

## Reflectors

| model (1)                        | RL098  | RL100  | RL100D    | RL100 | RL100 | RL100   | RL102        | RL103  | RL104    | RL105G   | RL106G   | RL107  | RL110  |  |
|----------------------------------|--------|--------|-----------|-------|-------|---------|--------------|--------|----------|----------|----------|--------|--------|--|
|                                  | TILOGO | 112100 | (50x50mm) | DA4   | DC4   | DQ1     | 112102       | TILTOO | TIL TO T | TILITOGG | TIL TOOC | 112107 | 112110 |  |
| DMP                              | -      | -      | 40        | 55    | 50    | 50      | 25           | 50     | 50       | 50       | 80       | 125    | 100    |  |
| FAIC_axial                       | 20     | 10     | 20        | 40    | 25    | 30      | 35           | 50     | 50       | 40       | 80       | 105    | 100    |  |
| FAIM_axial                       | 20     | 10     | 20        | 40    | 25    | 30      | 35           | 50     | 50       | 40       | 80       | 105    | 100    |  |
| FAIC_90°                         | 20     | 10     | 20        | 40    | 25    | 30      | 35           | 50     | 50       | 40       | 80       | 105    | 100    |  |
| FAIM_90°                         | 20     | 10     | 20        | 40    | 25    | 30      | 35           | 50     | 50       | 40       | 80       | 105    | 100    |  |
| FARN_axial                       | -      | -      | 25        | 40    | 30    | 35      | 40           | 45     | 50       | 40       | 80       | 110    | 100    |  |
| FARP_axial                       | -      | -      | 25        | 40    | 30    | 35      | 40           | 45     | 50       | 40       | 80       | 110    | 100    |  |
| FARN_90°                         | -      | -      | 20        | 35    | 25    | 30      | 30           | 25     | 35       | 40       | 110      | 130    | 100    |  |
| FARP_90°                         | -      | -      | 20        | 35    | 25    | 30      | 30           | 25     | 35       | 40       | 110      | 130    | 100    |  |
| FARL_axial                       | -      | -      | -         | -     | -     | -       | -            | -      | -        | -        | -        | -      | 100    |  |
| FARL_90°                         | -      | -      | -         | -     | -     | -       | -            | -      | -        | -        | -        | -      | 100    |  |
| FALN                             | -      | -      | 20        | 20    | 15    | 20      | 30           | 40     | 45       | 70       | 90       | 85     | 100    |  |
| SSC                              | 20     | 10     | 15        | 35    | 30    | 30      | 30           | 40     | 50       | 40       | 80       | 110    | 100    |  |
| SPC                              | 20     | 10     | 15        | 35    | 30    | 30      | 30           | 40     | 50       | 40       | 80       | 110    | 100    |  |
| SSP                              | -      | -      | -         | -     | -     | -       | 5            | 40     | 50       | 30       | 70       | 110    | 100    |  |
| SPP                              | -      | -      | -         | -     | -     | -       | 5            | 40     | 50       | 30       | 70       | 110    | 100    |  |
| MSC                              | 20     | 10     | 25        | 45    | 35    | 40      | 35           | 50     | 60       | 45       | 100      | 115    | 100    |  |
| MPC                              | 20     | 10     | 25        | 45    | 35    | 40      | 35           | 50     | 60       | 45       | 100      | 115    | 100    |  |
| MSP                              | -      | -      | 35        | 35    | 35    | 35      | 25           | 50     | 70       | 50       | 110      | 115    | 100    |  |
| MPP                              | _      | _      | 35        | 35    | 35    | 35      | 25           | 50     | 70       | 50       | 110      | 115    | 100    |  |
| SAC                              | 30     | 15     | 25        | 40    | 40    | 40      | 25           | 40     | 45       | 45       | 100      | 115    | 100    |  |
| SAP                              | -      | -      | 25        | 35    | 35    | 35      | 25           | 40     | 50       | 40       | 90       | 120    | 100    |  |
| MVC                              | 20     | 10     | 25        | 45    | 35    | 45      | 30           | 50     | 60       | 40       | 90       | 110    | 100    |  |
| MVP                              | -      | -      | 20        | 25    | 30    | 30      | 25           | 20     | 35       | 35       | 60       | 105    | 100    |  |
