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# ФОТОЭЛЕКТРИЧЕСКИЕ ДАТЧИКИ

## Технические характеристики

| sample picture                                                                      | product family                                                                             | housing                     | sensing distance<br>min. | sensing<br>distance max. | features                                                                                                                                                                                                                             |
|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|-----------------------------|--------------------------|--------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|    | <b>O500H.GP</b><br><br>Diffuse sensors with<br>background suppression                      | 20,2x47,7x36,4 mm,<br>metal | 60 mm                    | 400 mm                   | <ul style="list-style-type: none"> <li>• hygiene design</li> <li>• PinPoint LED</li> <li>• small beam diameter</li> <li>• short response time</li> <li>• IO-Link</li> <li>• Teach-in</li> <li>• IP 68/69K &amp; proTect+</li> </ul>  |
|    | <b>O500W.GP</b><br>(Retro series 14)<br><br>Diffuse sensors with<br>background suppression | 20,2x47,9x37,7 mm,<br>metal | 60 mm                    | 400 mm                   | <ul style="list-style-type: none"> <li>• washdown design</li> <li>• PinPoint LED</li> <li>• small beam diameter</li> <li>• short response time</li> <li>• IO-Link</li> <li>• Teach-in</li> <li>• IP 68/69K &amp; proTect+</li> </ul> |
|    | <b>O500W.GP</b><br><br>Diffuse sensors with<br>background suppression                      | 20,2x47,2x37,7 mm,<br>metal | 60 mm                    | 400 mm                   | <ul style="list-style-type: none"> <li>• washdown design</li> <li>• PinPoint LED</li> <li>• small beam diameter</li> <li>• short response time</li> <li>• IO-Link</li> <li>• qTeach</li> <li>• IP 68/69K &amp; proTect+</li> </ul>   |
|    | <b>O500H.SP</b><br><br>SmartReflect Light barriers                                         | 20,2x47,7x36,4 mm,<br>metal | -                        | 1000 mm                  | <ul style="list-style-type: none"> <li>• hygiene design</li> <li>• PinPoint LED</li> <li>• IO-Link</li> <li>• Teach-in</li> <li>• short response time</li> <li>• IP 68/69K &amp; proTect+</li> </ul>                                 |
|   | <b>O500W.SP</b><br>(Retro series 14)<br><br>SmartReflect Light barriers                    | 20,2x47,9x37,7 mm,<br>metal | -                        | 600 mm                   | <ul style="list-style-type: none"> <li>• washdown design</li> <li>• PinPoint LED</li> <li>• IO-Link</li> <li>• Teach-in</li> <li>• short response time</li> <li>• IP 68/69K &amp; proTect+</li> </ul>                                |
|  | <b>O500W.SP</b><br><br>SmartReflect Light barriers                                         | 20,2x47,2x37,7 mm,<br>metal | -                        | 1000 mm                  | <ul style="list-style-type: none"> <li>• washdown design</li> <li>• PinPoint LED</li> <li>• IO-Link</li> <li>• qTeach</li> <li>• short response time</li> <li>• IP 68/69K &amp; proTect+</li> </ul>                                  |
|  | <b>OR18W.GR</b><br><br>Diffuse sensors with<br>background suppression                      | 18x71,9 mm, metal           | 40 mm                    | 120 mm                   | <ul style="list-style-type: none"> <li>• washdown design</li> <li>• sensing distance adjustable via potentiometer</li> <li>• IP 67/69K</li> </ul>                                                                                    |
|  | <b>O300.SL</b><br>(Laser)<br><br>SmartReflect Light barriers                               | 12,9x32,3x23 mm,<br>plastic | -                        | 250 mm                   | <ul style="list-style-type: none"> <li>• One inch class</li> <li>• laser diode</li> <li>• very small beam diameter</li> <li>• IO-Link</li> <li>• qTeach</li> <li>• IP 67</li> </ul>                                                  |
|  | <b>O300.SP</b><br><br>SmartReflect Light barriers                                          | 12,9x32,3x23 mm,<br>plastic | -                        | 300 mm                   | <ul style="list-style-type: none"> <li>• One inch class</li> <li>• PinPoint LED</li> <li>• IO-Link</li> <li>• qTeach</li> <li>• short response time</li> <li>• IP 67</li> </ul>                                                      |
|  | <b>O300H.SL</b><br>(Laser)<br><br>SmartReflect Light barriers                              | 16,5x34,6x28,7 mm,<br>metal | -                        | 250 mm                   | <ul style="list-style-type: none"> <li>• One inch class</li> <li>• hygiene design</li> <li>• laser diode</li> <li>• very small beam diameter</li> <li>• IO-Link</li> <li>• Teach-in</li> <li>• IP 68/69K &amp; proTect+</li> </ul>   |
|                                                                                     | <b>O300H.SP</b><br><br>SmartReflect Light barriers                                         | 16,5x34,6x28,7 mm,<br>metal | -                        | 300 mm                   | <ul style="list-style-type: none"> <li>• One inch class</li> <li>• hygiene design</li> <li>• PinPoint LED</li> <li>• IO-Link</li> <li>• Teach-in</li> </ul>                                                                          |

|                                                                                     |                                                                       |                          |       |        |                                                                                                                                                                                                                                            |
|-------------------------------------------------------------------------------------|-----------------------------------------------------------------------|--------------------------|-------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|     |                                                                       |                          |       |        | <ul style="list-style-type: none"> <li>• short response time</li> <li>• IP 68/69K &amp; proTect+</li> </ul>                                                                                                                                |
|    | <b>O300W.SL (Laser)</b><br>SmartReflect Light barriers                | 16,5x34,7x28,2 mm, metal | -     | 250 mm | <ul style="list-style-type: none"> <li>• One inch class</li> <li>• washdown design</li> <li>• laser diode</li> <li>• very small beam diameter</li> <li>• IO-Link</li> <li>• qTeach</li> <li>• IP 68/69K &amp; proTect+</li> </ul>          |
|    | <b>O300W.SP</b><br>SmartReflect Light barriers                        | 16,5x34,7x28,2 mm, metal | -     | 300 mm | <ul style="list-style-type: none"> <li>• One inch class</li> <li>• washdown design</li> <li>• PinPoint LED</li> <li>• IO-Link</li> <li>• qTeach</li> <li>• short response time</li> <li>• IP 68/69K &amp; proTect+</li> </ul>              |
|    | <b>OR18.SP</b><br>SmartReflect Light barriers                         | 18x65 mm, metal          | -     | 300 mm | <ul style="list-style-type: none"> <li>• PinPoint LED</li> <li>• qTeach</li> <li>• short response time</li> <li>• IP 67</li> </ul>                                                                                                         |
|    | <b>O300.RL (Laser)</b><br>Retro-reflective sensors                    | 12,9x32,3x23 mm, plastic | -     | 5 m    | <ul style="list-style-type: none"> <li>• One inch class</li> <li>• laser diode</li> <li>• polarization filter to detect shiny objects</li> <li>• very short response time</li> <li>• IO-Link</li> <li>• qTeach</li> <li>• IP 67</li> </ul> |
|  | <b>O300.RP</b><br>Retro-reflective sensors                            | 12,9x32,3x23 mm, plastic | -     | 5 m    | <ul style="list-style-type: none"> <li>• One inch class</li> <li>• PinPoint LED</li> <li>• polarization filter to detect shiny objects</li> <li>• small beam diameter</li> <li>• IO-Link</li> <li>• qTeach</li> <li>• IP 67</li> </ul>     |
|  | <b>O300.GL (Laser)</b><br>Diffuse sensors with background suppression | 12,9x32,3x23 mm, plastic | 30 mm | 250 mm | <ul style="list-style-type: none"> <li>• One inch class</li> <li>• laser diode</li> <li>• very small beam diameter</li> <li>• IO-Link</li> <li>• qTeach</li> <li>• IP 67</li> </ul>                                                        |
|  | <b>O300.GP</b><br>Diffuse sensors with background suppression         | 12,9x32,3x23 mm, plastic | 30 mm | 200 mm | <ul style="list-style-type: none"> <li>• One inch class</li> <li>• PinPoint LED</li> <li>• small beam diameter</li> <li>• short response time</li> <li>• IO-Link</li> <li>• qTeach</li> <li>• IP 67</li> </ul>                             |
|  | <b>O500.GP</b><br>Diffuse sensors with background suppression         | 18x45x32 mm, plastic     | 60 mm | 400 mm | <ul style="list-style-type: none"> <li>• PinPoint LED</li> <li>• small beam diameter</li> <li>• short response time</li> <li>• IO-Link</li> <li>• qTeach</li> <li>• IP 67</li> </ul>                                                       |
|  | <b>OR18.GP</b><br>Diffuse sensors with background suppression         | 18x65 mm, metal          | 45 mm | 200 mm | <ul style="list-style-type: none"> <li>• PinPoint LED</li> <li>• small beam diameter</li> <li>• short response time</li> <li>• qTeach</li> <li>• IP 67</li> </ul>                                                                          |
|  | <b>OR18.GR.F</b><br>Diffuse sensors with background suppression       | 18x48,3 mm, plastic      | 50 mm | 50 mm  | <ul style="list-style-type: none"> <li>• fixed sensing distance</li> <li>• small beam diameter</li> <li>• IP 67</li> </ul>                                                                                                                 |

