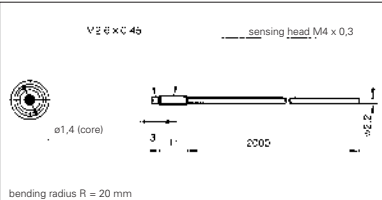
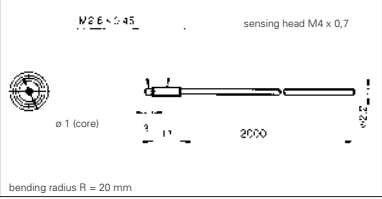
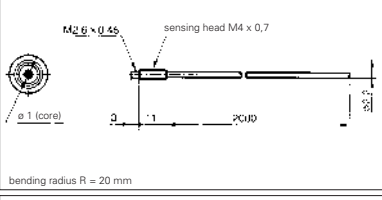
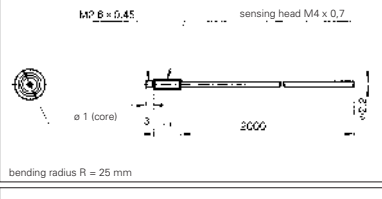
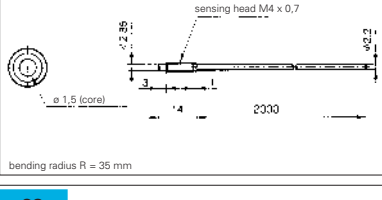
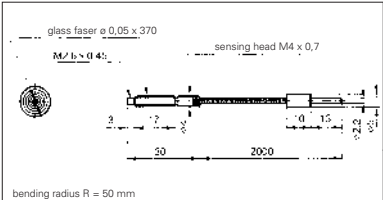
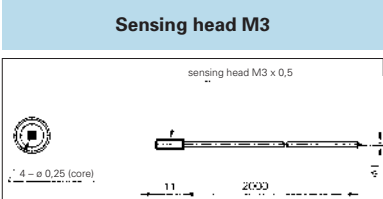
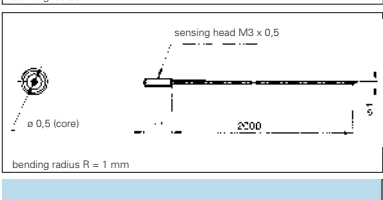
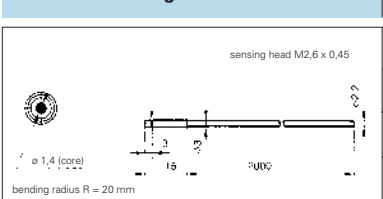
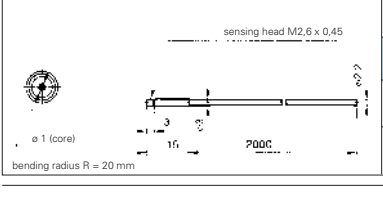
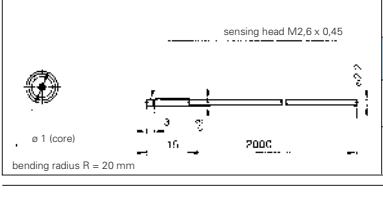


Through beam types

|                                                                              |                                 |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|
| <p>* For doubling lenses and fiber optics with lateral light exit see page 54</p> <p>Tw : Sensing range length 200 cm</p>                                    |                                 |
| Sensing head M4                                                                                                                                              | Features                        |
|                                                                                                                                                              | Part number                     |
|  <p>V2.6 x C 45<br/>sensing head M4 x 0,3<br/>bending radius R = 20 mm</p>   | <b>Large actual range</b>       |
|                                                                                                                                                              | <b>FWE 200C1Y00</b>             |
|                                                                                                                                                              | Excess gain curve               |
|  <p>M2.6 x C 45<br/>sensing head M4 x 0,7<br/>bending radius R = 20 mm</p>   | <b>Standard</b>                 |
|                                                                                                                                                              | <b>FSE 200C1Y00</b>             |
|                                                                                                                                                              | Excess gain curve               |
|  <p>M2.6 x C 45<br/>sensing head M4 x 0,7<br/>bending radius R = 20 mm</p>  | <b>Highly flexible R = 2 mm</b> |
|                                                                                                                                                              | <b>FSE 200E1Y00</b>             |
|                                                                                                                                                              | Excess gain curve               |
|  <p>M2.6 x C 45<br/>sensing head M4 x 0,7<br/>bending radius R = 25 mm</p> | <b>High temperature +105 °C</b> |
|                                                                                                                                                              | <b>FSA 200C1Y00</b>             |
|                                                                                                                                                              | Excess gain curve               |
|  <p>M2.6 x C 45<br/>sensing head M4 x 0,7<br/>bending radius R = 35 mm</p> | <b>High temperature +150 °C</b> |
|                                                                                                                                                              | <b>FSB 200C1Y00</b>             |
|                                                                                                                                                              | Excess gain curve               |

