



TLU

954151410

TL μ -411C

ALL REGISTRATION MARK DETECTION APPLICATIONS

OVERVIEW

- Teach-in, Remote settings
- Red/green or white LED emission
- Various interchangeable lenses and fiber-optic models
- Metal housing with orientable optics and connector

TECHNICAL FEATURES

Detection properties

| | |
|--------------------------|----------|
| Nominal sensing distance | 9mm |
| Spot dimension | Ø 3 mm |
| Sensitivity adjustment | Teach-in |

Application

| | |
|--------------------|-------------------------------|
| Function Principle | Contrast mark detection |
| Description | Standard case - circular spot |
| Optic position | axial |

| | |
|-----------|-------------------------|
| Functions | Contrast mark detection |
|-----------|-------------------------|

Outputs

| | |
|-------------|--------------------|
| Output type | NPN L/D Selectable |
|-------------|--------------------|

| | |
|-----------------|----------------|
| Output Function | L/D Selectable |
|-----------------|----------------|

| | |
|---------------|----------------|
| Response time | 0,025 (20 kHz) |
|---------------|----------------|

Electrical data

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

| | |
|------------------------|--------------------|
| No-Load supply current | $\leq 80\text{mA}$ |
|------------------------|--------------------|

| | |
|---------------------|------------------|
| Output voltage drop | $\leq 1\text{V}$ |
|---------------------|------------------|

| | |
|----------------|-----------------------|
| LED indicators | red OUTPUT greenREADY |
|----------------|-----------------------|

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

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

| | |
|----------|-----------|
| Emission | LED White |
|----------|-----------|

| | |
|--------------------------------|----------------------------------|
| 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 | 31x58x82 |
| Housing Material | Metal - Zamak |
| Connections | 2m cable |
| Active Head Material | Glass |
| Storage temperature | - 20°C...+70°C |
| Material | |
| 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 | 31x58x82 |
| Operating Temperature | -10°C ... 55°C |
| Mechanical Protection | IP67 |

Datasensing S.r.l.

Strada S.Caterina, 235
41122 Modena (MO)
Tel. 059 420411
Fax 059 253973
E-mail
info@datasensing.com

**date of
printing**
10/04/2026
17:26:38