|                                                                                     |                                                                        |                          |       |         |                                                                                                                                                                                                                                                                           |
|-------------------------------------------------------------------------------------|------------------------------------------------------------------------|--------------------------|-------|---------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|    | <b>OR18.GR</b><br>Diffuse sensors with background suppression          | 18x71,9 mm, plastic      | 40 mm | 120 mm  | <ul style="list-style-type: none"> <li>sensing distance adjustable via potentiometer</li> <li>IP 67</li> </ul>                                                                                                                                                            |
|    | <b>O300H.GL (Laser)</b><br>Diffuse sensors with background suppression | 16,5x34,6x28,7 mm, metal | 30 mm | 250 mm  | <ul style="list-style-type: none"> <li>One inch class</li> <li>hygiene design</li> <li>laser diode</li> <li>very small beam diameter</li> <li>IO-Link</li> <li>Teach-in</li> <li>IP 68/69K &amp; proTect+</li> </ul>                                                      |
|    | <b>O300H.GP</b><br>Diffuse sensors with background suppression         | 16,5x34,6x28,7 mm, metal | 30 mm | 200 mm  | <ul style="list-style-type: none"> <li>One inch class</li> <li>hygiene design</li> <li>PinPoint LED</li> <li>small beam diameter</li> <li>short response time</li> <li>IO-Link</li> <li>Teach-in</li> <li>IP 68/69K &amp; proTect+</li> </ul>                             |
|    | <b>O300W.GL (Laser)</b><br>Diffuse sensors with background suppression | 16,5x34,7x28,2 mm, metal | 30 mm | 250 mm  | <ul style="list-style-type: none"> <li>One inch class</li> <li>washdown design</li> <li>laser diode</li> <li>very small beam diameter</li> <li>IO-Link</li> <li>qTeach</li> <li>IP 68/69K &amp; proTect+</li> </ul>                                                       |
|   | <b>O300W.GP</b><br>Diffuse sensors with background suppression         | 16,5x34,7x28,2 mm, metal | 30 mm | 200 mm  | <ul style="list-style-type: none"> <li>One inch class</li> <li>washdown design</li> <li>PinPoint LED</li> <li>small beam diameter</li> <li>short response time</li> <li>IO-Link</li> <li>qTeach</li> <li>IP 68/69K &amp; proTect+</li> </ul>                              |
|  | <b>O500.SP</b><br>SmartReflect Light barriers                          | 18x45x32 mm, plastic     | -     | 1000 mm | <ul style="list-style-type: none"> <li>PinPoint LED</li> <li>IO-Link</li> <li>qTeach</li> <li>short response time</li> <li>IP 67</li> </ul>                                                                                                                               |
|  | <b>O500.RP</b><br>Retro-reflective sensors                             | 18x45x32 mm, plastic     | -     | 7,5 m   | <ul style="list-style-type: none"> <li>PinPoint LED</li> <li>polarization filter to detect shiny objects</li> <li>small beam diameter</li> <li>IO-Link</li> <li>qTeach</li> <li>IP 67</li> </ul>                                                                          |
|  | <b>OR18.RR</b><br>Retro-reflective sensors                             | 18x44,8 mm, plastic      | -     | 3,5 m   | <ul style="list-style-type: none"> <li>polarization filter to detect shiny objects</li> <li>sensitivity adjustable via potentiometer</li> <li>suppression of mutual optical interference</li> <li>IP 67</li> </ul>                                                        |
|  | <b>OR18.RR.T</b><br>Retro-reflective sensors                           | 18x67,2 mm, plastic      | -     | 0,5 m   | <ul style="list-style-type: none"> <li>designed for detection of transparent objects</li> <li>polarization filter to detect shiny objects</li> <li>sensitivity adjustable via potentiometer</li> <li>suppression of mutual optical interference</li> <li>IP 67</li> </ul> |
|  | <b>OR18.RL (Laser)</b><br>Retro-reflective sensors                     | 18x77 mm, metal          | -     | 15 m    | <ul style="list-style-type: none"> <li>short response time</li> <li>long range</li> <li>polarization filter to detect shiny objects</li> <li>sensitivity adjustable via potentiometer</li> <li>suppression of mutual optical interference</li> <li>IP 67</li> </ul>       |
|                                                                                     | <b>O300H.RL (Laser)</b><br>Retro-reflective sensors                    | 16,5x34,6x28,7 mm, metal | -     | 5 m     | <ul style="list-style-type: none"> <li>One inch class</li> <li>hygiene design</li> <li>laser diode</li> <li>polarization filter to detect shiny objects</li> </ul>                                                                                                        |

|                                                                                     |                                                               |                          |       |        |                                                                                                                                                                                                                                                                                                                    |
|-------------------------------------------------------------------------------------|---------------------------------------------------------------|--------------------------|-------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|     |                                                               |                          |       |        | <ul style="list-style-type: none"> <li>• very short response time</li> <li>• IO-Link</li> <li>• Teach-in</li> <li>• IP 68/69K &amp; proTect+</li> </ul>                                                                                                                                                            |
|    | <b>O300H.RP</b><br>Retro-reflective sensors                   | 16,5x34,6x28,7 mm, metal | -     | 5 m    | <ul style="list-style-type: none"> <li>• One inch class</li> <li>• hygiene design</li> <li>• PinPoint LED</li> <li>• polarization filter to detect shiny objects</li> <li>• small beam diameter</li> <li>• IO-Link</li> <li>• Teach-in</li> <li>• IP 68/69K &amp; proTect+</li> </ul>                              |
|    | <b>O300W.RL (Laser)</b><br>Retro-reflective sensors           | 16,5x34,7x28,2 mm, metal | -     | 5 m    | <ul style="list-style-type: none"> <li>• One inch class</li> <li>• washdown design</li> <li>• laser diode</li> <li>• polarization filter to detect shiny objects</li> <li>• very short response time</li> <li>• IO-Link</li> <li>• qTeach</li> <li>• IP 68/69K &amp; proTect+</li> </ul>                           |
|    | <b>O300W.RP</b><br>Retro-reflective sensors                   | 16,5x34,7x28,2 mm, metal | -     | 5 m    | <ul style="list-style-type: none"> <li>• One inch class</li> <li>• washdown design</li> <li>• PinPoint LED</li> <li>• polarization filter to detect shiny objects</li> <li>• small beam diameter</li> <li>• IO-Link</li> <li>• qTeach</li> <li>• IP 68/69K &amp; proTect+</li> </ul>                               |
|   | <b>O500H.RP</b><br>Retro-reflective sensors                   | 20,2x47,7x36,4 mm, metal | -     | 7,5 m  | <ul style="list-style-type: none"> <li>• hygiene design</li> <li>• PinPoint LED</li> <li>• polarization filter to detect shiny objects</li> <li>• small beam diameter</li> <li>• IO-Link</li> <li>• Teach-in</li> <li>• IP 68/69K &amp; proTect+</li> </ul>                                                        |
|  | <b>O500W.RP (Retro series 14)</b><br>Retro-reflective sensors | 20,2x47,2x37,7 mm, metal | -     | 7,5 m  | <ul style="list-style-type: none"> <li>• washdown design</li> <li>• PinPoint LED</li> <li>• polarization filter to detect shiny objects</li> <li>• small beam diameter</li> <li>• Teach-in</li> <li>• IP 68/69K &amp; proTect+</li> </ul>                                                                          |
|  | <b>O500W.RP</b><br>Retro-reflective sensors                   | 20,2x47,2x37,7 mm, metal | -     | 7,5 m  | <ul style="list-style-type: none"> <li>• washdown design</li> <li>• PinPoint LED</li> <li>• polarization filter to detect shiny objects</li> <li>• small beam diameter</li> <li>• IO-Link</li> <li>• qTeach</li> <li>• IP 68/69K &amp; proTect+</li> </ul>                                                         |
|  | <b>OR18W.RR</b><br>Retro-reflective sensors                   | 18x67,2 mm, metal        | -     | 3,5 m  | <ul style="list-style-type: none"> <li>• washdown design</li> <li>• polarization filter to detect shiny objects</li> <li>• sensitivity adjustable via potentiometer</li> <li>• suppression of mutual optical interference</li> <li>• IP 67/69K</li> </ul>                                                          |
|  | <b>OR18W.RR.T</b><br>Retro-reflective sensors                 | 18x67,2 mm, metal        | -     | 0,5 m  | <ul style="list-style-type: none"> <li>• washdown design</li> <li>• designed for detection of transparent objects</li> <li>• polarization filter to detect shiny objects</li> <li>• sensitivity adjustable via potentiometer</li> <li>• suppression of mutual optical interference</li> <li>• IP 67/69K</li> </ul> |
|  | <b>FHCK 07</b><br>Diffuse sensors with background suppression | 8x16,2x10,8 mm, plastic  | 10 mm | 60 mm  | <ul style="list-style-type: none"> <li>• ultra compact housing</li> <li>• sensing distance adjustable via Teach-in</li> <li>• suppression of mutual optical interference</li> <li>• IP 65</li> </ul>                                                                                                               |
|                                                                                     | <b>FHDK 10 (adjustable sensing distance)</b>                  | 10,4x27x14 mm, plastic   | 20 mm | 120 mm | <ul style="list-style-type: none"> <li>• compact housing</li> <li>• large sensing range</li> <li>• sensing distance adjustable via</li> </ul>                                                                                                                                                                      |

|                                                                                     |                                                                                                   |                          |             |               |                                                                                                                                                                                                                          |
|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------|--------------------------|-------------|---------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|     | Diffuse sensors with background suppression                                                       |                          |             |               | <ul style="list-style-type: none"> <li>• IP 67</li> </ul>                                                                                                                                                                |
|    | <b>FHDK 14</b><br><b>(mechanically adjustable)</b><br>Diffuse sensors with background suppression | 14,8x43x31 mm, plastic   | 20 mm       | 500 mm        | <ul style="list-style-type: none"> <li>• long range</li> <li>• sensing distance adjustable via potentiometer</li> <li>• suppression of mutual optical interference</li> <li>• IP 67</li> </ul>                           |
|    | <b>FHDK 04</b><br>Diffuse sensors with background suppression                                     | 4x44,8x6,2 mm, plastic   | 30 mm ±2 mm | 50 mm ±3 mm   | <ul style="list-style-type: none"> <li>• compact housing</li> <li>• small beam diameter</li> <li>• push-pull output</li> <li>• IP 65</li> </ul>                                                                          |
|    | <b>FHDM 12</b><br>Diffuse sensors with background suppression                                     | 12,4x35x35 mm, metal     | 15 mm       | 300 mm        | <ul style="list-style-type: none"> <li>• rugged miniature metal housing</li> <li>• sensing distance adjustable via potentiometer</li> <li>• suppression of mutual optical interference</li> <li>• IP 67</li> </ul>       |
|    | <b>FPDK 10</b><br>Retro-reflective sensors                                                        | 10,4x27x16,3 mm, plastic | -           | 3,5 m         | <ul style="list-style-type: none"> <li>• compact housing</li> <li>• polarization filter to detect shiny objects</li> <li>• suppression of mutual optical interference</li> <li>• IP 67</li> </ul>                        |
|   | <b>FPDK 14</b><br>Retro-reflective sensors                                                        | 14,8x43x31 mm, plastic   | -           | 7 m           | <ul style="list-style-type: none"> <li>• polarization filter to detect shiny objects</li> <li>• single lens optics (FPDK 14x5111/S35A)</li> <li>• suppression of mutual optical interference</li> <li>• IP 67</li> </ul> |
|  | <b>FRDK 14</b><br><b>(for transparent Objects)</b><br>Retro-reflective sensors                    | 14,8x43x31 mm, plastic   | -           | 7 m           | <ul style="list-style-type: none"> <li>• designed for detection of transparent objects</li> <li>• sensitivity adjustable via Teach-in</li> <li>• short response time</li> <li>• IP 67</li> </ul>                         |
|  | <b>FNDR 14</b><br>SmartReflect Light barriers                                                     | 19,6x51x34,3 mm, metal   | -           | 800 mm on V4A | <ul style="list-style-type: none"> <li>• washdown design</li> <li>• IO-Link</li> <li>• remote Teach-in</li> <li>• IP 68/69K &amp; proTect+</li> </ul>                                                                    |
|  | <b>FHDH 14</b><br>Diffuse sensors with background suppression                                     | 19,6x52,2x34,3 mm, metal | 50 mm       | 400 mm        | <ul style="list-style-type: none"> <li>• hygiene design</li> <li>• remote Teach-in</li> <li>• IP 68/69K &amp; proTect+</li> </ul>                                                                                        |
|  | <b>FHDR 14</b><br>Diffuse sensors with background suppression                                     | 19,6x51x34,3 mm, metal   | 50 mm       | 400 mm        | <ul style="list-style-type: none"> <li>• washdown design</li> <li>• IO-Link</li> <li>• Remote Teach-in</li> <li>• IP 68/69K &amp; proTect+</li> </ul>                                                                    |
|  | <b>FZDK 10</b><br>Diffuse sensors with intensity difference                                       | 10,4x27x14 mm, plastic   | 5 mm        | 200 mm        | <ul style="list-style-type: none"> <li>• compact housing</li> <li>• sensing distance adjustable via potentiometer</li> <li>• IP 67</li> </ul>                                                                            |
|                                                                                     | <b>O300.ZL</b><br><b>(Laser)</b>                                                                  | 12,9x32,3x23 mm, plastic | 10 mm       | 250 mm        | <ul style="list-style-type: none"> <li>• One inch class</li> <li>• laser diode</li> </ul>                                                                                                                                |

