

### Fotocellule rettangolari universali con uscita statica - DC o con uscita relé - AC/DC serie RX

Universal photoelectric sensors with static output - DC or with relay output - AC/DC RX series

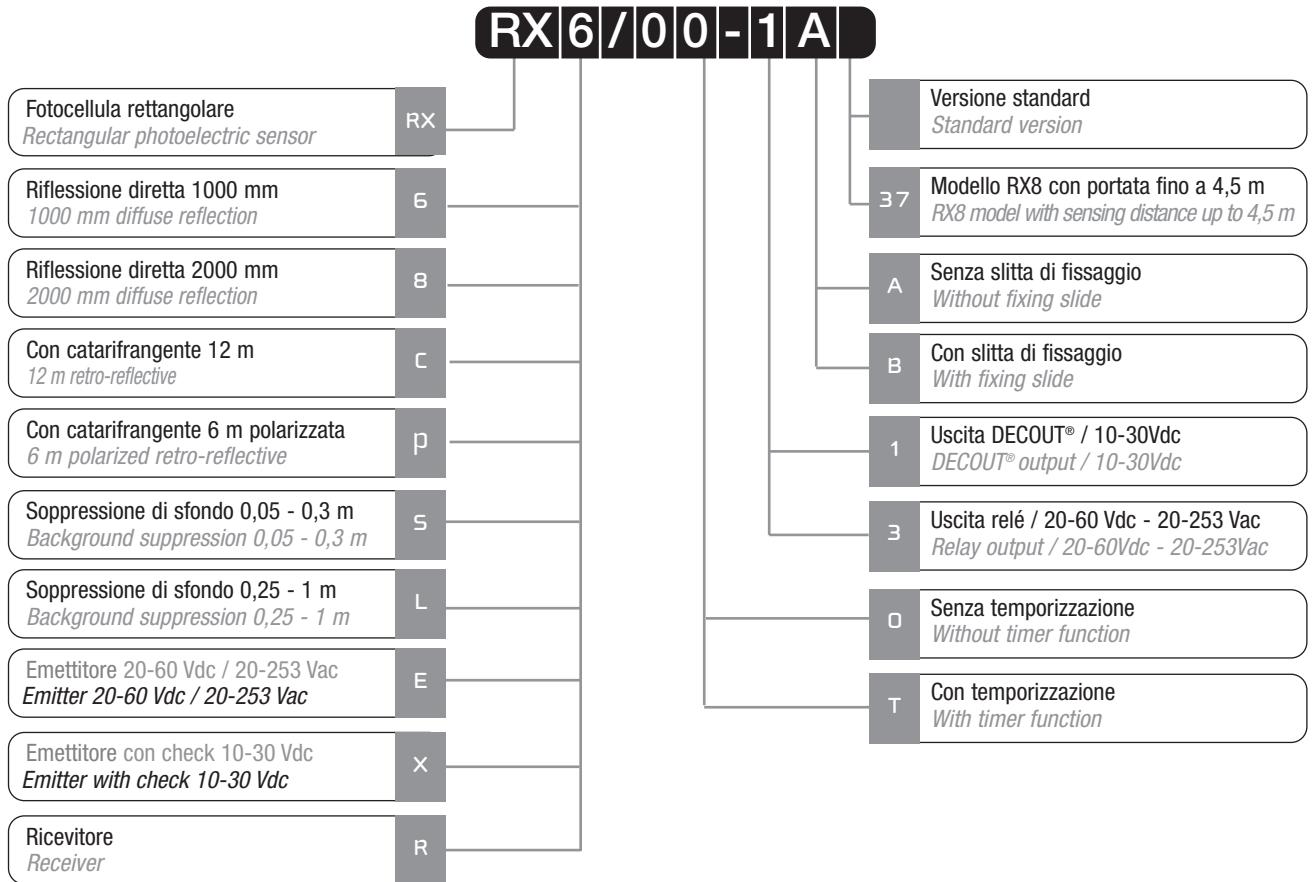


CE

### Caratteristiche principali Main features

- > Vasta gamma di modelli: riflessione diretta, catarifrangente, polarizzata, barriera e soppressione di sfondo
- > *Wide range of models: diffuse reflection, retro-reflective, polarized, through-beam and background suppression*
- > Serie con grandi protezioni ed innumerevoli possibilità di fissaggio
- > *Series with high performances and wide possibilities of installation*
- > Distanze elevate
- > *High sensing distance*
- > Ingombri contenutissimi
- > *Very small dimensions*
- > Uscita relé o multifunzionale DECOUT®
- > *Relay output or multifunctional DECOUT®*
- > Temporizzazione delay on, delay off, one shot
- > *Timer function delay on, delay off, one shot*
- > Trimmer di regolazione della sensibilità
- > *Trimmer for sensitivity adjustment*
- > Switch di riduzione emissione per la rilevazione fine nei tipi di barriera
- > *Switch reducing the emission for fine detection in through-beam types*
- > LED di allineamento con visibilità di 360°
- > *LED alignment indicator with 360° visibility*
- > 2 LED indicatori (segnale stabile, uscita)
- > *2 LED indicators (stable signal, output)*
- > Uscita connettore M12 standard
- > *M12 standard plug cable exit*
- > Staffaggio assiale o a 90°
- > *Axial and right angle brackets*
- > Grado di protezione IP65
- > *IP65 protection degree*
- > Totalmente protetto contro danneggiamenti di tipo elettrico
- > *Complete protection against electrical damage*
- > Vasta gamma di connettori, accessori e catarifrangenti disponibili
- > *Wide range of connectors, accessories and reflectors available*
- > Approvazioni: CE
- > *Approvals: CE*

