

Single Function Protection Relays

(✓ = Standard, ○ = Option)

		MRU3	MRF3	MRS1	IRI1	IRU1	MRP2	XP2-R	XU1-DC	BP1-R	BF1
Protection functions	ANSI										
Undervoltage	27	✓				✓			✓		
Power protection: P, Q, Qr, S, Pr	32F, 37F, 32Q, 37Q, 37QR, 32S, 37S, 37R						✓	✓		✓	
Negative sequence elements (current/DEFT/INV)	46			✓							
Circuit breaker failure protection	50BF / 62BF						✓				
Phase current elements (non-directional)	50/51				✓						
Overvoltage	59	✓				✓			✓		
Residual voltage elements	59N	✓									
Underfrequency / Overfrequency	81 O/U		✓								✓
Protection parameter sets		2	2	1			1				
Hardware											
Number of binary output relays (depends on type of device)		4	4	3	2/3	1/2	4	2	2	1	1
Number of digital inputs (depends on type of device)		2	2	2			2				
Communication											
RS485 Open Data		✓	✓	✓			✓	○	○		
MODBUS RTU (via fiber optic [FO] ST or RS485)		○	○				○				