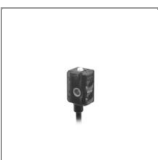
|                                                                                     |                                                                       |                          |               |               |                                                                                                                                                                                                                                                                                 |
|-------------------------------------------------------------------------------------|-----------------------------------------------------------------------|--------------------------|---------------|---------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|     | Diffuse sensors with intensity difference                             |                          |               |               | <ul style="list-style-type: none"> <li>• short response time</li> <li>• very small beam diameter</li> <li>• IO-Link</li> <li>• qTeach</li> <li>• IP 67</li> </ul>                                                                                                               |
|    | <b>O300.ZR</b><br>Diffuse sensors with intensity difference           | 12,9x32,3x23 mm, plastic | 10 mm         | 400 mm        | <ul style="list-style-type: none"> <li>• One inch class</li> <li>• qTeach</li> <li>• IP 67</li> </ul>                                                                                                                                                                           |
|    | <b>FZDK 14</b><br>Diffuse sensors with intensity difference           | 14,8x43x31 mm, plastic   | 5 mm          | 600 mm        | <ul style="list-style-type: none"> <li>• long range</li> <li>• sensing distance adjustable via potentiometer</li> <li>• suppression of mutual optical interference</li> <li>• IP 67</li> </ul>                                                                                  |
|    | <b>O500.ZR</b><br>Diffuse sensors with intensity difference           | 18x45x32 mm, plastic     | 20 mm         | 600 mm        | <ul style="list-style-type: none"> <li>• qTeach</li> <li>• IP 67</li> </ul>                                                                                                                                                                                                     |
|    | <b>OR18.ZI</b><br>Diffuse sensors with intensity difference           | 18x44,8 mm, plastic      | 0 mm          | 800 mm        | <ul style="list-style-type: none"> <li>• infrared LED</li> <li>• long range</li> <li>• sensing distance adjustable via potentiometer</li> <li>• suppression of mutual optical interference</li> <li>• IP 67</li> </ul>                                                          |
|  | <b>OR18.ZL (Laser)</b><br>Diffuse sensors with intensity difference   | 18x77 mm, metal          | 10 mm         | 300 mm        | <ul style="list-style-type: none"> <li>• short response time</li> <li>• sensing distance adjustable via potentiometer</li> <li>• suppression of mutual optical interference</li> <li>• IP 67</li> </ul>                                                                         |
|  | <b>OR18W.ZI</b><br>Diffuse sensors with intensity difference          | 18x67,2 mm, metal        | 0 mm          | 800 mm        | <ul style="list-style-type: none"> <li>• washdown design</li> <li>• infrared LED</li> <li>• long range</li> <li>• sensing distance adjustable via potentiometer</li> <li>• suppression of mutual optical interference</li> <li>• IP 67/69K</li> </ul>                           |
|  | <b>FKDK 14</b><br>Diffuse contrast sensors                            | 14,8x43x31 mm, plastic   | 12,5 mm ±2 mm | 12,5 mm ±2 mm | <ul style="list-style-type: none"> <li>• very short response time</li> <li>• white light</li> <li>• IP 67</li> </ul>                                                                                                                                                            |
|  | <b>FVDK 66 (standard version)</b><br>Fiber optic sensors & cables     | 10x33,8x70,2 mm, plastic | -             | 340 mm        | <ul style="list-style-type: none"> <li>• 2x4 digit display indicates the switching point and receiving light level</li> <li>• easy operation</li> <li>• version with external teach-in</li> <li>• IP 40</li> </ul>                                                              |
|  | <b>FVDK 67 (standard version)</b><br>Fiber optic sensors & cables     | 10x33,8x70,2 mm, plastic | -             | 1200 mm       | <ul style="list-style-type: none"> <li>• 2x4 digit display indicates the switching point and receiving light level</li> <li>• versatile applicable due to 8 integrated operating modes</li> <li>• version with external teach-in and teach feedback</li> <li>• IP 40</li> </ul> |
|  | <b>OHDK 10 (Laser)</b><br>Diffuse sensors with background suppression | 10,4x27x16,3 mm, plastic | 22 mm         | 130 mm        | <ul style="list-style-type: none"> <li>• compact housing</li> <li>• high repeatability</li> <li>• sensing distance adjustable via potentiometer</li> <li>• IP 67</li> </ul>                                                                                                     |

|                                                                                     |                                                                                  |                          |       |               |                                                                                                                                                                                                                                                                                         |
|-------------------------------------------------------------------------------------|----------------------------------------------------------------------------------|--------------------------|-------|---------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|     | <b>OHDK 14<br/>(Laser)</b><br><br>Diffuse sensors with background suppression    | 14,8x43x31 mm, plastic   | 20 mm | 350 mm        | <ul style="list-style-type: none"> <li>• short response time</li> <li>• high repeatability</li> <li>• sensing distance adjustable via potentiometer</li> <li>• IP 67</li> </ul>                                                                                                         |
|    | <b>OPDK 14<br/>(Laser, standard version)</b><br><br>Retro-reflective sensors     | 14,8x43x31 mm, plastic   | -     | 10 m          | <ul style="list-style-type: none"> <li>• single lens optics</li> <li>• long sensing range</li> <li>• short response time</li> <li>• IP 67</li> </ul>                                                                                                                                    |
|    | <b>OPDM 12<br/>(Laser)</b><br><br>Retro-reflective sensors                       | 12,4x35x35 mm, metal     | -     | 7 m           | <ul style="list-style-type: none"> <li>• rugged miniature metal housing</li> <li>• single lens optics</li> <li>• short response time</li> <li>• IP 67</li> </ul>                                                                                                                        |
|    | <b>FHDK 14<br/>(teach-in)</b><br><br>Diffuse sensors with background suppression | 14,8x43x31 mm, plastic   | 40 mm | 200 mm        | <ul style="list-style-type: none"> <li>• short response time</li> <li>• sensing distance adjustable via Teach-in</li> <li>• suppression of mutual optical interference</li> <li>• IP 67</li> </ul>                                                                                      |
|    | <b>FHDK 07</b><br><br>Diffuse sensors with background suppression                | 8x16,2x10,8 mm, plastic  | 10 mm | 60 mm         | <ul style="list-style-type: none"> <li>• ultra compact housing</li> <li>• sensing distance adjustable via Teach-in</li> <li>• suppression of mutual optical interference</li> <li>• IP 65</li> </ul>                                                                                    |
|   | <b>FLDK 110<br/>(Laser, Scatec-2 box)</b><br><br>Copy counters                   | 30 mm, plastic           | 0 mm  | 120 mm        | <ul style="list-style-type: none"> <li>• Laser copy counter / edge detector</li> <li>• Individual package detection with seamless product detection</li> <li>• Selectable output pulse length</li> <li>• IP 54</li> </ul>                                                               |
|  | <b>FLDK 110<br/>(Laser, Scatec-2)</b><br><br>Copy counters                       | 30 mm, plastic           | 0 mm  | 120 mm        | <ul style="list-style-type: none"> <li>• Smallest laser copy counter on the market</li> <li>• counting of up to 600'000 copies/hour</li> <li>• Sensitivity <math>\geq 0,2</math> mm</li> <li>• Selectable output pulse length</li> <li>• IP 54</li> </ul>                               |
|  | <b>FLDK 110<br/>(Laser, Scatec-J)</b><br><br>Copy counters                       | 30 mm, plastic           | 0 mm  | 55 mm         | <ul style="list-style-type: none"> <li>• Smallest laser copy counter on the market</li> <li>• counting of up to 280'000 copies/hour</li> <li>• Sensitivity <math>\geq 1,5</math> mm</li> <li>• IP 54</li> </ul>                                                                         |
|  | <b>FLDM 170<br/>(Laser, Scatec-10)</b><br><br>Copy counters                      | 30 mm, metal             | 0 mm  | 90 mm         | <ul style="list-style-type: none"> <li>• up to 3 million copies/hour</li> <li>• Sensitivity <math>\geq 0,1</math> mm</li> <li>• display and integrated counter</li> <li>• Selectable output pulse length</li> <li>• Integrated gap detection and Sync-input</li> <li>• IP 54</li> </ul> |
|  | <b>FNDK 14</b><br><br>SmartReflect Light barriers                                | 14,8x43x31 mm, plastic   | -     | 800 mm on V4A | <ul style="list-style-type: none"> <li>• short response time</li> <li>• sensing distance adjustable via Teach-in</li> <li>• IO-Link</li> <li>• IP 67</li> </ul>                                                                                                                         |
|  | <b>O300.TL<br/>(Laser, Emitter)</b><br><br>Through beam sensors                  | 12,9x32,3x23 mm, plastic | -     | 40 m          | <ul style="list-style-type: none"> <li>• One inch class</li> <li>• laser diode</li> <li>• very small beam diameter</li> <li>• IP 67</li> </ul>                                                                                                                                          |

