



GE VERNOVA

MiCOM P40 Agile

P141, P142, P143, P145

Version History
Feeder Management IED

Hardware Version: Up to P

Firmware Version: Up to 91

Publication Reference: P14x-VH-EN-3.5



1 HARDWARE AND SOFTWARE VERSION HISTORY

S/W Version Major	S/W Version Minor	H/W Version	Original Date of Issue	Description of Changes	S1 Compatibility	Technical Documentation
00	A	A	October 1998	Original Issue	V2.08	TG8612C
00	B	A	November 1998	▪ Correction to make output relay test pattern settable through Courier ▪ Modification to make output relay test pattern function correctly ▪ Corrected frequency measurement cell visibility ▪ Rectified AR mode selection problems ▪ Corrected system frequency measurement in fault records	V2.08	TG8612C
00	C	A	November 1998	▪ Corrected extraction of binary flags in event log ▪ Modification to AR deadtime logic ▪ Additional 100ms dwell timer added CB fail output in default PSL ▪ Modification to default undervoltage settings ▪ Correction to logic input label text	V2.08	TG8612C
00	D	A	February 1999	▪ Correction to IEC870 events	V2.08	TG8612C
00	E	A	March 1999	▪ Modification to residual overvoltage protection ▪ Modification to negative sequence overcurrent and overvoltage protection ▪ Minor bug fixes	V2.08	TG8612C
00	F	A	March 1999	▪ Thresholds applied to measurements to prevent jitter ▪ Modification to low impedance REF settings ▪ Modification to battery failure alarms ▪ Minor bug fixes	V2.08	TG8612C
00	G	A	June 1999	▪ Modification to minimum current setting for SEF protection ▪ Check sync signal made visible in PSL ▪ Minor bug fixes	V2.08	TG8612C
00	H	A	July 1999	▪ Disturbance recorder modified to include correct substation name ▪ MODBUS frequency measurement corrected ▪ Fault locator miles setting now indicates miles not metres ▪ Frequency measurement indicates "Not available" instead being invisible when no current or voltage is applied ▪ PSL downloads are now logged as events	V2.08	TG8612C
00	I	A	July 1999	▪ IREF>Is1 setting correctly scaled by CT ratio	V2.08	TG8612C
00	J	A	August 1999	▪ Modification to fault recorder prevents undervoltage starts being logged as undervoltage trips ▪ Corrected spelling mistake in French language text ▪ Modification to make "ISEF Direction" setting invisible when "Lo Z REF" is selected	V2.08	TG8612C

S/W Version Major	S/W Version Minor	H/W Version	Original Date of Issue	Description of Changes	S1 Compatibility	Technical Documentation
01	A	A	September 1999	- Corrected spelling mistakes in French language text - Modification to disturbance recorder to ensure that logic state changes are displayed at the correct times - Correction to VTS logic to enable scaling of the current threshold with CT ratio - Correction to VCO logic to enable scaling of the V< threshold with VT ratio - Modification to prevent VT ratios returning to default when the auxiliary supply is interrupted	V2.08	TG8612C
01	B	A	October 1999	Modification to prevent an error code being generated when the opto inputs are switched on and off between 200 and 10,000 times per second	V2.08	TG8612C
02	A	A	November 1999	- Frequency protection added - Minor changes to Courier implementation	V2.08	TG8612C
02	B	A	November 1999	Modification to transient overreach algorithm to improve sensitivity for faults just above threshold	V2.08	TG8612C
02	C	A	December 1999	Correction to prevent error code being generated when reading thermal state via a MODBUS master station	V2.08	TG8612C
02	D	A	February 1999	Modification to correct system frequency, fault duration and relay trip time measurements when extracting fault records via MODBUS master station	V2.08	TG8612C
02	E	A	May 2002	- Resolved possible reboot caused by invalid MODBUS requests - Modification to improve compatibility between Px20 and Px40 relays on MODBUS communications networks	V2.08	TG8612C
03	A	A	April 2000	- Admittance protection added - External initiation of auto-reclose added - Cos phi and Sin phi features added to SEF protection - Maximum Vn polarizing voltage setting increased from 22V to 80V (increased to 320V for 440V relays) - Maximum NVD setting increased from 50V to 80V (increased to 320V for 440V relays) - Minimum "Fault Frequency Counter" setting increased from 0 to 1	V2.08	TG8612C
03	B	A	May 2002	- Resolved possible reboot caused by invalid MODBUS requests - Modification to improve compatibility between Px20 and Px40 relays on MODBUS communications networks	V2.08	TG8612C
04	A	A	July 2000	- Not released to production - DNP3.0 protocol added - Courier and MODBUS enhancement to improve compatibility with other protection - Correction to scaling of REF setting with CT ratio - Corrected spelling mistakes in French, German and Spanish language text - Cos phi and Sin phi features added to SEF protection	V2.08	TG8612C

S/W Version Major	S/W Version Minor	H/W Version	Original Date of Issue	Description of Changes	S1 Compatibility	Technical Documentation
04	B	A	August 2000	- Not released to production - Correction to ensure that all analogue events are generated correctly - Modification to ensure the relay uses the correct deadband settings for analogue events	V2.08	TG8612C
04	C	A	August 2000	- Not released to production - Modification to IN1> and IN2> directional elements to prevent stages 2, 3 and 4 being blocked when stage 1 is set non-directional	V2.08	TG8612C
04	D	A	September 2000	Modification to improve compatibility between Px20 and Px40 relays on MODBUS communications networks	V2.08	TG8612C
04	E	A	October 2000	- Not released to production - Modification to CB fail and CB condition monitoring logic - Correction to ensure that address changes can be made using DNP3.0 remote address change feature - New data type (D15) added to DNP3.0 protocol	V2.08	TG8612C
05	A	A	November 2000	Event filtering added	V2.08	TG8612C
05	B	A	December 2000	Improvements made to event filtering and energy measurements	V2.08	TG8612C
05	C	A	July 2001	- Not released to production - Support for MODBUS code 7 added	V2.08	TG8612C
05	D	A	December 2001	- Modification to allow CB fail initiation by the under and over frequency elements - Fault locator enhanced to allow "MILES" setting to modified via MiCOM S1	V2.08	TG8612C
05	E	A	January 2002	Resolved possible reboot caused by Disturbance Recorder	V2.08	TG8612C
05	F	A	January 2002	Resolved possible reboot caused by invalid MODBUS requests	V2.08	TG8612C
05	G	A	July 2002	- Not released to production - Corrected MODBUS trip and close with "0" command	V2.08	TG8612C
05	H	A	November 2002	- Modification to allow extracted IEC60870-5-103 to be correctly sequenced - Enhanced DNP3.0 Object 10 support for CB Close pulse - Modification to reduce switching time between setting groups - Fault locator line length setting corrected in groups 2, 3 & 4 - DNP3.0 Object 10 included in Class 0 poll - DNP3.0 support for season in time information	V2.08	TG8612C
05	I	A	November 2002	Modification to improve compatibility between Px30 and Px40 relays IEC60870 communications networks	V2.08	TG8612C
05	J	A	July 2003	Disturbance recorder triggering no longer causes loss of disturbance recorder data, temporary freezing of the user interface or loss of rear port comms	V2.08	TG8612C

