



Main

Relay application	Substation
Range of product	Sepam series 80 NPP Sepam series 80
Device short name	S84
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	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 Measured residual current I0, calculated I'0Σ
Network and machine diagnosis type	Unbalance ratio/negative sequence current Ii Disturbance recording Thermal capacity used Remaining operating time before overload tripping Waiting time after overload tripping Tripping context Phase fault and earth fault trip counters Harmonic distortion (THD), current and voltage Ithd, Uthd Difference in amplitude, frequency and phase of voltages with synchro-check option Apparent positive sequence impedance Zd Apparent phase-to-phase impedances Z21, Z32, Z13 Phase displacement Datalog (DLG)
Switchgear diagnosis type	Cumulative breaking current

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)

Complementary

Type of measurement	Power factor Frequency Peak demand power Voltage Power (P,Q) Current Energy
Protection type	Recloser (4 cycles) ANSI code: 79 (option) Neutral voltage displacement ANSI code: 59N Breaker failure ANSI code: 50BF Directional earth fault ANSI code: 67N/67NC Directional phase overcurrent ANSI code: 67 Synchro-check ANSI code: 25 (option) Overvoltage (L-L or L-N) ANSI code: 59 Thermal overload for cables ANSI code: 49RMS Directional active underpower ANSI code: 37P Negative sequence/unbalance ANSI code: 46 Overfrequency ANSI code: 81H Underfrequency ANSI code: 81L Remanent undervoltage ANSI code: 27R Negative sequence overvoltage ANSI code: 47 Phase overcurrent ANSI code: 50/51 Earth fault/sensitive earth fault ANSI code: 50N/51N Earth fault/sensitive earth fault ANSI code: 50G/51G Directional active overpower ANSI code: 32P Positive sequence undercurrent ANSI code: 27D Undervoltage (L-L or L-N) ANSI code: 27 Rate of change of frequency ANSI code: 81R
Communication port protocol	Measurement readout (option) : Modbus Remote indication and time tagging of events (option) : Modbus Remote control orders (option) : Modbus Remote protection setting (option) : Modbus Transfer of disturbance recording data (option) : Modbus
Input output max capacity	42 inputs + 23 outputs
Communication compatibility	IEC 60870-5-103 Modbus TCP/IP DNP3 Modbus RTU IEC 61850 IEC 61850 goose message
User machine interface type	Without Advanced Mimic-based Remote

Packing Units

Package 1 Weight	2.826 kg
Package 1 Height	2.840 dm
Package 1 width	1.900 dm
Package 1 Length	3.650 dm