|                                                                                     |                                                                  |                             |   |      |                                                                                                                                                                                             |
|-------------------------------------------------------------------------------------|------------------------------------------------------------------|-----------------------------|---|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|     | <b>O300.EL</b><br>(Laser, Receiver)<br><br>Through beam sensors  | 12,9x32,3x23 mm,<br>plastic | - | 40 m | <ul style="list-style-type: none"> <li>• One inch class</li> <li>• short response time</li> <li>• qTeach</li> <li>• IP 67</li> </ul>                                                        |
|    | <b>O300.TR</b><br>(Emitter)<br><br>Through beam sensors          | 12,9x32,3x23 mm,<br>plastic | - | 10 m | <ul style="list-style-type: none"> <li>• One inch class</li> <li>• small beam diameter</li> <li>• IP 67</li> </ul>                                                                          |
|    | <b>O300.ER</b><br>(Receiver)<br><br>Through beam sensors         | 12,9x32,3x23 mm,<br>plastic | - | 10 m | <ul style="list-style-type: none"> <li>• One inch class</li> <li>• short response time</li> <li>• qTeach</li> <li>• IP 67</li> </ul>                                                        |
|    | <b>O500.TR</b><br>(Emitter)<br><br>Through beam sensors          | 18x45x32 mm,<br>plastic     | - | 25 m | <ul style="list-style-type: none"> <li>• IP 67</li> </ul>                                                                                                                                   |
|    | <b>O500.ER</b><br>(Receiver)<br><br>Through beam sensors         | 18x45x32 mm,<br>plastic     | - | 25 m | <ul style="list-style-type: none"> <li>• qTeach</li> <li>• IP 67</li> </ul>                                                                                                                 |
|   | <b>OR18.TI</b><br>(Emitter)<br><br>Through beam sensors          | 18x44,8 mm, plastic         | - | 13 m | <ul style="list-style-type: none"> <li>• infrared LED</li> <li>• long range</li> <li>• transmission power adjustable via potentiometer</li> <li>• IP 67</li> </ul>                          |
|  | <b>OR18.EI</b><br>(Receiver)<br><br>Through beam sensors         | 18x44,8 mm, plastic         | - | 13 m | <ul style="list-style-type: none"> <li>• infrared LED</li> <li>• long range</li> <li>• sensitivity adjustable via potentiometer</li> <li>• IP 67</li> </ul>                                 |
|  | <b>OR18.TL</b><br>(Laser, Emitter)<br><br>Through beam sensors   | 18x67 mm, metal             | - | 55 m | <ul style="list-style-type: none"> <li>• short response time</li> <li>• long range</li> <li>• IP 67</li> </ul>                                                                              |
|  | <b>OR18.EL</b><br>(Laser, Receiver)<br><br>Through beam sensors  | 18x77 mm, metal             | - | 55 m | <ul style="list-style-type: none"> <li>• short response time</li> <li>• long range</li> <li>• sensitivity adjustable via potentiometer</li> <li>• IP 67</li> </ul>                          |
|  | <b>O300H.TL</b><br>(Laser, Emitter)<br><br>Through beam sensors  | 16,5x34,6x28,7 mm,<br>metal | - | 40 m | <ul style="list-style-type: none"> <li>• One inch class</li> <li>• hygiene design</li> <li>• laser diode</li> <li>• very small beam diameter</li> <li>• IP 68/69K &amp; proTect+</li> </ul> |
|  | <b>O300H.EL</b><br>(Laser, Receiver)<br><br>Through beam sensors | 16,5x34,6x28,7 mm,<br>metal | - | 40 m | <ul style="list-style-type: none"> <li>• One inch class</li> <li>• hygiene design</li> <li>• short response time</li> <li>• Teach-in</li> <li>• IP 68/69K &amp; proTect+</li> </ul>         |

|                                                                                     |                                                                  |                             |   |      |                                                                                                                                                                                                   |
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|     | <b>O300H.TR</b><br>(Emitter)<br><br>Through beam sensors         | 16,5x34,6x28,7 mm,<br>metal | - | 10 m | <ul style="list-style-type: none"> <li>• One inch class</li> <li>• hygiene design</li> <li>• small beam diameter</li> <li>• IP 68/69K &amp; proTect+</li> </ul>                                   |
|    | <b>O300H.ER</b><br>(Receiver)<br><br>Through beam sensors        | 16,5x34,6x28,7 mm,<br>metal | - | 10 m | <ul style="list-style-type: none"> <li>• One inch class</li> <li>• hygiene design</li> <li>• short response time</li> <li>• Teach-in</li> <li>• IP 68/69K &amp; proTect+</li> </ul>               |
|    | <b>O300W.TL</b><br>(Laser, Emitter)<br><br>Through beam sensors  | 16,5x34,7x28,2 mm,<br>metal | - | 40 m | <ul style="list-style-type: none"> <li>• One inch class</li> <li>• washdown design</li> <li>• laser diode</li> <li>• very small beam diameter</li> <li>• IP 68/69K &amp; proTect+</li> </ul>      |
|    | <b>O300W.EL</b><br>(Laser, Receiver)<br><br>Through beam sensors | 16,5x34,7x28,2 mm,<br>metal | - | 40 m | <ul style="list-style-type: none"> <li>• One inch class</li> <li>• washdown design</li> <li>• short response time</li> <li>• qTeach</li> <li>• IP 68/69K &amp; proTect+</li> </ul>                |
|    | <b>O300W.TR</b><br>(Emitter)<br><br>Through beam sensors         | 16,5x34,7x28,2 mm,<br>metal | - | 10 m | <ul style="list-style-type: none"> <li>• One inch class</li> <li>• washdown design</li> <li>• small beam diameter</li> <li>• IP 68/69K &amp; proTect+</li> </ul>                                  |
|  | <b>O300W.ER</b><br>(Receiver)<br><br>Through beam sensors        | 16,5x34,7x28,2 mm,<br>metal | - | 10 m | <ul style="list-style-type: none"> <li>• One inch class</li> <li>• washdown design</li> <li>• short response time</li> <li>• qTeach</li> <li>• IP 68/69K &amp; proTect+</li> </ul>                |
|  | <b>O500H.TR</b><br>(Emitter)<br><br>Through beam sensors         | 20,2x47,7x36,4 mm,<br>metal | - | 25 m | <ul style="list-style-type: none"> <li>• hygiene design</li> <li>• IP 68/69K &amp; proTect+</li> </ul>                                                                                            |
|  | <b>O500H.ER</b><br>(Receiver)<br><br>Through beam sensors        | 20,2x47,7x36,4 mm,<br>metal | - | 25 m | <ul style="list-style-type: none"> <li>• hygiene design</li> <li>• Teach-in</li> <li>• IP 68/69K &amp; proTect+</li> </ul>                                                                        |
|  | <b>O500W.TR</b><br>(Emitter)<br><br>Through beam sensors         | 20,2x47,2x37,7 mm,<br>metal | - | 25 m | <ul style="list-style-type: none"> <li>• washdown design</li> <li>• IP 68/69K &amp; proTect+</li> </ul>                                                                                           |
|  | <b>O500W.ER</b><br>(Receiver)<br><br>Through beam sensors        | 20,2x47,2x37,7 mm,<br>metal | - | 25 m | <ul style="list-style-type: none"> <li>• washdown design</li> <li>• qTeach</li> <li>• IP 68/69K &amp; proTect+</li> </ul>                                                                         |
|  | <b>OR18W.TI</b><br>(Emitter)<br><br>Through beam sensors         | 18x67,2 mm, metal           | - | 13 m | <ul style="list-style-type: none"> <li>• washdown design</li> <li>• infrared LED</li> <li>• long range</li> <li>• transmission power adjustable via potentiometer</li> <li>• IP 67/69K</li> </ul> |
|                                                                                     |                                                                  |                             |   |      |                                                                                                                                                                                                   |

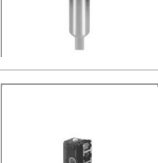
|                                                                                     |                                                      |                             |   |      |                                                                                                                                                                 |
|-------------------------------------------------------------------------------------|------------------------------------------------------|-----------------------------|---|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|
|     | (Receiver)<br>Through beam sensors                   |                             |   |      | <ul style="list-style-type: none"> <li>• infrared LED</li> <li>• long range</li> <li>• sensitivity adjustable via potentiometer</li> <li>• IP 67/69K</li> </ul> |
|    | FSDK 14<br>(Emitter)<br>Through beam sensors         | 14,8x43x31 mm,<br>plastic   | - | 12 m | <ul style="list-style-type: none"> <li>• economy line</li> <li>• IP 67</li> </ul>                                                                               |
|    | FEDK 14<br>(Receiver)<br>Through beam sensors        | 14,8x43x31 mm,<br>plastic   | - | 12 m | <ul style="list-style-type: none"> <li>• economy line</li> <li>• fix sensing distance</li> <li>• IP 67</li> </ul>                                               |
|    | OSDK 14<br>(Laser, Emitter)<br>Through beam sensors  | 14,8x43x31 mm,<br>plastic   | - | 8 m  | <ul style="list-style-type: none"> <li>• economy line</li> <li>• IP 67</li> </ul>                                                                               |
|    | OEDK 14<br>(Laser, Receiver)<br>Through beam sensors | 14,8x43x31 mm,<br>plastic   | - | 8 m  | <ul style="list-style-type: none"> <li>• economy line</li> <li>• fix sensing distance</li> <li>• IP 67</li> </ul>                                               |
|   | FSDK 10<br>(Emitter)<br>Through beam sensors         | 10,4x27x14 mm,<br>plastic   | - | 5 m  | <ul style="list-style-type: none"> <li>• compact housing</li> <li>• IP 67</li> </ul>                                                                            |
|  | FEDK 10<br>(Receiver)<br>Through beam sensors        | 10,4x27x14 mm,<br>plastic   | - | 5 m  | <ul style="list-style-type: none"> <li>• compact housing</li> <li>• sensing range adjustable via potentiometer</li> <li>• IP 67</li> </ul>                      |
|  | OSDK 10<br>(Laser, Emitter)<br>Through beam sensors  | 10,4x27x16,3 mm,<br>plastic | - | 8 m  | <ul style="list-style-type: none"> <li>• laser sensor in miniature housing</li> <li>• high repeatability</li> <li>• IP 67</li> </ul>                            |
|  | OEDK 10<br>(Laser, Receiver)<br>Through beam sensors | 10,4x27x14 mm,<br>plastic   | - | 8 m  | <ul style="list-style-type: none"> <li>• laser sensor in sub miniature housing</li> <li>• high repeatability</li> <li>• IP 67</li> </ul>                        |
|  | FSDM 16<br>(Emitter)<br>Through beam sensors         | 15,4x50x50 mm,<br>metal     | - | 8 m  | <ul style="list-style-type: none"> <li>• rugged metal housing</li> <li>• IP 67</li> </ul>                                                                       |

