



NLS-FM515-V



NLS-FM515-H

NLS-FM515 SERIES

FIXED MOUNT BARCODE SCANNER

The NLS-FM515 series products are 1D linear barcode scanners for medical applications, mainly integrated into testing instruments in laboratories, hospitals and assembly lines. It delivers fast and reliable reading of 1D printed barcodes on long-distance test tubes or reagent bottles. The NLS-FM515 series includes NLS-FM515-V (lateral beam exit) and NLS-FM515-H (front beam exit), distinguished by the direction of the beam exit.

The NLS-FM515 series are mainly applied in IVD instruments, such as a rotating tube, double-circle turntables and multi-row tube holders.

FEATURES

- **Ultra-High Scan Speed and Motion Tolerance**
780 scans per second.
Suitable for IVD instruments fast putting in and high speed turntables.
- **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 stand-alone equipment.
- **IP54-Sealed Housing**
The metal housing is sealed to an IP54 rating, durable and secure.
- **Far-Field Reading**
Excellent far-field reading enables long-distance scanning up to four to eight rows or double-circle turntable.
- **Wide Viewing Angle**
Wide scan range for near-field reading.
- **Wide Voltage Input**
Support voltage ranges from 5 to 24VDC.



1D Barcode



RS232



IVD



IP sealing

NLS-FM515 Series

Performance

Image Sensor		2500 CCD
Illumination		615nm red LED
Field of View		68°
Beam Exit	FM515-V	Scan window with lateral beam exit
	FM515-H	Scan window with front beam exit
Scan Speed		780 scans/s
Depth of Field ¹	FM515-V	25-180mm
	FM515-H	35-190mm
Resolution		≥6mil
Symbologies	ID	Codabar, Code 128, EAN-13 Addendum, Code 39, Code 93, GSI-128 (UCC/EAN 128), EAN-8, EAN-13, UPC-A, UPC-E, Interleaved 2/5
Min. Symbol Contrast		25%

Physical

Operating Voltage		5-24VDC±5%
Rated Power Consumption		< 3W
Current@5VDC	Operating	292mA RMS (typical) 850mA (max.)
Current@24VDC		66mA RMS (typical) 250mA (max.)
Interface		RS-232
Notification		Status indicator
Housing		Aluminium
Dimensions	FM515-V	62.5(W)×57(D)×21.5(H)mm (max.)
	FM515-H	62.5(W)×50.5(D)×21.5(H)mm (max.)
Weight		166g

Environmental

Operating Temperature	0°C to 50°C (32°F to 122°F)
Storage Temperature	-40°C to 70°C (-40°F to 158°F)
Humidity	5% to 95% (non-condensing)
Sealing	IP54
Ambient Light	≤5000lux

Certificates

Certificates & Protection	CE/FCC/UL IEC62471: 2006 for LED safety RoHS 2.0
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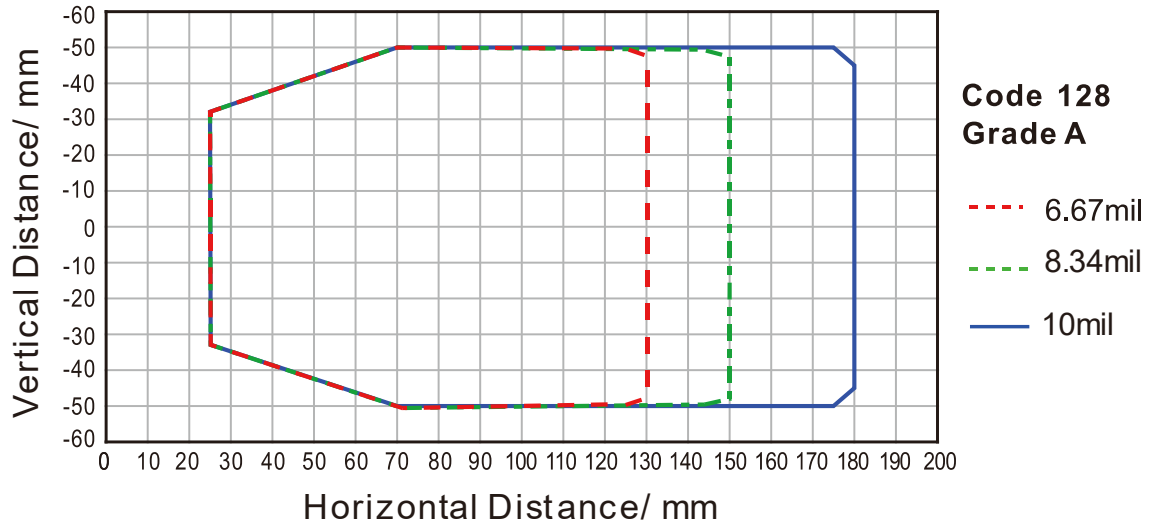
¹ For depth of field based on resolutions, please refer to [Scanning Range](#).