### Descrizione del codice - Code structure



### Modelli disponibili - Available models

> Modelli senza slitta di fissaggio / Models without fixing slide

| Funz. / Model                             | Portata Distance | 10-30 Vdc DECOUT®                     |                                | 20-60 Vdc / 20-253 Vac                |  |
|---|------------------|---------------------------------------|--------------------------------|---------------------------------------|--|
|   |                  | Non temporizzata<br>No timer function | Temporizzata<br>Timer function | Non temporizzata<br>No timer function | RELE / RELAY<br>Temporizzata<br>Timer function |
| Sopp. di sfondo<br>Background suppression | 0,05...0,3 m     | RXS/00-1A                             | RXS/0T-1A                      | RXS/00-3A                             | RXS/0T-3A                                      |
|   | 0,25...1 m       | RXL/00-1A                             | RXL/0T-1A                      | RXL/00-3A                             | RXL/0T-3A                                      |
| Tasteggio diretto<br>Diffuse reflection   | 1 m              | RX6/00-1A                             | RX6/0T-1A                      | RX6/00-3A                             | RX6/0T-3A                                      |
|   | 2 m              | RX8/00-1A                             | RX8/0T-1A                      | RX8/00-3A                             | RX8/0T-3A                                      |
|   | 4,5 m            | RX8/00-1A37                           | RX8/0T-1A37                    | RX8/00-3A37                           | RX8/0T-3A37                                    |
| Catarifrangente<br>Retroreflective        | 12 m             | RXC/00-1A                             | RXC/0T-1A                      | RXC/00-3A                             | RXC/0T-3A                                      |
| Polarizzata<br>Polarized                  | 6 m              | RXP/00-1A                             | RXP/0T-1A                      | RXP/00-3A                             | RXP/0T-3A                                      |
| Emettitore / Emitter                      | /                | /                                     | /                              | RXE/00-3A                             | /  |
| Emett. con check<br>Emitt. with check     | /                | RXX/00-1A                             | /                              | /                                     | /  |
| Ricevitore / Receiver                     | 16 / 32 m        | RXR/00-1A                             | RXR/0T-1A                      | RXR/00-3A                             | RXR/0T-3A                                      |

### > Modelli con slitta di fissaggio / Models with fixing slide

| Funz. / Model                                   | Portata<br>Distance | 10-30 Vdc DECOU <sup>®</sup>          |                                | 20-60 Vdc / 20-253 Vac                | RELÈ / RELAY                   |
|---|---------------------|---------------------------------------|--------------------------------|---------------------------------------|--------------------------------|
|   |                     | Non temporizzata<br>No timer function | Temporizzata<br>Timer function | Non temporizzata<br>No timer function | Temporizzata<br>Timer function |
| Sopp.<br>di sfondo<br>Background<br>suppression | 0,05...0,3 m        | RXS/00-1B                             | RXS/0T-1B                      | RXS/00-3B                             | RXS/0T-3B                      |
|   | 0,25...1 m          | RXL/00-1B                             | RXL/0T-1B                      | RXL/00-3B                             | RXL/0T-3B                      |
| Tasteggio diretto<br>Diffuse reflection         | 1 m                 | RX6/00-1B                             | RX6/0T-1B                      | RX6/00-3B                             | RX6/0T-3B                      |
|   | 2 m                 | RX8/00-1B                             | RX8/0T-1B                      | RX8/00-3B                             | RX8/0T-3B                      |
|   | 4,5 m               | RX8/00-1B37                           | RX8/0T-1B37                    | RX8/00-3B37                           | RX8/0T-3B37                    |
| Catarifrangente<br>Retroreflective              | 12 m                | RXC/00-1B                             | RXC/0T-1B                      | RXC/00-3B                             | RXC/0T-3B                      |
| Polarizzata<br>Polarized                        | 6 m                 | RXP/00-1B                             | RXP/0T-1B                      | RXP/00-3B                             | RXP/0T-3B                      |
| Emettitore / Emitter                            | /                   | /                                     | /                              | RXE/00-3B                             | /                              |
| Emett. con check<br>Emitt. with check           | /                   | RXX/00-1B                             | /                              | /                                     | /                              |
| Ricevitore / Receiver                           | 16 / 32 m           | RXR/00-1B                             | RXR/0T-1B                      | RXR/00-3B                             | RXR/0T-3B                      |

