

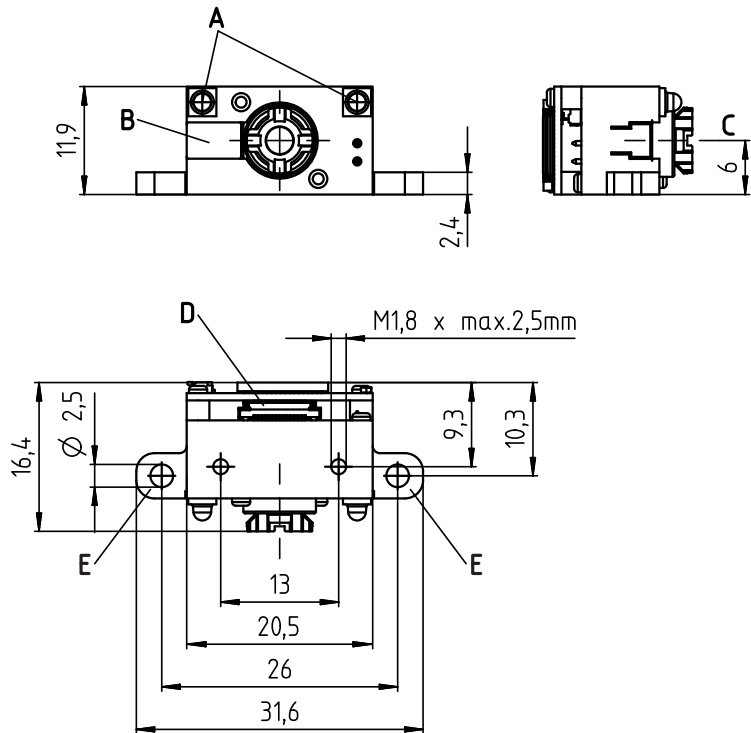
DCR40

CMOS Imager Scan Engine with Integrated Decoder

en 01-2017/03 50136732



Dimensioned drawing



- A** 2 integrated LEDs for illumination (red light)
- B** 1 integrated target LED (blue light)
- C** Center of optical axis
- D** Connector HIROSE (FH33-125-0.5SH(10)), 12-pin
- E** Mounting tabs (optional)

Electrical connection

HIROSE FH33-125-0.5SH(10), 12-pin

| Pin No. | Signal | IN / OUT |
|---------|------------------------------|----------|
| 1 | POLARITY RS232 ¹⁾ | IN |
| 2 | VCC / +3.3VDC | IN |
| 3 | GROUND | IN |
| 4 | RS232 RxD | IN |
| 5 | RS232 TxD | OUT |
| 6 | CTS | IN |
| 7 | RTS | OUT |
| 8 | POWER DOWN ¹⁾ | OUT |
| 9 | BEEPER | OUT |
| 10 | GOOD READ | OUT |
| 11 | WAKE UP ¹⁾ | IN |
| 12 | TRIGGER | IN |

1) see Remarks

30 ... 425mm

3.3 V
DC

RS 232

BARCODE

2D-CODE

- CMOS imager scan engine for all common 1D and 2D codes
- Excellent reading and decoding features
- Very small construction
- Integrated decoder
- RS232 interfaces
- Operating temperature 0°C ...+50°C



Accessories:

(available separately)

- MA-CR Modular adapter unit
- DCR40 Interface Kit for use with MA-CR.
Kit includes:
 - 12-pin / 6-pin Adapter cable
 - DCR 40 Interface board
 - Ribbon cable

We reserve the right to make changes • DS_DCR40_en_50136732.fm

Specifications

Optical data

| | |
|---------------------------------|---|
| Optical system | CMOS Imager, Rolling Shutter (1280x960) |
| Read range | 30 ... 425mm |
| Resolution | 1D codes: m = 0.190mm (7.5mil), distance dependent 2D codes: m = 0.127 mm (5mil), distance dependent |
| Light source illumination | integrated LED (visible red light) |
| Light source target LED (aimer) | integrated LED (visible blue light) |
| Contrast | 15% minimum |

