

# Entellisys® 5.0 Low Voltage Switchgear Fact Sheet



## Now fuseless 100kA Interrupting Capacity!

Introducing Entellisys Low Voltage Switchgear with EntelliGuard® E circuit breakers. Now you can have all of the valuable benefits of Entellisys at higher kA IC ratings without fuses. The EntelliGuard E circuit breakers can be used in the same lineup with EntelliGuard circuit breakers. This flexibility provides the ability to have lineups with fuseless breakers from 800A through 5000A with 100kA interrupting capacity.

## Same Great Benefits of Entellisys

- Increased uptime with a redundant architecture and comprehensive diagnostics to identify issues quickly.
- Keep operators outside the Arc Flash boundary with the touchscreen HMI in a remote control stack or wall mounted enclosure.
- Lower Incident Energy with dynamic zone selective interlocking and bus differential protection.
- Easy remote communications over Modbus TCP/IP. All of the lineup's information and control at your finger tips.
- Fewer spare breakers needed due to interchangeability within frame/envelope sizes.
- Add functionality with firmware download and typically no impact on uptime.

## Enhanced Selectivity & Arc Flash Protection

Entellisys 5.0 expands the selectivity capability of Entellisys as well as increasing arc flash protection in three significant ways:

1. **Instantaneous Zone Selective Interlocking (IZSI) Input** – Downstream breakers with the GE EntelliGuard Trip Unit (ETU) or *micro*EntelliGuard™ Trip Unit (MET) trip unit can

be connected to the upstream Entellisys breakers. When a downstream fault occurs the trip units can send a signal and restrain the upstream Entellisys breakers with a longer time delay. IZSI with faster clearing times results in lower incident energy at downstream equipment while maintaining selectivity with the downstream breakers.

2. **ZSI Output via IEC 61850** – Entellisys 5.0 can communicate over IEC 61850 to upstream relays (Multilin F-35 feeder relay and the 345 transformer relay) located on the MV primary breakers. This can dramatically improve the protection and reduce the arc flash incident energy of the incoming line-side bus. Entellisys will communicate to the upstream relay to restrain tripping for faults downstream of the LV main breaker. ZSI output to upstream relays over wires is still available by using discrete I/O. Communicating over IEC 61850 (Ethernet physical layer) enables ZSI upstream capability over a large geographic area and it also greatly simplifies the interconnections by using a local area network.

3. **Selective Discrimination IOC (Instantaneous Overcurrent)** – In addition to Instantaneous protection users now also have Selective Discrimination IOC settings to choose from. Selective Discrimination IOC provides better coordination with downstream current limiting breakers and fuses because Entellisys can determine if a downstream breaker/fuse is clearing a fault based on the waveform profile. This provides the capability to reduce incident energy with Instantaneous clearing times while maintaining selectivity with downstream current limiting devices.

*All of the selectivity enhancements are available with EntelliGuard or EntelliGuard E circuit breakers.*



# EntelliGuard E Ratings

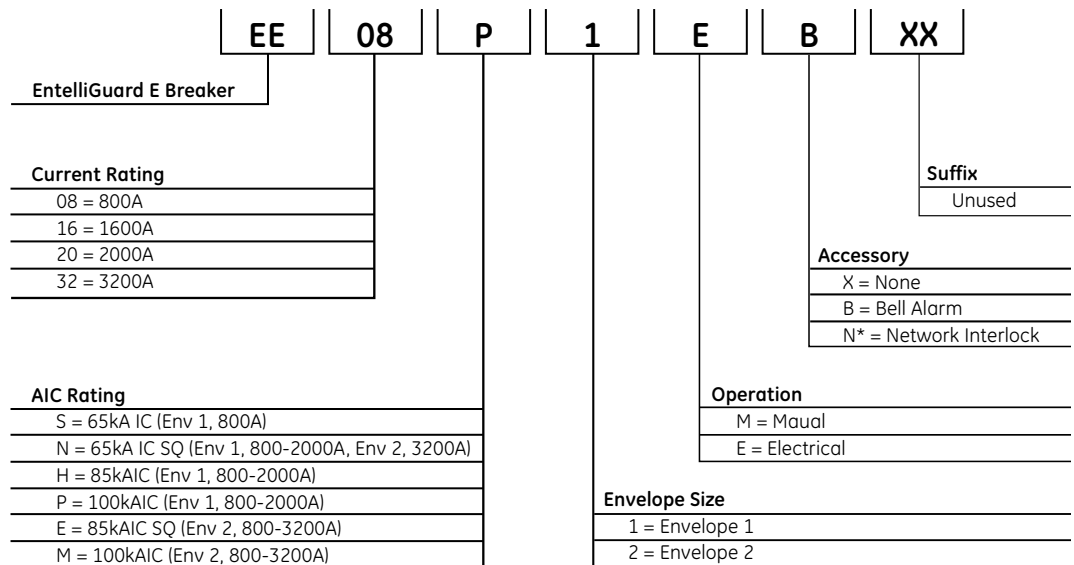


Entellisys switchgear with EntelliGuard E or EntelliGuard power circuit breakers complies with ANSI standards C37.20.1 and is UL listed to standard 1558. The equipment has been conformance tested according to ANSI C37.51 and also meets the requirements for the CSA label.

## EntelliGuard E Power Circuit Breaker ANSI/UL 1066 Ratings

	Breaker Cat. No.	Interrupting Rating Tier (kA)			
		254V	508V	635V	1/2s Withstand
Envelope 1	EE08S	65	65	50	50
	EE08N	65	65	65	65
	EE08H	85	85	65	65
	EE08P	100	100	65	65
	EE16N	65	65	65	65
	EE16H	85	85	65	65
	EE16P	100	100	65	65
	EE20N	65	65	65	65
	EE20H	85	85	65	65
Envelope 2	EE20P	100	100	65	65
	EE32N	65	65	65	65
	EE08E	85	85	85	85
	EE08M	100	100	100	85
	EE16E	85	85	85	85
	EE16M	100	100	100	85
	EE20E	85	85	85	85
	EE20M	100	100	100	85
	EE32E	85	85	85	85
EE32M	100	100	100	85	

## EntelliGuard E Low Voltage Power Circuit Breakers -Catalog No. Structure



\*Electrical breakers only

### GE Energy

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