



| Bestellbezeichnung<br><i>Order number</i> | Serie<br><i>Type</i> | Erfassungsbereich<br><i>Sensing range</i> | Schaltausgang<br><i>Switching output</i>     | Anschluss<br><i>Wiring</i>                                                         |
|-------------------------------------------|----------------------|-------------------------------------------|----------------------------------------------|------------------------------------------------------------------------------------|
| 3RG70 12-0AB01-PF                         | K31                  | 600cm                                     | PNP, hellerschaltend<br><i>PNP, light-on</i> | Kabel 2m, PUR, 3x0,14mm <sup>2</sup><br><i>Cabel 2m, PUR, 3x0,14mm<sup>2</sup></i> |
| 3RG70 12-0AA01-PF                         | K31                  | 600cm                                     | PNP, dunkelschaltend<br><i>PNP, dark-on</i>  | Kabel 2m, PUR, 3x0,14mm <sup>2</sup><br><i>Cabel 2m, PUR, 3x0,14mm<sup>2</sup></i> |
| 3RG70 12-0BG01-PF                         | K31                  | 600cm                                     | Sender                                       | Kabel 2m, PUR, 3x0,14mm <sup>2</sup><br><i>Cabel 2m, PUR, 3x0,14mm<sup>2</sup></i> |
| 3RG70 12-7AB01-PF                         | K31                  | 600cm                                     | PNP, hellerschaltend<br><i>PNP, light-on</i> | M8 Stecker, 3-polig<br><i>M8 connector, 3pole</i>                                  |
| 3RG70 12-7AA01-PF                         | K31                  | 600cm                                     | PNP, dunkelschaltend<br><i>PNP, dark-on</i>  | M8 Stecker, 3-polig<br><i>M8 connector, 3pole</i>                                  |
| 3RG70 12-7BG01-PF                         | K31                  | 600cm                                     | Sender                                       | M8 Stecker, 3-polig<br><i>M8 connector, 3pole</i>                                  |

|                                           |  |                                                                                      |
|-------------------------------------------|--|--------------------------------------------------------------------------------------|
| Funktion<br><i>Operating modes</i>        |  | Einweg-Lichtschranke<br><i>Thru-beam sensor</i>                                      |
| Erfassungsbereich<br><i>Sensing range</i> |  | 600cm (einstellbar mit Potentiometer)<br><i>600cm (adjustable via potentiometer)</i> |
| Lichtart<br><i>Used light</i>             |  | infrarot, 880 nm<br><i>infrared, 880nm</i>                                           |

|                                                                |                |              |
|----------------------------------------------------------------|----------------|--------------|
| Versorgungsspannung<br><i>Power supply voltage</i>             |                |              |
| Bemessungsbetriebsspannung<br><i>Rated operational voltage</i> | U <sub>e</sub> | 24 V DC      |
| Betriebsspannungsbereich<br><i>Operating voltage range</i>     | U <sub>B</sub> | 10...30 V DC |
| Zulässige Restwelligkeit<br><i>max. ripple content</i>         |                | 20%          |
| Leerlaufstrom<br><i>No-load supply current</i>                 | I <sub>o</sub> | 15 mA        |

|                                                                 |                |                                                                    |
|-----------------------------------------------------------------|----------------|--------------------------------------------------------------------|
| Ausgang<br><i>Output</i>                                        |                |                                                                    |
| Anzahl d. Schaltausgänge<br><i>Numbers of switching outputs</i> |                | 1                                                                  |
| Ausgangsart<br><i>Output type</i>                               |                | PNP, hell- oder dunkelschaltend<br><i>PNP, light-on or dark-on</i> |
| Bemessungsbetriebsstrom<br><i>Rated operational current</i>     | I <sub>e</sub> | 200 mA                                                             |
| Spannungsfall max.<br><i>Output voltage drop</i>                | U <sub>d</sub> | ≤ 2 V                                                              |

|                                                |  |         |
|------------------------------------------------|--|---------|
| Zeiten, Frequenzen<br><i>Timing, frequency</i> |  |         |
| Schaltfrequenz<br><i>Switching frequency</i>   |  | 1000 Hz |
| Schaltzeit<br><i>Switching time</i>            |  | 0,5 ms  |

|                                                              |  |                |
|--------------------------------------------------------------|--|----------------|
| Temperaturen<br><i>Temperatures</i>                          |  |                |
| Zul. Umgebungstemperatur<br><i>Ambient temperature range</i> |  | -25 ... +55 °C |
| Temperaturkoeffizient<br><i>Temperature coefficient</i>      |  | 0,3 %/K        |





| Mechanische Schutzmaßnahmen/<br><i>Mechanical protections</i> |  |                                                                                                                            |
|---------------------------------------------------------------|--|----------------------------------------------------------------------------------------------------------------------------|
| Schutzart<br><i>Degree of protection</i>                      |  | IP65                                                                                                                       |
| Schockbeanspruchung<br><i>Shock</i>                           |  | 30g/11ms; 3 Achsen nach EN60947-5-7<br><i>30g/11ms; 3 axis accord.to EN60947-5-7</i>                                       |
| Vibrationsbeanspruchung<br><i>Vibrations</i>                  |  | 10...55Hz / 1,5mm Amplitude; 3 Achsen nach EN60947-5-2<br><i>10...55Hz / 1,5mm Amplitude; 3 axis accord.to EN60947-5-2</i> |

