

Functions Available


Standard Functions

Optional Functions

Integrated Generator Protection® Quick Reference Guide

ANSI Function #	Description	Generator Protection			Intertie Protection	Transformer Protection		Intertie/Generator Protection
		M-3420	M-3425A	M-3430	M-3520	M-3310	M-3311	M-3410A
21	Phase Distance (Mho characteristic)		<input checked="" type="checkbox"/> *	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
24	Volts/Hz	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
25	Sync-Check		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>
27	RMS Undervoltage, 3-Phase	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
27G	RMS Undervoltage, Neutral				<input checked="" type="checkbox"/>			
27TN	Third-Harmonic Undervoltage, Neutral Circuit		<input checked="" type="checkbox"/> *	<input checked="" type="checkbox"/>				
32	Directional Power, 3-Phase	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>
40	Loss of Field	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>
46	Negative Sequence Overcurrent	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
47	Phase Rotation				<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>
49	Winding thermal protection		<input checked="" type="checkbox"/> *				<input checked="" type="checkbox"/>	
50	Instantaneous Overcurrent, 3-Phase	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
50/27	Inadvertent Energizing	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				
50BF	Breaker Failure	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	

* Functions available in Comprehensive Protection Package only.

† Note: On the M-3425A when 50 DT is selected, 50BF, 87, and 87GD functions are not available.

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		M-3420	M-3425A	M-3430	M-3520	M-3310	M-3311	M-3410
50DT	Definite time overcurrent for split-phase differential		<input checked="" type="checkbox"/>					
50G or 50N	Instantaneous Overcurrent, Neutral	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
50W1/W2/W3	Instantaneous Phase Overcurrent (Dual elements per winding)					<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
51W1/W2/W3	Three winding inverse time phase overcurrent					<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
51N	Inverse Time Overcurrent, Neutral	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>
51V	Inverse Time Overcurrent, 3-Phase with Voltage Control or Voltage Restraint	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>
51NW1/W2/W3	Inverse Time Residual Overcurrent					<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
59	RMS Overvoltage, 3-Phase	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>
59D	Third Harmonic Voltage Differential		<input checked="" type="checkbox"/>					
59G or 59N	RMS Overvoltage, Neutral Circuit or Zero Sequence	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
59I	Peak Overvoltage				<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>
59X	Multipurpose overvoltage		<input checked="" type="checkbox"/>					
60FL	VT Fuse-Loss Detection	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>
64F	Field Ground		<input checked="" type="checkbox"/>					
64S	100% Stator Ground Fault by 20Hz Injection		<input checked="" type="checkbox"/>					
67	Phase Directional Overcurrent				<input checked="" type="checkbox"/>			

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67N	Residual Directional Overcurrent		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>			
78	Out-of-step (Mho Characteristic) protection		<input checked="" type="checkbox"/> *		<input checked="" type="checkbox"/>			
79	Reconnect Time Delay				<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>
81 O/U	Frequency	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
81A	Underfrequency Accumulation		<input checked="" type="checkbox"/> *					
81R	Rate of Change of Frequency		<input checked="" type="checkbox"/> *		<input checked="" type="checkbox"/>			
87	Phase Differential Current	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				
87GD	Ground (zero sequence) Differential	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
87H	Phase Differential High Set Overcurrent					<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
87T	Phase Differential (Harmonic Restrained)					<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
EXT	External	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	

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