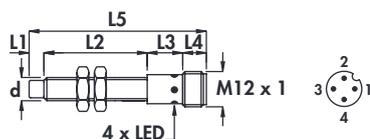


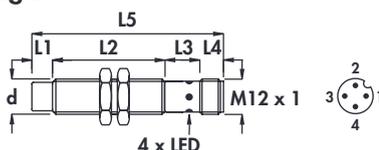
## CYLINDRICAL INDUCTIVE SENSORS IN METAL HOUSING

- Extended sensing distance - diameter 8 - 12 mm
- Amplified in d.c.
- Connector output M12 x 1

### Housing I-11



### Housing I-7



|                          |          |         |
|--------------------------|----------|---------|
| Diameter                 | M8 x 1   | M12 x 1 |
| Nut                      | Size     | SW13    |
|                          | Thkns mm | 4       |
| Max tightening torque Nm | 10       | 15      |

### Materials:

- Housing 8 mm: stainless steel
- Housing 12 mm: nickel plated brass
- Sensing face: plastic

### Technical data:

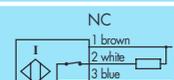
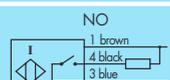
- Supply voltage ( $U_B$ ): see ordering references
- Max ripple: 10%
- Rated operational current ( $I_B$ ): 200 mA
- No-load supply current ( $I_0$ ):  $\leq 10$  mA
- Voltage drop ( $U_d$ ):  $\leq 1,5$  V
- Temperature range:  $-20^\circ \div +70^\circ$  C
- Max thermal drift of sensing distance  $S_T$ :  $\pm 10\%$
- Repeat accuracy (R): 4%
- Switching hysteresis (H): 10%
- Degree of protection: IP67
- Switch status indicator: yellow LED
- Protected against short-circuit and overload
- Protected against any wrong connection
- Suppression of initial false impulse
- Electromagnetic compatibility (EMC) according to EN60947-5-2
- Shock and vibration resistance according to EN60068-2-27 EN60068-2-6

| Housing | Flush mounting (*)<br>Non flush mounting | L1 | L2 | L3 | L4 | L5 | Female connector | Body diameter (d) | Supply voltage ( $U_B$ ) | Max switching frequency (f) | Nominal sensing distance ( $S_n$ ) $\pm 10\%$ | ORDERING REFERENCES      |                      |
|---------|--|----|----|----|----|----|------------------|-------------------|--------------------------|-----------------------------|---|--------------------------|----------------------|
|         |  |    |    |    |    |    |                  |                   |                          |                             |   | PNP (positive switching) |                      |
|         |  | mm | mm | mm | mm | mm | n°               | mm                | V (min - max)            | Hz                          | mm  |                          |                      |
| I-11    | •  | -  | 40 | 12 | 8  | 60 | 6-8B-10          | M8 x 1            | 7 ÷ 30                   | 800                         | 2   | <b>DCAE8/4309KS</b>      | <b>DCAE8/43C9KS</b>  |
| I-11    | •  | -  | 40 | 12 | 8  | 60 | 6-8B-10          | M8 x 1            | 7 ÷ 30                   | 800                         | 2,5   | <b>DCE8/4309KS</b>       | <b>DCE8/43C9KS</b>   |
| I-11    | •  | 5  | 35 | 12 | 8  | 60 | 6-8B-10          | M8 x 1            | 7 ÷ 30                   | 400                         | 3   | <b>DCAE8/5309KS</b>      | <b>DCAE8/53C9KS</b>  |
| I-11    | •  | 5  | 35 | 12 | 8  | 60 | 6-8B-10          | M8 x 1            | 7 ÷ 30                   | 400                         | 3,5   | <b>DCE8/5309KS</b>       | <b>DCE8/53C9KS</b>   |
| I-7     | •  | -  | 43 | 15 | 8  | 66 | 6-8B-10          | M12 x 1           | 7 ÷ 40                   | 800                         | 3   | <b>DCAE12/4309KS</b>     | <b>DCAE12/43C9KS</b> |
| I-7     | •  | -  | 43 | 15 | 8  | 66 | 6-8B-10          | M12 x 1           | 7 ÷ 40                   | 800                         | 4   | <b>DCE12/4309KS</b>      | <b>DCE12/43C9KS</b>  |
| I-7     | •  | 7  | 36 | 15 | 8  | 66 | 6-8B-10          | M12 x 1           | 7 ÷ 40                   | 600                         | 5   | <b>DCAE12/5309KS</b>     | <b>DCAE12/53C9KS</b> |
| I-7     | •  | 7  | 36 | 15 | 8  | 66 | 6-8B-10          | M12 x 1           | 7 ÷ 40                   | 600                         | 6   | <b>DCE12/5309KS</b>      | <b>DCE12/53C9KS</b>  |