Specifications are subject to change without notice.

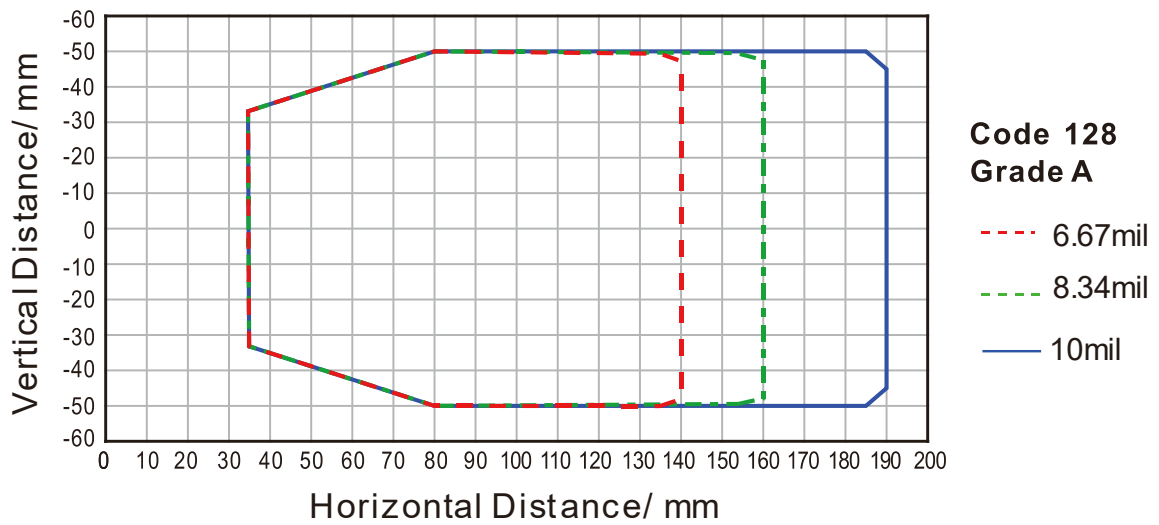
Version: V1.1

NLS-FM515 Series

NLS-FM515-V Scanning Range



NLS-FM515-H Scanning Range



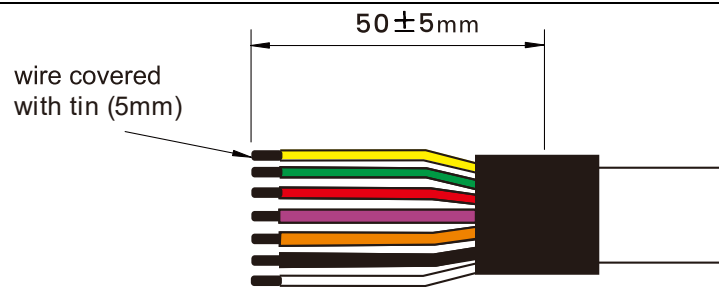
NLS-FM515 Series

The following table lists the interface pinouts.

