

NTF-60DP

Industrial Fixed Mount DPM Barcode Scanner



A compact, zinc-alloy scanner for industrial integration. The 1.3 megapixel CMOS sensor reads 1D and 2D barcodes, including challenging direct part marks and printed codes affected by low contrast, contamination or distortion.

Model: NTF-60DP
 Housing protection: IP65
 Interfaces: USB HID / CDC or RS232

Scanning Performance	Specification
Image sensor	1.3 megapixel CMOS; 1280 pixels (H) x 1080 pixels (V)
Field of view	Horizontal 35°; vertical 30°
Illumination	White and red light
Aiming	Laser crosshair
Reading modes	Automatic sensing, continuous scanning and external-trigger pulse mode; external triggering requires the corresponding cable or control-box configuration.
1D symbologies	UPC-A, UPC-E, EAN-8, EAN-13, Code 128, Code 39, Code 93, Codabar, ITF-25
2D symbologies	Data Matrix, QR Code, Micro QR, Aztec, MaxiCode
Minimum element resolution	1D: ≥ 3 mil; 2D: ≥ 5 mil, as stated in the English specification.
Minimum print contrast	Greater than 15% (UPC/EAN 100%)

DPM applications

Supports etched, inkjet-printed, engraved, perforated, laser-marked and micro codes. Actual performance depends on mark quality, surface finish, lighting and installation geometry.

External trigger and I/O functions depend on the selected cable or optional control box. They are not included in direct USB or direct RS232 configurations.

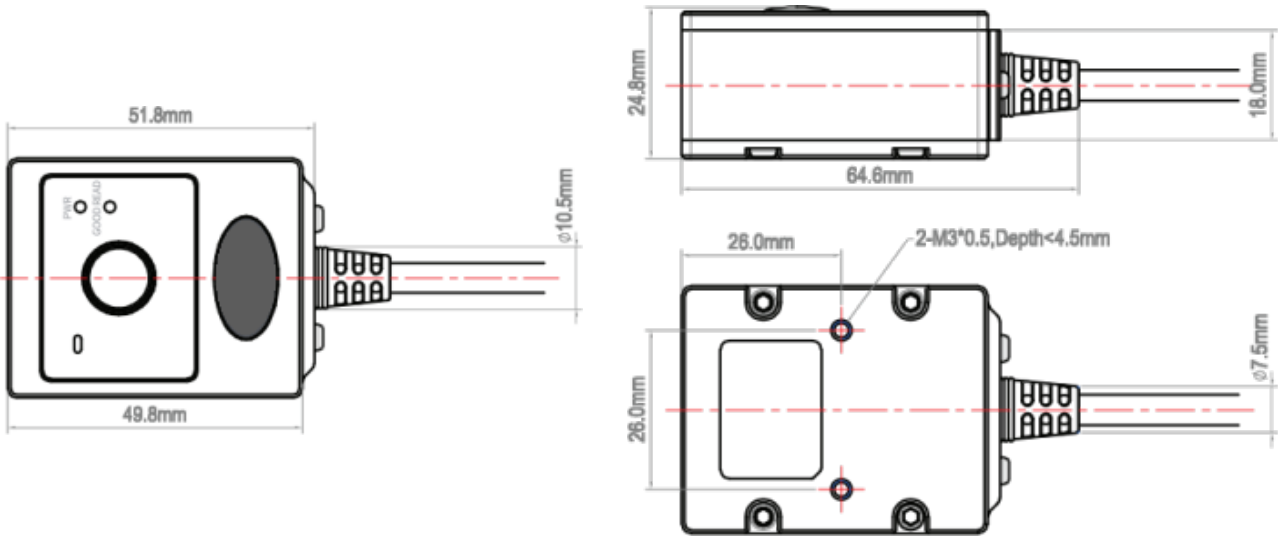
Mechanical Electrical and Environmental

Mechanical and Electrical	Specification
Dimensions	51.8 (W) x 40.4 (D) x 24.8 (H) mm; see the mechanical drawing.
Weight	Approximately 150 g, excluding cable
Housing	Zinc alloy
Interfaces	USB HID / CDC or RS232, depending on the selected configuration
Supply voltage	Direct connection: 5 VDC. Optional control box: 5-24 VDC.
Operating current at 5 VDC	300 mA $\pm$ 5% typical; 450 mA $\pm$ 5% maximum
Standby current at 5 VDC	100 mA $\pm$ 5%
User feedback	Buzzer and LED indicator
Optional external I/O	1 opto-isolated trigger input and 1 Good-read output. Input compatibility and signal switching must be confirmed for the supplied cable/control box; a separate NG output is not specified consistently.