| FQIC_axial                       | 30     | 15     | 30        | 75    | 40    | 45      | 40           | 50     | 50       | 50       | 95       | 105    | 100    |  |
| FQIC_90°                         | 15     | 20     | 30        | 75    | 40    | 50      | 25           | 40     | 55       | 40       | 90       | 105    | 100    |  |
| FQRN axial                       |        |        | 30        | 30    | 30    | 30      | 40           | 50     | 50       | 45       |          | 110    | 100    |  |
|                                  | -      | -      |           |       |       |         |              | 50     |          | 40       | 90       |        |        |  |
| FQRN_90°                         | -      | -      | 30        | 35    | 30    | 30      | 40           |        | 50       | 40       | 90       | 110    | 100    |  |
| FQRL_axial                       | -      | -      | -         | -     | -     | -       | -            | -      | -        |          | -        | -      | 100    |  |
| FQRL_90°                         | -      | -      | -         | -     | -     | -       | -            | -      | -        | -        | -        | -      | 100    |  |
| FFRN                             | -      | -      | 25        | 30    | 30    | 30      | 35           | 45     | 50       | 45       | 90       | 110    | 100    |  |
| FFRP                             | -      | -      | 25        | 30    | 30    | 30      | 35           | 45     | 50       | 45       | 90       | 110    | 100    |  |
| FFRL                             | -      | -      | -         | -     | -     | -       | -            | -      | -        | -        | -        | -      | 100    |  |
| QXP                              | -      | -      | 30        | 35    | 35    | 35      | 25           | 30     | 40       | 40       | 80       | 110    | 100    |  |
| QXC                              | -      | -      | -         | 40    | 30    | 15      | 20           | 25     | 35       | 40       | 90       | 100    | 100    |  |
| BVC                              | 40     | 20     | 35        | 85    | 50    | 55      | 40           | 50     | 55       | 50       | 95       | 110    | 100    |  |
| BSC                              | 40     | 20     | 35        | 85    | 50    | 55      | 40           | 50     | 55       | 50       | 95       | 110    | 100    |  |
| PSC                              | -      | -      | -         | 30    | 25    | 25      | 20           | 20     | 10       | 40       | 30       | 115    | 100    |  |
| RXC                              | 25     | 20     | 25        | 50    | 30    | 40      | 30           | 30     | 20       | 35       | 80       | 95     | 100    |  |
| RXP                              | -      | -      | 30        | 50    | 35    | 40      | 10           | 10     | 40       | 45       | 60       | 110    | 100    |  |
| QMIC                             | 40     | 20     | 30        | 40    | 20    | 35      | 30           | 40     | 40       | 40       | 90       | 100    | 100    |  |
| QMIG                             | -      | -      | -         | -     | -     | -       | -            | -      | -        | -        | -        | -      | 100    |  |
| QMRG_LP                          | -      | -      | -         | -     | -     | -       | -            | -      | -        | -        | -        | -      | 100    |  |
| QMRG                             | -      | -      | -         | -     | -     | -       | -            | -      | -        | -        | -        | -      | 100    |  |
| Q50RN                            | -      | -      | 25        | 35    | 25    | 30      | 35           | 45     | 50       | 40       | 80       | 105    | 100    |  |
| FGRN                             | 5      | -      | 15        | 30    | 30    | 30      | 35           | 50     | 55       | 45       | 75       | 105    | 100    |  |
| QMRN                             | -      | -      | 15        | 35    | 30    | 35      | 15           | 30     | 40       | 50       | 90       | 120    | 100    |  |
| QMRL                             | -      | -      | -         | -     | -     | -       | -            | -      | -        | -        | -        | -      | 100    |  |
| protection degree <sup>(2)</sup> |        |        |           |       |       |         | IP67         |        |          |          |          |        |        |  |
| material                         |        |        |           |       |       | acrylic | c /policarbo | onate  |          |          |          |        |        |  |
|                                  |        |        |           |       |       |         |              |        |          |          |          |        |        |  |