|                                                                                     |                                                           |                            |   |       |                                                                                                                                             |
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|     | <b>FEDM 16<br/>(Receiver)</b><br><br>Through beam sensors | 15,4x50x50 mm,<br>metal    | - | 8 m   | <ul style="list-style-type: none"> <li>• rugged metal housing</li> <li>• fix sensing distance</li> <li>• IP 67</li> </ul>                   |
|    | <b>FSCK 07<br/>(Emitter)</b><br><br>Through beam sensors  | 8x16,2x10,8 mm,<br>plastic | - | 2 m   | <ul style="list-style-type: none"> <li>• ultra compact housing</li> <li>• IP 65</li> </ul>                                                  |
|    | <b>FECK 07<br/>(Receiver)</b><br><br>Through beam sensors | 8x16,2x10,8 mm,<br>plastic | - | 2 m   | <ul style="list-style-type: none"> <li>• ultra compact housing</li> <li>• sensing range adjustable via Teach-in</li> <li>• IP 65</li> </ul> |
|    | <b>FSDK 07<br/>(Emitter)</b><br><br>Through beam sensors  | 8x16,2x10,8 mm,<br>plastic | - | 2 m   | <ul style="list-style-type: none"> <li>• ultra compact housing</li> <li>• IP 65</li> </ul>                                                  |
|    | <b>FEDK 07<br/>(Receiver)</b><br><br>Through beam sensors | 8x16,2x10,8 mm,<br>plastic | - | 2 m   | <ul style="list-style-type: none"> <li>• ultra compact housing</li> <li>• sensing range adjustable via Teach-in</li> <li>• IP 65</li> </ul> |
|   | <b>FSDM 12<br/>(Emitter)</b><br><br>Through beam sensors  | 12,4x35x35 mm,<br>metal    | - | 6 m   | <ul style="list-style-type: none"> <li>• rugged miniature metal housing</li> <li>• IP 67</li> </ul>                                         |
|  | <b>FEDM 12<br/>(Receiver)</b><br><br>Through beam sensors | 12,4x35x35 mm,<br>metal    | - | 6 m   | <ul style="list-style-type: none"> <li>• rugged miniature metal housing</li> <li>• fix sensing distance</li> <li>• IP 67</li> </ul>         |
|  | <b>FSAM 08<br/>(Emitter)</b><br><br>Through beam sensors  | 8x59 mm, metal             | - | 2,5 m | <ul style="list-style-type: none"> <li>• subminiature metal housing</li> <li>• IP 65</li> </ul>                                             |
|  | <b>FEAM 08<br/>(Receiver)</b><br><br>Through beam sensors | 8x59 mm, metal             | - | 2,5 m | <ul style="list-style-type: none"> <li>• rugged subminiature metal housing</li> <li>• fix sensing distance</li> <li>• IP 65</li> </ul>      |
|  | <b>FSAM 18<br/>(Emitter)</b><br><br>Through beam sensors  | 18x57 mm, metal            | - | 16 m  | <ul style="list-style-type: none"> <li>• test input</li> <li>• IP 67</li> </ul>                                                             |
|  | <b>FEAM 18<br/>(Receiver)</b><br><br>Through beam sensors | 18x57 mm, metal            | - | 16 m  | <ul style="list-style-type: none"> <li>• sensing range adjustable via potentiometer</li> <li>• IP 67</li> </ul>                             |
|                                                                                     |                                                           |                            |   |       |                                                                                                                                             |

|                                                                                     |                                                                                         |                      |      |        |                                                                                                                                                                                                              |
|-------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|----------------------|------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|     | <b>FSDM 08 (Emitter)</b><br><br>Through beam sensors                                    | 8x58x12 mm, metal    | -    | 2,5 m  | <ul style="list-style-type: none"> <li>• rectangular miniature housing with side sensing optics</li> <li>• IP 65</li> </ul>                                                                                  |
|    | <b>FEDM 08 (Receiver)</b><br><br>Through beam sensors                                   | 8x58x12 mm, metal    | -    | 2,5 m  | <ul style="list-style-type: none"> <li>• rugged subminiature metal housing with side sensing optics</li> <li>• fix sensing distance</li> <li>• IP 65</li> </ul>                                              |
|    | <b>FCE xCD 1</b><br><br>Fiber optics                                                    | 3x12 mm, metal       | 1 mm | 400 mm | <ul style="list-style-type: none"> <li>• with thread</li> </ul>                                                                                                                                              |
|    | <b>FCE xEF 1</b><br><br>Fiber optics                                                    | 6x18 mm, metal       | 1 mm | 46 mm  | <ul style="list-style-type: none"> <li>• with thread</li> </ul>                                                                                                                                              |
|    | <b>FFAK 16</b><br><br>Liquid level and leakage sensors                                  | 30x81 mm, plastic    | -    | -      | <ul style="list-style-type: none"> <li>• with thread M16x1</li> <li>• chemical resistance</li> <li>• up to 10 bar nominal pressure</li> <li>• IP 67</li> </ul>                                               |
|   | <b>FFAK 17 (mechanically adjustable, axial)</b><br><br>Liquid level and leakage sensors | 30x81,5 mm, plastic  | -    | -      | <ul style="list-style-type: none"> <li>• sensitivity adjustable</li> <li>• chemical resistance</li> <li>• up to 10 bar nominal pressure</li> <li>• IP 67</li> </ul>                                          |
|  | <b>FFAK 17 (standard version)</b><br><br>Liquid level and leakage sensors               | 30x81 mm, plastic    | -    | -      | <ul style="list-style-type: none"> <li>• chemical resistance</li> <li>• up to 10 bar nominal pressure</li> <li>• IP 67</li> </ul>                                                                            |
|  | <b>FFAM 16</b><br><br>Liquid level and leakage sensors                                  | 30x66,5 mm, metal    | -    | -      | <ul style="list-style-type: none"> <li>• with thread M16x1</li> <li>• rugged metal housing</li> <li>• up to 40 bar nominal pressure</li> <li>• IP 67</li> </ul>                                              |
|  | <b>FFAM 17</b><br><br>Liquid level and leakage sensors                                  | 30x66,5 mm, metal    | -    | -      | <ul style="list-style-type: none"> <li>• rugged metal housing</li> <li>• chemical resistance</li> <li>• up to 40 bar nominal pressure</li> <li>• IP 67</li> </ul>                                            |
|  | <b>FFDK 16</b><br><br>Liquid level and leakage sensors                                  | 16x28x26 mm, plastic | -    | -      | <ul style="list-style-type: none"> <li>• liquid level sensor for pipe mounting</li> <li>• pipe diameter from 3 ... 13 mm</li> <li>• easy setup - no adjustment necessary</li> <li>• IP 50</li> </ul>         |
|  | <b>FGLM</b><br><br>Fork and angle sensors                                               | 75x75x10 mm, metal   | -    | 158 mm | <ul style="list-style-type: none"> <li>• fork opening from 60-158 mm</li> <li>• optical axis approachable in x-, y- and z-direction</li> <li>• smallest detectable object 0,5 mm</li> <li>• IP 67</li> </ul> |
|                                                                                     | <b>FGUM</b>                                                                             | 50x60x10 mm,         | -    | 80 mm  | <ul style="list-style-type: none"> <li>• fork opening from 30-80 mm</li> </ul>                                                                                                                               |

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|     | (Teach-in)<br>Fork and angle sensors                                                           | metal                       |               |                  | <ul style="list-style-type: none"> <li>• smallest detectable object 0,3 mm</li> <li>• Teach-in</li> <li>• IP 67</li> </ul>                                                                               |
|    | FGUM<br>Fork and angle sensors                                                                 | 40x50x10 mm,<br>metal       | -             | 120 mm           | <ul style="list-style-type: none"> <li>• fork opening from 20-120 mm</li> <li>• smallest detectable object 0,5 mm</li> <li>• ambient light immunity up to 140 kLux</li> <li>• IP 67</li> </ul>           |
|    | FHDK 10<br>(for glass detection)<br>Diffuse sensors with<br>background suppression             | 10,4x27x14 mm,<br>plastic   | 10 mm         | 30 mm            | <ul style="list-style-type: none"> <li>• compact housing</li> <li>• optimized for glass detection</li> <li>• sensing distance adjustable via potentiometer</li> <li>• IP 67</li> </ul>                   |
|    | FHDK 10<br>(line beam)<br>Diffuse sensors with<br>background suppression                       | 10,4x27x14 mm,<br>plastic   | 20 mm         | 80 mm            | <ul style="list-style-type: none"> <li>• compact housing</li> <li>• with line beam</li> <li>• sensing distance adjustable via potentiometer</li> <li>• IP 67</li> </ul>                                  |
|    | FHDK 10<br>(Tw adjustable, point source LED)<br>Diffuse sensors with<br>background suppression | 10,4x27x14 mm,<br>plastic   | 25 mm         | 120 mm           | <ul style="list-style-type: none"> <li>• compact housing</li> <li>• small beam diameter</li> <li>• sensing distance adjustable via potentiometer</li> <li>• IP 67</li> </ul>                             |
|   | FHDK 10<br>(Tw fixed)<br>Diffuse sensors with<br>background suppression                        | 10,4x27x14,7 mm,<br>plastic | 30 mm ±2 mm   | 80 mm<br>±8 mm   | <ul style="list-style-type: none"> <li>• compact housing</li> <li>• fixed sensing distance</li> <li>• push-pull output</li> <li>• IP 67</li> </ul>                                                       |
|  | FHDK 20<br>Diffuse sensors with<br>background suppression                                      | 20x42x15 mm,<br>plastic     | 30 mm         | 200 mm           | <ul style="list-style-type: none"> <li>• cross-technology housing concept</li> <li>• sensing distance adjustable via Teach-in</li> <li>• small mounting depth</li> <li>• IP 67</li> </ul>                |
|  | FHDM 16<br>Diffuse sensors with<br>background suppression                                      | 15,4x50x50 mm,<br>metal     | 20 mm         | 600 mm           | <ul style="list-style-type: none"> <li>• rugged metal housing</li> <li>• sensing distance adjustable via potentiometer</li> <li>• suppression of mutual optical interference</li> <li>• IP 67</li> </ul> |
|  | FKDH 14<br>Diffuse contrast sensors                                                            | 19,6x52,2x34,3 mm,<br>metal | 12,5 mm ±2 mm | 12,5 mm<br>±2 mm | <ul style="list-style-type: none"> <li>• hygiene design</li> <li>• very short response time</li> <li>• White light</li> <li>• IP 68/69K &amp; proTect+</li> </ul>                                        |
|  | FKDM 22<br>(large light spot, 2 channels)<br>Color sensors                                     | 22,9 mm, metal              | 40 mm         | 40 mm            | <ul style="list-style-type: none"> <li>• up to 2 colors can be distinguished properly</li> <li>• spot size 3 x 5 mm</li> <li>• rugged metal housing</li> <li>• IP 67</li> </ul>                          |
|  | FKDM 22<br>(large light spot, 4 channels)<br>Color sensors                                     | 22,9 mm, metal              | 40 mm         | 40 mm            | <ul style="list-style-type: none"> <li>• up to 4 colors can be distinguished properly</li> <li>• spot size 3 x 5 mm</li> <li>• rugged metal housing</li> <li>• IP 67</li> </ul>                          |
|                                                                                     | FKDM 22                                                                                        | 22,9 mm, metal              | 25 mm         | 25 mm            | <ul style="list-style-type: none"> <li>• up to 4 colors can be distinguished</li> </ul>                                                                                                                  |