Environmental	Specification
Ingress protection	IP65
Operating temperature	-10°C to +50°C
Storage temperature	-40°C to +70°C
Relative humidity	5%-95%, non-condensing
Electrostatic protection	$\pm$ 20 kV air discharge; $\pm$ 8 kV direct discharge
Ambient light	0-8,600 lux fluorescent; 0-100,000 lux daylight, as listed in the English specification.
Operating vibration	10-150 Hz; 0.5 G; 3 axes; 1 min/octave; 1 sweep per axis
Endurance vibration	10-150 Hz; 2 G; 3 axes; 1 min/octave; 20 sweeps per axis
Source-listed standards	CE EN55022; FCC Part 15 Class B; CE EMC Class B

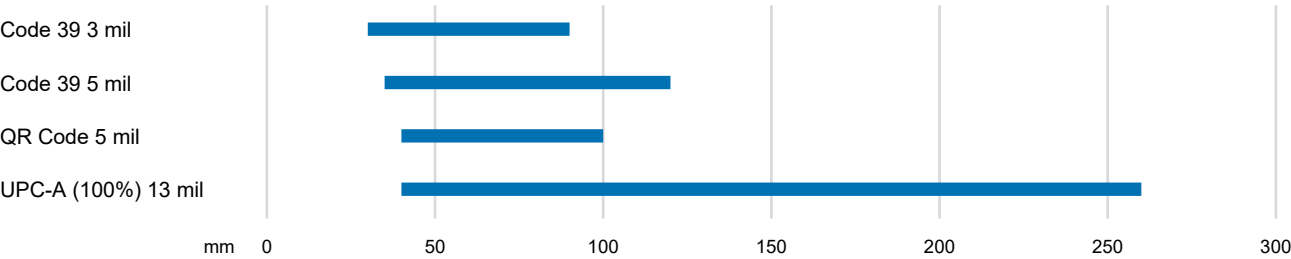
Mechanical Dimensions

Dimensions in millimeters. Main-unit nominal dimensions: 51.8 x 40.4 x 24.8 mm. Individual body and protrusion dimensions are shown in the source drawings.



Typical Depth of Field

Barcode	Module width	Reading distance
Code 39	3 mil	30-90 mm
Code 39	5 mil	35-120 mm
QR Code	5 mil	40-100 mm
UPC-A (100%)	13 mil	40-260 mm



Test conditions: 23°C ambient temperature; 300 lux incandescent lighting; specified test barcodes. Typical ranges depend on the barcode and installation.

Configuration Selection

Select the interface and cable arrangement when ordering. Optional breakout cables and control boxes are separate configurations; they must not be treated as standard equipment.

Configuration	Interface	Included or required items
USB direct	USB HID / CDC	2.0 m direct cable; no external trigger.
RS232 direct	RS232	2.0 m direct cable; 5 V, 1 A adapter; no external trigger.
USB breakout I/O	USB HID / CDC	Optional breakout cable with external trigger and Good-read signal.
RS232 breakout I/O	RS232	Optional breakout cable and 5 V supply; external trigger and Good-read signal.
USB control box	USB HID / CDC	Optional USB breakout cable and control box.
RS232 control box	RS232	Optional RS232 breakout cable and DB9 control box; selection guide excludes the power supply from this option.

Configuration notes

Check the supplied interface, power arrangement and external I/O before installation. Direct USB and RS232 configurations do not provide an external trigger. Breakout cables and control boxes are optional configurations.

For optional I/O, confirm input compatibility and output signaling with the supplied hardware. Use the separate user manual for installation and setup codes.