



NLS-FM550

FIXED MOUNT BARCODE SCANNER

The NLS-FM550 products are 2D barcode scanners for medical applications, mainly integrated into testing instruments in laboratories, hospitals and assembly lines. It delivers fast and reliable reading of printed barcodes on short-distance test tubes or reagent bottles.

FEATURES

- **Specialized Algorithm**
Optimized decoding algorithm for the medical industry.
Minimize reading errors with high decoding accuracy.
- **Ultra-Compact Design**
This miniature barcode scanner is easily integrated into the IVD device.
- **IP65-Sealed Housing**
The metal housing is sealed to an IP65 rating, durable and secure.
- **Wide Viewing Angle**
Wide scan range for near-field reading.
- **Dual Laser Aiming**
Dual laser aiming helps to position the device location during installation, easy and convenient.
- **Fast Data Transmission**
It supports transmitting data at a quick speed to the host via the USB interface.
- **Image Processing**
Able to transmit images in the specific area in different formats.



1D Barcode



2D Barcode



RS232



IVD



IP sealing



USB

NLS-FM550

Performance

| | | |
|----------------------|---------------------|--|
| Image Sensor | | 800*1280 CMOS |
| Illumination | | 3000K white LED |
| Aiming | | 650nm red laser aiming LEDs*2 |
| Field of View | | Horizontal 52 °, Vertical 76.5 ° |
| Beam Exit | | Scan window with lateral beam exit |
| Depth of Field | Code 39 (6.67mil) | 45-85mm |
| | Code 128 (5mil) | 30-80mm |
| | Code 128 (10mil) | 35-130mm |
| | QR (15mil) | 15-165mm |
| | Data Matrix (10mil) | 20-120 |
| Resolution | | ≥5mil |
| Symbologies | 1D | Code 128, EAN-8, EAN-13, UPC-E, UPC-A, Interleaved 2/5, Code 39, Codabar, Code 93, UCC/EAN-128 |
| | 2D | PDF417, QR Code, Aztec, Data Matrix |
| Min. Symbol Contrast | | 50% |

Physical

| | | |
|-------------------|------------------------|--|
| Operating Voltage | | 5VDC±5% |
| Current | Operating | 141.35mA RMS (typical) 397.54mA (max.) |
| Interface | | RS-232, USB |
| Housing | | Aluminium |
| Dimensions | | 54(W)×27.5(D)×25.5(H)mm (max.) (without cable) |
| Weight | | 107g |
| Cable | USB-A | 1.5m |
| | 9-pin connection cable | 2m |

Environmental

| | |
|-----------------------|-----------------------------------|
| Operating Temperature | 0 °C to 50 °C (32 °F to 122 °F) |
| Storage Temperature | -20 °C to 70 °C (-4 °F to 158 °F) |
| Humidity | 5% to 95% (non-condensing) |
| Sealing | IP65 |
| Ambient Light | ≤5000lux |

Certificates

| | |
|---------------------------|-------------------------------|
| Certificates & Protection | CE/FCC |
| | IEC62471: 2006 for LED safety |
| | 60825-1:2014 for laser safety |
| | RoHS 2.0 |

Specifications are subject to change without notice.

Version: V1.0

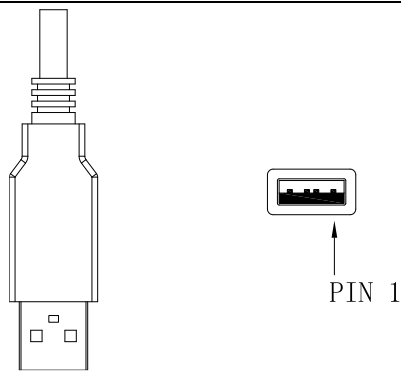
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The following table lists the pin functions of the USB interface.

| PIN# | Signal | I/O | Function |
|------|--------|-----|---------------------------------|
| 1 | VCC | P | 5V power supply input |
| 2 | USB_D- | A | USB D- differential data signal |
| 3 | USB_D+ | A | USB D+ differential data signal |
| 4 | GND | P | Power-supply ground |

Interface

Pinouts

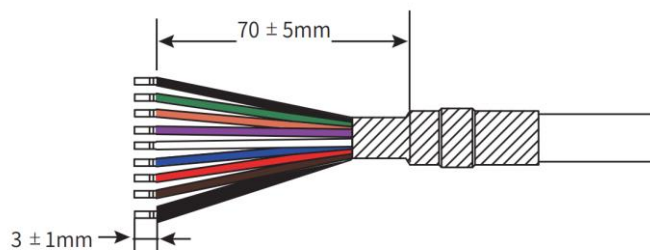


The following table lists the pin functions of the 9-pin connection cable.