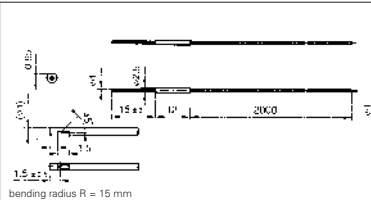
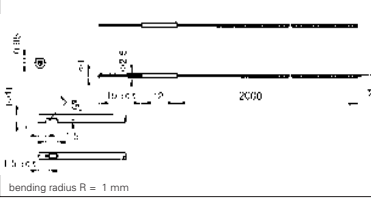
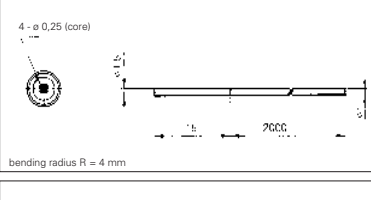
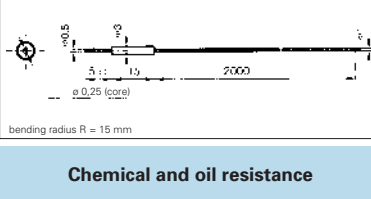
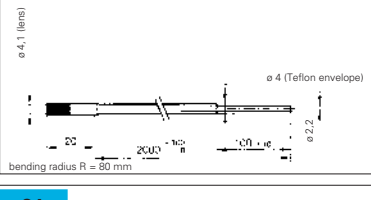
| Low hysteresis                                                                    | Fast version                                                                      | High sensitivity                                                                  | Teach-in                                                                          | Modular version                                                                    |
|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|
|  |  |  |  |  |
| FVDK 10x81Y0                                                                      | FVDK 10x82Y0                                                                      | FVDK 10x83Y0                                                                      | FVDK 10x6xY0                                                                      | FVDK 31x06Y0                                                                       |
| Tw 400 mm                                                                         | Tw 160 mm                                                                         | Tw 800 mm                                                                         | Tw 540 mm                                                                         | Tw 540 mm                                                                          |
| 25                                                                                | 49                                                                                | 01                                                                                | 181                                                                               | 181                                                                                |
| 205                                                                               | 209                                                                               | 210                                                                               | 229                                                                               | 229                                                                                |
| Tw 200 mm                                                                         | Tw 80 mm                                                                          | Tw 400 mm                                                                         | Tw 290 mm                                                                         | Tw 290 mm                                                                          |
| 26                                                                                | 50                                                                                | 02                                                                                | 182-184*                                                                          | 182-184*                                                                           |
| 345                                                                               | 100                                                                               | 74                                                                                | 230-232*                                                                          | 230-232*                                                                           |
| Tw 150 mm                                                                         | Tw 60 mm                                                                          | Tw 300 mm                                                                         | Tw 220 mm                                                                         | Tw 220 mm                                                                          |
| 212                                                                               | 216                                                                               | 219                                                                               | 223                                                                               | 223                                                                                |
| 215                                                                               | 218                                                                               | 222                                                                               | 226                                                                               | 226                                                                                |
| Tw 120 mm                                                                         | Tw 50 mm                                                                          | Tw 250 mm                                                                         | Tw 170 mm                                                                         | Tw 170 mm                                                                          |
| 34                                                                                | 58                                                                                | 10                                                                                | 194-196*                                                                          | 194-196*                                                                           |
| 95                                                                                | 108                                                                               | 82                                                                                | 242-244*                                                                          | 242-244*                                                                           |
| Tw 200 mm                                                                         | Tw 80 mm                                                                          | Tw 400 mm                                                                         | Tw 290 mm                                                                         | Tw 290 mm                                                                          |
| 236                                                                               | 238                                                                               | 240                                                                               | 197                                                                               | 197                                                                                |
| 237                                                                               | 239                                                                               | 246                                                                               | 245                                                                               | 245                                                                                |

