

Data Sheet Version 1.0

Creation Date Jul-18 | Last Update 1-Jul-18

NORTEC 600 Ex



CONTENT

1 BASIC INFORMATION

1.1 Product Information

1.2 Predecessor Information

2 PRODUCT SPECIFICATIONS

2.1 Specifications

2.2 Operating Environment

2.3 Packing List

3 PRODUCTS DRAWINGS

1 BASIC INFORMATION

1.1 Product Information

Product code	N600D-ATEX-KIT
Product name	NORTEC 600Ex
Long description	NORTEC 600D Commercial ATEX/EMI instrument kit.

Available starting from	June, 2018
-------------------------	------------

Difference to predecessor	Environmental ratings have been improved significantly, and the instrument has been ATEX and EMI-hardened. The NORTEC 600Ex is qualified for use in explosive atmosphere conditions conforming to ATEX Directive 2014/34/EU for Group II, Category 3, Zone 2, and in areas classified as Class I, Division 2, Group D, as defined in the National Fire Protection Association Code (NFPA 70), Article 500, and tested using MIL-STD-810G, Method 511.5, Procedure I.
---------------------------	--

1.2 Predecessor Information

Product code	N600D
Product name	NORTEC 600D

Long description	NORTEC 600 eddy current flaw detector (full configuration including Dual frequency), including: United States and Canada power cord, English keypad and instruction label, English getting started printed manual, Rigid transport case, DC battery charger, Smart 10.8V, 67Wh Li-Ion Battery, Emergency AA tray cell holder, Standard factory certificate of calibration (short form), NORTEC PC software and N600 full manuals CD (all languages), USB communication cable, 2 GB MicroSD Memory Card, Wrist Strap (factory-installed on left side of N600).
------------------	---

Sales period	2014-present
--------------	--------------

2.1 Housing

Parameter	Value
Overall dimensions (W x H x D)	241 mm x 173 mm x 82 mm (9.49 in. x 6.81 in. x 3.23 in.)
Weight	2.82 kg (6.2 lb), including lithium-ion battery
Power requirements	AC Mains: 100 VAC to 120 VAC, 200 VAC to 240 VAC, 50 Hz to 60 Hz
Inputs and Outputs	One USB 2.0 peripheral port, one standard VGA analog output port, one 15-pin I/O port (male) with 6 analog outputs, 3 alarm outputs

2.2 Environmental Conditions

Parameter	Value
Operating temperature	-10°C to 50°C (14°F to 122°F)
Storage temperature	With batteries 0°C to 50°C (32°F to 122°F) Without batteries: -20°C to 70°C (-4°F to 158°F)
IP rating	Designed to meet requirements of IP54
Drop tested	Method 516.6 Procedure IV, 26 drops, package for shipment
Shock tested	MIL-STD-810F, Method 516.5 Procedure I, 6 cycles each axis, 15G, 11 ms half sine shock testing
Vibration tested	MIL-STD-801 F, Method 514.5, Procedure I, Annex C, Figure 6, general exposure: 1 hour each axis vibration test
Protective bag operation	Knobless mode is used to calibrate signals when unit is placed in protective bag

2.3 Batteries

Parameter	Value
Battery model	600-BAT-L-3 (Li-ion) [U8051431]
Battery type	Single lithium-ion rechargeable battery
Battery life	Over 10 hours for standard operation and 6 to 8 hours when operating rotating scanners

2.4 Display

Parameter	Value
Size (W x H x Diagonal)	117.4 mm x 88.7 mm, 146.3 mm (46.2 in. X 3.49 in., 5.76 in.)
Display type	Full VGA (640 x 480 pixels) color transfective LCD (liquid crystal display)
Screen modes	Normal or Full screen
Grid and display tools	Choice of 5 grids, (OFF, 10 x 10, FINE, COARSE, and WEB) and user-selected crosshairs available on single and dual impedance plane views only

2.1 Connectivity and memory

Parameter	Value
PC Software	NORTEC PC software, included in base NORTEC 600Ex kit. NORTEC PC enables viewing saved files and printing reports.
Data storage	500 files feature on-board preview

2.1 Interface

Parameter	Value
Languages	English
Applications	Application selection menu for easy and rapid configuration
Real-time readings	Choice of up to 2 real-time readings to measure signal characteristics (selection of 5 amplitude measurements and 2 angle measurements)

2.2 Eddy Current Specifications

Parameter	Value
Probe types	Absolute and differential, in either bridge or reflection configuration. The instrument should only be used with probes listed in KIT-ECT-ATEX. Any other probes need to be qualified to ATEX requirements with this instrument before use.
Probe connectors	16-pin LEMO and BNC
Frequency range	10 Hz to 12 MHz
Gain	0 dB to 100 dB in 0.1 dB or 1 dB increments
Rotation	0° to 359.9° in 0.1° or 11° increments
Sweep	Variable from .0005 s to 10 s per division (total of 13.3 divisions with FINE grid)
Low Pass Filter	10 Hz to 2000 Hz and wide band
High Pass Filter	Off or 2 Hz to 1000 Hz, user selectable in constant Figure 6 or Figure 8 filter type
Probe drive	LOW, MEDIUM, HIGH (2 volts, 5 volts, 8 volts)
Display erase, persistence	Display erase (0.1 s to 60 s), persistence (0.1 s to 10 s)
Available alarm types	3 simultaneous alarms. Choices include BOX (rectangle), POLAR (circle), SECTOR (pie), SWEEP (time-based), CONDUCTIVITY and COATING THICKNESS

2.1 Conductivity (NORTEC 600ExC, NORTEC 600ExS, NORTEC 600ExD)

Parameter	Value
Frequency	60 kHz or 480 kHz
Digital conductivity specification	Digital conductivity display from 0.9% to 110% IACS or 0.5MS/m to 64MS/m. Accuracy within $\pm 0.5\%$ IACS from 0.9% to 62% IACS and within $\pm 1.0\%$ of values over 62%. Meets or exceeds BAC 5651 specifications. Accuracies depend on probe frequency, range of calibration, and coating thickness.
Non-conductive coating thickness	Nominal accuracy of nonconductive coating thickness of ± 0.025 mm (± 0.001 in.) from 0 mm to 0.254 mm (0.00 in. to 0.010 in.) range, and ± 0.50 mm over 10

mm to 0.5 mm (0.01 in. to 0.020 in.) range. Accuracies depend on conductivity range, probe frequency, and range of calibration.

Interface

Easy to follow conductivity Wizard with adjustment of reference points and coating thickness (shims).

2.1 Dual Frequency (NORTEC 600ExD)

Parameter	Value
Frequency adjustment (dual frequency mode)	Two fully independent frequencies, operating in simultaneous injection.
MIX options	F1 – F2, F1 + F2, and automatic true mixing

3 PRODUCT DRAWINGS

Width 240.9 mm

Depth 81.2 mm

Height 172.91 mm