S/W Version Major	S/W Version Minor	H/W Version	Original Date of Issue	Description of Changes	S1 Compatibility	Technical Documentation
05	K	A	January 2004	▪ Correction to prevent loss of communication via the front courier port, noticed particularly with rear port MODBUS relays ▪ DNP3.0 Analogue scan rate reduced from 5s to 1s ▪ DNP3.0 Digital scan rate reduced from 5s to 0.5s ▪ Improvements to DNP3.0 deadband settings for data types D1 to D7 ▪ Modification to event filtering to resolve problem with undercurrent elements causing a buffer overflow ▪ Reboot of relay if clear key is pressed following a remote reset of indications	V2.08	TG8612C
05	L	A	May 2004	▪ Auto-reclose trip test now produces a fault record on the user interface ▪ Overvoltage fault record page on the user interface is now correct for VCN faults ▪ Even/odd parity setting is now correctly recognized for DNP3.0 and MODBUS at power up ▪ The analogue check channels are monitored all of the time ▪ MODBUS has improved frame reception and does not lock up when spurious messages are injected onto the RS485 network ▪ The relay will lock out if it detects an SRAM failure at power up	V2.08	TG8612C
05	M	A	July 2004	▪ MODBUS device driver can incorrectly interpret frame length and return invalid data for valid message ▪ Remote commands can occasionally result in a reboot	V2.08	TG8612C
05	N	A	June 2005	▪ MODBUS device driver updated to improve performance on 60 Hz ▪ Power measurements display at non-zero current inputs corrected ▪ Phase under/over voltage protection hysteresis changed to 2% ▪ CB maintenance alarm now set for each new trip ▪ AR behavior in User Set Mode improved	V2.08	TG8612C
05	P	A	January 2010	▪ Update platform to B3.11 ▪ DTS PCS3198: Incorrect resetting of change of direction drop-off count strategy for evolving fault	V2.08	TG8612C
Special Release for Taiwan						
09	A	B	April 2002	▪ CB trip and close functionality available via the default display	V2.08	Based upon P14x/EN T/A22
09	B	B	December 2002	▪ Control inputs modified to produce protection events ▪ Control inputs enhanced to be none volatile ▪ IDG curve stage 2 improvements ▪ Modified AR mode to be none volatile ▪ Fault locator line length setting corrected in groups 2, 3 & 4 ▪ DNP3.0 Object 10 included in Class 0 poll ▪ DNP3.0 support for season in time information	V2.08	Based upon P14x/EN T/A22

S/W Version Major	S/W Version Minor	H/W Version	Original Date of Issue	Description of Changes	S1 Compatibility	Technical Documentation
09	B	B	December 2002	▪ "Reset Relays/LED" DDB signal corrected to reset LEDs ▪ Slip frequency measurement corrected via MODBUS ▪ Modification to reduce switching time between setting groups ▪ ISEF> IDG time setting modified to include units (seconds)	V2.08	Based upon P14x/EN T/A22
09	C	B	November 2003	▪ Modification to improve compatibility between Px30 and Px40 relays on IEC60870 communications networks ▪ Check synch time settings - step size reduced from 100ms to 10ms ▪ Disturbance recorder triggering no longer causes loss of disturbance recorder data, temporary freezing of the user interface or loss of rear port comms ▪ Modification to improve compatibility between Px30 and Px40 relays IEC60870 communications networks	V2.09 + Patch	Based upon P14x/EN T/A22
09	D	B	June 2005	▪ MODBUS device driver updated to improve performance on 60 Hz ▪ Power measurements display at non-zero current inputs corrected ▪ Phase under/over voltage protection hysteresis changed to 2% ▪ CB maintenance alarm now set for each new trip ▪ AR behavior in User Set Mode improved ▪ IEC60870-5-103. Status of summer bit corrected ▪ Commissioning test pattern for output relays improved to take account of fitted relays ▪ Commissioning test DDB status cell 1022-992 now shows 31 bits (instead of 32)	V2.11	Based upon P14x/EN T/A22
10	A	B	October 2001	▪ Not released to production ▪ Support for 8 inputs, 8 outputs and 4+4 cards ▪ Universal opto input added + "Opto input config" column ▪ Output contacts uprated from 5A to 10A ▪ Modification to allow CB fail initiation by the under and over frequency elements ▪ PSL reference I/D cell added ▪ Increased DDB signals from 512 to 1023	V2.08	P14x/EN T/A22
10	B	B	November 2001	▪ Increased user alarms from 9 to 36 ▪ US/IEEE curves modified to TD/7 with TD ▪ IDG, Rectifier and RI characteristics added ▪ Auto-reclose and checksync enhancements ▪ Phase angles added to sequence quantities ▪ Thermal overload modified to RMS based ▪ Range of SEF high sets increased from 0.8In to 2In ▪ SEF Inhibit & AR trip test can be operated via opto input	V2.08	P14x/EN T/A22

