Newland AIDC
Scanning Made Simple

NLS-FM530 SERIES

FIXED MOUNT BARCODE SCANNER

The NLS-FM530 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 printed barcodes on ultra-long distance test tubes or reagent bottles.

The NLS-FM530 series includes NLS-FM530 and NLS-FM530 PRO. Main differences between them are depth of field and supported symbologies.

FEATURES

○ **Ultra-high Scan Speed and Motion Tolerance**
780 scans per second.
Suitable for IVD instruments fast putting in.

○ **Far-Field Reading**
Excellent far-field reading enables long-distance scanning up to 10 to 15 rows.

○ **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.

○ **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.

○ **Laser Aiming**
Crosshair laser aiming helps to position the device location during installation, easy and convenient.

○ **Wide Voltage Input**
Support voltage ranges from 9 to 30VDC.

○ **Ease of Maintenance**
With USB OTG interface, it is convenient for upgrading without disassembling the device.

| 1D Barcode | CCD | RS232 | IVD | IP sealing | Laser Aimer |

NLS-FM530 Series

Performance

Image Sensor		2500 CCD
Illumination		Red LED (615nm)
Aiming		Green crosshair laser aiming (515nm)
Beam Exit		Scan window with lateral beam exit
Scan Speed		780 scans/sec
Depth of Field*	FM530	30-320mm
	FM530 PRO	30-350mm
Resolution	FM530	≥8mil
	FM530 PRO	≥6mil
Symbologies	1D	Codabar, Code 128, Code 39, Code 93, GS1-128 (UCC/EAN 128), EAN-8, EAN-13, UPC-A, UPC-E, Interleaved 2/5
Min. Symbol Contrast		25%

Physical

Operating Voltage		9~30VDC±5%
Rated Power Consumption		9W
Current @24VDC**	FM530	156mA RMS (typical) 375mA (max.)
	FM530 PRO	170mA RMS (typical) 375mA (max.)
Communication Interface		RS-232
Debugging Interface		USB OTG
Notification		LED indicator, beeper
Housing		Metal
Dimensions		90(W)×110(D)×29.8(H)mm (max.)
Weight		500g

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	IP65
Ambient Light	≤5000lux

Certificates

Certificates & Protection		CE/FCC
	LED Safety	EN 62471: 2008
	Laser Safety	EN 60825-1:2014+ A11: 2021
		EN 50689:2021
		IP65/ RoHS 2.0

*Depth of Field: T=23℃; Illumination=300lux using incandescent lamp; Sample barcodes made by Newland.
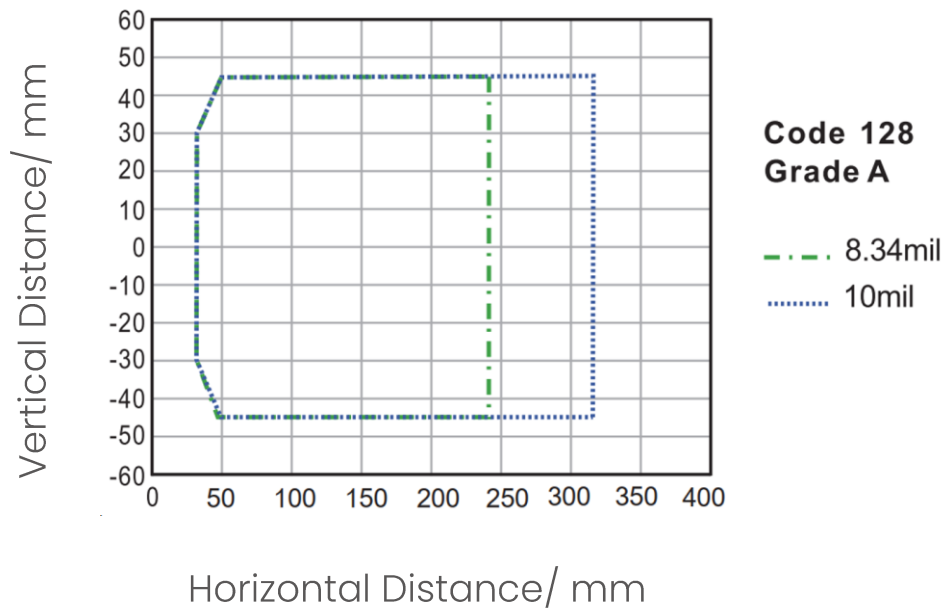
**Operating Current: Scan Distance=(min. DOF + max. DOF)/2.