Code specifications

| | |
|------------|--|
| Code types | 1D: BC412, Codabar, Code 11, Code 32, Code 39, Code 93, Code 128, IATA 2 of 5, Interleaved 2 of 5, GS1 DataBar, Hong Kong 2 of 5, Matrix 2 of 5, MSI Plessey, NEC 2 of 5, Pharmacode, Plessey, Straight 2 of 5, Telepen, Trioptic, UPC/EAN/JAN |
| | Stacked 1D: Codablock F, Code 49, GS1 Composite (CC-A/CC-B/CC-C), MicroPDF, PDF417 |
| | 2D: Aztec Code, Data Matrix, Han Xin, Micro QR Code, QR Code |
| | Postal Codes: Australian Post, Canada Post, Intelligent Mail, Japan Post, KIX Code, Korea Post, Planet, Postnet, UK Royal Mail, UPU ID-tags |

Electrical data

| | |
|-------------------------|------------|
| Operating voltage U_B | 3.3VDC |
| Current consumption | max. 450mA |

Interfaces

| | |
|--------------------|--|
| Interface type | RS232 |
| Baud rate RS232 | 9,600 ... 115,200Bd, configurable |
| Data formats RS232 | configurable |
| Switching outputs | NPN transistor outputs, max. 20mA, active low (successful reading, beeper, power down) |
| Switching inputs | active/not active = 0V/+5V or not connected (trigger, wake-up) |

Mechanical data

| | |
|--------------------|--|
| Weight | 5g |
| Dimensions (HxWxD) | 11.90x31.60x16.46mm |
| Mounting Tabs | Ø 2.5mm through-hole (optional, see order guide) |
| Fastening | 4 M1.8 screws, 2mm deep |
| Connection type | HIROSE FH33-125-0.5SH(10), 12-pin |

Environmental data

| | |
|-------------------------------|--|
| Temperature range (operation) | 0°C ... +50°C |
| Ambient temperature (storage) | -20°C ... +60°C |
| Air humidity | 10 ... 90% rel. humidity, non-condensing |
| Ambient light | max. 100,000 lux |
| Standards conformity | CE, RoHS, FCC, EN 55022:2006 Class B, IEC 62471:2006 |

Read ranges

| Code type / resolution m | Typical reading distance [mm] ([inch]) | |
|---------------------------------|--|------------|
| Code 39 / 0.190mm (7.5mil) | 50 (2.0) | 245 (9.6) |
| GS1 Databar / 0.267mm (10.5mil) | 35 (1.4) | 225 (8.9) |
| UPC / 0.330mm (13mil) | 40 (1.5) | 370 (14.6) |
| PDF417 / 0.147mm (5.8mil) | 85 (3.3) | 155 (6.1) |
| PDF417 / 0.170mm (6.7mil) | 65 (2.6) | 175 (6.9) |
| Data Matrix / 0.127mm (5mil) | 75 (3.0) | 90 (3.5) |
| Data Matrix / 0.160mm (6.3mil) | 70 (2.8) | 135 (5.3) |
| Data Matrix / 0.254mm (10mil) | 50 (2.0) | 205 (8.1) |
| Data Matrix / 0.528mm (20.8mil) | 30 (1.2) | 425 (16.7) |

Order guide

| Product Name | Description | Part no. |
|----------------|--|----------|
| DCR40M2/R2 | CMOS imager scan engine for 1D and 2D codes, RS232 interface, HIROSE FH33-125-0.5SH(10), 12-pin | 50134999 |
| DCR40M2/R2-MTX | CMOS imager scan engine for 1D and 2D codes, RS232 interface, HIROSE FH33-125-0.5SH(10), 12-pin, without mounting tabs | 50136738 |
| MA-CR | Modular adapter unit to interface device to host | 50128204 |
| DCR40-IFK | DCR40 Interface Kit for use with MA-CR. Kit includes: 12-pin / 6-pin Adapter cable, DCR 40 Interface board, Ribbon cable | 50136748 |

Remarks

Operate in accordance with intended use!

- ⚠ This product is not a safety sensor and is not intended as personnel protection.
- ⚠ The product may only be put into operation by competent persons.
- ⚠ Only use the product in accordance with the intended use.

● Features

Very small and light scan engine with integrated decoder for all common 1D and 2D codes.
Data transmission via configurable RS232 interface.

● RS232 polarity control

When unconnected, all RS232 signals have their normal polarity.
When connected to **GND**, all RS232 signals have **inverted polarity**.
Do not tie high!

● Power down / Wake-up

Sleep state is indicated by the output **POWER DOWN**.
To bring the unit out of sleep state, connect input **WAKE UP** to GND.