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|     | Color sensors                                       |                          |               |               | <ul style="list-style-type: none"> <li>• spot size 0,7 x 1,3 mm</li> <li>• rugged metal housing</li> <li>• IP 67</li> </ul>                                                                                                                                              |
|    | <b>FKDR 14</b><br>Diffuse contrast sensors          | 19,6x51x34,3 mm, metal   | 12,5 mm ±2 mm | 12,5 mm ±2 mm | <ul style="list-style-type: none"> <li>• hygiene design</li> <li>• very short response time</li> <li>• White light</li> <li>• IP 68/69K &amp; proTect+</li> </ul>                                                                                                        |
|    | <b>FKE xCD 1</b><br>Fiber optics                    | 5x31,2 mm, metal         | 1 mm          | 70 mm         | <ul style="list-style-type: none"> <li>• with thread</li> </ul>                                                                                                                                                                                                          |
|    | <b>FLC xCD 2</b><br>Fiber optics                    | 5x14,7 mm, metal         | -             | 4500 mm       | <ul style="list-style-type: none"> <li>• Chemical and oil proof</li> <li>• Smooth sensing head</li> </ul>                                                                                                                                                                |
|   | <b>FLDM 170 (Laser, Scatec-15)</b><br>Copy counters | 30 mm, metal             | 0 mm          | 120 mm        | <ul style="list-style-type: none"> <li>• up to 3 million copies/hour</li> <li>• Sensitivity ≥ 0,15 mm</li> <li>• display and integrated counter</li> <li>• Selectable output pulse length</li> <li>• Integrated gap detection and Sync-input</li> <li>• IP 54</li> </ul> |
|  | <b>FLDM 180 (Laser, Edge)</b><br>Copy counters      | 31 mm, metal             | 30 mm         | 100 mm        | <ul style="list-style-type: none"> <li>• Für Neuprojekte empfehlen wir SCATEC Produkte</li> </ul>                                                                                                                                                                        |
|  | <b>FLDM 180 (Laser, Micro)</b><br>Copy counters     | 31 mm, metal             | 30 mm         | 100 mm        | <ul style="list-style-type: none"> <li>• Für Neuprojekte empfehlen wir SCATEC Produkte</li> </ul>                                                                                                                                                                        |
|  | <b>FLDM 180 (LED, gripper)</b><br>Copy counters     | 31 mm, metal             | 30 mm         | 50 mm         | -                                                                                                                                                                                                                                                                        |
|  | <b>FLE xCD 1</b><br>Fiber optics                    | 4x15 mm, metal           | 1 mm          | 530 mm        | <ul style="list-style-type: none"> <li>• with thread</li> </ul>                                                                                                                                                                                                          |
|  | <b>FNCK 07</b><br>SmartReflect Light barriers       | 8x16,2x10,8 mm, plastic  | -             | 45 mm         | <ul style="list-style-type: none"> <li>• ultra compact housing with cable rear side</li> <li>• sensing distance adjustable via Teach-in</li> <li>• suppression of mutual optical interference</li> <li>• IP 65</li> </ul>                                                |
|  | <b>FNDH 14</b><br>SmartReflect Light barriers       | 19,6x52,2x34,3 mm, metal | -             | 800 mm on V4A | <ul style="list-style-type: none"> <li>• hygiene design</li> <li>• IO-Link</li> <li>• remote Teach-in</li> <li>• IP 68/69K &amp; proTect+</li> </ul>                                                                                                                     |

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|     | <b>FNDK 07</b><br>SmartReflect Light barriers                           | 8x16,2x10,8 mm,<br>plastic  | - | 45 mm  | <ul style="list-style-type: none"> <li>• ultra compact housing with cable bottom side</li> <li>• sensing distance adjustable via Teach-in</li> <li>• suppression of mutual optical interference</li> <li>• IP 65</li> </ul> |
|    | <b>FNDK 14</b><br>SmartReflect Light barriers                           | 14,8x43x31 mm,<br>plastic   | - | 200 mm | <ul style="list-style-type: none"> <li>• short response time</li> <li>• sensing distance adjustable via Teach-in</li> <li>• IP 67</li> </ul>                                                                                |
|    | <b>FOC xCD 6</b><br>Fiber optics                                        | 13x30,9x9,9 mm,<br>plastic  | - | -      | <ul style="list-style-type: none"> <li>• leakage monitoring</li> </ul>                                                                                                                                                      |
|    | <b>FODK 23</b><br>Liquid level and leakage sensors                      | 23x10,5x37,2 mm,<br>plastic | - | -      | <ul style="list-style-type: none"> <li>• leakage sensor with integrated electronics</li> <li>• detects liquid amounts of approx. 1 ml</li> <li>• chemical resistance thanks to PFA sheath</li> <li>• IP 67</li> </ul>       |
|    | <b>FPAM 18</b><br>Retro-reflective sensors                              | 18x57 mm, metal             | - | 3,2 m  | <ul style="list-style-type: none"> <li>• rugged metal housing</li> <li>• polarization filter to detect shiny objects</li> <li>• IP 67</li> </ul>                                                                            |
|   | <b>FPCK 07</b><br>Retro-reflective sensors                              | 8x17,8x12,6 mm,<br>plastic  | - | 0,6 m  | <ul style="list-style-type: none"> <li>• ultra compact housing</li> <li>• sensing range adjustable via Teach-in</li> <li>• suppression of mutual optical interference</li> <li>• IP 65</li> </ul>                           |
|  | <b>FPDH 14</b><br>Retro-reflective sensors                              | 19,6x52,2x34,3 mm,<br>metal | - | 3 m    | <ul style="list-style-type: none"> <li>• hygiene design</li> <li>• EHEDG certified</li> <li>• IP 68/69K &amp; proTect+</li> </ul>                                                                                           |
|  | <b>FPDK 07</b><br>Retro-reflective sensors                              | 8x17,8x12,6 mm,<br>plastic  | - | 0,6 m  | <ul style="list-style-type: none"> <li>• ultra compact housing</li> <li>• sensing range adjustable via Teach-in</li> <li>• suppression of mutual optical interference</li> <li>• IP 65</li> </ul>                           |
|  | <b>FPDK 20</b><br>Retro-reflective sensors                              | 20x42x15 mm,<br>plastic     | - | 5,5 m  | <ul style="list-style-type: none"> <li>• cross-technology housing concept</li> <li>• polarization filter to detect shiny objects</li> <li>• small mounting depth</li> <li>• IP 67</li> </ul>                                |
|  | <b>FPDM 12</b><br>Retro-reflective sensors                              | 12,4x35x35 mm,<br>metal     | - | 5 m    | <ul style="list-style-type: none"> <li>• rugged miniature metal housing</li> <li>• polarization filter to detect shiny objects</li> <li>• available with alarm output</li> <li>• IP 67</li> </ul>                           |
|  | <b>FPDM 16</b><br>(for transparent objects)<br>Retro-reflective sensors | 15,4x50x50 mm,<br>metal     | - | 6 m    | <ul style="list-style-type: none"> <li>• rugged metal housing</li> <li>• designed for detection of transparent objects</li> <li>• sensitivity adjustable via Teach-in</li> <li>• IP 67</li> </ul>                           |

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|     | <b>FPDM 16</b><br>(standard version)<br><br>Retro-reflective sensors | 15,4x50x50 mm, metal   | - | 7,3 m   | <ul style="list-style-type: none"> <li>• rugged metal housing</li> <li>• sensing range adjustable via potentiometer</li> <li>• polarization filter to detect shiny objects</li> <li>• IP 67</li> </ul> |
|    | <b>FPDR 14</b><br><br>Retro-reflective sensors                       | 19,6x51x34,3 mm, metal | - | 3 m     | <ul style="list-style-type: none"> <li>• washdown design</li> <li>• Ecolab approved</li> <li>• IP 68/69K &amp; proTect+</li> </ul>                                                                     |
|    | <b>FPE xCD 1</b><br><br>Fiber optics                                 | 4x28 mm, metal         | - | 4140 mm | <ul style="list-style-type: none"> <li>• with thread</li> </ul>                                                                                                                                        |
|    | <b>FPE xCD 4</b><br><br>Fiber optics                                 | 4x30 mm, metal         | - | 4500 mm | <ul style="list-style-type: none"> <li>• Smooth sensing head</li> <li>• side view</li> </ul>                                                                                                           |
|   | <b>FSA xCD 1</b><br><br>Fiber optics                                 | 4x14 mm, metal         | - | 690 mm  | <ul style="list-style-type: none"> <li>• Heat resistant</li> <li>• with thread</li> </ul>                                                                                                              |
|  | <b>FSB xCD 1</b><br><br>Fiber optics                                 | 4x17 mm, metal         | - | 1200 mm | <ul style="list-style-type: none"> <li>• Heat and cold resistant</li> <li>• with thread</li> </ul>                                                                                                     |
|  | <b>FSC xCD 4</b><br><br>Fiber optics                                 | 4,7x15,8 mm, metal     | - | 1030 mm | <ul style="list-style-type: none"> <li>• Chemical and oil proof</li> <li>• Smooth sensing head</li> <li>• side view</li> </ul>                                                                         |
|  | <b>FSE xCD 1</b><br><br>Fiber optics                                 | 3x11 mm, metal         | - | 1200 mm | <ul style="list-style-type: none"> <li>• with thread</li> </ul>                                                                                                                                        |
|  | <b>FSE xCD 2</b><br><br>Fiber optics                                 | 3x15 mm, metal         | - | 1200 mm | <ul style="list-style-type: none"> <li>• Smooth sensing head</li> </ul>                                                                                                                                |
|  | <b>FSE xCD 4</b><br><br>Fiber optics                                 | 4x22 mm, metal         | - | 750 mm  | <ul style="list-style-type: none"> <li>• with thread</li> <li>• Smooth sensing head</li> <li>• side view</li> </ul>                                                                                    |
|  | <b>FSE xCD 6</b><br><br>Fiber optics                                 | 20x25x3 mm, metal      | - | 790 mm  | <ul style="list-style-type: none"> <li>• Array</li> <li>• Line length = Number of holes x hole spacing</li> </ul>                                                                                      |

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|     | <b>FSE xEF 1</b><br>Fiber optics | 3x11 mm, metal         | -    | 900 mm | • with thread                                                                 |
|    | <b>FSE xEF 4</b><br>Fiber optics | 2,5x27 mm, metal       | -    | 52 mm  | • Smooth sensing head<br>• side view                                          |
|    | <b>FSE xEF 6</b><br>Fiber optics | 12x8x3 mm, plastic     | -    | 140 mm | -                                                                             |
|    | <b>FSL xCD 6</b><br>Fiber optics | 32x28x23,4 mm, plastic | -    | 13 mm  | • Fill level detection<br>• pipe mounting<br>• pipe diameter from 3 ... 13 mm |
|   | <b>FUA xCD 1</b><br>Fiber optics | 6x20 mm, metal         | 1 mm | 200 mm | • Heat resistant<br>• with thread                                             |
|  | <b>FUB xCD 1</b><br>Fiber optics | 6x17 mm, metal         | 1 mm | 400 mm | • Heat and cold resistant<br>• with thread                                    |
|  | <b>FUC xCD 2</b><br>Fiber optics | 6x16 mm, metal         | 1 mm | 170 mm | • Chemically resistant<br>• Smooth sensing head                               |
|  | <b>FUE xCD 1</b><br>Fiber optics | 3x11 mm, metal         | 1 mm | 300 mm | • with thread                                                                 |
|  | <b>FUE xCD 2</b><br>Fiber optics | 3x15 mm, metal         | 1 mm | 300 mm | • Smooth sensing head                                                         |
|  | <b>FUE xCD 4</b><br>Fiber optics | 3x55 mm, metal         | 1 mm | 40 mm  | • Smooth sensing head<br>• side view                                          |
|  | <b>FUE xCD 6</b><br>Fiber optics | 20,6x20,6x5 mm, metal  | 1 mm | 265 mm | • Array<br>• Line length = Number of holes x hole spacing                     |

