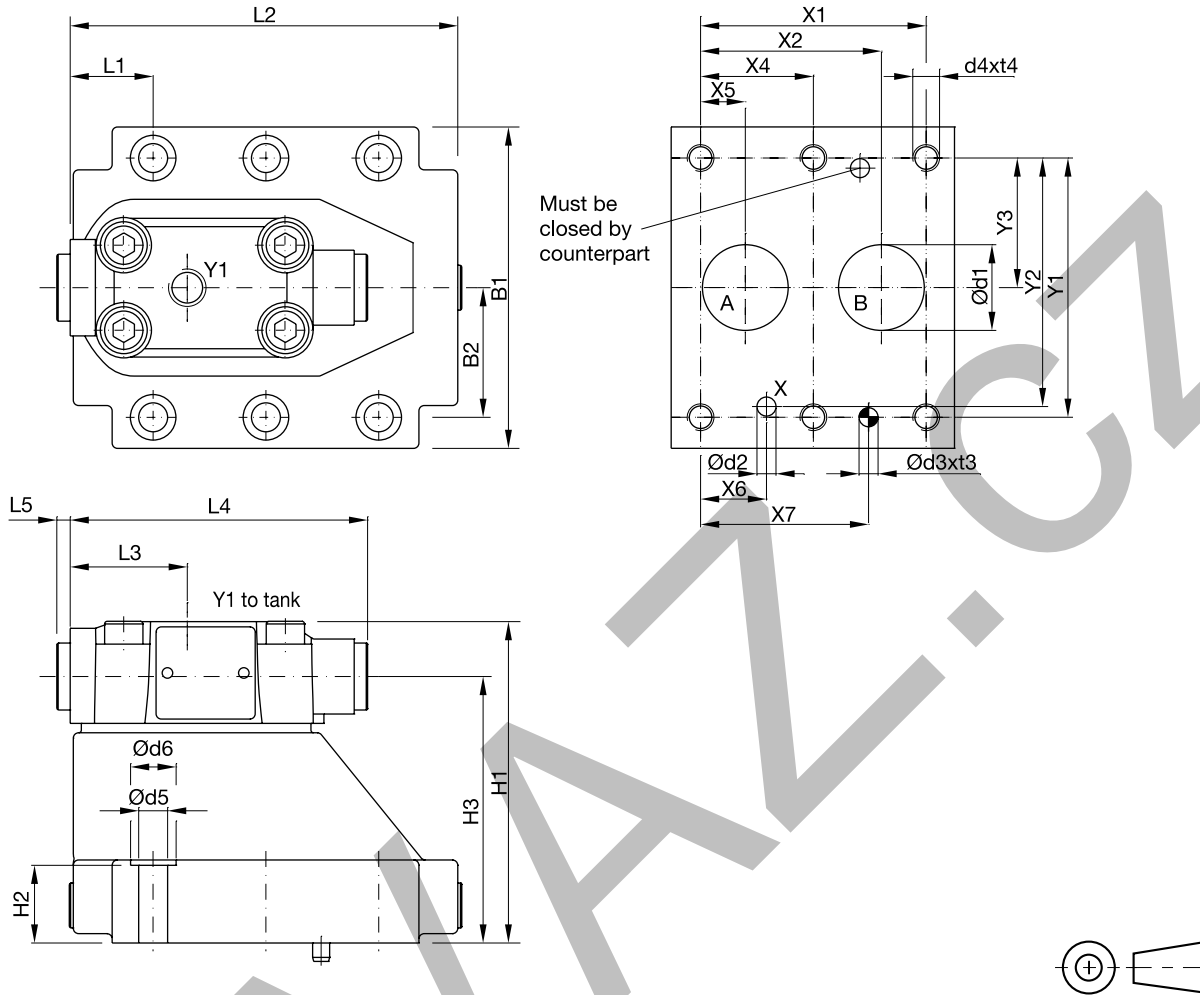
|                                  |  |
|----------------------------------|--|
| Function                         | PNP, contact                                 |
| Supply voltage (U <sub>s</sub> ) | [VDC] 10...30                                |
| Supply voltage ripple            | [%] ≤ 10                                     |
| Current consumption              | [mA] max. 8                                  |
| Residual voltage L-signal        | [V] U <sub>s</sub> - 2.2 at I <sub>max</sub> |
| Output current (I)               | [mA] ≤ 200                                   |
| Protection class                 | IP67   |
| Ambient temperature              | [°C] -25...+70                               |
| Wire cross section               | [mm²] 3 x 0.5                                |