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10	C	B	November 2001	- Not released to production - Correction to P142 and P143 default PSL to re-map input L7 and V>2 trip signals	V2.08	P14x/EN T/A22
10	D	B	February 2002	- Resolved possible reboot caused by Disturbance Recorder - Resolved possible reboot caused by invalid MODBUS requests	V2.08	P14x/EN T/A22
10	E	B	December 2002	- Control inputs modified to produce protection events - Control inputs enhanced to be none volatile - IDG curve stage 2 improvements - Modified AR mode to be none volatile - Fault locator line length setting corrected in groups 2, 3 & 4 - DNP3.0 Object 10 included in Class 0 poll - DNP3.0 support for season in time information - Reset Relays/LED" DDB signal corrected to reset LEDs - Slip frequency measurement corrected via MODBUS - Modification to reduce switching time between setting groups - ISEF> IDG Time setting modified to include units (seconds) - Enhanced DNP3.0 Object 10 support for CB Close pulse	V2.08	P14x/EN T/A22
10	F	B	September 2003	- Disturbance recorder triggering no longer causes loss of disturbance recorder data, temporary freezing of the user interface or loss of rear port comms - Modification to improve compatibility between Px30 and Px40 relays IEC60870 communications networks	V2.08	P14x/EN T/A22
Special release for LADWP (Los Angeles)						
13	A	B	April 2002	- Beta release - SEF power measurement added 4 DDB signals added indicating directional starts	V2.08	P14x/EN T/A22
13	B	B	May 2002	Pre-validation release	V2.08	P14x/EN T/A22
13	C	C	May 2002	- Power supply modified to limit peak inrush to less than 10A - Support for second rear communication port	V2.08	P14x/EN T/A22
13	D	C	June 2002	SEF start count strategy changed		P14x/EN T/A22
13	E	C	January 2003	- ISEF> IDG Time setting modified to include units (seconds) - Fault locator line length setting corrected in groups 2, 3 & 4 - DNP3.0 Object 10 included in Class 0 poll - DNP3.0 support for season in time information - Slip frequency measurement corrected via MODBUS - Modification to reduce switching time between setting groups - Modified AR mode to be none volatile - Control inputs modified to produce protection events	V2.08	P14x/EN T/A22

S/W Version Major	S/W Version Minor	H/W Version	Original Date of Issue	Description of Changes	S1 Compatibility	Technical Documentation
13	E	C	January 2003	- Improved AR performance for short duration faults "Reset Relays/LED" DDB signal corrected to reset LEDs - Corrected MODBUS trip and close with "0" command - Support for trip and close pulse in DNP3.0 Object 10 - IDG curve stage 2 improvements	V2.08	P14x/EN T/A22
15	A	C	September 2002	- Not released to production - Support for second rear communication port - Power supply modified to limit peak inrush to less than 10A - Support for VDEW with private codes - Support for VDEW uncompressed disturbance recorder - Modification so that internal clock failure is correctly reported	V2.08	P14x/EN T/A33
15	B	C	September 2002	- Default PSL identifier corrected for P144 - REF options removed for P144	V2.08	P14x/EN T/A33
15	C	C	February 2003	- IEC 103 DR no longer generates a false disturbance record when two triggers occur in close succession - Some menu text changed in French and Spanish languages - Modification so that manual reset user alarms are logged correctly in event records - Control inputs enhanced to be non volatile - Fault locator line length setting corrected in groups 2, 3 & 4 - DNP3.0 Object 10 included in Class 0 poll - DNP3.0 support for season in time information - ISEF> IDG Time setting modified to include units (seconds) - Slip frequency measurement corrected via MODBUS	V2.08	P14x/EN T/A33
15	D	C	January 2004	- Disturbance recorder triggering no longer causes loss of disturbance recorder data, temporary freezing of the user interface or loss of rear port comms - DNP3.0 Analogue scan rate reduced from 5s to 1s - DNP3.0 Digital scan rate reduced from 5s to 0.5s - Improvements to DNP3.0 deadband settings for data types D1 to D7 - Modification to event filtering to resolve problem with undercurrent elements causing a buffer overflow	V2.08	P14x/EN T/A33
15	E	C	May 2004	- MODBUS IEC time stamp format may be expressed in forward or reverse format by means of a setting - Reset LED/latches DDB signal has same functionality as reset indications menu cell in user interface - SEF power measurements include a minimum threshold - Overvoltage fault record page on the user interface is now correct for VCN faults - Check Synch. Reset of under/over voltage blocking is independent for bus and line	V2.08	P14x/EN T/A33

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16	A	C	February 2003	- Option for pulsed/latched control inputs added - IEC 103 DR no longer generates a false disturbance record when two triggers occur in close succession - Some menu text changed in French and Spanish languages - Modification so that manual reset user alarms are logged correctly in event records - Control inputs enhanced to be none volatile - Fault locator line length setting corrected in groups 2, 3 & 4 - DNP3.0 Object 10 included in Class 0 poll - DNP3.0 support for season in time information - ISEF> IDG Time setting modified to include units (seconds) - Slip frequency measurement corrected via MODBUS	V2.10	P14x/EN T/A33 (with addendum)
Special release for LADWP (based upon 16 software)						
17	A	C	November 2003	- Not released to production - Option for pulsed/latched control inputs added - DNP3.0 Analogue scan rate reduced from 5s to 1s - DNP3.0 Digital scan rate reduced from 5s to 0.5s - Modification to event filtering to resolve problem with undercurrent elements causing a buffer overflow - Missing CT Option "None" setting (P144 only) for 3 CT applications - Improvements to DNP3.0 deadband settings for data types D1 to D7 - Support for primary measurements over DNP3.0 using scaling factors, which may be viewed/changed both locally and remotely - Disturbance recorder triggering no longer causes loss of disturbance recorder data, temporary freezing of the user interface or loss of rear port comms	V2.10	P14x/EN T/A33 (with addendum)
17	B	C	December 2003	- DNP3.0 manual reset user alarm points are now non-volatile - DNP3.0 time synch command no longer causes a reboot when IRIG-B is enabled	V2.10	P14x/EN T/A33 (with addendum)
17	C	C	March 2010	DTS PCS3199 The analogue check channels are monitored all of the time	V2.10	P14x/EN T/B43 (with addendum)
20	A	G	June 2003	- Not released to production - New CPU card and front display. Display is a 16 x 3 character dot matrix type with direct access keys (hotkeys) - Enhanced check synch functionality including predictive close feature - Support for UCA2 protocol and associated features (GOOSE etc.) - Configurable opto input filtering added - Time synchronization via opto inputs added - Missing CT Option "None" setting (P144 only) for 3 CT applications - Time synchronization via opto inputs added	V2.09	P14x/EN T/A44