Through beam types

|                                                                                                         |                                              |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------|
| <p>* For doubling lenses and fiber optics with lateral light exit see page 54</p> <p>Tw: sensing range length 200 cm</p>                                                                   |                                              |
| Sensing head M4                                                                                                                                                                            | Features                                     |
|                                                                                                                                                                                            | Part number                                  |
|  <p>glass fiber ø 0.05 x 370<br/>M2.6 x C 45<br/>sensing head M4 x 0,7<br/>bending radius R = 50 mm</p> | <b>Heat and cold resistant -60...+350 °C</b> |
|                                                                                                                                                                                            | <b>FSG 200C1Y00</b>                          |
|                                                                                                                                                                                            | Excess gain curve                            |
|  <p>sensing head M3 x 0,5<br/>bending radius R = 4 mm</p>                                               | <b>Standard</b>                              |
|                                                                                                                                                                                            | <b>FSE 200D1Y50</b>                          |
|                                                                                                                                                                                            | Excess gain curve                            |
|  <p>sensing head M3 x 0,5<br/>bending radius R = 1 mm</p>                                              | <b>Highly flexible R = 1 mm</b>              |
|                                                                                                                                                                                            | <b>FSE 200F1Y00</b>                          |
|                                                                                                                                                                                            | Excess gain curve                            |
|  <p>sensing head M2,6 x 0,45<br/>bending radius R = 20 mm</p>                                         | <b>Features</b>                              |
|                                                                                                                                                                                            | <b>Part number</b>                           |
|  <p>sensing head M2,6 x 0,45<br/>bending radius R = 20 mm</p>                                         | <b>Large actual range</b>                    |
|                                                                                                                                                                                            | <b>FWE 200C2Y00</b>                          |
|                                                                                                                                                                                            | Excess gain curve                            |
|  <p>sensing head M2,6 x 0,45<br/>bending radius R = 20 mm</p>                                         | <b>Standard</b>                              |
|                                                                                                                                                                                            | <b>FSE 200C2Y00</b>                          |
|                                                                                                                                                                                            | Excess gain curve                            |

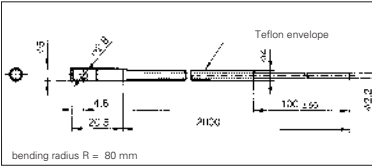
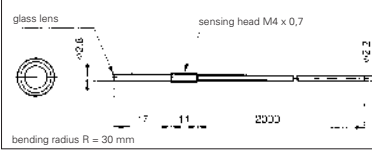
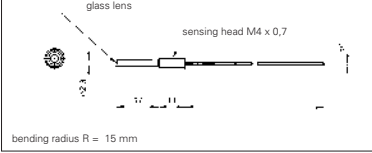
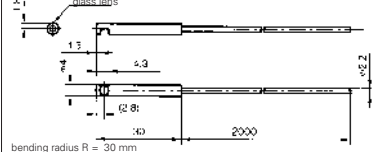
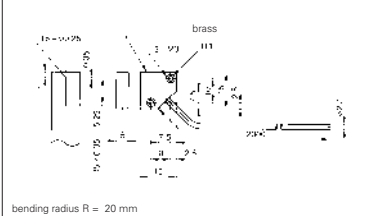
| Low hysteresis                                                                      | Fast version                                                                        | High sensitivity                                                                    | Teach-in                                                                            | Modular version                                                                     |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|  |  |  |  |  |
| FVDK 10x81Y0                                                                        | FVDK 10x82Y0                                                                        | FVDK 10x83Y0                                                                        | FVDK 10x6xY0                                                                        | FVDK 31x06Y0                                                                        |
| Tw 120 mm                                                                           | Tw 50 mm                                                                            | Tw 250 mm                                                                           | Tw 160 mm                                                                           | Tw 160 mm                                                                           |
| 346/37*                                                                             | 347/61*                                                                             | 348/13*                                                                             | 201-203*                                                                            | 201-203*                                                                            |
| 97/98*                                                                              | 110/111*                                                                            | 84/85*                                                                              | 249-251*                                                                            | 249-251*                                                                            |
| FVDK 10x81Y0                                                                        | FVDK 10x82Y0                                                                        | FVDK 10x83Y0                                                                        | FVDK 10x6xY0                                                                        | FVDK 31x06Y0                                                                        |
| Tw 40 mm                                                                            | Tw 20 mm                                                                            | Tw 100 mm                                                                           | Tw 45 mm                                                                            | Tw 45 mm                                                                            |
| 29                                                                                  | 53                                                                                  | 349                                                                                 | 186                                                                                 | 186                                                                                 |
| 90                                                                                  | 103                                                                                 | 77                                                                                  | 234                                                                                 | 234                                                                                 |
| Tw 25 mm                                                                            | Tw 12 mm                                                                            | Tw 50 mm                                                                            | Tw 35 mm                                                                            | Tw 35 mm                                                                            |
| 247                                                                                 | 253                                                                                 | 258                                                                                 | 263                                                                                 | 263                                                                                 |
| 248                                                                                 | 257                                                                                 | 260                                                                                 | 264                                                                                 | 264                                                                                 |
| FVDK 10x81Y0                                                                        | FVDK 10x82Y0                                                                        | FVDK 10x83Y0                                                                        | FVDK 10x6xY0                                                                        | FVDK 31x06Y0                                                                        |
| Tw 400 mm                                                                           | Tw 160 mm                                                                           | Tw 800 mm                                                                           | Tw 540 mm                                                                           | Tw 540 mm                                                                           |
| 25                                                                                  | 49                                                                                  | 01                                                                                  | 181                                                                                 | 181                                                                                 |
| 86                                                                                  | 99                                                                                  | 73                                                                                  | 229                                                                                 | 229                                                                                 |
| Tw 200 mm                                                                           | Tw 80 mm                                                                            | Tw 400 mm                                                                           | Tw 290 mm                                                                           | Tw 290 mm                                                                           |
| 26                                                                                  | 50                                                                                  | 02                                                                                  | 182-184*                                                                            | 182-184*                                                                            |
| 345                                                                                 | 100                                                                                 | 74                                                                                  | 230-232*                                                                            | 230-232*                                                                            |