### Specifiche (In accordo con IEC EN 60947-5-2) - Specifications (According to IEC EN 60947-5-2)

> Modelli a riflessione diretta, catarifrangente e soppressione di sfondo  
 Direct diffuse, retro-reflective and background suppression models

| Modelli / Models  | Uscita statica - DC / Static output - DC   |                    |   |                          |  |                         | Uscita RELÈ - AC/DC / RELAY output - AC/DC   |   |                                     |  |   |                         |
|---|--|--------------------|---|--------------------------|--|-------------------------|--|---|-------------------------------------|--|---|-------------------------|
|   | RX6/0*-1*  | RX8/0*-1*          | RXC/0*-1*   | RXP/0*-1*                | RXS/0*-1*  | RXL/0*-1*               | RX6/0*-3*  | RX8/0*-3*   | RXC/0*-3*                           | RXP/0*-3*  | RXS/0*-3*                                 | RXL/0*-3*               |
| Tipo / Type   | Riflessione diretta<br>Diffuse reflection  |                    | Catarifrangente<br>Retro-reflective                       |                          | Riflessione diretta<br>Diffuse reflection                |                         | Riflessione diretta<br>Diffuse reflection  |   | Catarifrangente<br>Retro-reflective |  | Riflessione diretta<br>Diffuse reflection |                         |
|   | -  |                    | Standard  | Polarizzata<br>Polarized | Soppr. di sfondo<br>Background suppr.                    |                         | -  |   | Standard                            | Polarizzata<br>Polarized                                 | Soppr. di sfondo<br>Background suppr.     |                         |
| Distanza di rilevazione nominale (Sn)<br>Nominal sensing distance(Sn) | 1 m <sup>(1)</sup>   | 2 m <sup>(1)</sup> | 12 m <sup>(2)</sup>                                       | 6 m <sup>(2)</sup>       | 0,05-0,3 m <sup>(3)</sup>                                | 0,25-1 m <sup>(3)</sup> | 1 m <sup>(1)</sup>   | 2 m <sup>(1)</sup>  | 12 m <sup>(2)</sup>                 | 6 m <sup>(2)</sup>                                       | 0,05-0,3 m <sup>(3)</sup>                 | 0,25-1 m <sup>(3)</sup> |
| Emissione<br>Emission   | Infrarosso / Infrared<br>(880 nm)  |                    |   | Rosso / Red<br>(660 nm)  | Infrarosso / Infrared<br>(880 nm)                        |                         |  | Rosso / Red<br>(660 nm)                                   | Infrarosso / Infrared<br>(880 nm)   |  |   |                         |
| Tolleranza / Tolerance  | -10...+30%   |                    | EG≥2 at Sr  |                          | 0/ +10%  |                         | -10/ +30%  |   | EG≥2 at Sr                          |  | 0/ +10%                                   |                         |
| Corsa differenziale<br>Differential travel                            | 2...10% della distanza di rilevazione Sn / of the nominal sensing distance Sn  |                    |   |                          |  |                         |  |   |                                     |  |   |                         |
| Ripetibilità<br>Repeat accuracy                                       | 5%   |                    |   |                          |  |                         |  |   |                                     |  |   |                         |
| Tensione di alimentazione<br>Operating voltage                        | 10 - 30 Vdc  |                    |   |                          |  |                         | 20 - 253 Vac / 50-60Hz   |   |                                     |  |   |                         |
| Ondulazione residua / Ripple  | ≤ 10 % max.  |                    |   |                          |  |                         |  |   |                                     |  |   |                         |
| Corrente assorbita<br>No-load supply current                          | 25 mA  |                    |   | 40 mA                    |  |                         | 25 mARMS   |   |                                     | 30 mARMS   |   |                         |
| Corrente di uscita<br>Load current                                    | ≤100 mA  |                    |   |                          |  |                         | 3A - 250 Vac / 3A - 30 Vdc (750 VA / 90 W)   |   |                                     |  |   |                         |
| Corrente di perdita<br>Leakage current                                | ≤10µA  |                    |   |                          |  |                         |  |   |                                     |  |   |                         |