S/W Version Major	S/W Version Minor	H/W Version	Original Date of Issue	Description of Changes	S1 Compatibility	Technical Documentation
20	A	G	June 2003	- Enhancement to rear courier port to give K-bus and EIA(RS)485 compatibility - Support for 512 events - Automatic disturbance recorder extraction support for Courier, VDEW and UCA2	V2.09	P14x/EN T/A44
20	B	G	November 2003	- Not released to production - Support for Russian Language text added - Automatic disturbance recorder extraction support for MODBUS	V2.09	P14x/EN T/A44
20	C	G	December 2003	- Not released to production - Improvement to ensure the restoration of Ethernet communications following a long-term loss of Ethernet hub - Correction to prevent relay reboot if any Ethernet settings are - Modified without Ethernet card being present	V2.09	P14x/EN T/A44
20	D	G	February 2004	- Not released to production - Resolution of EMC problems with rear K-Bus port	V2.09	P14x/EN T/A44
20	E	G	February 2004	- Improvement to increase the maximum pending UCA2 requests - Number of simultaneous UCA2 clients increased from 4 to 10 - Modification to prevent blank page from being displayed in the fault records when a record is generated without a genuine fault (i.e. via opto input). The blank page only occurs if fault record is generated whilst an alarm is already present	V2.09	P14x/EN T/A44
20	F	G	June 2004	- Modification to prevent reboot when disturbance records are extracted over UCA2 - MODBUS. IEC time stamp format may be expressed in forward or reverse format by means of a setting - Overvoltage fault record page on the user interface is now correct for VCN faults - Check Synch. Reset of under/over voltage blocking is independent for bus and line. Hysteresis reduced to 2% - IEC60870. The FAN now correctly increments for new fault conditions	V2.09	P14x/EN T/B54
20	G	G	May 2005	- MODBUS device driver updated to improve performance on 60 Hz - Power measurements display at non-zero current inputs corrected - Phase under/over voltage protection hysteresis changed to 2% - CB maintenance alarm now set for each new trip - AR behavior in User Set Mode improved - IEC60870-5-103. Status of summer bit corrected - Commissioning test pattern for output relays improved to take account of fitted relays - Commissioning test DDB status cell 1022-992 now shows 31 bits (instead of 32)	V2.10	P14x/EN T/B54

S/W Version Major	S/W Version Minor	H/W Version	Original Date of Issue	Description of Changes	S1 Compatibility	Technical Documentation
20	G	G	May 2005	- Second rear Courier communications port improved - Px40 UCA2 communications improvement	V2.10	P14x/EN T/B54
20	H	G	June 2006	- Resolution of IEC61850 VxWorks problem - association lost after 49 days - IRIG-B Status reported incorrectly - DNP3 interframe gap reinstated in Phase 2 CPU. - Spurious indication of Voltage Controlled Overcurrent if feature is enabled, and Phase Overcurrent is disabled. - Spurious protection lockout events when autoreclose is not enabled. - US IDMT reset characteristic behaviour incorrect - Autoreclose. The Hold Reclaim Logic signal does not comply with the diagram	V2.10	P14x/EN T/B54
21	A	G	May 2004	4-stage time delayed rate of change of frequency protection - Initiation of CB Fail from external single pole or earth fault protection - Check synch indication of blocking on Stage 1 - LCD contrast change confirmation - UCA2 - Ethernet card MAC address display - UCA2 - Local GOOSE IED name - MODBUS - IEC time stamp format may be expressed in forward or reverse format by means of a setting - Overvoltage fault record page on the user interface is now correct for VCN faults - Check Synch - Reset of under/over voltage blocking is independent for bus and line - IEC60870 - The FAN now correctly increments for new fault conditions	V2.10	P14x/EN T/B54
21	B	G	December 2004	- Second rear Courier communications port failure - Phase under/over voltage protection - 2% hysteresis - CB maintenance alarm set for each new trip - AR State Machine can lock in User Set Mode	V2.10	P14x/EN T/B54
21	C	G	December 2008	Reduced minimum setting of df/dt Averaging cycles to 2Hz/s	V2.10	P14x/EN T/B54
30	A	J	December 2004	4-stage definite time directional negative sequence overcurrent - Dual opto input operate/reset characteristics - Fiber optic support for Courier/MODBUS/DNP3.0 protocols - Check synch stage 2 blocking indications - Triggering of disturbance recorder from Control Inputs, GOOSE Inputs and GOOSE Outputs - Fault record information over IEC60870-5-103 protocol - Fault location and broken current information over DNP3.0 protocol - Menu text change from ALSTOM to AREVA. Grey case - Default text for relay and opto labels rationalized	V2.11	P14x/EN T/B54

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30	A	J	December 2004	- Phase under/over voltage protection - 2% hysteresis - CB maintenance alarm set for each new trip - AR behavior in User Set Mode improved	V2.11	P14x/EN T/B54
30	B	J	February 2006	- DNP3.0 interframe gap reinstated in Phase 2 CPU - IRIG-B status reporting and spurious events correction - Correction to IDG IDMT characteristic configuration	V2.11	P14x/EN T/B54
30	D	G	December 2008	Reduced minimum setting of df/dt Averaging cycles to 2Hz/s	V2.11	P14x/EN T/B54
Rebranded from AREVA to ALSTOM. April 2011. P14x/EN T/C54						
31	A	J	March 2005	- P145 only: Original Issue - P145 Evolution with extended User Interface (10 Function Keys and 18 tricolour LEDs) - Control Input status stored in FLASH memory 10 Maintenance Records instead of 5 - Programmable opto initiation of setting group change by DDB signals (rather than fixed L1 and L2) - Blocking of remote CB Trip/Close by DDB signals - Inhibit of Earth Fault 1&2 by DDB signals - Skip first shot of AR sequence by DDB signal	V2.12	P145/EN M/A11
32	A	J	October 2005	- P141/2/3/4 only - New DDB signals for PSL initiation of setting group selection - New DDB signal for Blocking of remote CB Trip/Close commands - New DDB signal to inhibit Earth Fault 1&2 - Skip first shot of AR sequence by DDB signal - Zero reference DDB signal - Maintenance Records increased - Phase Rotation in all 4 setting groups - EPATR_B characteristic in SEF stages 1 and 2 - Auto-reclose modifications to include: 4 Reclaim timers - one per AR shot - AR Skip Shot 1 setting - DDB Signals for Inhibit Reclaim, Reclaim In Progress and Reclaim Time Complete - Df/dt configuration cell moved	V2.12	P14x/EN T/B64
32	B	J	May 2006	- DNP3.0 interframe gap reinstated in Phase 2 CPU - IRIG-B status reporting and spurious events correction	V2.12	P14x/EN AD/B64