Through beam types

|  <div>Tw: Sensing range length 200 cm</div> |                                        |
|-----------------------------------------------------------------------------------------------------------------------------|----------------------------------------|
| Small external diameter                                                                                                     | Features<br>Part number                |
|  <div>bending radius R = 15 mm</div>        | Lateral light exit                     |
|                                                                                                                             | FSE 200D4Y00                           |
|                                                                                                                             | Excess gain curve                      |
|  <div>bending radius R = 1 mm</div>         | Lateral light exit min. bending radius |
|                                                                                                                             | FSE 200F4Y00                           |
|                                                                                                                             | Excess gain curve                      |
|  <div>bending radius R = 4 mm</div>        | Small external diameter                |
|                                                                                                                             | FSE 200D2Y00                           |
|                                                                                                                             | Excess gain curve                      |
|  <div>bending radius R = 15 mm</div>      | Small external diameter                |
|                                                                                                                             | FSE 200D2Y50                           |
|                                                                                                                             | Excess gain curve                      |
| Chemical and oil resistance                                                                                                 | Features<br>Part number                |
|  <div>bending radius R = 80 mm</div>      | Chemical and oil resistance            |
|                                                                                                                             | FSC 200C2Y00                           |
|                                                                                                                             | Excess gain curve                      |

| Low hysteresis                                                                    | Fast version                                                                      | High sensitivity                                                                  | Teach-in                                                                          | Modular version                                                                    |
|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|
|  |  |  |  |  |
| FVDK 10x81Y0                                                                      | FVDK 10x82Y0                                                                      | FVDK 10x83Y0                                                                      | FVDK 10x6xY0                                                                      | FVDK 31x06Y0                                                                       |
| Tw 30 mm                                                                          | Tw 12 mm                                                                          | Tw 60 mm                                                                          | Tw 40 mm                                                                          | Tw 40 mm                                                                           |
| 28                                                                                | 52                                                                                | 350                                                                               | 185                                                                               | 185                                                                                |
| 89                                                                                | 102                                                                               | 351                                                                               | 352                                                                               | 352                                                                                |
| Tw 10 mm                                                                          | Tw 3 mm                                                                           | Tw 20 mm                                                                          | Tw 14 mm                                                                          | Tw 14 mm                                                                           |
| 270                                                                               | 274                                                                               | 279                                                                               | 284                                                                               | 284                                                                                |
| 271                                                                               | 278                                                                               | 281                                                                               | 286                                                                               | 286                                                                                |
| Tw 40 mm                                                                          | Tw 20 mm                                                                          | Tw 100 mm                                                                         | Tw 45 mm                                                                          | Tw 45 mm                                                                           |
| 29                                                                                | 53                                                                                | 349                                                                               | 186                                                                               | 186                                                                                |
| 90                                                                                | 103                                                                               | 77                                                                                | 234                                                                               | 234                                                                                |
| Tw 6 mm                                                                           | Tw 2 mm                                                                           | Tw 12 mm                                                                          | Tw 9 mm                                                                           | Tw 9 mm                                                                            |
| 293                                                                               | 297                                                                               | 299                                                                               | 204                                                                               | 204                                                                                |
| 296                                                                               | 298                                                                               | 300                                                                               | 252                                                                               | 252                                                                                |
| FVDK 10x81Y0                                                                      | FVDK 10x82Y0                                                                      | FVDK 10x83Y0                                                                      | FVDK 10x6xY0                                                                      | FVDK 31x06Y0                                                                       |
| Tw 800 mm                                                                         | Tw 300 mm                                                                         | Tw 1600 mm                                                                        | Tw 1000 mm                                                                        | Tw 1000 mm                                                                         |
| 35                                                                                | 59                                                                                | 11                                                                                | 193                                                                               | 193                                                                                |
| 96                                                                                | 109                                                                               | 83                                                                                | 241                                                                               | 241                                                                                |

