



# Small

## 95B000050

**SM-PR-2-D20-NN**

**COMPLETE LINE OF AMPLIFIED SUBMINIATURE  
PHOTOELECTRIC SENSORS**

## OVERVIEW

- 15 mm, 20 mm, 30 mm and 50 mm fixed focus proximity
- 1,5 m retroreflective and 1 m polarized retroreflective
- 2 m through beam models
- Amplified NPN or PNP output with NO-NC output

## TECHNICAL FEATURES

### Detection properties

|                          |      |
|--------------------------|------|
| Nominal sensing distance | 30mm |
|--------------------------|------|

|                        |     |
|------------------------|-----|
| Sensitivity adjustment | n/a |
|------------------------|-----|

### Application

|                    |                |
|--------------------|----------------|
| Function Principle | Fix focus beam |
|--------------------|----------------|

|             |                        |
|-------------|------------------------|
| Description | Subminiature slim case |
|-------------|------------------------|

|                |            |
|----------------|------------|
| Optic position | Radial 90° |
|----------------|------------|

|           |                |
|-----------|----------------|
| Functions | Fix focus beam |
|-----------|----------------|

## Outputs

|             |           |
|-------------|-----------|
| Output type | NPN NO+NC |
|-------------|-----------|

|                 |       |
|-----------------|-------|
| Output Function | NO+NC |
|-----------------|-------|

|                     |       |
|---------------------|-------|
| Switching frequency | 590Hz |
|---------------------|-------|

|               |       |
|---------------|-------|
| Response time | 0,7ms |
|---------------|-------|

## Electrical data

|                   |            |
|-------------------|------------|
| Operating Voltage | 10...30VDC |
|-------------------|------------|

|                        |                    |
|------------------------|--------------------|
| No-Load supply current | $\leq 20\text{mA}$ |
|------------------------|--------------------|

|              |                    |
|--------------|--------------------|
| Load current | $\leq 50\text{mA}$ |
|--------------|--------------------|

|                     |                                                 |
|---------------------|-------------------------------------------------|
| Output voltage drop | $\leq 1,25\text{V}@I_{\text{load}}=50\text{mA}$ |
|---------------------|-------------------------------------------------|

|                |                        |
|----------------|------------------------|
| LED indicators | Yellow (output status) |
|----------------|------------------------|

|                          |     |
|--------------------------|-----|
| Short-circuit protection | YES |
|--------------------------|-----|

|                             |     |
|-----------------------------|-----|
| Reverse Polarity Protection | Yes |
|-----------------------------|-----|

|          |                 |
|----------|-----------------|
| Emission | LED Red (640nm) |
|----------|-----------------|

|                                |                                  |
|--------------------------------|----------------------------------|
| Interference to external light | according to EN 60947-5-2 : 2020 |
|--------------------------------|----------------------------------|

|                                  |     |
|----------------------------------|-----|
| Impulsive Overvoltage Protection | Yes |
|----------------------------------|-----|

|                       |                                                               |
|-----------------------|---------------------------------------------------------------|
| Insulation resistance | $>20\text{ M}\Omega$ 500 Vdc, between electronics and housing |
|-----------------------|---------------------------------------------------------------|

|                    |                                                 |
|--------------------|-------------------------------------------------|
| Contact resistance | 500 Vac 1 min., between electronics and housing |
|--------------------|-------------------------------------------------|

## Mechanical data

|            |         |
|------------|---------|
| Dimensions | 8x23x12 |
|------------|---------|

|          |  |
|----------|--|
| Material |  |
|----------|--|

|                  |                   |
|------------------|-------------------|
| Housing material | Plastic PC / PMMA |
|------------------|-------------------|

|             |          |
|-------------|----------|
| Connections | 2m cable |
|-------------|----------|

|                      |      |
|----------------------|------|
| Active Head Material | PMMA |
|----------------------|------|

|                     |                |
|---------------------|----------------|
| Storage temperature | - 35°C...+75°C |
|---------------------|----------------|

|                    |       |
|--------------------|-------|
| Diameter/Dimension | Cubic |
|--------------------|-------|

## Test/Approvals

|           |          |
|-----------|----------|
| Approvals | CE cULus |
|-----------|----------|

|                       |                                                                        |
|-----------------------|------------------------------------------------------------------------|
| Shocks and vibrations | 0.5 mm amplitude, 10 ... 55 Hz frequency, for every axis (EN60068-2-6) |
|-----------------------|------------------------------------------------------------------------|

## Generical Data

|            |         |
|------------|---------|
| Dimensions | 8x23x12 |
|------------|---------|

|                       |                 |
|-----------------------|-----------------|
| Operating Temperature | - 20°C...+ 55°C |
|-----------------------|-----------------|

|                       |      |
|-----------------------|------|
| Mechanical Protection | IP67 |
|-----------------------|------|

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