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39	B	J	July 2009	- Due to MODBUS register misalignment, introduced in version 40 (extended DDB), MODBUS registers set to version 30 - Four stages of Advanced Frequency df/dt copied to df/dt column	Studio/2.14	P14x/EN M/Cc4
40	A	J	February 2008	64 programmable SR latches - Broken conductor starts - EIA 232 InterMiCOM - Improvement to adaptive check synch - Trip signal independent of relay 3 - DNP3.0 over Ethernet	V2.14	P14x/EN M/C94 (with addendum)
41	A	J	April 2011	Rebranded to ALSTOM		P14x/EN AD/D94
			June 2008	- Based on 40A functionality: 32 DNP3 points with aliased (modified) functionality for Control Inputs - Additional DNP3 communications settings 2nd harmonic restraint, selectively blocking: 4 stage phase overcurrent protection 4 stage measured earth fault protection 4 stage derived earth fault protection 4 stage sensitive earth fault protection 4 stage negative sequence overcurrent protection - Removal of 16 hard-coded SR Latches	Studio/2.14	P14x/EN M/Ca4 (with addendum)
41	B	J	November 2009	- Based on 41A platform release K3.10 - Minor corrections included	Studio/2.14	P14x/EN M/Ca4 (with addendum)
41	C	J	February 2011	Rebranded to ALSTOM	Studio/2.14	P14x/EN M/C74 (with addendum) P14x/EN AD/Da4
42	A	J	September 2008	- Not released to production - IEC 61850 phase II enhancements - Read only mode 1msec time tagging of opto inputs	V2.14 and S1 Studio v3.1.0	P14x/EN M/Ca4 (with addendum)
42	B	J	October 2008	- IEC 61850 phase II enhancements - Read only mode 1msec time tagging of opto inputs	V2.14 and S1 Studio v3.1.0	P14x/EN M/Ca4 (with addendum)
42	C	J	March 2009	New platform software release required for KEMA conformance issues	V2.14 and S1 Studio v3.1.0	P14x/EN M/Ca4 (with addendum)
42	D	J	September 2009	New platform software release to resolve 'NIC no response' alarm	V2.14 and S1 Studio v3.1.0	P14x/EN M/Ca4 (with addendum)

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42	E	J	February 2011	Rebranded to ALSTOM	V2.14 and S1 Studio v3.1.0	P14x/EN M/C74 (with addendum) P14x/EN AD/Db4
42	F	J	January 2012	- New Parallel Redundant Protocol PRP Ethernet cards support - Enhancements in DR display - Corrections on IEC61850 model - Correction for German & Russian language - Enhancements on directional negative sequence current function - Bug fixes	V2.14 and S1 Studio v3.1.0	P14x/EN M/C74 (with addendum) P14x/EN AD/Db4
42	G	J	February 2012	- New Parallel Redundant Protocol PRP Ethernet cards support - Enhancements in DR display - Corrections on IEC61850 model - Correction for German & Russian language - Enhancements on directional negative sequence current function - Correction of SEF reset - Correction of Fault Locator display - Bug fixes	V2.14 and S1 Studio v3.1.0	P14x/EN M/C74 (with addendum) P14x/EN AD/Db4
42	H	J	June 2012	- Enhancements in DR display - Corrections on IEC61850 model - Enhancements on directional negative sequence current function - Correct Check Sync angle - Correction of Fault Locator display - Bug fixes	V2.14 and S1 Studio v3.1.0	P14x/EN M/C74 (with addendum) P14x/EN AD/Db4
43	A	J	April 2009	- Advanced frequency protection - Phase segregated power protection - Sensitive power protection - Check synch. enhancements - Enhanced I/O for P143 - Redundant Ethernet - optical (optional) - IEC 61850 phase III enhancements	V2.14 and S1 Studio v3.1.0	P14x/EN M/De6
43	B	J	May 2009	The "Stg f+t Freq" Advanced Frequency Protection setting in Hz for all 9 stages, is incorrectly dependent on the Main VT ratio settings	V2.14 and S1 Studio v3.1.0	P14x/EN M/De6
43	C	J	October 2009	Minor corrections included	V2.14 and S1 Studio v3.1.0	P14x/EN M/De6
43	D	J	February 2011	Rebranded to ALSTOM	V2.14 and S1 Studio v3.1.0	P14x/EN M/Ee6

S/W Version Major	S/W Version Minor	H/W Version	Original Date of Issue	Description of Changes	S1 Compatibility	Technical Documentation
43	E	J	March 2012	▪ New Parallel Redundant Protocol PRP Ethernet cards support ▪ Enhancements in DR display ▪ Corrections on IEC61850 model ▪ Correction for German language ▪ Enhancements on directional negative sequence current function ▪ Correction on display the Admittance Data in fault record ▪ Correct Check Sync angle ▪ Bug fixes	V2.14 and S1 Studio v3.1.0	P14x/EN M/Ee6
43	G	J	February 2011	▪ Rebranded to ALSTOM	V2.14 and S1 Studio v3.1.0	P14x/EN AD/De7
44	A	J	December 2009	▪ 128 Virtual Inputs ▪ Increase of SR gates to 128 ▪ 6 Stages of O/C protection ▪ Rate of change of voltage protection ▪ Enhanced I/O for P141 ▪ 200 volts phase - phase VT configuration ▪ Fault records retrieval over DNP3.0 ▪ Increased setting range for CB close pulse time	V2.14 and S1 Studio v3.1.0	P14x/EN M/De7 (with addendum)
44	B	J	May 2010	▪ PCS3273: Applying XCBR1.CO.Pos Open/Close via IEDScout can cause the relay to reply with Invalid Position even though the Open/Close operation is successful. ▪ PCS3268: The SNTP poll task on the ethernet card occasionally showed a stack overflow and was corrected in Phase 1. This correction has not been implemented in Phase 2 ▪ PCS3241: The release notes for the GOOSE Enhancements section of platform L4.0 references bulk transfer mode for the ECI fifo. These updates can cause any changes to DDB signals NOT to be passed to the Ethernet board ▪ PCS3224: Occasional increased delay between Virtual Output and GOOSE message transmitted with new state when relay under current & voltage load (IEC 61850 Phase 2 only) ▪ PCS3211: Occasionally an opto-input change of state is not registered in System\OptGGIO1.ST ▪ PCL1505: On P442 phase 1 product when a corrupt group message is displayed on LCD, the protection functions are stopped but no watch dog is raised (Healthy LED is green) ▪ PCL1492: The bit field parameters defined in the L&F are badly converted in the IEC61850 model ▪ PCS3256: In version 44A software issuing a change to a Control Input from a CS103 Master station is not actioned on the relay	V2.14 and S1 Studio v3.1.0	P14x/EN M/Ee6 (with addendum) P14x/EN AD/Fe7