To ensure constant detection performance, especially when used at the maximum sensing range, it is important to keep the reflector surface clean by wiping with a damp cloth. When selecting a reflector, the ambient condition in which it is to be used should be taken into account, as dusty or high humidity atmospheres may cause the range to be limited to as low as 10 %.

<sup>(1)</sup> Refer to individual data sheets for detailed specifications of the photoelectric sensors (2) Applications involving water immersion or atmospheres with steam or water vapour clouds are not advised



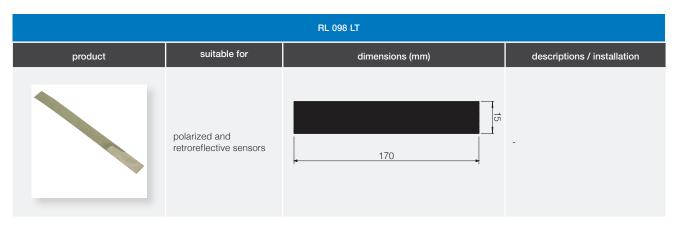
| RL110 | RL111G | RL112G | RL113G | RL116 | RL130         | RL131 | RL133 | RL201 | RL202 | RL203 | RL204 | model (1)      |
|-------|--------|--------|--------|-------|---------------|-------|-------|-------|-------|-------|-------|----------------|
| 100   | 30     | 35     | 75     | 50    | 55            | 30    | 25    | -     | -     | -     | -     | DMP            |
| 100   | 40     | 50     | 80     | 80    | 80            | 30    | 25    | -     | -     | -     | -     | FAIC_axia      |
| 100   | 40     | 50     | 80     | 80    | 80            | 30    | 25    | -     | -     | -     | -     | FAIM_axia      |
| 100   | 40     | 50     | 80     | 80    | 80            | 30    | 25    | -     | -     | -     | -     | FAIC_90°       |
| 100   | 40     | 50     | 80     | 80    | 80            | 30    | 25    | -     | -     | -     | -     | FAIM_90        |
| 100   | 35     | 45     | 70     | 75    | 75            | 35    | 10    | -     | -     | -     | -     | FARN_ax        |
| 100   | 35     | 45     | 70     | 75    | 75            | 35    | 10    | -     | -     | -     | -     | FARP_axi       |
| 100   | 15     | 15     | 60     | 20    | 45            | 25    | 7     | -     | -     | -     | -     | FARN_90        |
| 100   | 15     | 15     | 60     | 20    | 45            | 25    | 7     | -     | -     | -     | -     | FARP_90        |
| 100   | -      | -      | 70     | 70    | -             | -     | -     | -     | -     | -     | -     | FARL_axi       |
| 100   | -      | -      | 55     | 70    | -             | -     | -     | -     | -     | -     | -     | FARL_90        |
| 100   | 60     | 70     | 85     | 85    | 90            | 15    | 15    | 130   | 120   | 90    | 90    | FALN           |
| 100   | 45     | 50     | 75     | 85    | 85            | 40    | 25    | -     | -     | -     | -     | SSC            |
| 100   | 45     | 50     | 75     | 85    | 85            | 40    | 25    | -     | -     | -     | -     | SPC            |
| 100   | 40     | 45     | 70     | 110   | 80            | 25    | -     | -     | -     | -     | -     | SSP            |
| 100   | 40     | 45     | 70     | 110   | 80            | 25    | -     | -     | -     | -     | -     | SPP            |
| 100   | 35     | 50     | 80     | 80    | 100           | 40    | 35    | -     | -     | -     | -     | MSC            |
| 100   | 35     | 50     | 80     | 80    | 100           | 40    | 35    | -     | -     | -     | -     | MPC            |
| 100   | 50     | 40     | 60     | 90    | 60            | 30    | 25    | -     | -     | -     | -     | MSP            |
| 100   | 50     | 40     | 60     | 90    | 60            | 30    | 25    | -     | -     | -     | -     | MPP            |
| 100   | 20     | 55     | 80     | 90    | 80            | 35    | 10    | -     | -     | -     | -     | SAC            |
| 100   | 30     | 30     | 80     | 50    | 40            | 20    | 20    | -     | -     | -     | -     | SAP            |
| 100   | 50     | 40     | 70     | 70    | 75            | 30    | 25    | -     | -     | -     | -     | MVC            |
| 100   | 25     | 30     | 60     | 55    | 55            | 30    | 7     | -     | -     | -     | -     | MVP            |
| 100   | 40     | 55     | 75     | 90    | 70            | 30    | 25    | -     | -     | -     | -     | FQIC_axi       |
| 100   | 40     | 55     | 80     | 90    | 70            | 30    | 25    | -     | -     | -     | -     | FQIC_90        |
| 100   | 35     | 50     | 75     | 80    | 70            | 30    | 25    | -     | -     | -     | -     | FQRN axi       |
| 100   | 20     | 30     | 70     | 40    | 65            | 35    | 20    | -     | -     | -     | -     | FQRN_90        |
| 100   | -      | -      | 55     | 60    | -             | -     | -     | -     | -     | -     | -     | FQRL_axi       |
| 100   | -      | -      | 55     | 60    | -             | -     | -     | -     | -     | -     | -     | FQRL_90        |
| 100   | 35     | 45     | 75     | 80    | 70            | 35    | 25    | -     | -     | -     | -     | FFRN           |
| 100   | 35     | 45     | 75     | 80    | 70            | 35    | 25    | -     | -     | -     | -     | FFRP           |
| 100   | -      | -      | 55     | 45    | -             | -     | -     | -     | -     | -     | -     | FFRL           |
| 100   | 55     | 40     | 50     | 70    | 70            | 20    | 25    | -     | -     | -     | -     | QXP            |
| 100   | 25     | 30     | 35     | 40    | 45            | -     | -     | -     | -     | -     | -     | QXC            |
| 100   | 35     | 55     | 85     | 95    | 95            | 35    | 30    | -     | -     | -     | -     | BVC            |
| 100   | 35     | 55     | 85     | 95    | 95            | 35    | 30    | -     | -     | -     | -     | BSC            |
| 100   | 30     | 30     | 45     | 45    | 60            | 10    | -     | -     | -     | -     | -     | PSC            |
| 100   | 30     | 40     | 60     | 60    | 65            | -     | -     | -     | -     | -     | -     | RXC            |
| 100   | 25     | 35     | 45     | 25    | 60            | -     | -     | -     | -     | -     | -     | RXP            |
| 100   | 35     | 50     | 80     | 80    | 85            | 30    | 20    | -     | -     | -     | -     | QMIC           |
| 100   | -      | -      | 50     | 60    | -             | -     | -     | -     | -     | -     | -     | QMIG           |
| 100   | -      | -      | 65     | 70    | -             | -     | -     | -     | -     | -     | -     | QMRG_LI        |
| 100   | -      | -      | 65     | 70    | -             | -     | -     | -     | -     | -     | -     | QMRG           |
| 100   | 40     | 35     | 60     | 80    | 80            | 25    | 20    | -     | -     | -     | -     | Q50RN          |
| 100   | 40     | 45     | 70     | 80    | 80            | 25    | 30    | -     | -     | -     | -     | FGRN           |
| 100   | 35     | 45     | 70     | 80    | 80            | 30    | 15    | -     | -     | -     | -     | QMRN           |
| 100   |        |        | 70     | 80    |               |       |       | _     |       | _     |       | QMRL           |
|       |        |        |        |       | IP6           | 67    |       |       |       |       |       | protection deg |
|       |        |        |        | ,     | acrylic /poli |       |       |       |       |       |       | material       |

