



neptune

Neptune E4000

Electronic Register



Accurate, economical electronic registration for refined fuel delivery.

The Neptune E4000 electronic register automates transaction operations for deliveries of LPG, distillate fuels and other liquids commercially distributed through flowmeters on bulk delivery trucks. The E4000 is the electronic register you can't outgrow, providing immediate benefits as a stand-alone and ready to interface with a mobile computer (no upgrades required).

The E4000 displays the delivered volume on the flowmeter at the rear of the truck, as do conventional mechanical registers. Selectable electronic temperature compensation allows deliveries to be made in gross or net (compensated) volumes, according to local practice. A printer in the cab provides a simple volume delivery ticket or, using the E4000's pricing capability, a complete priced invoice as a record of the transaction. Tickets are stamped with the time and date information for security.

Features and Benefits:

- Fast payback - temperature compensation reduces product losses.
- Reduced register maintenance requirements
- All functions can be performed at the register - save on proprietary equipment
- Prices and prints invoices automatically from the truck, reducing billing cycle time
- Improves driver efficiency - no manual ticket errors
- More calibration factors and pricing capability than competing electronic registers - 10 products with pricing (120 products optional)
- End-of-shift report totalizes day's deliveries by product
- Update pricing from a mobile computer eliminating manual inputs
- Fast and easy auto-calibration
- Easy retrofit to replace mechanical registers
- No special configuration device needed
- Multi-compartment monitoring
- L.O.C.K. operation control kit
- Data log

Three levels of operation with one model - no upgrades required

Level 1: Volume-only tickets

Operate just as you do now with mechanical registers, with the benefit of multi-product calibration and the optional benefit of electronic temperature compensation accuracy. Control delivery manually or preset by volume. Plus, you get a printed end-of-shift report off the truck printer. All this functionality is standard and requires no additional components.

Level 2: Priced invoices off the truck

Enter pricing data manually or by Neptune configuration software for up to 10 priced products. Get a priced invoice off the truck to leave with the customer, eliminating calculation errors and improving your cash flow. Execute preset deliveries by volume or monetary value. Maintain accountability with hard ticket copies and end-of-shift reports.

Level 3: Comprehensive electronic transaction management

Interface the E4000 with mobile computers to extract delivery data. Calculate, print invoices, and update customer accounts from the truck. Add features such as tank location (GPS), driver directions, signature capture and detailed account history. The mobile computer relays information to the central database when returned to the office - no manual intervention is required.

Specifications

PHYSICAL	
Register Size	229 mm x 227 mm x 161 mm (9.0 in. x 8.9 in. x 6.3 in.)
Junction Box Size	181 mm x 181 mm x 54 mm (7.12 in. x 7.12 in. x 2.123 in.)
Weight	2.45 kg (5.4 lbs)
Operating Temperature	-30–55°C (-22–131°F), -40–50°C (-40–122°F) with Heated Display
Enclosure Rating	NEMA 3R or 4
ELECTRICAL	
Display	2 lines, 20 characters per line Text area: 143 mm x 19 mm (5-5/8 in. x 3/4 in.) Character area: 8.3 mm x 5.9 mm (0.327 in. x 0.355 in.)
Power Rating	9–16 VDC, 0.25 A
Relay Rating	Two Form C relays, normally open, 250 VAC at 5 A and 30 VDC at 3 A
LPG Solenoid Valve	0.9 A, 12 VDC, 9.5 W
Two-Stage Petroleum Valve	High-Flow, 2 in., 1.5 A, 12 VDC, 19 W Low-Flow, 3/8 in., 0.9 A, 12 VDC, 11 W
Two-Stage LPG Valve	High-Flow, 3/8 in., 0.8 A, 12 VDC, 9.5 W Low-Flow, 3/8 in., 0.8 A, 12 VDC, 10 W
RTD Temperature Probe	Platinum, 4-wire, resistance 100 Ohms $\pm 0.12\%$ at 0°C (32°F)
Pulse Input	Single, dual or quadrature (menu-selectable) Input impedance 10K Ohms nominal to common Trigger level, logic ON 3–30 VDC; Trigger level, logic OFF 0–1 VDC
Communication	RS-232 to printer and computer
APPROVALS	
Weights and Measures	NTEP Approval to Handbook 44 and NCWM Publications 14
UL	Class 1, Div. 2, Groups A, B, C & D
PRINTER	
Type	Epson TM—U295 dot matrix; Ribbon ERC—27 (purple)
Ticket	Blank or preprinted, up to 3-ply; Size 102 mm x 257 mm (4 in. x 10 in.)
Power	24 VDC ± 2.4 VDC
Operating Temperature	5–40°C (41–104°F) with ribbon

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