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|     | <b>FUE xEF 1</b><br>Fiber optics                                      | 3x10 mm, metal           | 1 mm   | 210 mm  | <ul style="list-style-type: none"> <li>• with thread</li> </ul>                                                                                                                                          |
|    | <b>FUG xCD 1</b><br>Fiber optics                                      | 6x25 mm, metal           | 1 mm   | 160 mm  | <ul style="list-style-type: none"> <li>• Heat and cold resistant</li> <li>• with thread</li> <li>• Glass fibers</li> </ul>                                                                               |
|    | <b>FUL xCD 2</b><br>Fiber optics                                      | 4x15 mm, plastic         | -      | -       | <ul style="list-style-type: none"> <li>• Fill level detection</li> <li>• Smooth sensing head</li> </ul>                                                                                                  |
|    | <b>FVDK 10</b><br>Fiber optic sensors & cables                        | 10,4x27x14 mm, plastic   | -      | 160 mm  | <ul style="list-style-type: none"> <li>• sensitivity adjustable via potentiometer</li> <li>• suppression of mutual optical interference</li> <li>• IP 40</li> </ul>                                      |
|    | <b>FVDK 12 (fast version)</b><br>Fiber optic sensors & cables         | 12x33,2x60 mm, plastic   | -      | 140 mm  | <ul style="list-style-type: none"> <li>• short response time 50 µs</li> <li>• fast version &lt; 0,05 ms</li> <li>• integrated alarm output</li> <li>• timer function</li> <li>• IP 65</li> </ul>         |
|  | <b>FVDK 12</b><br>Fiber optic sensors & cables                        | 12x33,2x60 mm, plastic   | -      | 320 mm  | <ul style="list-style-type: none"> <li>• sensitivity adjustable via Teach-in</li> <li>• integrated alarm output</li> <li>• protection class IP 65</li> <li>• timer function</li> <li>• IP 65</li> </ul>  |
|  | <b>FVDK 22</b><br>Fiber optic sensors & cables                        | 22x33,2x60 mm, plastic   | -      | 320 mm  | <ul style="list-style-type: none"> <li>• 2 sensors in one housing</li> <li>• sensitivity adjustable via Teach-in</li> <li>• optional logical output operation</li> <li>• IP 65</li> </ul>                |
|  | <b>FVDK 66 (master/slave)</b><br>Fiber optic sensors & cables         | 10x33,8x70,2 mm, plastic | -      | 340 mm  | <ul style="list-style-type: none"> <li>• master/slave system with up to 15 extension units</li> <li>• 2x4 digit display</li> <li>• IP 40</li> </ul>                                                      |
|  | <b>FVDK 67 (2 adjustable outputs)</b><br>Fiber optic sensors & cables | 10x33,8x70,2 mm, plastic | -      | 1200 mm | <ul style="list-style-type: none"> <li>• 2 independently adjustable outputs</li> <li>• suppression of mutual optical interference</li> <li>• 2x4 digit display</li> <li>• IP 40</li> </ul>               |
|  | <b>FVDK 67 (master/slave)</b><br>Fiber optic sensors & cables         | 10x33,8x70,2 mm, plastic | -      | 1200 mm | <ul style="list-style-type: none"> <li>• master/slave system with up to 16 extension units</li> <li>• integrated dynamic auto-teach-in function</li> <li>• 2x4 digit display</li> <li>• IP 40</li> </ul> |
|  | <b>FVDK 80</b><br>Fiber optic sensors & cables                        | 10x29,7x60 mm, plastic   | -      | 440 mm  | <ul style="list-style-type: none"> <li>• sensitivity adjustable via potentiometer</li> <li>• fast and high sensitivity version available</li> <li>• integrated alarm output</li> <li>• IP 40</li> </ul>  |
|                                                                                     | <b>FVDM 15</b>                                                        | 15x60x45 mm,             | 240 mm | 1200 mm | <ul style="list-style-type: none"> <li>• sensitivity adjustable via potentiometer</li> </ul>                                                                                                             |

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|     | Fiber optic sensors & cables                                                                      | metal           |        |         | <ul style="list-style-type: none"> <li>• fast version available</li> <li>• rugged metal housing</li> <li>• IP 65</li> </ul>                                                                                         |
|    | <b>FWE xCD 1</b><br>Fiber optics                                                                  | 3x14 mm, metal  | -      | 2175 mm | <ul style="list-style-type: none"> <li>• with thread</li> </ul>                                                                                                                                                     |
|    | <b>FWE xCD 2</b><br>Fiber optics                                                                  | 3x15 mm, metal  | -      | 2350 mm | <ul style="list-style-type: none"> <li>• Smooth sensing head</li> </ul>                                                                                                                                             |
|    | <b>FZAM 08</b><br>Diffuse sensors with intensity difference                                       | 8x56 mm, metal  | 40 mm  | 80 mm   | <ul style="list-style-type: none"> <li>• subminiature metal housing</li> <li>• fixed sensing distance</li> <li>• IP 65</li> </ul>                                                                                   |
|   | <b>FZAM 12</b><br>Diffuse sensors with intensity difference                                       | 12x70 mm, metal | 30 mm  | 200 mm  | <ul style="list-style-type: none"> <li>• rugged metal housing</li> <li>• sensing distance adjustable via potentiometer</li> <li>• suppression of mutual optical interference</li> <li>• IP 65</li> </ul>            |
|  | <b>FZAM 18</b><br>(mechanically adjustable, axial)<br>Diffuse sensors with intensity difference   | 18x50 mm, metal | 20 mm  | 150 mm  | <ul style="list-style-type: none"> <li>• rugged metal housing</li> <li>• sensing distance adjustable with potentiometer (axial)</li> <li>• extended sensing distance with lens</li> <li>• IP 65</li> </ul>          |
|  | <b>FZAM 18</b><br>(mechanically adjustable, axial)<br>Fiber optic sensors & cables                | 18x50 mm, metal | 60 mm  | 310 mm  | <ul style="list-style-type: none"> <li>• sensitivity adjustable via potentiometer (axial)</li> <li>• rugged metal housing</li> <li>• infrared light source</li> <li>• IP 65</li> </ul>                              |
|  | <b>FZAM 18</b><br>(mechanically adjustable, lateral)<br>Diffuse sensors with intensity difference | 18x50 mm, metal | 60 mm  | 430 mm  | <ul style="list-style-type: none"> <li>• rugged metal housing</li> <li>• sensing distance adjustable with radially mounted potentiometer</li> <li>• extended sensing distance with lens</li> <li>• IP 67</li> </ul> |
|  | <b>FZAM 18</b><br>(mechanically adjustable, lateral)<br>Fiber optic sensors & cables              | 18x50 mm, metal | 150 mm | 800 mm  | <ul style="list-style-type: none"> <li>• sensitivity adjustable via potentiometer (radial)</li> <li>• rugged metal housing</li> <li>• infrared light source</li> <li>• IP 67</li> </ul>                             |
|  | <b>FZAM 18</b><br>(teach-in)<br>Diffuse sensors with intensity difference                         | 18x50 mm, metal | 60 mm  | 430 mm  | <ul style="list-style-type: none"> <li>• with alarm output</li> <li>• sensing distance adjustable via Teach-in</li> <li>• extended sensing distance with lens</li> <li>• IP 67</li> </ul>                           |
|  | <b>FZAM 18</b><br>(teach-in)<br>Fiber optic sensors & cables                                      | 18x50 mm, metal | 150 mm | 800 mm  | <ul style="list-style-type: none"> <li>• sensitivity adjustable via Teach-in</li> <li>• light / dark operation programmable</li> <li>• rugged metal housing</li> <li>• IP 67</li> </ul>                             |

|                                                                                     |                                                               |                          |        |         |                                                                                                                                                                                                 |
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|     | <b>FZAM 30</b><br>Diffuse sensors with intensity difference   | 30x66 mm, metal          | 100 mm | 1500 mm | <ul style="list-style-type: none"> <li>• rugged metal housing</li> <li>• long sensing range</li> <li>• IP 65</li> </ul>                                                                         |
|    | <b>FZAM 30</b><br>Fiber optic sensors & cables                | 30x66 mm, metal          | 110 mm | 1400 mm | <ul style="list-style-type: none"> <li>• extended sensing distance</li> <li>• fast version available</li> <li>• rugged metal housing</li> <li>• IP 65</li> </ul>                                |
|    | <b>FZCK 07</b><br>Diffuse sensors with intensity difference   | 8x16,2x10,8 mm, plastic  | 20 mm  | 150 mm  | <ul style="list-style-type: none"> <li>• ultra compact housing</li> <li>• sensitivity adjustable via Teach-in</li> <li>• suppression of mutual optical interference</li> <li>• IP 65</li> </ul> |
|    | <b>FZDK 07</b><br>Diffuse sensors with intensity difference   | 8x16,2x10,8 mm, plastic  | 20 mm  | 150 mm  | <ul style="list-style-type: none"> <li>• ultra compact housing</li> <li>• sensitivity adjustable via Teach-in</li> <li>• suppression of mutual optical interference</li> <li>• IP 65</li> </ul> |
|    | <b>FZDK 20</b><br>Diffuse sensors with intensity difference   | 20x42x15 mm, plastic     | 5 mm   | 500 mm  | <ul style="list-style-type: none"> <li>• cross-technology housing concept</li> <li>• sensing distance adjustable via potentiometer</li> <li>• small mounting depth</li> <li>• IP 67</li> </ul>  |
|  | <b>FZDM 08</b><br>Diffuse sensors with intensity difference   | 8x58x12 mm, metal        | 40 mm  | 80 mm   | <ul style="list-style-type: none"> <li>• subminiature metal housing</li> <li>• fixed sensing distance</li> <li>• IP 65</li> </ul>                                                               |
|  | <b>FZDM 16</b><br>Diffuse sensors with intensity difference   | 15,4x50x50 mm, metal     | 0 mm   | 400 mm  | <ul style="list-style-type: none"> <li>• rugged metal housing</li> <li>• sensing distance adjustable via potentiometer</li> <li>• IP 67</li> </ul>                                              |
|  | <b>O300.GI</b><br>Diffuse sensors with background suppression | 12,9x32,3x23 mm, plastic | 30 mm  | 300 mm  | <ul style="list-style-type: none"> <li>• One inch class</li> <li>• infrared LED</li> <li>• short response time</li> <li>• qTeach</li> <li>• IP 67</li> </ul>                                    |
|  | <b>O300.GR</b><br>Diffuse sensors with background suppression | 12,9x32,3x23 mm, plastic | 30 mm  | 300 mm  | <ul style="list-style-type: none"> <li>• One inch class</li> <li>• qTeach</li> <li>• IP 67</li> </ul>                                                                                           |
|  | <b>O300.RR</b><br>Retro-reflective sensors                    | 12,9x32,3x23 mm, plastic | -      | 4 m     | <ul style="list-style-type: none"> <li>• One inch class</li> <li>• polarization filter to detect shiny objects</li> <li>• IP 67</li> </ul>                                                      |
|  | <b>O500.GI</b><br>Diffuse sensors with background suppression | 18x45x32 mm, plastic     | 60 mm  | 550 mm  | <ul style="list-style-type: none"> <li>• infrared LED</li> <li>• short response time</li> <li>• qTeach</li> <li>• IP 67</li> </ul>                                                              |
|                                                                                     | <b>O500.GR</b>                                                | 18x45x32 mm, plastic     | 60 mm  | 550 mm  | <ul style="list-style-type: none"> <li>• qTeach</li> <li>• IP 67</li> </ul>                                                                                                                     |