| Caduta di tensione in uscita<br>Voltage drop                          | 1,2V max.  |                    |   |                          |  |                         |  |   |                                     |  |   |                         |
| Tipo uscita / Output type   | Statica / Static type DECOU <sup>®</sup>   |                    |   |                          |  |                         | Relè / Relay type  |   |                                     |  |   |                         |
| Frequenza di commutazione<br>Switching frequency                      | 500 Hz   |                    |   |                          |  |                         | 25 Hz  |   |                                     |  |   |                         |
| Ritardo alla disponibilità<br>Time delay before availability          | 100 ms   |                    |   |                          |  |                         |  |   |                                     |  |   |                         |
| Temporizzazione<br>Timing functions                                   | Da 0,1s to 10s, delay ON, delay OFF, one shot<br>From 0,1s to 10s, delay ON, delay OFF, one shot   |                    |   |                          |  |                         |  |   |                                     |  |   |                         |
| Protezioni elettriche alimentazione<br>Supply electrical protections  | inversione di polarità, sovratensioni impulsive<br>Polarity reversal, transient  |                    |   |                          |  |                         | sovratensioni impulsive (AC), sovratensioni (DC)<br>Transient (AC), over voltages (DC) |   |                                     |  |   |                         |
| Protezioni elettriche uscita<br>Output electrical protections         | al cortocircuito (memoria)<br>short circuit (with hold)  |                    |   |                          |  |                         |  |   |                                     |  |   |                         |
| Limiti di temperatura<br>Temperature range                            | -25°C...+70°C<br>(senza condensa / without freeze)   |                    |   | -25°C<br>...+60°C        |  |                         | -25°C...+70°C<br>(senza condensa / without freeze)                                     |   |                                     | -25°C<br>...+60°C  |   |                         |
| Deriva termica<br>Temperature drift                                   | 10% Sr   |                    |   |                          |  |                         |  |   |                                     |  |   |                         |
| Interferenza luce esterna<br>Interference to external light           | ≥5000 lux (lampada ad incandescenza / incandescent lamp)   |                    | ≥10000 lux (lampada ad incandescenza / incandescent lamp) |                          | ≥5000 lux (lampada ad incandescenza / incandescent lamp) |                         |  | ≥10000 lux (lampada ad incandescenza / incandescent lamp) |                                     | ≥5000 lux (lampada ad incandescenza / incandescent lamp) |   |                         |
| Grado di protezione<br>Protection degree                              | IP65 (EN60529) <sup>(3)</sup>  |                    |   |                          |  |                         |  |   |                                     |  |   |                         |
| Indicatori LED<br>LED indicators                                      | Rosso posteriore (stato uscita), rosso superiore (allineamento), verde (segnale stabile)<br>Rear red (output state), superior red (alignment), green (stable signal) |                    |   |                          |  |                         |  |   |                                     |  |   |                         |
| Materiali corpo<br>Housing material                                   | policarbonato (caricato in vetro)<br>polycarbonate (glass fiber reinforced)  |                    |   |                          |  |                         |  |   |                                     |  |   |                         |
| Materiali ottica<br>Lenses material                                   | Plastico / Plastic   |                    |   |                          |  |                         |  |   |                                     |  |   |                         |
| Peso (appross.)<br>Weight (approx.)                                   | 75 g (senza slitta) - 90 g (con slitta)<br>75 g (without slide) - 90 g (with slide)  |                    |   |                          |  |                         |  |   |                                     |  |   |                         |

