

Zenith MX250

Entelli-Switch Microprocessor Controller

Introduction

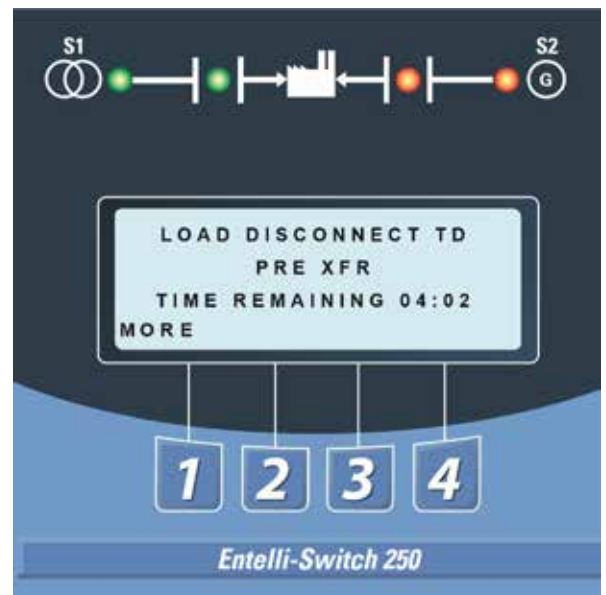
With more powerful integrated features, the Entelli-Switch 250 microprocessor, standard with the entire ABB Zenith ZTS product family, offers expanded programmability and field adaptability. This premium controller is designed for use in specification-grade applications. As an embedded digital controller, 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 loss.
- Voltage unbalance detection standard
- Optically isolated inputs and outputs
- Includes all standard Zenith 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; underfrequency 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.

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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

Source 1 LED (Green)
indicates Source 1 is acceptable for use

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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%*	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		20
	Timers	0-60 seconds	seconds
Delay Transition Time Delays	DT, DW	1 second-10	
	Timers	minutes	5 seconds

LCD Screen

Current Time, Day and Date of Display

Menus (MORE, CFG, TEST)

#1 or the word on the LCD above the key.

The word above the key changes depending on which screen is being displayed.

Notes

*2 Hz below restore setting

**Form C Double Throw Contact Output

Source 1 Position LED (Green)
indicates Power Panel (ATS) is closed to Source 1 position

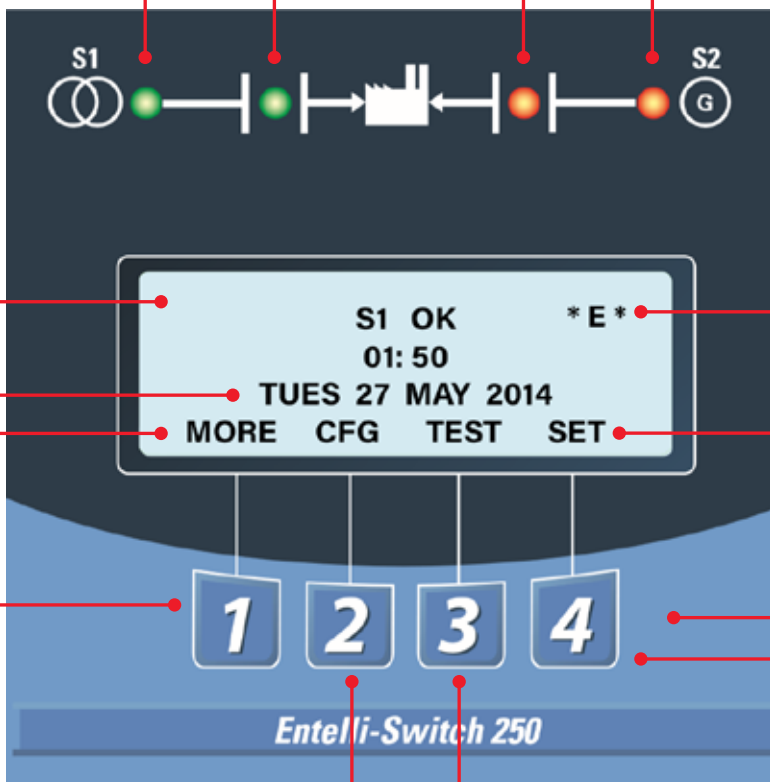
Source 2 Position LED (Red)
indicates Power Panel (ATS) is closed to Source 2 position

Source 2 (Red)
indicates Source 2 is acceptable for use

Exercise Event "Impending"

SET Menu

Keypad



#2 or the word on the LCD above the key.
The word above the key changes depending on which screen is being displayed.

#3 or the word on the LCD above the key.
The word above the key changes depending on which screen is being displayed.

#4 or the word on the LCD above the key.
The word above the key changes depending on which screen is being displayed.



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