## Δp/Q flow curve



Characteristic curve measured with HLP46 at 50 °C.





| NG | ISO-code        | x1   | x2   | x3 | x4   | x5   | x6   | x7   | y1   | y2   | y3   | y4 | y5 | y6 |
|----|-----------------|------|------|----|------|------|------|------|------|------|------|----|----|----|
| 10 | 5781-06-07-0-00 | 42.9 | 35.8 | -  | -    | 7.2  | 21.5 | 31.8 | 66.7 | 58.8 | 33.4 | -  | -  | -  |
| 25 | 5781-08-10-0-00 | 60.3 | 49.2 | -  | -    | 11.1 | 20.6 | 44.5 | 79.4 | 73   | 39.7 | -  | -  | -  |
| 32 | 5781-10-13-0-00 | 84.2 | 67.5 | -  | 42.1 | 16.7 | 24.6 | 62.7 | 96.8 | 92.8 | 48.4 | -  | -  | -  |

Tolerance for all dimensions  $\pm 0.2$

| NG | ISO-code        | B1   | B2   | H1    | H2 | H3   | H4 | H5 | H6 | L1   | L2    | L3   | L4  | L5 | L6 |
|----|-----------------|------|------|-------|----|------|----|----|----|------|-------|------|-----|----|----|
| 10 | 5781-06-07-0-00 | 87.3 | 33.4 | 83    | 21 | 62.5 | -  | -  | -  | 29.4 | 95.2  | 43.7 | 111 | 5  | -  |
| 25 | 5781-08-10-0-00 | 105  | 39.7 | 107.5 | 29 | 87   | -  | -  | -  | 35.1 | 127.2 | 43.7 | 111 | 5  | -  |
| 32 | 5781-10-13-0-00 | 120  | 48.4 | 120   | 30 | 99.5 | -  | -  | -  | 31   | 144.7 | 43.7 | 111 | 5  | -  |

| NG | ISO-code        | d1max | d2max | d3  | t3 | d4  | t4 | d5   | d6 |
|----|-----------------|-------|-------|-----|----|-----|----|------|----|
| 10 | 5781-06-07-0-00 | 15    | 7     | 7.1 | 8  | M10 | 16 | 10.8 | 17 |
| 25 | 5781-08-10-0-00 | 23.4  | 7.1   | 7.1 | 8  | M10 | 18 | 10.8 | 17 |
| 32 | 5781-10-13-0-00 | 32    | 7.1   | 7.1 | 8  | M10 | 20 | 10.8 | 17 |

| NG | ISO-code        | Bolt kit |                         |                  | Kit         | Surface finish |     |
|----|-----------------|----------|-------------------------|------------------|-------------|----------------|-----|
|    |                 |          |                         |                  |             | NBR            | FPM |
| 10 | 5781-06-07-0-00 | BK505    | 4x M10x35 ISO 4762-12.9 | 63 Nm $\pm 15$ % | S26-58507-0 | S26-58507-5    |     |
| 25 | 5781-08-10-0-00 | BK485    | 4x M10x45 ISO 4762-12.9 | 63 Nm $\pm 15$ % | S26-58475-0 | S26-58475-5    |     |
| 32 | 5781-10-13-0-00 | BK506    | 6x M10x45 ISO 4762-12.9 | 63 Nm $\pm 15$ % | S26-58508-0 | S26-58508-5    |     |