S/W Version Major	S/W Version Minor	H/W Version	Original Date of Issue	Description of Changes	S1 Compatibility	Technical Documentation
44	C	J	July 2010	- PCS3291: Reading the Logical Nodes in order to map all IEC61850 points, the master station always stops at AlmGGIO1 logical node - Platform Release L4.3 - PCS3290: Slow extraction of SCL configuration data - PCW161: When one Analogue Input is no longer valid, the Flags for this Analogue Input remains as "Online, Local Forced". - PCW162: When the beginning character of a menu text is '%', this menu text will be wrongly displayed in Courier Device Browser and MiCOM S1 Studio	V2.14 and S1 Studio v3.1.0	P14x/EN M/Ee6 (with addendum) P14x/EN AD/Fe7
44	D	J	September 2010	Not released to Production	V2.14 and S1 Studio v3.1.0	P14x/EN M/Ee6 (with addendum) P14x/EN AD/Fe7
44	E	J	October 2010	PCS3335: IEC61850 Heavy use of BRCB causes loss of communications	V2.14 and S1 Studio v3.1.0	P14x/EN M/Ee6 (with addendum) P14x/EN AD/Fe7
44	F	J	December 2010	- PCS3316: "IEC61850 Data Attribute CBOpCap.stVal (CB Operate Capacity - Status value) in all XCBR Logical NodeS returns an incorrect Enumeration type." - DTS PCS3329: "Fault location reported over dnp3 is incorrect" - DTS PCS3339 "Overcurrent additional stage (5&6) don't appear properly in the fault record." - DTS PCS3357: "Duplicate registers used; also, errors in 'Look and Feel' spec register list" - DTS PCS3369: Reading Trip Elements 3 and Trip Elements 4 the relay responds with "Exception: [02]-Illegal data address" - DTS PCS3337: IEC61850 - A quickly toggled state may cause the interim state change to be not reported. - DTS PCL1552: A mix of not latched and latched LED lead to an incorrect behaviour of the latched LED - DTS PCS3362: Px4x stops receiving (processing) GOOSE messages when managed Ethernet switch parameterised for VLAN. - Px40 Platform library release MMSLITE_V5.1001D	V2.14 and S1 Studio v3.1.0	P14x/EN M/Ee6 (with addendum) P14x/EN AD/Fe7
44	H	J	December 2011	- New Parallel Redundant Protocol PRP Ethernet cards support - Enhancements in DR display - Corrections on IEC61850 model - Correction for German & Russian language - Enhancements on directional negative sequence current function - Bug fixes	V2.14 and S1 Studio v3.1.0	P14x/EN M/Ee6 (with addendum) P14x/EN AD/Fe7

S/W Version Major	S/W Version Minor	H/W Version	Original Date of Issue	Description of Changes	S1 Compatibility	Technical Documentation
44	J	J	March 2012	▪ Corrections on IEC61850 model ▪ Enhancements on directional negative sequence current function ▪ Correction on display the Admittance Data in fault record ▪ Correct Check Sync angle ▪ Bug fixes	V2.14 and S1 Studio v3.1.0	P14x/EN M/Ee6 (with addendum) P14x/EN AD/Fe7
45	A	J	April 2011	▪ Special release for Hydro Quebec (not released to Production)	V2.14 and S1 Studio v3.1.0	P14x/EN M/Ee6 (with addendum) P14x/EN AD/Fe7
46	A	J	May 2011	▪ Load encroachment (Blinder) ▪ Voltage restrained over current protection ▪ Programmable curves ▪ Monitor bits in PSL ▪ Setting changes through IEC103 protocol ▪ Improvements in CB fail algorithm	V2.14 and S1 Studio v3.1.0	P14x/EN M/Ee6 (with addendum) P14x/EN AD/Ff7
46	B	J	December 2011	▪ New Parallel Redundant Protocol PRP Ethernet cards support	V2.14 and S1 Studio v3.1.0	P14x/EN M/Ee6 (with addendum) P14x/EN AD/Ff7
46	C	J	March 2012	▪ Enhancements in DR display ▪ Corrections on IEC61850 model ▪ Correction for German language ▪ Enhancements on directional negative sequence current function ▪ Correction on display the Admittance Data in fault record ▪ Correct Check Sync angle ▪ Bug fixes	V2.14 and S1 Studio v3.1.0	P14x/EN M/Ee6 (with addendum) P14x/EN AD/Ff7
46	D	J	August 2014	▪ Corrections on IEC61850 model ▪ Some platform and IEC 61850 improvements ▪ Enhancements in DR display ▪ Bug fixes	V2.14 and S1 Studio v3.1.0	P14x/EN M/Ee6 (with addendum) P14x/EN AD/Ff7
Special release SW49 for Indian market (P143 only for INDIA)						
50	A	J	January 2013	▪ Cyber Security implementation ▪ CS103 enhancements ▪ Enhancements in DR display ▪ Corrections on IEC61850 model ▪ New language option (7): EN, PL, IT & PT ▪ Enhancements on directional negative sequence current function ▪ Bug fixes	MiCOM S1 Agile V1.0.0	P14x/EN TM/Fg7

S/W Version Major	S/W Version Minor	H/W Version	Original Date of Issue	Description of Changes	S1 Compatibility	Technical Documentation
50	B	J	June 2013	- Second Harmonic blocking for SEF added - Hot Standby Ethernet failover added - Signal alarm added for loss of SNTP server - CB fail logic changed	MiCOM S1 Agile V1.0.0	P14x/EN TM/Fg7
50	C	J	June 2014	- CB fail re-trip and back-trip signal issue corrected - Some platform and IEC 61850 improvements	MiCOM S1 Agile V1.0.0	P14x/EN TM/Fg7
51	A	J	March 2014	- Adding 8 sets of switch control and 48 digital inputs - Enhancement of GOOSE performance - Some platform and IEC 61850 improvements - Bug fixes	MiCOM S1 Agile V1.1.0	P14x-TM-EN-1
51	B	J	April 2014	- Switch Control function added - IEC 61850 support for Switch Control added - EF current threshold settings modified - POC current threshold settings modified - VCO current threshold settings modified - Opto-inputs added for P143 (up to 48 now available) - Some DDB signal ordinals changed - Some language text optimised	MiCOM S1 Agile V1.1.0	P14x-TM-EN-1
51	C	J	August 2015	- IEC103 protocol support for Switch Control and CB Control added - Frequency protection functional improvements - Ethernet alarms improvements - Some platform and IEC 61850 improvements	MiCOM S1 Agile V1.2	P14x-TM-EN-1.2
51	D	J	April 2016	- Enhancement of GOOSE performance - Some platform and IEC 61850 improvements - DNP3 protocol corrections - Bug fixes	MiCOM S1 Agile V1.3	P14x-TM-EN-1.2
51	E	J	May 2020	- Support for new Ethernet boards, new CORTEC options R/S/T - Minimum value for setting [46 0C] 'VTS PickupThresh' changed to 10V from 20V - MLFR time stamp support in IEC61850 Ed1 - Corrected status of opto Inputs in the IED and the IEC 61850 data model are inconsistent - Corrected delay in receiving Virtual Inputs on IED power up - Corrected issue when sending an Assign Class request immediately followed by a Class poll relay reboots - Corrected CS1 and CS2. Does not work independently when CB Comp enabled for CS2 - Corrected voltage difference measurement not displayed on HMI - Bug fixes	MiCOM S1 Agile V1.3	P14x-TM-EN-1.2