| Wire Color | Signal | I/O | Function |
|---------------|----------|-----|---------------------------------|
| Red | VCC | P | 5V power supply |
| Green | RS232_TX | O | RS-232 output |
| White | RS232_RX | I | RS-232 input |
| Purple | GND | P | Power-supply ground |
| Black | SW OUT | O | IO output |
| Orange | SW IN | I | IO input |
| Brown | USB_D- | I/O | USB D- differential data signal |
| Blue | USB_D+ | I/O | USB D+ differential data signal |
| Black (thick) | FE | P | Shield |

Interface

Pinouts



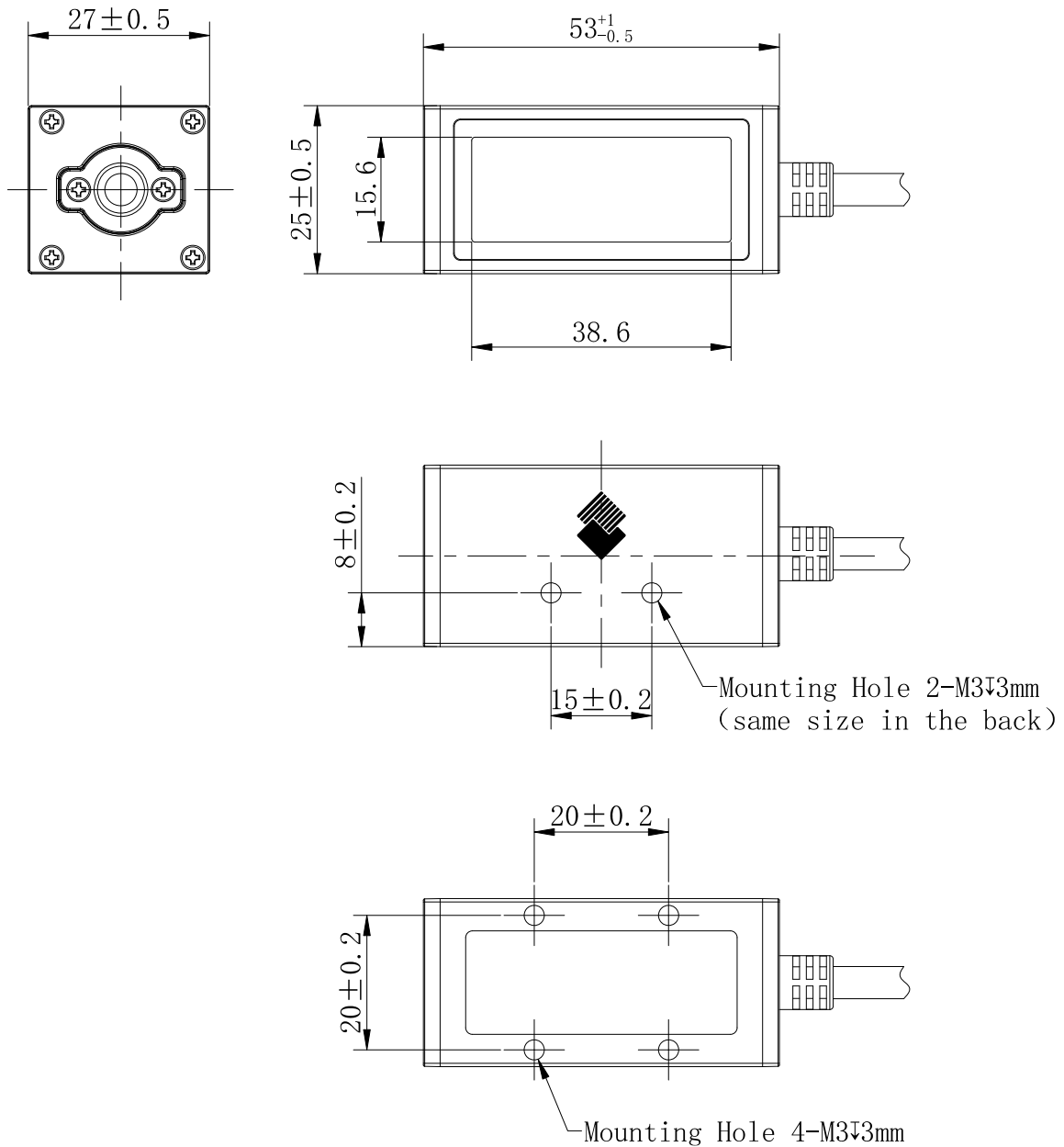
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Mechanical

Mounting

Dimensions

(unit: mm)



Dimensions: 54(W) \times 27.5(D) \times 25.5(H)mm (max.) (without cable)

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Version: V1.0

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