

# Enercon MX250

## Entelli-Switch Microprocessor Controller

### Introduction

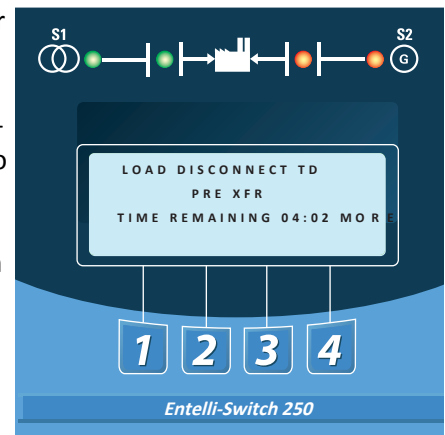
With more powerful integrated features, the Entelli-Switch 250 microprocessor, standard with the entire Enercon ETS product family, offers expanded programmability and field adaptability. This premium controller is designed for use in specification-grade applications. As an embedded digital controller, the Entelli-Switch 250 series offers high reliability and ease of unattended operation across a range of applications.

- Available in ALL transfer modes:  
~ Open, Closed, Delayed and Bypass

### Features and Benefits

- User-friendly programmable engine exerciser, used for the engine generator with or without load, at any interval in a one-year period
- Operating voltages available in a single controller for most domestic and international applications
- Real-time display of ATS status, including active timer(s)
- Multiple levels of user-defined password protection
- Serial communications allowing connectivity with other ATS's, paralleling switchgear and SCADA systems
- Time tested synchronous logic automatically measures phase angle and frequency allowing disturbance-free transfer
- Unsurpassed statistical ATS/System monitoring available in real-time
- T3/W3 elevator pre-signal timer and output contacts. Automatically bypassed if the selected source fails, minimizing time an elevator is without power

- Universal Motor Disconnect (UMD) sends a pre-signal, post-signal or both to any motor control center. Not bypassed in an outage, the UMD ensures safety in the event of a single phase standard loss.



- Voltage unbalance detection
- Optically isolated inputs and outputs
- Includes all standard Enercon MX150 microprocessor controller features

### User-Friendly Operation

LEDs are used in a recognizable line configuration for continuous monitoring of switch position. A 4x20 character LCD display shows source availability, exercise time delay operation and system source condition. A new simplified adjustment is featured for voltage, frequency and time delay settings.

The control operates off a close differential 3-phase under-voltage sensing of Source 1 (normal), factory standard setting 90% pickup, 80% dropout; under-frequency sensing of Source 1 factory setting 95% pickup; voltage and frequency sensing of Source 2 (emergency), factory standard setting 90% pickup voltage, 95% pickup frequency. All factory settings are operator adjustable (see table on reverse side).

