

TD3100 two-way remote control with backlit LCD

Compact transceiver for reliable and precise wireless control and monitoring of mobile and industrial machinery



Description

The Eaton TD3100 is a robust wireless transceiver that uses proprietary and proven OMNEX Trusted Wireless technology to provide reliable real-time control and monitoring of mobile and stationary hydraulic equipment. It is part of Eaton's new TD series of two-way communicating wireless transceivers. The TD3100 features customizable multi-function capabilities that can send and receive digital or proportional signals to and from the Eaton R260 two-way wireless transceiver. The two-way capability allows users to monitor real-time machine feedback on the robust, easy-to-read backlit LCD screen, featured in the TD series wireless transceivers.

The TD3100 transceiver also comes equipped with Bluetooth communication capability, for easy pairing with wireless accessories used to provide instantaneous communication with the transceiver, maximizing worker safety and productivity.

Reliability was the core driver behind the development of TD3100, continuing the Eaton OMNEX respected reputation for long life, reliable, and robust wireless products specifically designed for the harshest of environments.

Features

- Two-way communications for real-time and precise machine feedback
- Robust construction with superior ingress protection, purposefully built for the harshest environments (IP66 and IP67 ratings)
- OMNEX Trusted Wireless FHSS technology
- Compact design with user-customized configuration control options of paddles, 2-axis joysticks, 3-axis joysticks, buttons, standard & specialized toggle switches, and potentiometers
- Multiple battery options: rechargeable long-life lithium battery pack or off-the-shelf alkaline batteries
- Contactless charging and external battery charger available
- Bluetooth connectivity to Eaton wireless accessories
- Tether as alternate to wireless connectivity and for user configurability
- E-stop function with twist to release
- Full line of accessories
- Sunlight readability

Applications

- Concrete line pumps
- Concrete mixer trucks
- Vacuum excavation trucks
- Auto recovery vehicles
- Truck-mounted cranes
- Agricultural equipment
- Off-road machines
- Chippers and augers

Ordering

Product code	Frequency
TD3100 900 MHz	900 MHz
TD3100 2.4 GHz	2.4 GHz

Accessories

Product code	Description
ASSY-3834-01	Battery pack, non-chargeable
ASSY-3834-02	Battery pack, rechargeable
ASSY-3849-01	Battery charger
ASSY-3933-01	TD3100 charge cradle
ASSY-3933-02	TD3100 mount & detect switch
ACAB-3679-01	Charge cable, 12/24VDC, auto pwr plug
ACAB-3680-01	Charge cable, 120/240VAC, wall plug
FMEC-2709-01	Shoulder strap (with tear away)
FMEC-1248-02	Waist belt
ACAB-3681-01	Tether cable, 10 meters
ACAB-3681-02	Tether cable, 30 meters
ACAB-3681-03	Tether cable, 15 meters



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Specifications

Specification	Description
Wireless communications	
Transceiver	900 MHz and 2.4 GHz
Communications	OMNEX trusted wireless FHSS technology with two-way communications capability
Antenna	Internal antenna
Operating range	1,650 ft (500 m) ^a for 900 MHz and 2.4 GHz
Pairing	Radio remote can be paired to receiver through easy pairing process
Receiver	
Wireless transceiver	Pairs with the OMNEX Trusted Wireless programmable 20-function CAN controller (R260), IEC 61131-3 programmable
Expansion	Machine I/Os can be expanded with additional modules
Tether interface	
Power	Accepts 9–32 Vdc at the tether connector
Charging	Charges lithium battery when connected to charging cable
Protection	Surge protected
Display	
LCD	3-inch transreflective monochrome display, viewable in all daylight and nighttime conditions
Resolution	240 x 120 pixels
Protection	Polycarbonate scratch resistant lens with protective replaceable screen guard
Custom features	Customizable display options with customer-defined information
LEDs	
Status LED	Errors (e.g. Low battery warning)
Link LED	Wireless or tether communications established
Operator controls	
Soft buttons	4 - machine / auxiliary functions as assigned
Reliability	1 million cycles
Protection	All controls are protected from damage when dropped
Paddle / Joystick Options (Total 8 positions maximum)	
Paddle	Up to 8 (Each occupies one position)
3-axis joystick	Up to 2 (Each occupies two positions)
2-axis joystick	Up to 4 (Each occupies two positions)
Switch Options (Total 8 positions maximum)	
Toggle switches	Momentary or Latch (Each occupies one position)
Potentiometer	340 degree rotation (Each occupies one position)
Safety	
Neutral check	Power up neutral detection for critical controls
E-stop	Emergency stop switch, latching, turn to reset
Inactivity detection	Shutdown after a period of no controls activity (configurable)
Ergonomics	Design features protect accidental activation of controls

Specification	Description
Alert - Operator warnings	
Vibrator	Haptic vibration
Visual	LED indicators
Diagnostics	
Event logging	Internal system event log
System	Hardware diagnostics available via LCD display
Battery	
Type	Long-life lithium iron phosphate (Pre-packaged) or Alkaline (User-replaceable battery pack)
Capacity	1.2 Ah x 2
Expected operating time	14 hr (with lithium ion battery) ^b
Protection	Protected against overcurrent failure
Life expectancy	5 years, to 80% capacity
Charging	Multiple ways to charge battery: Battery charger (removable battery pack) Charging cradle (contactless) Tether connection Charging time: 4 hours
Battery indicators	LED, LCD
Compliance	
EMC	FCC Part 15, Class B; EN 301 489-3; EN 55022 Class B (Radiated and Conducted Emissions)
Wireless	FCC Part 15.247; IC RSS 210
Electrical	UL/EN/AS/NZS 60950 (Safety); EMR FCC Part 2.1093 SAE J1113-11 load dump, start motor and other transients
General	
Size (outside dimensions)	7.7 x 9.0 x 6.2 inches (196 x 229 x 158 mm)
Weight	3.5 lb (1.59 kg) incl. battery
Storage temperature	-4°F to +136°F (-20°C to +58°C) with lithium ion battery ^c
Operating temperature	-4°F to +131°F (-20°C to +55°C) with lithium ion battery ^c
Charging temperature	+32°F to +113°F (0°C to +45°C)
Humidity rating	0–95% RH noncondensing
Environmental	IP66 and IP67 (dust, immersion, water jets) SAE J1455 (salt spray)
Shock	ISO 15998 (15 G for 11 ms)
Vibration	SAE J1455 (24 to 2000 Hz for each of 3 axes, 5 G ² /Hz)
Housing	Industrially robust, hardened plastic, chemical resistant

Specifications are subject to change.

^a Line-of-sight

^b Battery life depends on several factors: state of battery, RF transmit power, ambient temperature, etc.

^c Refer to manufacturer specifications for alkaline battery

For information on Eaton's wireless business, please visit Eaton.com/wireless