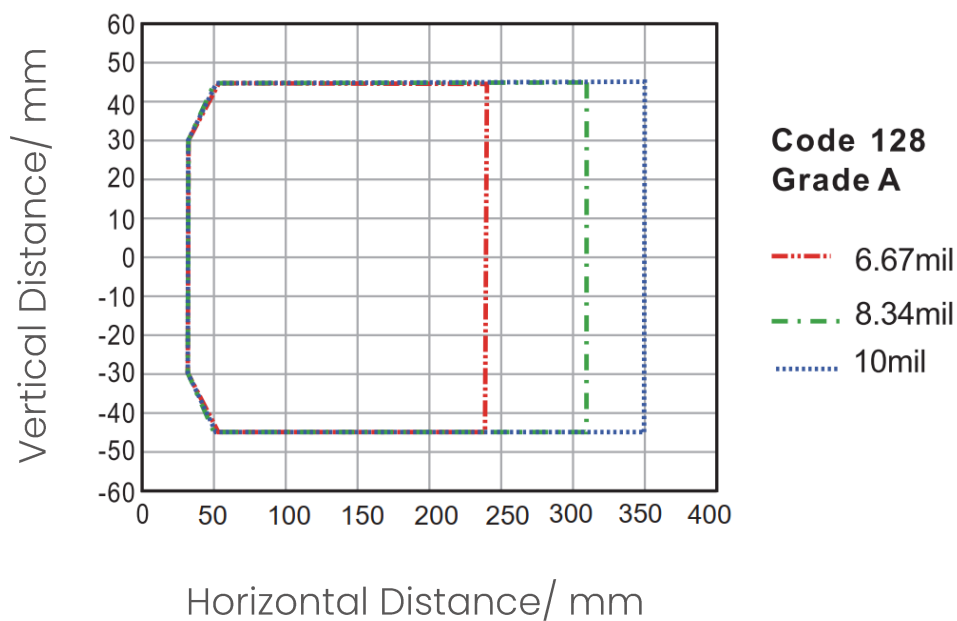Specifications are subject to change without notice.   Version: V1.0
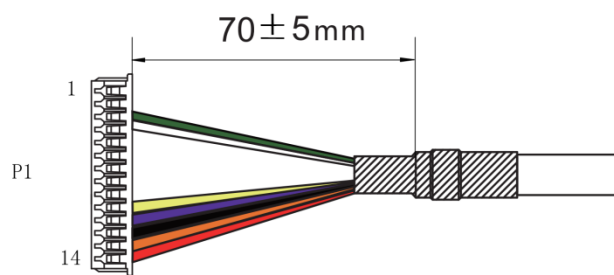
NLS-FM530 Series

NLS-FM530 Scanning Range

**Code 128
Grade A**

- — ⋅ — ⋅ — 8.34mil
- ·········· 10mil

Horizontal Distance/ mm

NLS-FM530 PRO Scanning Range

**Code 128
Grade A**

- — ⋅ — ⋅ — 6.67mil
- — ⋅ — ⋅ — 8.34mil
- ·········· 10mil

Horizontal Distance/ mm

NLS-FM530 Series

The following table lists the pin functions of the 7-pin connection cable.

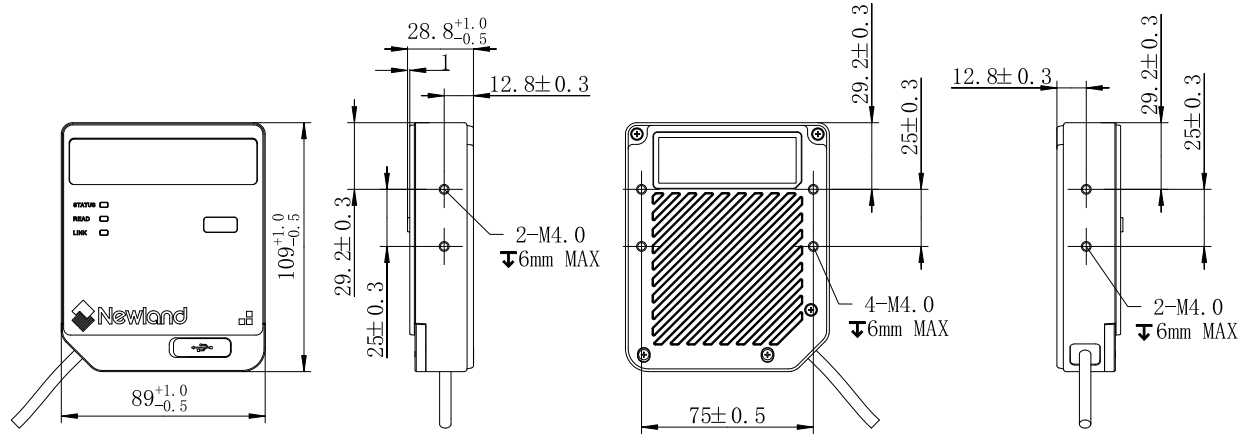| Wire Color	Signal	I/O	Function
Red	DC IN	P	Power supply
Orange	SW IN	I	Switch input
Purple	GND	P	Power-supply ground
Black	SW OUT	O	Switch output
White	RS-232 RXD	I	RS-232 input
Green	RS-232 TXD	O	RS-232 output
Yellow	FE/ Shield	-	Shield

Interface

Pinouts

NLS-FM530 Series

Mechanical
Mounting
Dimensions
(unit: mm)

Dimensions: 90(W)×110(D)×29.8(H)mm (max.)