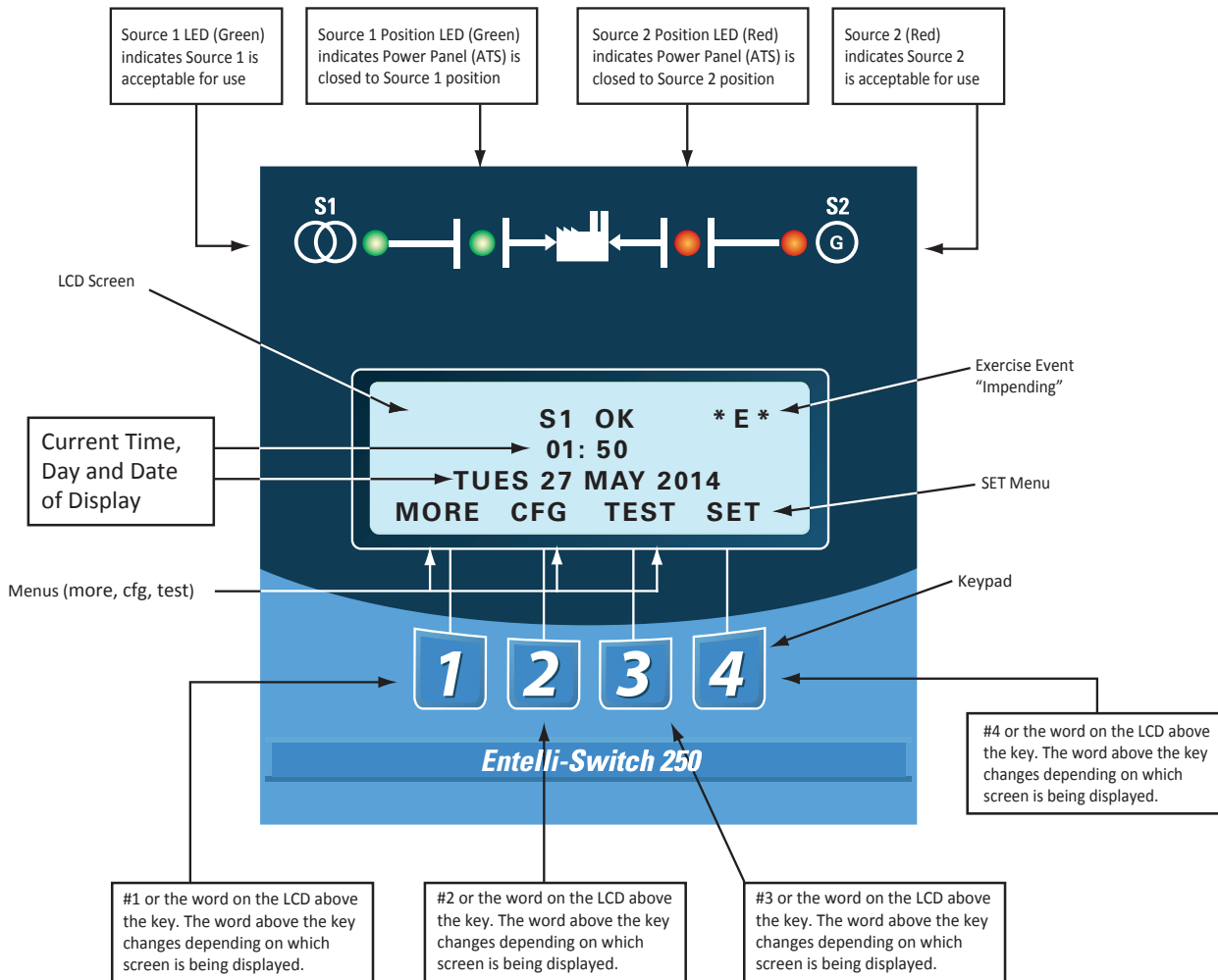
A test is standard (fast test/load/no load) to simulate Source 1 failure - automatically bypassed should Source 2 fail.

## Fully Approved

- UL and CSA listed
- Ringing wave immunity per IEEE 472 (ANSI C37.90A)
- Conducted and Radiated Emissions per EN55022 Class B (CISPR 22) (Exceeds EN55011 & MILSTD 461 Class 3)
- ESD Immunity test per EN61000-4-2 Class B (Level 4)
- Radiated RF, electromagnetic field immunity test per EN61000-4-3 (ENV50140) 10v/m
- Electrical fast transient/burst immunity test for EN61000-4-4
- Surge immunity test per EN61000-4-5 IEEE C62.41 (1.2 x 50µs, 0.5 to 4 kV)
- Conducted immunity test per EN61000-4-6 (ENV50141)
- Voltage dips and interruption immunity EN61000-4-11

Control Setting Ranges			
Control Feature	Function	MX250	
		Range	Factory Setting
S1 Line Sensing – Under-voltage	Fail	75-98%	80%
	Restore	85-100%	90%
S1 Line Sensing – Under-frequency	Fail	88-98%	90%
	Restore	90-100%	95%
S2 Line Sensing – Under-voltage	Fail	75-98%	80%
	Restore	85-100%	90%
S2 Line Sensing – Under-frequency	Fail	88-98% (2 Hz below restore setting)	90%
	Restore	90-100%	95%
Time Delay S2 Start	P1 Timer	0-10 seconds	3 seconds
S2 Stop Delay	U Timer	0-60 minutes	5 minutes
Time Delay S2 Stable Timer	W Timer	0-5 minutes	1 second
Time Delay S1 Stable Timer	T Timer	0-60 minutes	30 minutes
Universal Motor Disconnect *	UMD Timer	0-60 seconds	5 seconds
Elevator Transfer Presignal *	T3/W3 Timers	0-60 seconds	20 seconds
Delay Transition Time Delays	DT, DW Timers	1 second-10 minutes	5 seconds

\* Form C Double Throw Contact Output



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