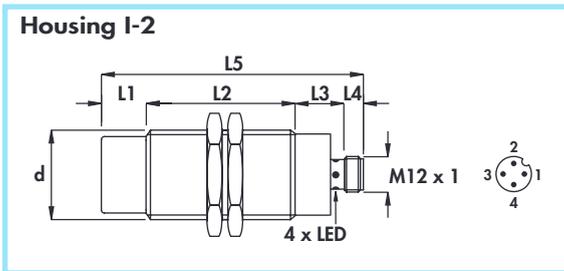
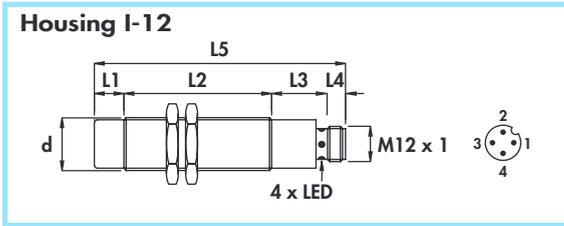
(\*) Note: See mounting precautions (pag. 22)

### NPN (negative switching)

Use the above mentioned part number changing the last number 9 with 8 (ie. DCE8/4308KS)



Extended sensing distance - diameters 18 - 30 mm •  
 Amplified in d.c. •  
 Connector output M12 x 1 •



|                          |          |         |           |
|--------------------------|----------|---------|-----------|
| Diameter                 |          | M18 x 1 | M30 x 1,5 |
| Nut                      | Size     | SW24    | SW36      |
|                          | Thkns mm | 4       | 5         |
| Max tightening torque Nm |          | 35      | 80        |

**Materials:**

- Housing: nickel plated brass
- Sensing face: plastic

**Technical data:**

- Supply voltage ( $U_B$ ): see ordering references
- Max ripple: 10%
- Rated operational current ( $I_B$ ): 200 mA
- No-load supply current ( $I_0$ ):  $\leq 10$  mA
- Voltage drop ( $U_d$ ):  $\leq 1,5$  V
- Temperature range:  $-20^\circ \div +70^\circ$  C
- Max thermal drift of sensing distance  $S_r$ :  $\pm 10\%$
- Repeat accuracy (R): 4%
- Switching hysteresis (H): 10%
- Degree of protection: IP67
- Switch status indicator: yellow LED
- Protected against short-circuit and overload
- Protected against any wrong connection
- Suppression of initial false impulse
- Electromagnetic compatibility (EMC) according to EN60947-5-2
- Shock and vibration resistance according to EN60068-2-27 EN60068-2-6

| Housing | Flush mounting (*)<br>Non flush mounting | L1 | L2 | L3 | L4 | L5 | Female connector | Body diameter (d) | Supply voltage ( $U_B$ ) | Max switching frequency (f) | Nominal sensing distance ( $S_n$ ) $\pm 10\%$ | ORDERING REFERENCES      |                      |
|---------|--|----|----|----|----|----|------------------|-------------------|--------------------------|-----------------------------|---|--------------------------|----------------------|
|         |  |    |    |    |    |    |                  |                   |                          |                             |   | PNP (positive switching) |                      |
| I-12    | •  | -  | 50 | 19 | 8  | 77 | 6-8B-10          | M18 x 1           | 7 ÷ 40                   | 300                         | 10  |                          |                      |
| I-12    | •  | -  | 50 | 19 | 8  | 77 | 6-8B-10          | M18 x 1           | 7 ÷ 40                   | 300                         | 10  | <b>DCAE18/4309KS</b>     | <b>DCAE18/43C9KS</b> |
| I-12    | •  | 10 | 50 | 19 | 8  | 87 | 6-8B-10          | M18 x 1           | 7 ÷ 40                   | 200                         | 14  | <b>DCE18/4309KS</b>      | <b>DCE18/43C9KS</b>  |
| I-12    | •  | 10 | 50 | 19 | 8  | 87 | 6-8B-10          | M18 x 1           | 7 ÷ 40                   | 200                         | 14  | <b>DCAE18/5309KS</b>     | <b>DCAE18/53C9KS</b> |
| I-12    | •  | 10 | 50 | 19 | 8  | 87 | 6-8B-10          | M18 x 1           | 7 ÷ 40                   | 200                         | 14  | <b>DCE18/5309KS</b>      | <b>DCE18/53C9KS</b>  |
| I-2     | •  | -  | 65 | 17 | 8  | 90 | 6-8B-10          | M30 x 1,5         | 7 ÷ 40                   | 100                         | 20  | <b>DCAE30/4309KS</b>     | <b>DCAE30/43C9KS</b> |
| I-2     | •  | -  | 65 | 17 | 8  | 90 | 6-8B-10          | M30 x 1,5         | 7 ÷ 40                   | 100                         | 20  | <b>DCE30/4309KS</b>      | <b>DCE30/43C9KS</b>  |
| I-2     | •  | 15 | 50 | 17 | 8  | 90 | 6-8B-10          | M30 x 1,5         | 7 ÷ 40                   | 100                         | 28  | <b>DCAE30/5309KS</b>     | <b>DCAE30/53C9KS</b> |
| I-2     | •  | 15 | 50 | 17 | 8  | 90 | 6-8B-10          | M30 x 1,5         | 7 ÷ 40                   | 100                         | 28  | <b>DCE30/5309KS</b>      | <b>DCE30/53C9KS</b>  |

(\*) Note: See mounting precautions (pag. 22)

| NPN (negative switching)  |  |
|---|--|
| Use the above mentioned part number changing the last number 9 with 8 (ie. DCE8/4308KS) |  |
|   |  |