The range is calculate as follow:

range is calculate as follow:
range = max. sensing distance x reflector % x ambient condition%
The ambient condition % is an arbitrary value that can be determined only be experimentation.
Typical values are: clean = 100%; low levels of dust or humidity = 50%; moderate levels = 25%; high levels = 10%
The reflectors should be positioned at 90° to the optical axis with a tolerance of ± 15°

Please Note: Mechanical dimensions can vary without any advice





| RL 100  |                         |                            |   |  |  |  |  |  |  |
|---------|-------------------------|----------------------------|---|--|--|--|--|--|--|
| product | suitable for            | dimensions (mm)            | descriptions / installation                                     |  |  |  |  |  |  |
|         | retroreflective sensors | dimensions defined by user | RL 100: Dimensions defined by user. Max. dimension: 92 x 200 cm |  |  |  |  |  |  |

| RL 100D / RL AGV / RL 100DA4 / RL 100DC4 /RL 100DQ1 |                   |                 |  |  |  |  |  |  |
|---|-------------------|-----------------|--|--|--|--|--|--|
| product   | suitable for      | dimensions (mm) | descriptions / installation  |  |  |  |  |  |
|   | polarized sensors |                 | RL 100D: Dimensions defined<br>by user. Max. dimensions: 92 x<br>200 cm.<br>RL AGV: Fixed height 92 cm -<br>minimum length 50 cm - maximum<br>lenght: 250 cm.<br>RL 100DC4: Fixed height 50 cm -<br>fixed length 30 cm<br>RL 100DA4: Fixed height 30 cm -<br>fixed length 20 cm<br>RL 100DQ1: Fixed height 10 cm -<br>fixed length 10 cm |  |  |  |  |  |

| RL 102  |                                       |                 |                             |  |  |  |  |  |  |
|---------|---------------------------------------|-----------------|-----------------------------|--|--|--|--|--|--|
| product | suitable for                          | dimensions (mm) | descriptions / installation |  |  |  |  |  |  |
|         | polarized and retroreflective sensors | 5.5 ø 25        | -                           |  |  |  |  |  |  |