Wire Color	Signal	I/O	Function
Red	5-24VDC	Power supply	Power supply
Orange	SW IN	I	Control signal input
Purple	GND	-	Power supply ground
Black	SW OUT	O	Control signal output
White	RS-232 RXD	I	RS level 232 receive data
Green	RS-232 TXD	O	RS level 232 transmit data
Yellow	FE/Shield	-	Shield

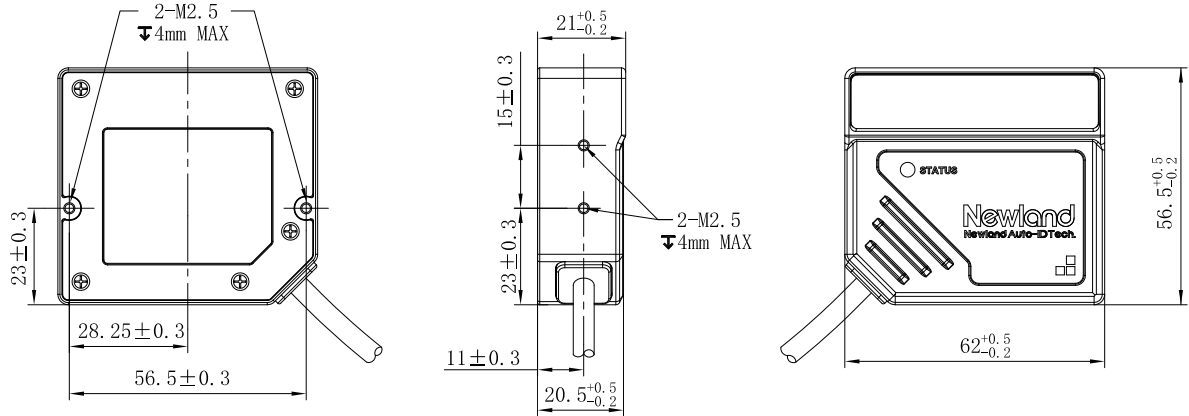
Interface

Pinouts

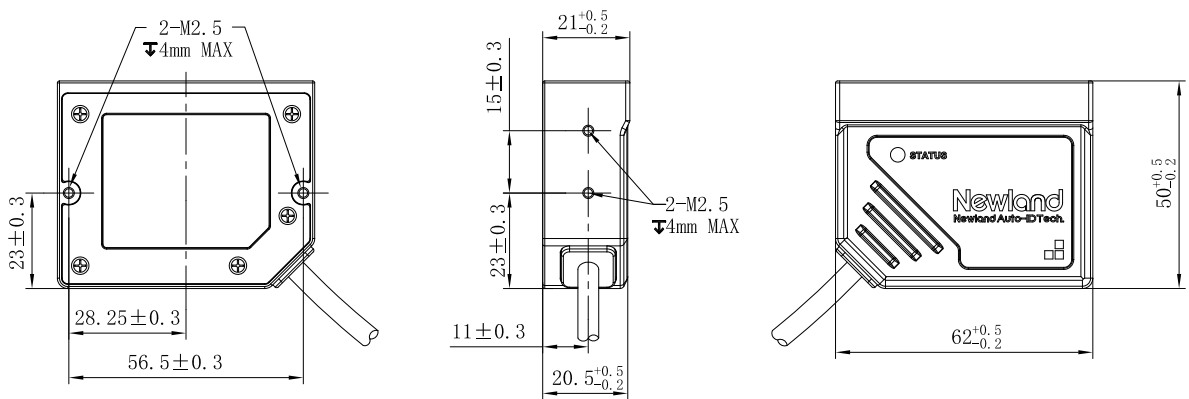


NLS-FM515 Series

**Mechanical
Mounting
Dimensions
(unit: mm)**



Dimensions: 62.5(W)×57(D)×21.5(H)mm (max) (FM515-V)



Dimensions: 62.5(W)×50.5(D)×21.5(H)mm (max) (FM515-H)

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Version: V1.1

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