|                                                                                     |                                                                                 |                          |        |        |                                                                                                                                                                                                |
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|     | Diffuse sensors with background suppression                                     |                          |        |        |                                                                                                                                                                                                |
|    | <b>O500.RR</b><br>Retro-reflective sensors                                      | 18x45x32 mm, plastic     | -      | 7,5 m  | <ul style="list-style-type: none"> <li>polarization filter to detect shiny objects</li> <li>IP 67</li> </ul>                                                                                   |
|    | <b>OBDM 12 (2-point comparison)</b><br>Difference sensors                       | 12,4x37x34,5 mm, metal   | 16 mm  | 120 mm | <ul style="list-style-type: none"> <li>comparison of two distances</li> <li>max. tolerance adjustable</li> <li>specific measuring moment selectable</li> <li>IP 67</li> </ul>                  |
|    | <b>OBDM 12 (min./max. analysis)</b><br>Difference sensors                       | 12,4x37x34,5 mm, metal   | 16 mm  | 120 mm | <ul style="list-style-type: none"> <li>analysis of distance differences (min./max.)</li> <li>max. difference tolerance adjustable</li> <li>measuring time selectable</li> <li>IP 67</li> </ul> |
|    | <b>OBDM 12 (step analysis)</b><br>Difference sensors                            | 12,4x37x34,5 mm, metal   | 16 mm  | 120 mm | <ul style="list-style-type: none"> <li>detection of edges</li> <li>reference steps adjustable</li> <li>min. output pulse 10 ms</li> <li>IP 67</li> </ul>                                       |
|  | <b>OBDM 12 (tolerance analysis)</b><br>Difference sensors                       | 12,4x37x34,5 mm, metal   | 16 mm  | 120 mm | <ul style="list-style-type: none"> <li>distance monitoring within a tolerance band</li> <li>nominal distance</li> <li>adjustable tolerance band</li> <li>IP 67</li> </ul>                      |
|  | <b>OBDM 12 (window analysis)</b><br>Difference sensors                          | 12,4x37x34,5 mm, metal   | 16 mm  | 120 mm | <ul style="list-style-type: none"> <li>range switch (foreground / background suppression)</li> <li>adjustable window</li> <li>IP 67</li> </ul>                                                 |
|  | <b>OGUM (Laser)</b><br>Fork and angle sensors                                   | 60x60x10 mm, metal       | -      | 120 mm | <ul style="list-style-type: none"> <li>fork opening from 30-120 mm</li> <li>smallest detectable object 0,05 mm</li> <li>high repeatability of 0.01 mm</li> <li>IP 67</li> </ul>                |
|  | <b>OGUM (Laser, basic)</b><br>Fork and angle sensors                            | 50x60x10 mm, metal       | -      | 120 mm | <ul style="list-style-type: none"> <li>fork opening from 30-120 mm</li> <li>smallest detectable object 0,1 mm</li> <li>repeatability of 0,02 mm</li> <li>IP 67</li> </ul>                      |
|  | <b>OHDK 10 (Laser line beam)</b><br>Diffuse sensors with background suppression | 10,4x27x16,3 mm, plastic | 22 mm  | 130 mm | <ul style="list-style-type: none"> <li>compact housing</li> <li>line beam</li> <li>sensing distance adjustable via potentiometer</li> <li>IP 67</li> </ul>                                     |
|  | <b>OHDK 25 (Laser, 1 m)</b><br>Diffuse sensors with background suppression      | 23,4x63x45 mm, plastic   | 100 mm | 900 mm | <ul style="list-style-type: none"> <li>qTeach</li> <li>no black/white difference</li> <li>IP 67</li> </ul>                                                                                     |

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|    | <b>OHDK 25</b><br>(Laser, 2 m)<br><br>Diffuse sensors with background suppression                  | 23,4x63x45 mm, plastic   | 100 mm | 1750 mm | <ul style="list-style-type: none"> <li>• qTeach</li> <li>• no black/white difference</li> <li>• 1 or 2 switching outputs</li> <li>• IP 67</li> </ul>                                   |
|    | <b>OHDM 12</b><br>(Laser)<br><br>Diffuse sensors with background suppression                       | 12,4x37x34,5 mm, metal   | 17 mm  | 120 mm  | <ul style="list-style-type: none"> <li>• rugged miniature metal housing</li> <li>• negligible black/white difference</li> <li>• teachable sensing distance</li> <li>• IP 67</li> </ul> |
|    | <b>OHDM 13</b><br>(Laser)<br><br>Diffuse sensors with background suppression                       | 13,4x48,2x40 mm, metal   | 50 mm  | 550 mm  | <ul style="list-style-type: none"> <li>• rugged metal housing</li> <li>• negligible black/white difference</li> <li>• teachable sensing distance</li> <li>• IP 67</li> </ul>           |
|    | <b>OHDM 16</b><br>(Laser)<br><br>Diffuse sensors with background suppression                       | 15,4x50x50 mm, metal     | 25 mm  | 300 mm  | <ul style="list-style-type: none"> <li>• rugged metal housing</li> <li>• long range</li> <li>• high repeatability</li> <li>• IP 67</li> </ul>                                          |
|   | <b>OHDM 16</b><br>(Laser, wafer mapping sensor)<br><br>Diffuse sensors with background suppression | 15,4x50x50 mm, metal     | 123 mm | 143 mm  | <ul style="list-style-type: none"> <li>• for lateral detection of wafer edges</li> <li>• very long range</li> <li>• laser sensor in rugged metal housing</li> <li>• IP 67</li> </ul>   |
|  | <b>OHDM 20</b><br>(Laser)<br><br>Diffuse sensors with background suppression                       | 20,6x65x50 mm, metal     | 210 mm | 1500 mm | <ul style="list-style-type: none"> <li>• long range</li> <li>• negligible black/white difference</li> <li>• two teachable sensing distances</li> <li>• IP 67</li> </ul>                |
|  | <b>ONDK 25</b><br>(Laser)<br><br>SmartReflect Light barriers                                       | 23,4x63x45 mm, plastic   | -      | 1900 mm | <ul style="list-style-type: none"> <li>• long sensing range</li> <li>• qTeach</li> <li>• IP 67</li> </ul>                                                                              |
|  | <b>OPDK 14</b><br>(Laser, for transparent Objects)<br><br>Retro-reflective sensors                 | 14,8x43x31 mm, plastic   | -      | 4,5 m   | <ul style="list-style-type: none"> <li>• designed for detection of transparent objects</li> <li>• single lens optics</li> <li>• short response time</li> <li>• IP 67</li> </ul>        |
|  | <b>OPDM 16</b><br>(Laser)<br><br>Retro-reflective sensors                                          | 15,4x50x50 mm, metal     | -      | 11 m    | <ul style="list-style-type: none"> <li>• rugged metal housing</li> <li>• high repeatability</li> <li>• short response time</li> <li>• IP 67</li> </ul>                                 |
|  | <b>OZDK 10</b><br>(Laser line beam)<br><br>Diffuse contrast sensors                                | 10,4x27x16,3 mm, plastic | 3 mm   | 150 mm  | <ul style="list-style-type: none"> <li>• compact housing</li> <li>• high repeatability</li> <li>• very short response time</li> <li>• IP 67</li> </ul>                                 |
|  | <b>OZDK 10</b><br>(Laser line beam)<br><br>Diffuse sensors with intensity difference               | 10,4x27x16,3 mm, plastic | 3 mm   | 150 mm  | <ul style="list-style-type: none"> <li>• compact housing</li> <li>• line beam</li> <li>• very short response time</li> <li>• IP 67</li> </ul>                                          |
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|    | <b>OZDK 10<br/>(Laser)</b><br><br>Diffuse contrast sensors                                    | 10,4x27x16,3 mm,<br>plastic | 3 mm  | 150 mm | <ul style="list-style-type: none"> <li>• compact housing</li> <li>• high repeatability</li> <li>• very short response time</li> <li>• IP 67</li> </ul>                          |
|    | <b>OZDK 10<br/>(Laser)</b><br><br>Diffuse sensors with intensity difference                   | 10,4x27x16,3 mm,<br>plastic | 3 mm  | 150 mm | <ul style="list-style-type: none"> <li>• compact housing</li> <li>• high repeatability</li> <li>• very short response time</li> <li>• IP 67</li> </ul>                          |
|    | <b>OZDK 14<br/>(Laser)</b><br><br>Diffuse contrast sensors                                    | 14,8x43x31 mm,<br>plastic   | 20 mm | 300 mm | <ul style="list-style-type: none"> <li>• very short response time</li> <li>• high repeatability</li> <li>• sensing distance adjustable via Teach-in</li> <li>• IP 67</li> </ul> |
|    | <b>OZDK 14<br/>(Laser)</b><br><br>Diffuse sensors with intensity difference                   | 14,8x43x31 mm,<br>plastic   | 20 mm | 300 mm | <ul style="list-style-type: none"> <li>• very short response time</li> <li>• high repeatability</li> <li>• sensing distance adjustable via Teach-in</li> <li>• IP 67</li> </ul> |
|    | <b>OZDM 16<br/>(Laser, analog output)</b><br><br>Diffuse contrast sensors                     | 15,4x50x50 mm,<br>metal     | 0 mm  | 250 mm | <ul style="list-style-type: none"> <li>• with analog output</li> <li>• high repeatability</li> <li>• very short response time</li> <li>• IP 67</li> </ul>                       |
|  | <b>OZDM 16<br/>(Laser, analog output)</b><br><br>Diffuse sensors with intensity difference    | 15,4x50x50 mm,<br>metal     | 0 mm  | 250 mm | <ul style="list-style-type: none"> <li>• with analog output</li> <li>• high repeatability</li> <li>• very short response time</li> <li>• IP 67</li> </ul>                       |
|  | <b>OZDM 16<br/>(Laser, switching output)</b><br><br>Diffuse contrast sensors                  | 15,4x50x50 mm,<br>metal     | 0 mm  | 250 mm | <ul style="list-style-type: none"> <li>• rugged metal housing</li> <li>• high repeatability</li> <li>• very short response time</li> <li>• IP 67</li> </ul>                     |
|  | <b>OZDM 16<br/>(Laser, switching output)</b><br><br>Diffuse sensors with intensity difference | 15,4x50x50 mm,<br>metal     | 0 mm  | 250 mm | <ul style="list-style-type: none"> <li>• rugged metal housing</li> <li>• high repeatability</li> <li>• very short response time</li> <li>• IP 67</li> </ul>                     |
|  | <b>ZADM 034<br/>(ParCon, switching output)</b><br><br>Edge sensors                            | 34 mm, metal                | 0 mm  | 40 mm  | <ul style="list-style-type: none"> <li>• detection of small objects</li> <li>• measuring area 24 x 40 mm</li> <li>• high measuring frequency</li> <li>• IP 67</li> </ul>        |

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