Through beam types

|  <div>Tw: sensing range length 200 cm</div> |                                      |
|--------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|
| Chemical and oil resistance                                                                                                    | Features<br>Part number              |
|  <div>bending radius R = 80 mm</div>        | Lateral light exit                   |
|                                                                                                                                | FSC 200C4Y00                         |
|                                                                                                                                | Excess gain curve                    |
| Parallel beam                                                                                                                  | Features                             |
|                                                                                                                                | Part number                          |
|                                                                                                                                | 2,8 mm Parallel beam $\pm 2^\circ$   |
|  <div>bending radius R = 30 mm</div>        | FPE 200C1Y00                         |
|                                                                                                                                | Excess gain curve                    |
|                                                                                                                                | Light beam curve                     |
|  <div>bending radius R = 15 mm</div>       | 2,3 mm Parallel beam $\pm 1^\circ$   |
|                                                                                                                                | FPE 200D1Y00                         |
|                                                                                                                                | Excess gain curve                    |
|  <div>bending radius R = 30 mm</div>      | 4 mm Parallel beam $\pm 2^\circ$     |
|                                                                                                                                | FPE 200C4Y00                         |
|                                                                                                                                | Excess gain curve                    |
| Array                                                                                                                          | Features<br>Part number              |
|  <div>bending radius R = 20 mm</div>      | Recognition of small or thin objects |
|                                                                                                                                | FSE 200C6Y00                         |
|                                                                                                                                | Excess gain curve                    |

| Low hysteresis                                                                      | Fast version                                                                        | High sensitivity                                                                    | Teach-in                                                                            | Modular version                                                                     |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|  |  |  |  |  |
| FVDK 10x81Y0                                                                        | FVDK 10x82Y0                                                                        | FVDK 10x83Y0                                                                        | FVDK 10x6xY0                                                                        | FVDK 31x06Y0                                                                        |
| Tw 170 mm                                                                           | Tw 70 mm                                                                            | Tw 340 mm                                                                           | Tw 250 mm                                                                           | Tw 250 mm                                                                           |
| 354                                                                                 | 356                                                                                 | 358                                                                                 | 301                                                                                 | 301                                                                                 |
| 355                                                                                 | 357                                                                                 | 359                                                                                 | 302                                                                                 | 302                                                                                 |
| Tw 750 mm                                                                           | Tw 300 mm                                                                           | Tw 1500 mm                                                                          | Tw 1000 mm                                                                          | Tw 1000 mm                                                                          |
| 305                                                                                 | 307                                                                                 | 309                                                                                 | 206                                                                                 | 206                                                                                 |
| 306                                                                                 | 308                                                                                 | 310                                                                                 | 254                                                                                 | 254                                                                                 |
| Tw 600 mm                                                                           | Tw 240 mm                                                                           | Tw 1200 mm                                                                          | Tw 870 mm                                                                           | Tw 870 mm                                                                           |
| 311                                                                                 | 313                                                                                 | 315                                                                                 | 317                                                                                 | 317                                                                                 |
| 312                                                                                 | 314                                                                                 | 316                                                                                 | 318                                                                                 | 318                                                                                 |
| Tw 800 mm                                                                           | Tw 320 mm                                                                           | Tw 1600 mm                                                                          | Tw 1100 mm                                                                          | Tw 1100 mm                                                                          |
| 321                                                                                 | 323                                                                                 | 325                                                                                 | 207                                                                                 | 207                                                                                 |
| 322                                                                                 | 324                                                                                 | 326                                                                                 | 255                                                                                 | 255                                                                                 |
| FVDK 10x81Y0                                                                        | FVDK 10x82Y0                                                                        | FVDK 10x83Y0                                                                        | FVDK 10x6xY0                                                                        | FVDK 31x06Y0                                                                        |
| Tw 125 mm                                                                           | Tw 50 mm                                                                            | Tw 250 mm                                                                           | Tw 190 mm                                                                           | Tw 190 mm                                                                           |
| 327                                                                                 | 329                                                                                 | 331                                                                                 | 333                                                                                 | 333                                                                                 |
| 328                                                                                 | 330                                                                                 | 330                                                                                 | 334                                                                                 | 334                                                                                 |