



CURTIS

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enGage[®] NX II Model 3250R





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The Curtis enGage® NX II (NX2) is a color, 2.1 inch, touch screen display, packaged in a 52 mm gauge form factor. With a bright, high resolution, capacitive touch display and optionally integrated wireless connectivity, the NX2 enables unprecedented interaction and information visualization. The NX2 is customizable in a multitude of ways, allowing OEMs to realize unique brand identity quickly. The display is equipped with CAN-FD, the latest CANbus technology, which provides faster data rates and increased reliability than CAN 2.0. Optional Bluetooth and Wi-Fi enable communication to a mobile application or fleet telematics portal. Optional RFID enables vehicle security and operator identification through an RFID tag or mobile phone.

The NX2 represents the base level of the unified enGage NX product portfolio. All enGage NX products share a common user experience as well as a set of companion tools, such as the mobile application and data portal, making it easy to move between product platforms within the portfolio.

www.curtisinstruments.com/NX

FEATURES

- ▶ 2.1 in, color, 480x480 pixel, touch screen LCD.
- ▶ Bright, optically bonded, 600 nit LCD ensures viewing in any lighting condition.
- ▶ Enables visualization of machine information and a unique brand identity through a fully customizable user interface.
- ▶ Out-of-the-box application software targeting electronic vehicles.
- ▶ The 52 mm gauge form factor allows for easy panel mounting in new and existing applications.
- ▶ One CAN FD port, with J1939 and CANopen support, provide superior EMC and reliability, and backwards compatibility to CAN 2.0.
- ▶ Optional WiFi and Bluetooth wireless connectivity communicate machine data to the Curtis mobile application, data server or third-party applications.
- ▶ Optional RFID/NFC enables easy operator identification using compatible ISO 14443A RFID tags or supported mobile phone application.
- ▶ One analog and one digital input allow connection of external IO devices.
- ▶ Integrated BDI and hour meter.
- ▶ Optional fixed frequency audio alarm to alert operators of machine issues and warnings.
- ▶ Operates in demanding conditions with an operational temperature range of -30° to +70°C and IP67 front and rear ingress protection.
- ▶ Wide voltage range, 12 VDC to 48 VDC, supports a variety of applications.
- ▶ CE, UKCA and ROHS3 compliance and UL recognition ensure compatibility with global regulatory safety.*

*Pending





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SPECIFICATIONS

Electrical

Voltage Ranges

Nominal	Min.	Max.
12-48V	9V	60V

Operating Currents

B+ Voltage	BL Off (Typ)	Max - BL 100%, CAN active, buzzer on
9V	94mA	190mA
12V	72mA	140mA
24V	40mA	75mA
36V	30mA	55mA
48V	25mA	45mA
60V	22mA	40mA

CAN Baud Rate

Default: 250Kbit/s
100 Kbps to 5 Mbps

Inputs

Switch Input Characteristics:

Switch Input Characteristics	Min.	Max.	Units
Input Active High Threshold Voltage	9.0	B+ MAX	Volts
Input Impedance	353	360	kOhms



Analog Input Characteristics:

Analog Input Characteristics	Min.	Max.	Units
Voltage Input Range	0	60	Volts
Voltage Measurement Range	0	10	Volts
Voltage Resolution	-	10	mV
Voltage Measurement Error	-	+/- (1% + 40 mV)	
Resistance Measurement Range	0	10k	Ohms
Resistance Resolution (0 - 1200 Ω)	TBD	TBD	Ohms
Resistance Resolution (1.2k - 10k Ω)	TBD	TBD	Ohms
Resistance Measurement Error	-	+/- (3% + 2 Ω)	
Input Impedance (Voltage Mode)	TBD	TBD	Ohms

Environmental

Temperature Range:

Operating: -30° to +70°C
Storage: -40° to +85°C

Humidity:

Soak: Designed to meet EN 60068-2-78
Cyclic: Designed to meet EN 60068-2-30

Ingress Protection:

Designed to meet EN 60529 IP67
IP67 front and rear (with mating connector connected)

Shock:

Designed to meet EN 60068-2-27

UV:

Designed to meet G155-05 cycle 7a





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SPECIFICATIONS continued

Shock and Vibration:

Shock: IEC 60068-2-27
 Vibration: IEC 60068-2-6

EMC Specifications

ESD

Designed to meet IEC 61000-4-2

Emissions

Designed to meet EN 12895:2015+A1:2019

Immunity

Radiated: Designed to meet EN 12895:2020
 Frequency Magnetic Field: Designed to meet EN 12895:2015+A1:2019

Regulatory Approvals

UL*: UL recognition to UL 583

CE*: The product complies with the requirements of the EMC Standards and RoHS directive 2015/863/EU (RoHS 3).