<sup>(1)</sup> Con foglio di carta opaca 100x100 mm EG=1,5 / With 100x100 mm white matt paper EG=1,5

<sup>(2)</sup> Con catarifrangente Ø80 mm (RL110 fornito separatamente) / With standard reflector Ø80 mm (RL110 supplied separately)

<sup>(3)</sup> Protezione garantita solo con il cavo a connettore correttamente montato / Protection guaranteed only with plug cable well mounted

### > Modelli a barriera / Trough-beam models

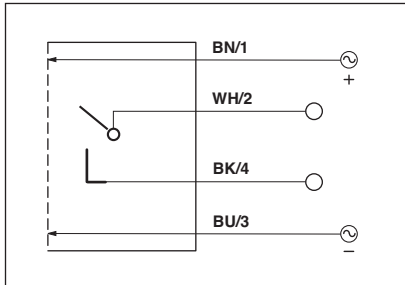
| Modelli / Models                              | Uscita statica - DC / Static output - DC  | Uscita RELÈ - AC/DC / RELAY output - AC/DC                                     |
|---|---|--|
|   | RXX/0*-1* + RXR/0*-1*   | RXE/0*-3* + RXR/0*-3*  |
| Tipo / Type                                   | Barriera / Trough-beam  |  |
|   | Con / With check  | Senza / Without check  |
| Distanza nominale (Sn) / Nominal distance(Sn) | 16-32 m selezionabile con switch / selectable with switch <sup>1)</sup>                         |  |
| Emissione / Emission                          | Infrarosso / Infrared (880 nm)  |  |
| Tolleranza / Tolerance                        | EG≥2 at Sr  |  |
| Corsa differenziale / Differential travel     | 10%   |  |
| Ripetibilità / Repeat accuracy                | 5%  |  |
| Tensione di alimentazione / Operating voltage | 10 - 30 Vdc   | 20 - 253 Vac / 20-60 Hz  |
| Corrente assorbita                            | 35 mA (emettitore / emitter)  | 15 mARMS (emettitore / emitter)  |
| No-load supply current                        | 25 mA (ricevitore / receiver)   | 30 mARMS (ricevitore / receiver)   |
| Corrente di uscita / Load current             | ≤100 mA   | 3A - 250 Vac / 3A - 30 Vdc (750 VA / 90 W)                                     |
| Corrente di perdita / Leakage current         | ≤10 µA  | -  |
| Caduta di tensione in uscita / Voltage drop   | 1,2V max.   | -  |
| Tipo uscita / Output type                     | Statica / Static type DECOU <sup>®</sup>  | Relè / Relay type  |
| Frequenza di commutazione                     | 500 Hz  | 25 Hz  |
| Switching frequency                           | 500 Hz  |  |
| Ritardo alla disponibilità                    | 100 ms  |  |
| Time delay before availability                | 100 ms  |  |
| Temporizzazione / Timing functions            | Da 0,1s to 10s, delay ON, delay OFF, one shot / From 0,1s to 10s, delay ON, delay OFF, one shot |  |
| Protezioni elettriche alimentazione           | Inversione di polarità, sovratensioni   | Sovratensioni impulsive (AC), sovratensioni (DC)                               |
| Supply electrical protections                 | Impulsive polarity reversal, transient  | Transient (AC), over voltages (DC)   |
| Protezioni elettriche uscita                  | Al cortocircuito (memoria)  | -  |
| Output electrical protections                 | Short circuit (with hold)   | -  |
| Limiti di temperatura / Temperature range     | -25°C...+70°C (senza condensa / without freeze)   |  |
| Deriva termica / Temperature drift            | ±10% Sr   |  |
| Interferenza luce esterna                     | 10000 lux (lampada ad incandescenza / incandescent lamp)  |  |
| Interference to external light                | 10000 lux (lampada ad incandescenza / incandescent lamp)  |  |
| Grado di protezione                           | IP65 (EN60529) <sup>2)</sup>  |  |
| Protection degree                             | IP65 (EN60529) <sup>2)</sup>  |  |
| Indicatori LED emettitore                     | Verde / Green (check off),<br>Rosso / Red (distanza / distance x2)                              | Verde / Green (alimentazione / supply)<br>Rosso / Red (distanza / distance x2) |
| Emitter LED indicators                        | Verde / Green (check off),<br>Rosso / Red (distanza / distance x2)                              | Verde / Green (alimentazione / supply)<br>Rosso / Red (distanza / distance x2) |
| Indicatori LED ricevitore                     | Rosso posteriore (stato uscita), rosso superiore (allineamento), verde (segnale stabile)        |  |
| receiver LED indicators                       | Rear red (output state), superior red (alignment), green (stable signal)                        |  |
| Materiali corpo / Housing material            | policarbonato (caricato in vetro) / polycarbonate (glass fiber reinforced)                      |  |
| Materiali ottica / Lenses material            | Plastico / Plastic  |  |
| Peso (appross.) / Weight (approx.)            | 75 g (senza slitta / without slide) - 90 g (con slitta / with slide)                            |  |

<sup>1)</sup> Con eccesso di guadagno EG>2 della distanza di rilevazione nominale Sn / With 1excess gain EG>2 at the nominal sensing distance Sn

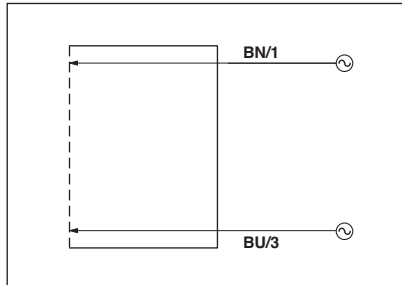
<sup>2)</sup> Protezione garantita solo con il cavo a connettore correttamente montato / Protection guaranteed only with plug cable well mounted

### Schemi elettrici delle connessioni - Electrical diagrams of the connections

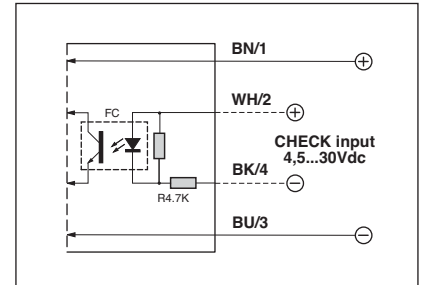
Uscita relé AC - DC  
Relay output AC - DC