S/W Version Major	S/W Version Minor	H/W Version	Original Date of Issue	Description of Changes	S1 Compatibility	Technical Documentation
51	F	J	December 2021	- Frequent fleeting SNTP alarms correction - Corrected issue where during commissioning, for some relays, error code 0x350C002D can be reported on the relay front panel when downloading MCL file to the relay - Bug fixes	MiCOM S1 Agile V1.3	P14x-TM-EN-1.2
52	A	J	February 2017	- IEC 61850 model enhancements - CS103 protocol enhancements - Modbus protocol enhancements - DNP3 protocol enhancements - Russian language correction - Active and reactive energy measurement correction - Improvement of switch control function - Improvement of fault location function	MiCOM S1 Agile V1.3.1	P14xEd1-TM-EN-1
52	B	J	February 2019	- Support for new Ethernet boards, new CORTEC options R/S/T - Firmware 52A cannot be configured for model P143918A3M0520J - corrected - Bug fixes	MiCOM S1 Agile V1.3.1	P14xEd1-TM-EN-1
61	A	P	November 2015	- IEC 61850 Edition 2 implementation - Comprehensive IEC 61850 test mode and simulation capability - IEC 61850 editable Logical Devices and Logical Nodes - Optimised GOOSE dataset - PTP (IEEE 1588) time synchronization added - SNMP v2c and v3 added - Transient earth fault - Extend UV/OV/ROV to four stages - Sensitive over voltage - Memory enhancements - Bug fixes	MiCOM S1 Agile V1.2	P14x-TM-EN-2.2
61	B	P	September 2016	- GOOSE message enhancements - IEC 61850 model corrections - TEFD function corrections - Active and Reactive energy direction correction - SOV function enhancements	MiCOM S1 Agile V1.3	P14x-TM-EN-2.2
62	A	P	November 2020	62A applies to P144 model only - Neutral voltage (VN) switchable between Derived and Measured values for the Directional Earth Fault 1 and 2, Directional Sensitive Earth Fault, Residual O/V NVD and TEFD using the VN Input - Measured/Derived setting in the CONFIGURATION menu. Previously P144 only used measured VN Note: the P141/2/3/5 use derived neutral voltage only - Frequent fleeting SNTP alarms correction	MiCOM S1 Agile V1.3	P14x-TM-EN-2.2

S/W Version Major	S/W Version Minor	H/W Version	Original Date of Issue	Description of Changes	S1 Compatibility	Technical Documentation
91	D	P	June 2020	▪ New Ethernet board support - new CORTEC options R/S/T. Improved traffic density handling, PRP, HSR and RSTP supported in the same order option for standardisation. Modulated/demodulated IRIG-B also standardised. New dual RJ45 copper Ethernet option, provides a more economical connection to switches ▪ Duplicate GOOSE rejection ▪ IEC61850 Ed1/Ed2 switchable ▪ Cybersecurity enhancements: ▪ Role based access control (RBAC) for centralized authentication. ▪ Authorization and account management via RADIUS, and directly on the relay. ▪ Security event management via syslog ▪ IEC61850 multi-client reporting support for 8 clients ▪ Fixed Length GOOSE support ▪ CS103 configurable points list ▪ Bug fixes	MiCOM S1 Agile Version 2.0.1	P14x-TM-EN-3
91	E	P	July 2021	▪ IEC61850 ED2 corrections ▪ German language corrections ▪ Frequent fleeting SNTF alarms correction ▪ Improvement where the CT/VT ratio settings and primary/secondary selection are incorporated in the generation of the ".cfg" part of the COMTRADE Disturbance Record (DR) extracted from the device ▪ Minor bug fixes	MiCOM S1 Agile Version 2.0.1	P14x-TM-EN-3
91	F	P	February 2023	▪ Correction to Opto I/P Status 2 cell 0F.02 which does not update when the signal status changes ▪ Correction to extraction of disturbance record file with IEC 61850 Ethernet card where the application will stop if the number of channels is increased past the default number ▪ Correction to the IED stopping IEC 61850 MMS reporting after sequences of IEC 61850 MMS controls to PLoGGIO/SPCSO Controls Inputs, if these are configured with either (1) SBO with enhanced security (2) Direct Control with enhanced security ▪ Correction to cancelling an SBO command which will incorrectly wait for the select time out to expire ▪ PSL graphics memory increased from 7K to 27920 bytes to support more graphical items such as Off Page Connectors (OPCs) in the PSL	MiCOM S1 Agile Version 2.0.1	P14x-TM-EN-3.3
91	G	P	March 2023	P142/3 ONLY ▪ Inclusion of the maximum Fault Current in the fault record	MiCOM S1 Agile Version 2.0.1	P14x-TM-EN-3.3
91	H	P	April 2024	▪ Correction where with Multi Client Reports if a read is done on System LLN0, the server size may be exceeded. Customers can configure the client to read the data objects from the individual logical nodes rather than reading the complete logical node as a work around	MiCOM S1 Agile Version 2.0.1	P14x-TM-EN-3.3