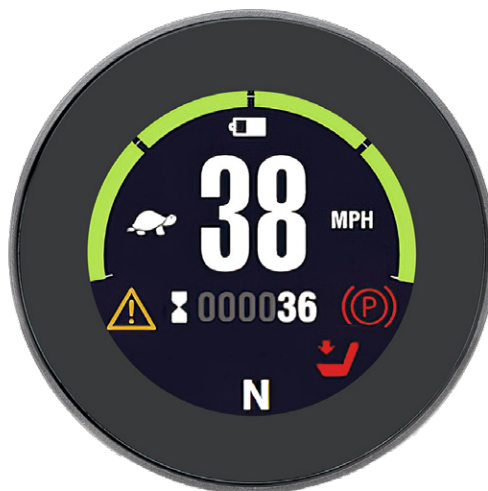
- ▶ EMC: EN 12895:2015+A1:2019
- ▶ RoHS: 2015/863/EU (RoHS)

**Pending*

MODEL CHART

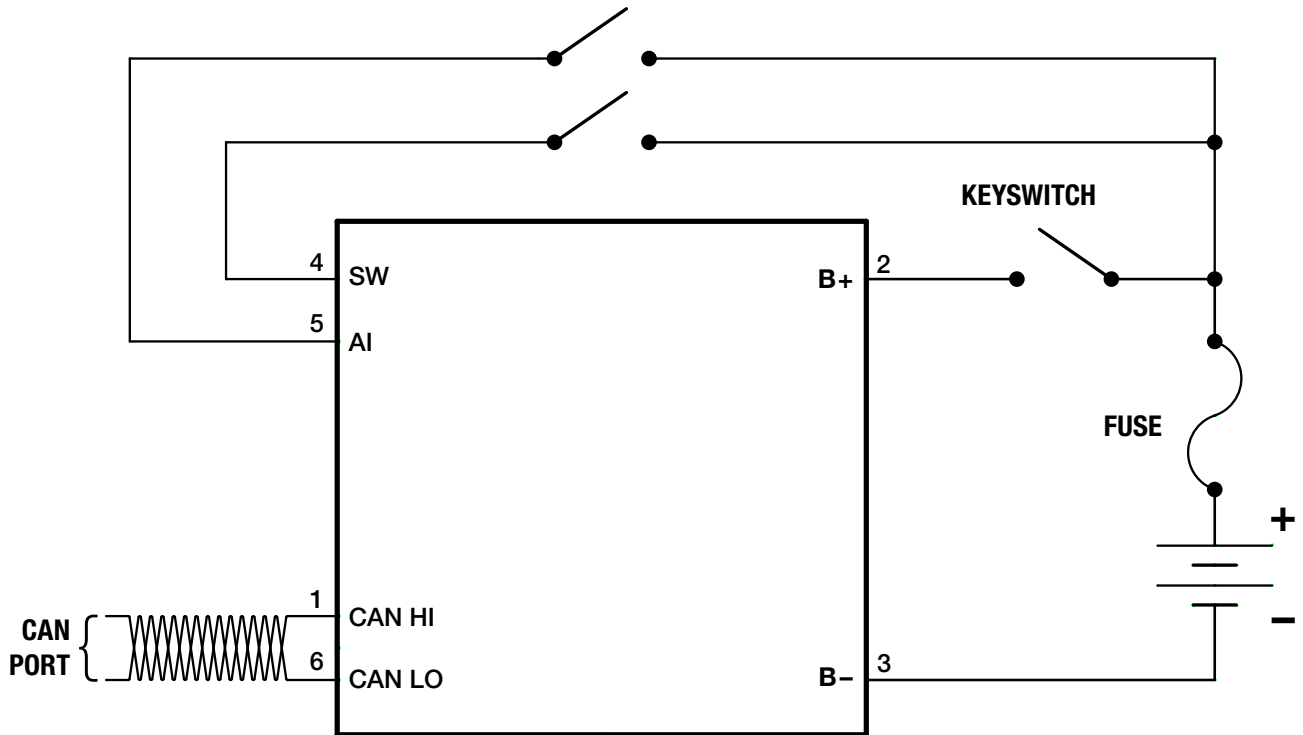
Model	Curtis PN	Description
3250R1260T	17785700-001	NX2 with Touch Screen
TBD	TBD	NX2 with RFID, WIFI (Single Band), Bluetooth and Touch Screen

Please discuss custom model inquiries with a Curtis sales member.





TYPICAL WIRING DIAGRAM



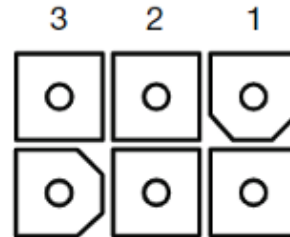


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CONNECTOR

The signals are assigned as shown in the table below.