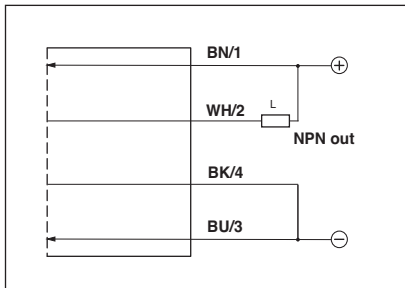
Elettore  
Emitter



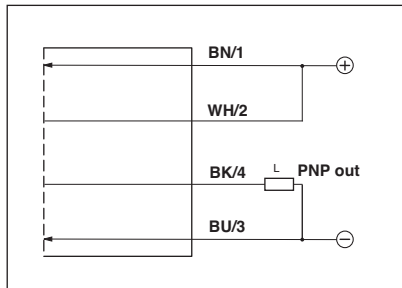
Elettore con check  
Emitter with check



Uscita NPN DECOUT®  
DECOUT® output NPN



Uscita PNP DECOUT®  
DECOUT® output PNP

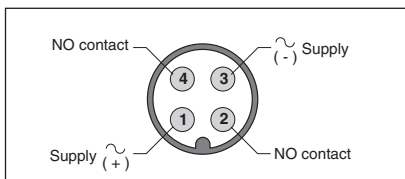


### Legenda Key

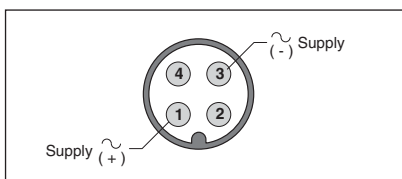
- BN → marrone/brown
- BK → nero/black
- BU → blu/blue
- WH → bianco/white

### Connettore - Plug

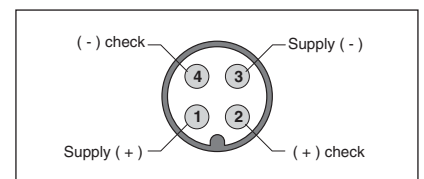
M12 Uscita relé AC-DC  
Relay output AC-DC



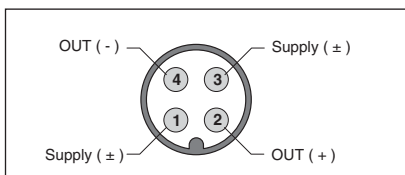
M12 Elettore AC-DC  
Emitter AC-DC



M12 Elettore con check  
Emitter with check

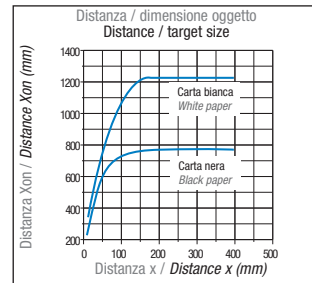
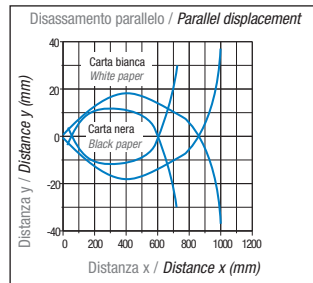
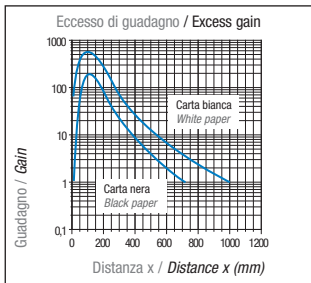


M12 DECOUT®

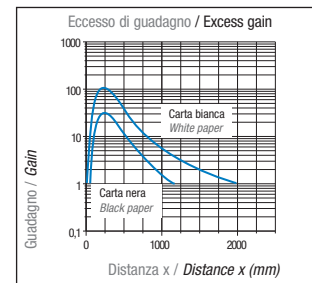


### Curva di risposta - Response diagram

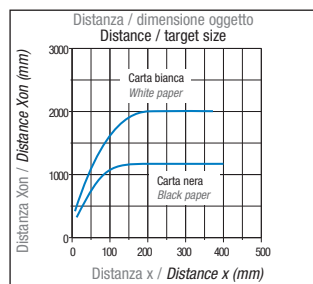
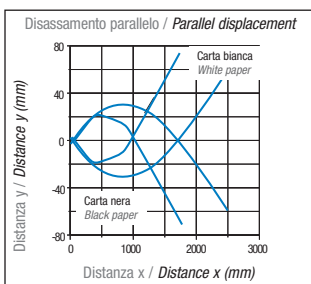
RX6/0\* - \*\*



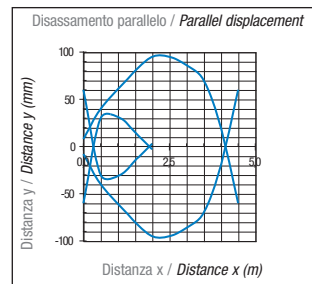
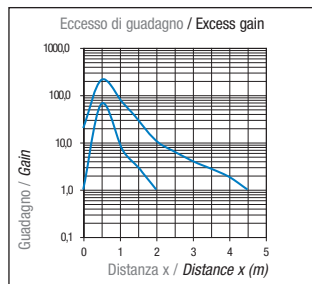
RX8/0\* - \*\*



