



		RET615 Functional Application				RET620 Functional Application			
		Firmware version 4.0, 4.2				Firmware version 5.0 FP-1		Firmware version 2.0	
Included = •, Optional = ◦	ANSI Function	A	B	C	D	B	F	A	B
<b>Monitoring and supervision</b>									
Trip circuit monitoring	TCM	•	•	•	•	•	•	•	•
Breaker condition monitoring	52CM	◦ <sup>(1)</sup>	◦ <sup>(1)</sup>	◦ <sup>(1)</sup>	◦ <sup>(1)</sup>	•	•	•	•
Advanced current circuit supervision for transformers	MCS, 3I, I2	—	—	—	—			•	•
Fuse failure	60	—	•	•	•		•	•	•
Tap changer position	84T	•	•	•	•	•	•	•	•
Open CT secondary monitoring (Windings 1 & 2)	CTSRCTF	•	•	•	•			—	—
<b>Metering</b>									
Three-phase currents (Winding 1)	IA, IB, IC (1)	•	•	•	•	•	•	•	•
Three-phase currents (Winding 2)	IA, IB, IC (2)	•	•	•	•	•	•	•	•
Sequence currents (Winding 1)	I1, I2, I0 (1)	•	•	•	•	•	•	•	•
Sequence currents (Winding 2)	I1, I2, I0 (2)	•	•	•	•			•	•
Ground current	IG	•	•	•	•	•	•	•	•
Demand values (Windings 1 & 2)		•	•	•	•	•	•	•	•
Maximum and minimum demand values (Windings 1 & 2)		•	•	•	•	•	•	•	•
Three-phase voltages	VA, VB, VC	—	•	•	•		•	•	•
Sequence voltages	V1, V2, V0	—	•	•	•		•	•	•
Ground voltage	VG	—	•	•	—		•	•	•
RTD/mA measurement						◦	◦		
Frequency	f	•	•	•	•		•	•	•
Power and energy (1-phase, 3-phases) and power factor	P, E, and PF	—	•	•	•		•	•	•
<b>Automation and communications</b>									
Max number of Digital Inputs		14	12	8	11	14	12	16	16
Max number of Digital Outputs		13	10	10	10	13	10	17	17
Max number of High-Speed Outputs (HSO's are optional and take the place of some digital outputs)		3	3	3	3	3	3	6	6
Sample values per IEC 61850-9-2LE							•		
Front 100Base-TX Ethernet (RJ45) port		•	•	•	•	•	•	•	•
Rear 100Base-TX Ethernet (RJ45) port		•	•	•	•	•	•	•	•
Rear 100Base-FX Ethernet (LC) port		•	•	•	•	•	•	•	•
Rear 100Base-TX Ethernet(RJ45) + RS-485(1x4-wire or 2x2-wire) + IRIG-B ports		•	•	•	•	•	•	•	•
Rear [2 * Ethernet 100FX (LC) + Ethernet 10/100BaseT (RJ45) + serial glass fiber (ST)] w HSR/PRP2			◦ <sup>(2)</sup>		◦ <sup>(2)</sup>	•	•		
Rear 100Base-FX Ethernet(LC) + RS-485(1x4-wire or 2x2-wire) + IRIG-B ports		•	•	•	•	•	•	•	•
Rear 100Base-TX and -FX Ethernet (1 * LC, 2 * RJ45) + serial glass fiber (ST) ports w HSR/PRP2		•	•	•	•	•	•	•	•
Rear 100Base-TX Ethernet (3 * RJ45) + serial glass fiber (ST) ports w HSR/PRP2		•	•	•	•	•	•	•	•
Ethernet 100Base-TX (RJ45) + configurable RS232/RS485 + [RS485 or serial glass fiber (ST) + IRIG-B] ports <sup>(3)</sup>		•	•	•	•	•	•	•	•
All three DNP3.0, Modbus, and IEC61850 communication protocols		•	•	•	•	•	•	•	•
<b>Records</b>									
Sequence of events recorder	SER	•	•	•	•	•	•	•	•
Fault recorder	FLR	•	•	•	•	•	•	•	•
Digital fault (waveform) recorder	DFR	•	•	•	•	•	•	•	•
Load profile	LoadProf	-	-	-	-	•	•	•	•
Digital Fault Recorder signal channels (Analog/Digital)		4/64	4/64	4/64	4/64	12/64	12/64	12/64	12/64
Events recorder (FIFO), 1ms resolution		1024	1024	1024	1024	1024	1024	1024	1024
Fault records		128	128	128	128	128	128	128	128

1 Applicable for two breakers

2 Firmware version 4.2 must be selected

3 Not available with Arc Flash Detection (AFD) option

Notes

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ABB Inc.  
Coral Springs, Florida 33065  
Phone: +1 954 752 6700  
Fax: +1 954 345 5329

[www.abb.com/mediumvoltage](http://www.abb.com/mediumvoltage)  
[www.abb.com/substationautomation](http://www.abb.com/substationautomation)

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