S/W Version Major	S/W Version Minor	H/W Version	Original Date of Issue	Description of Changes	S1 Compatibility	Technical Documentation
91	H	P	April 2024	- Correction to NIC No Response and NIC MemAlloc Fail Alarms being created if the dataset contains CF elements - Correction where the relay does not display the voltage difference between Line and Bus for the check synch element (C/S Bus-Line Mag) when the Delta Voltage is <8.5V secondary	MiCOM S1 Agile Version 2.0.1	P14x-TM-EN-3.3
91	I	P	October 2025	- Support for new Ethernet boards, U/W/Y options in the CORTEC order code - Combined 2 instances of SNMP into one, updates network statistics to SNMP - Added LCCH logical node for IEC 61850 Ed1 and Ed2 data models for link status of Ethernet ports (NP2A and NP2B) for the new Ethernet boards - Added two DDBs to show link status of NP2A and NP2B ports - Configuration of HSR/PRP/RSTP/Failover for new Ethernet boards is via S1 Agile IED configuration tool over MCL - Ethernet traffic overload improvements - Fixed issue with malformed packet from P40 IEDs. One of the IEC 61850 Clients can occasionally give up the association with a P40 relay - in most cases this is observed after a control action from the client - IEC 61850 LN numbering changed from 01, 02, 03 to 1, 2, 3 etc. Use of 01, 02...09 numbering for IEC 61850 LNs can prevent some 61850 data attributes from updating correctly - Fixed cyber security vulnerability in TMW Library for DNP3.0 - Fixed IEC 61850 Interoperability issue with Siemens clients - Fixed issue where scaling factor is shown as secondary instead of primary in the comtrade CFG file and CT ratios are hard coded as 1:1 - Fixed issue where IEC 61850 Server has no respond for SetDataValues request on setSrcRef DA - Fixed issue where frequency setting - (courier cell [0009]) cannot be set to 60Hz from the default 50Hz value - Fixed issue where some data changes are not reported via IEC 61850 if 'BufTm' is set > 0 - Fixed issue with IEC 61850 Ed2 where SBO Cancel request is not processed when IED mode is Test blocked - Fixed issue where when the stNum of a 'duplicate' GOOSE that is being published without Sim Flag goes > the stNum of the 'real' GOOSE Publisher, the P40 subscriber switched over to the new stNum - Fixed issue where the IED stops IEC 61850 MMS reporting after sequences of IEC 61850 MMS controls to PLoGGIO/SPCSO Controls Inputs, if these are configured with either: (1) SBO with enhanced security or (2) Direct Control with enhanced security - Fixed issue with IED losing MMS Communication when EntryID/Buffer Overflow is selected for URCB - Fixed issue with GOOSE Control Block (GCB) enable and CSWI controls which are failing when initiated only from "UniGrid" conformance test tool	MiCOM S1 Agile Version 2.0.1	P14x-TM-EN-3.4

S/W Version Major	S/W Version Minor	H/W Version	Original Date of Issue	Description of Changes	S1 Compatibility	Technical Documentation
91	I	P	October 2025	- Fixed occasional Ping Loss on the IEC 61850 IED - Fixed issue with COMTRADE Format for MMS which shows "1997" - should be "1999" - Increased the MMS_MAX_MSG_SIZE to 65536 from 16384. For V91 software IEDs, Multi Client Reports are supported and if a read is done on System LLN0 the server size may be exceeded - IEC 61850 Association ServiceSupportedCalled includes support for obtainFile - Fixed issue where relay should not send out CommandTermination - when the operation is positive and the value is changed in IEC 61850 DOes and SBOes - Fixed issue where the control will now correctly fail when the device is in On Mode and the Control comes with the Test flag set - Fixed IEC 61850 Ed2 issue where for a free BRCB, ResvTms must be >0 value if client does not write it - Fixed issue to be compliant to IEC 61850 Edition 2.1, where for LPHD.Sim and Mod, the test flag should be ignored, and the command should be executed with or without the test flag. Previous implementation of Edition 2 required the test flag to be present when LLN0.Mod is in Test for LPHD.Sim to be active - Fixed issue where with the device in Test/Blocked Mode and user sends a control with the test flag the user gets a message saying the control has executed, but there is no change in status of the Control Inputs or outputs - Fixed issue where the IRIG-B Status changes to 'Card Failed' from 'Signal Healthy' over a long connection - Fixed issue with frequent logging of short duration 'SNTP Failure' Alarms - Fixed issue related to NIC No Response and NIC MemAlloc Fail Alarms if dataset contains CF elements - Fixed issue where if a user creates a dataset and adds SI units' data attributes under the CF functional constraint and configures the RBCB with that dataset and Enables RBCB with IED scout the connection to the relay is lost - Fixed issue with DST setting, the time is shifted by 60 minutes as per DST offset setting, but the 'Summertime' bit flag in IEC 103 protocol is not set - Fixed issue with reset of User Alarms - Incorrect reset through Function Key when Binary Input is still energized	MiCOM S1 Agile Version 2.0.1	P14x-TM-EN-3.4

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SOFTWARE VERSION COMPATIBILITY

IED S/W Version	Setting File Version	Menu Text File Version*8	PSL File Version
00	00	00	00
01	00, 01	01	00, 01
02	00, 01, 02	02	00, 01, 02
03	00, 01, 02, 03	03	00, 01, 02, 03
04	00, 01, 02, 03, 04	04	00, 01, 02, 03, 04
05	00, 01, 02, 03, 04, 05	05	00, 01, 02, 03, 04, 05
09	05, 09	09	09
10	09, 10	10	09, 10
13	09, 10, 13	13	09, 10, 13
15B	09, 10, 13, 15	15B	09, 10, 13, 15
15C	09, 10, 13, 15	15C	09, 10, 13, 15
16	09, 10, 13, 15, 16	16	09, 10, 13, 15, 16
17	09, 10, 13, 15, 16, 17	17	09, 10, 13, 15, 16, 17
20	20	20	20
21	20, 21	21	20, 21
30	30	30	30
31	31	31	31
32	32	32	32
34	34	34	34
35	35	35	35
36	36	36	36
39	39	39	39
40	40	40	40
41	41	41	41
42	42	42	42
43	43	43	43
44	44	44	44
45	45	45	45

IED S/W Version	Setting File Version	Menu Text File Version*8	PSL File Version
46	46	46	46
50	50	50	46, 50
51	51	51	51
52	52	52	52
61	61	61	61
91	91	91	91

Notes:

*1: Compatible except for Disturbance recorder digital channel selection.

*2: Additional functionality added such that setting files from earlier software versions will need additional settings to be made.

*3: Compatible except for Disturbance recorder digital channel selection & settings for additional functionality will be missing.

*4: Compatible except for the Disturbance recorder digital channel selection and the distance settings.

*5: Compatible except for Disturbance recorder digital channel selection & the setting file contains a large number of Distance setting which will each produce an error on download.

*6: Additional DDBs were added such that PSL files from earlier software versions will not be able to access them.

*7: Additional DDB for the Distance protection will not be included.

*8: Menu text remains compatible within each software version but is NOT compatible across different versions.



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