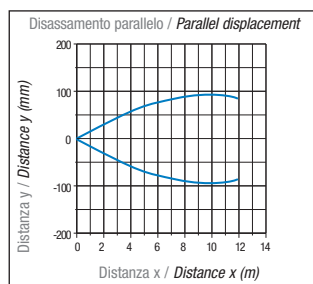
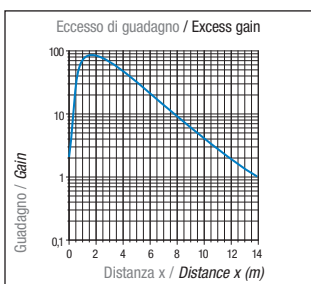
RX8/0\* - \*\*



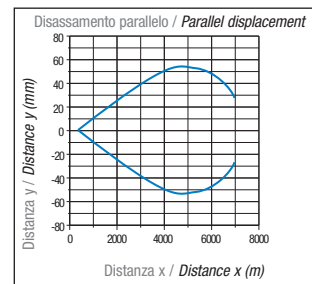
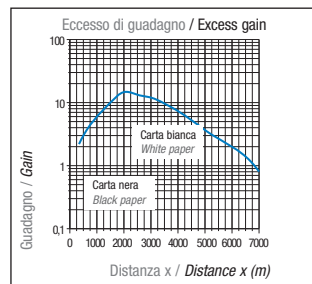
RX8/0\* - \*\*37



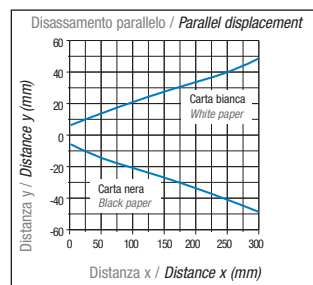
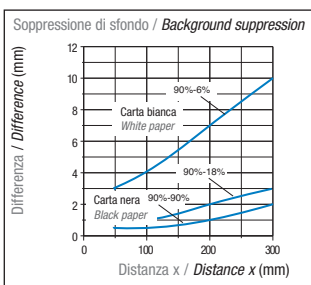
RXC/0\* - \*\*



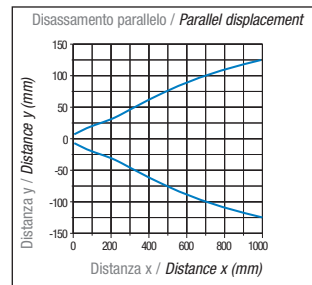
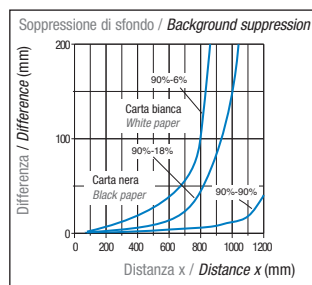
RXP/0\* - \*\*



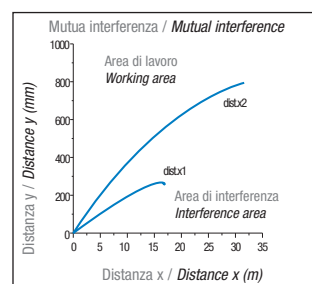
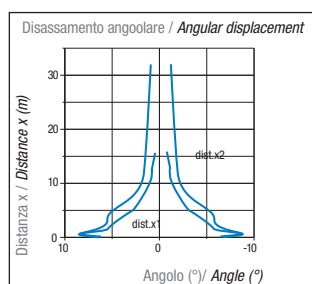
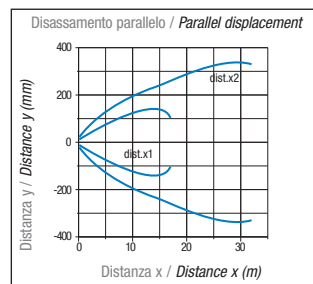
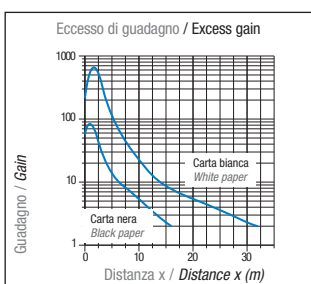
RXS/0\* - \*\*