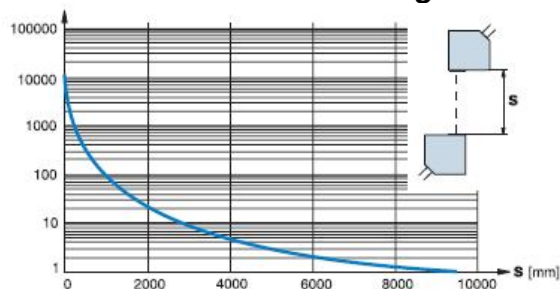
| Elektrische Schutzmaßnahmen/<br><i>Electrical protection, EMV</i> |  |                                                                                           |
|-------------------------------------------------------------------|--|-------------------------------------------------------------------------------------------|
| Verpolungsschutz<br><i>Reverse voltage protection</i>             |  | Eingebaut<br><i>Built in</i>                                                              |
| Kurzschluss-Schutz<br><i>Short circuit protection</i>             |  | Eingebaut<br><i>Built in</i>                                                              |
| Drahtbruchsicherheit<br><i>Wire break protection</i>              |  | Eingebaut<br><i>Built in</i>                                                              |
| Induktionsschutz<br><i>Inductive over voltage</i>                 |  | Eingebaut<br><i>Built in</i>                                                              |
| Einschaltfehlimpuls<br><i>Switch-on pulse</i>                     |  | Eingebaut<br><i>Built in</i>                                                              |
| IEC 61000-4-2<br>ESD (kV)                                         |  | +/- 8 kV Luft; +/- 4kV direkt<br><i>+/- 8 kV air; +/- 4kV direct</i>                      |
| IEC 61000-4-3<br>gestrahltes HF Feld (V/m)                        |  | 3 V/m                                                                                     |
| IEC 61000-4-4<br>Burst (kV)                                       |  | ± 2kV                                                                                     |
| Fremdlichtgrenze/<br><i>Ambient light</i>                         |  | 5000 Lux Halogen / 10000 Lux Sonnenlicht<br><i>5000 lux halogen / 10000 lux sun light</i> |

| Anzeigen /<br><i>Indicators</i>                    |  |                               |
|----------------------------------------------------|--|-------------------------------|
| Betriebsspannung/<br><i>Operating voltage</i>      |  | -                             |
| Schaltzustand/<br><i>Output signal</i>             |  | LED gelb<br><i>LED yellow</i> |
| Funktionsreserve/<br><i>Surplus light function</i> |  | LED grün<br><i>LED green</i>  |

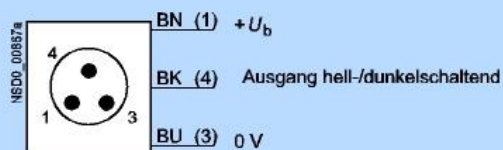
| Konstruktive Merkmale /<br><i>Design characteristics</i> |  |                                                                     |
|----------------------------------------------------------|--|---------------------------------------------------------------------|
| Max. zul. Leitungslänge/<br><i>Max. cable length</i>     |  | 300 m                                                               |
| Anschlussart/<br><i>Type of connection</i>               |  | Kabel oder Stecker, M8<br><i>Cable or M8 connector</i>              |
| Gehäusematerial/<br><i>Housing material</i>              |  | Kunststoff (PBTP, Crastin)<br><i>Molded plastic (PBTP, Crastin)</i> |
| Baugröße<br><i>Housing size</i>                          |  | BxHxT 15x30x30 mm<br><i>WxHxD 15x30x30 mm</i>                       |
| Gewicht /<br><i>Weight</i>                               |  | 6RG70 12-0 : 75 g<br>6RG70 12-7 : 17 g                              |



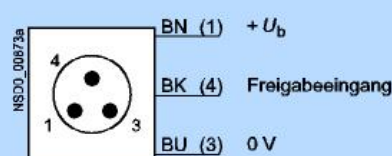
## Funktionsreserve / Excess-gain indication



## Anschluss / Wiring

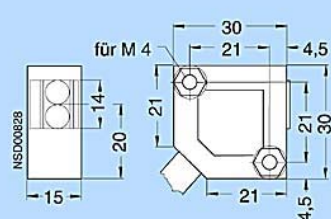


hell- oder dunkelschaltend  
light-on or dark-on

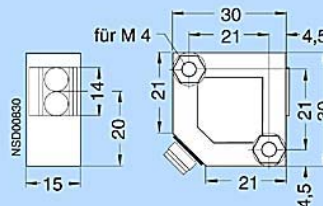


Sender  
Emitter

## Maßzeichnung / Dimensional drawing



3RG70 12-0...-PF



3RG70 12-7...-PF

## Kennlinie / Characteristic curve

