



Main

Relay application	Generator
Range of product	Sepam series 80 Sepam series 80 NPP
Device short name	G87
Control and monitoring type	Circuit breaker/contactor control ANSI code: 94/69 (option) Latching/Acknowledgement ANSI code: 86 Logic discrimination ANSI code: 68 (option) Switching of groups of settings Annunciation ANSI code: 30 Automatic transfer (AT) (option) Logipam programming (ladder language) (option) Logic equation editor 200 operators
Metering type	Phase current I'1, I'2, I'3 RMS Measured residual current I0, calculated I'0Σ Calculated residual current I'0Σ Positive sequence voltage Vd/rotation direction Frequency Calculated active and reactive energy (+/- W.h, +/- VAR.h) Active and reactive energy by pulse counting (+/- W.h, +/- VAR.h) (option) Phase current I1, I2, I3 RMS Demand current I1, I2, I3 Peak demand current IM1, IM2, IM3 Measured residual current I'0 Voltage U21, U32, U13, V1, V2, V3 Residual voltage V0 Negative sequence voltage Vi Active power P, P1, P2, P3 Reactive power Q, Q1, Q2, Q3 Apparent power S, S1, S2, S3 Peak demand power PM, QM Power factor Temperature (16 RTDs) (option) Rotation speed (option) Neutral point voltage Vnt
Network and machine diagnosis type	Datalog (DLG) Current phase displacement θ Unbalance ratio/negative sequence current Ii Disturbance recording Thermal capacity used Remaining operating time before overload tripping Waiting time after overload tripping Running hours counter/operating time Tripping context

Disclaimer: This documentation is not intended as a substitute for and is not to be used for determining suitability or reliability of these products for specific user applications

	Phase fault and earth fault trip counters Harmonic distortion (THD), current and voltage I _{thd} , U _{thd} Difference in amplitude, frequency and phase of voltages with synchro-check (option) Apparent positive sequence impedance Z _d Apparent phase-to-phase impedances Z ₂₁ , Z ₃₂ , Z ₁₃ Differential current I _{diff1} , I _{diff2} , I _{diff3} Through current I _{t1} , I _{t2} , I _{t3} Third harmonic voltage, neutral point residual Phase displacement
Switchgear diagnosis type	CT/VT supervision ANSI code: 60FL Trip circuit supervision ANSI code: 74 (option) Auxiliary power supply monitoring Nb of operations, operating time, charging time, nb of racking out operations (option) Cumulative breaking current

Complementary

Type of measurement	Current Energy Frequency Harmonic distortion (I THD & U THD) Peak demand power Power (P,Q) Power factor Rotation speed Temperature Voltage
Protection type	Directional earth fault ANSI code: 67N/67NC Directional phase overcurrent ANSI code: 67 Synchro-check (option) ANSI code: 25 Overvoltage (L-L or L-N) ANSI code: 59 Temperature monitoring (16 RTDs) (option) ANSI code: 38/49T Thermal overload for machines ANSI code: 49RMS Overfluxing (V/Hz) ANSI code: 24 Field loss (underimpedance) ANSI code: 40 Pole slip ANSI code: 78PS Overspeed (2 set points) (option) ANSI code: 12 Underspeed (2 set points) (option) ANSI code: 14 Directional reactive overpower ANSI code: 32Q Machine differential ANSI code: 87M Underimpedance ANSI code: 21B Inadvertent energisation ANSI code: 50/27 Third harmonic undervoltage/100 % stator earth fault ANSI code: 27TN/64G2 Third harmonic undervoltage/100 % stator earth fault ANSI code: 64G Earth fault/sensitive earth fault ANSI code: 50N/51N Earth fault/sensitive earth fault ANSI code: 50G/51G Negative sequence/unbalance ANSI code: 46 Remanent undervoltage ANSI code: 27R Overfrequency ANSI code: 81H Underfrequency ANSI code: 81L Negative sequence overvoltage ANSI code: 47 Directional active overpower ANSI code: 32P Voltage-restrained overcurrent ANSI code: 50V/51V Positive sequence undercurrent ANSI code: 27D Undervoltage (L-L or L-N) ANSI code: 27 Breaker failure ANSI code: 50BF Neutral voltage displacement ANSI code: 59N Phase overcurrent ANSI code: 50/51
Communication port protocol	Measurement readout (option) : Modbus Remote control orders (option) : Modbus Remote indication and time tagging of events (option) : Modbus Remote protection setting (option) : Modbus Transfer of disturbance recording data (option) : Modbus
Input output max capacity	42 inputs + 23 outputs
Communication compatibility	Modbus RTU IEC 60870-5-103 DNP3 IEC 61850 Modbus TCP/IP IEC 61850 goose message
User machine interface type	Advanced Mimic-based Without

Remote

Offer Sustainability

Product environmental profile

Available

 Product environmental

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