RXL/0\* - \*\*

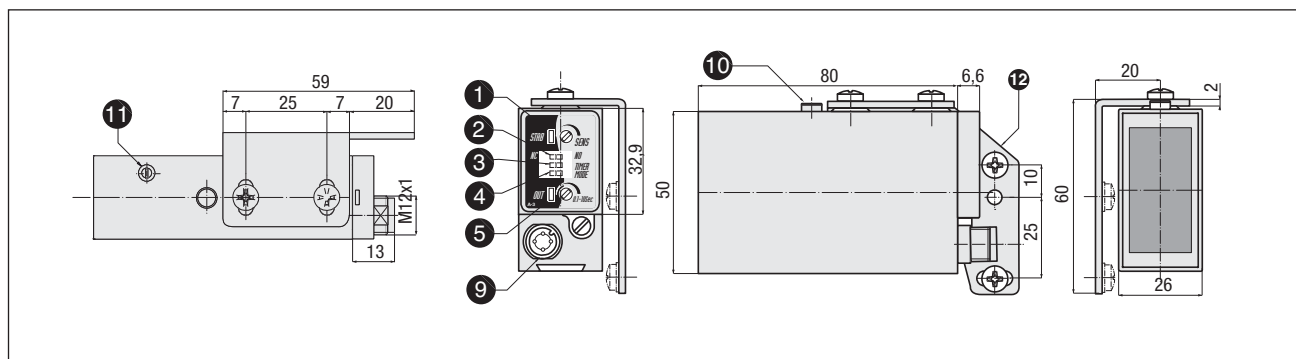


RX\*/00-\*\* + RXR/0\* - \*\*

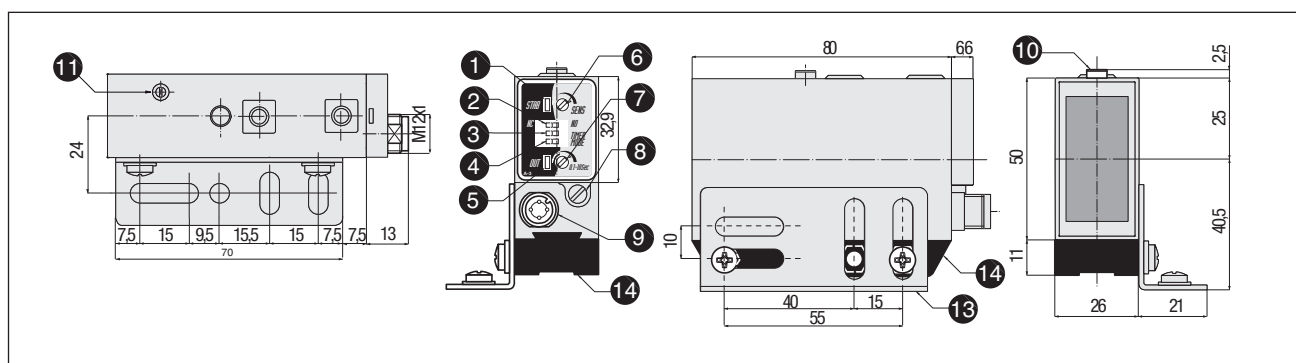


### Dimensioni - Dimensions

RX\*/\*-\*A



RX\*/\*-\*B



### Legenda / Key

- ① LED verde (segnale stabile RX6-8-C-P-S-L-R)  
LED verde (check off RXX o alimentazione RXE)  
*Green LED (stable signal RX6-8-C-P-S-L-R)*  
*Green LED (check off RXX or supply voltage RXE)*
- ② Switch di selez. NO/NC (RX6-8-C-P-S-L-R)  
Switch di selez. dist. x1 - dist. x2 (RXX-E)  
*Switch of NO/NC selection (RX6-8-C-P-S-L-R)*  
*Switch select. dist. x1 - dist. x2 (RXX-E)*
- ③ Switch di selezione temporizzazione delay ON  
*Switch selecting timer function delay ON*
- ④ Switch di selezione temporizzazione delay ON  
*Switch selecting timer function delay ON*
- ⑤ LED rosso (stato uscita RX6-8-C-P-S-L-R)  
LED rosso (distanza x2 RXX-RXE)  
*Red LED (output state RX6-8-C-P-S-L-R)*  
*Red LED (distance x2 RXX-RXE)*
- ⑥ Trimmer regolazione della sensibilità (non disponibile su RXX e RXE)  
*Trimmer for sensitivity adjustment (not available for RXX and RXE)*
- ⑦ Trimmer regolazione temporizzazione (0,1-10s)  
*Trimmer for timer function adjustment (0,1-10s)*
- ⑧ Vite di fissaggio della protezione plastica regolazioni  
*Fixing screw for plastic protection of adjustments*
- ⑨ Uscita connettore M12 standard  
*M12 standard plug-in exit*
- ⑩ LED allineamento (non disponibile su RXX e RXE)  
*LED for alignment (not available on RXX and RXE)*
- ⑪ Vite di regolazione ottica  
(solo modelli a soppressione di sfondo RXX e RXE)  
*Screw for optic adjustment*  
*(available only for background suppression models RXX and RXE)*
- ⑫ Staffa di fissaggio (ST80) per sensori di tipo A  
*Fixing bracket (ST80) for sensor option A*
- ⑬ Staffa di fissaggio (ST81) per sensori di tipo B  
*Fixing bracket (ST81) for sensor option B*
- ⑭ Staffa di fissaggio (ST80) per sensori di tipo A  
Inserto plastico per il fissaggio del sensore di tipo B  
*Fixing bracket (ST80) for sensor option A*  
*Plastic insert for the sensor of type B*