Pin No.	Signal Name	Description
1	CAN Hi	CANbus High Signal
2	B+	Battery Positive
3	B-	Battery Common
4	SW	Switch Input 1
5	AI	Analog Input 1
6	CAN Low	CANbus High Signal



MATING CONNECTOR

The mating connector for the 3250 is an 6-pin Mini-Universal MATE-N-LOK housing from TE Connectivity. The part numbers to assemble a mating assembly are shown in the table below.

Mating Connector Part Numbers:

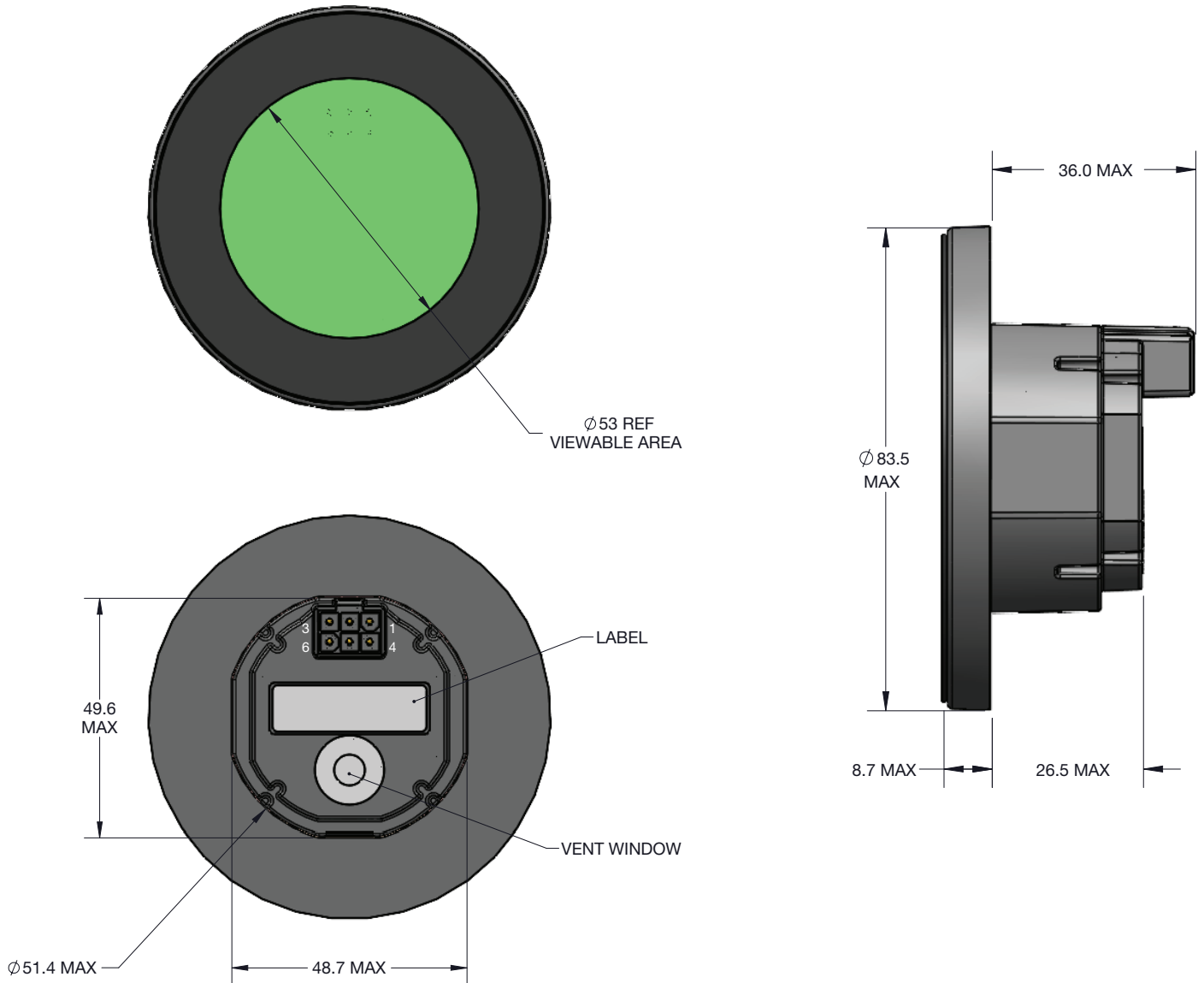
Item	Part Description	TE P/N
1	Connector Housing	794895-1
2	Terminal (18 – 24 AWG)	770904-X
3	Interface Seal	794772-6
4	Wire Seal	794758-1
5	Cavity Plug Seal (for unused terminal positions)	794995-1





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DIMENSIONS mm



WARRANTY Two year limited warranty from time of delivery.

