**Hardware/Software Version**

**History and Compatibility**

MiCOM P120/P121/P122/P123

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| **Relay Type P120** | | | | |
| Software  Version | Date of  Issue | Full Description of Changes | S1  Compatibility | Backward  Compatibility  with previous  hardware |
| V11.A | 11/06/07 | Software changes implemented in this version  Calibration value memorization.  Auxiliary logic inputs temporized, with alarm displayed or not (by setting), assignable to LED, to Trip order, to output relays or to logic equations.  RL1 & RL2 can be configured as Fail safe  Possibility to have contact outputs inverted to trip on drop of signals  Time Synchronization through a digital Input  TMS step to 0.001 of the TMS as well as the RTMS.  That will authorize a better precision for the small values.  Logic inputs assignable to one or several internal signal.  Each signal result of a logical OR of all inputs assigned to it.  Digital inputs can be directly assigned to outputs.  Increase the number of fault records from 5 to 25.  Increase the number of event records from 75 to 250.  Correction of disturbance record in case of avalanche  Event record time tagging correction  Communication protocol enhancement (Modbus, DNP3  & Courier) | V2.14 | HARD 5 |
| V11.C |  | Software changes implemented in this version  - tAux1 and tAux2 modifications:  . assigned to inputs,  . temporization,  . alarm inhibited,  . Trip,  . latching,  . blocking logic,  . assigned to outputs.  - IEC-103 and Courier: correction of the acknowledgement of the disturbance record.  - Modbus:  . correction of the manual, self and disturbance record acknowledgement,  . address added to the event setting group change,  . disturbance record: correction of the number of pages  and sample in the last page,  . hardware alarm after a communication failure,  - correction of LSB of square root. | V2.14 | HARD 5 |
| V11.D | 2011 | New Schneider Electric brand | S1  Studio | HARD 5 |
| V11.E | 2011 | Software changes implemented in this version  - Possibility to control locally a General Reset and to start a disturbance record from the relay HMI,  - Turkish language added  - Reading of event without number improved (ModBus)  - Correction of event’s bit when >12,  - Courier protocol: correction of SKd\_setNb() function  - modification of alarms and LEDs saving  - Modification of date and time failure hardware alarms,  - Improvement of the reception (rear communication),  - DNP3: restart and multi-fragment responses corrections,  - IEC-103 communication: ACD bit correction after general  or time synchro command reception | S1  Studio | HARD 5 |

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| **Relay Type P121** | | | | |
| Software  Version | Date of  Issue | Full Description of Changes | S1  Compatibility | Backward  Compatibility  with previous  hardware |
| V11.B | 11/06/07 | Software changes implemented in this version  Calibration value memorization.  Auxiliary logic inputs temporized, with alarm displayed or not (by setting), assignable to LED, to Trip order, to output relays or to logic equations.  RL1 & RL2 can be configured as Fail safe.  Possibility to have contact outputs inverted to trip on drop of signals.  TMS step to 0.001 of the TMS as well as the RTMS.  That will authorize a better precision for the small values.  Logic inputs assignable to one or several internal signal.  Each signal result of a logical OR of all inputs assigned to it.  Digital inputs can be directly assigned to outputs.  The com1 and tcom2 max changes from 5s to 600s.  Implementation of 8 Boolean logic equations of 16 operands (NOT, OR & AND).  Communication protocol enhancement (Modbus, DNP3  & Courier). | V2.14 | HARD 5 |
| V11.C |  | Software changes implemented in this version  - software minor corrections. | V2.14 | HARD 5 |
| V11.D |  | Software changes implemented in this version  - Portuguese language is added.  - Correction for communication with system (Pacis…)  - initialization of tAux1 and tAux2 procrastination at power on,  - tAux1 and tAux2 alarm inhibition corrected, | V2.14 | HARD 5 |
| V11.E | 30/06/08 | Software changes implemented in this version  - Compatibility with MiCOM S1 Studio,  - separate output signalization of the three overcurrent  (IA>, IB> and IC>).  - Language corrections  - hardware alarm correction after a communication port  failure,  - phase indicator alarm modified,  - RI delay type in In> protection saved after device restart  when settings are loaded with S1 Modbus,  - Displayed rms value corrected (when no current injected) corrected,  Other documentation changes in B96 TM  - new general presentation  - presentation of MiCOM S1 Studio (new GS section)  - TD: Phase and earth current transformers  consumption added,  - AD: more explanation added for transformers inrush current | V2.14  S1  Studio | Hard 5 |
| V11.F | 19/11/08 | Software changes implemented in this version  None (modification on P122 & P123 relays only) |  |  |
| V12.A | 01/2009 | Software changes implemented in this version  - New inhibited alarms added (possibility to inhibit alarm on tAux and Boolean logic)  - Suspend IDMT curves on I> & I>>, interlock of I> IDMT by I>> DT or I>>> DT modified,  - Logical inputs directly assignable to Boolean Logical Equations, | V2.14  S1 Studio | Hard 5 |
| V12.B | 09/2009 | Software changes implemented in this version  - Correction of:  . Chinese text (HMI display),  . control trip events when RL1 is assigned to “Ctrl Trip” | V2.14  S1 Studio | Hard 5 |
| V12.C | 03/2010 | Software changes implemented in this version  - Correction of:  . IDMT curve when inrush blocking is used with Ie> or Ie>>  . German labels | S1  Studio | Hard 5 |
| V12.D | 03/2010 | General: New Schneider Electric brand | S1  Studio | Hard 5 |
| V12.E | 10/2011 | Software changes implemented in this version  - Correction of:  alarm message when an auxiliary relay is latched, alarm after a date / time failure  Output relay assignation (autorecloser)  CB failure reset before the end of a timer if current is null,  Logic equation status (address 002Ch)  At CB switching on, erratic alarm | S1  Studio | Hard 5 |

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| **Relay Type P122** | | | | |
| Software  Version | Date of  Issue | Full Description of Changes | S1  Compatibility | Backward  Compatibility  with previous  hardware |
| V11.A | 11/06/07 | Software changes implemented in this version  Inrush blocking function implementation  Calibration value memorization.  Auxiliary logic inputs temporized, with alarm displayed  or not (by setting), assignable to LED, to Trip order, to  output relays or to logic equations.  RL1 & RL2 can be configured as Fail safe  Possibility to have contact outputs inverted to trip on  drop of signals  Time Synchronization through a digital Input  TMS step to 0.001 of the TMS as well as the RTMS.  That will authorize a better precision for the small values.  Logic inputs assignable to one or several internal signal. Each signal result of a logical OR of all inputs assigned to it.  Digital inputs can be directly assigned to outputs.  Increase the number of fault records from 5 to 25.  Increase the number of event records from 75 to 250.  Correction of disturbance record in case of avalanche  Event record time tagging correction  Communication protocol enhancement (Modbus,  DNP3 & Courier) | V2.14 | HARD 5 |
| V11.C |  | Software changes implemented in this version  - software minor corrections. | V2.14 | HARD 5 |
| V11.D |  | Software changes implemented in this version  - Portuguese language is added.  - Correction for communication with system (Pacis…)  - DMT temporization decimal value corrected for values >20s  - Communication Modbus correction:  . manual, self and disturbance acknowledgment of the oldest event & fault record,  . Modbus address added to the event setting group change,  - Communication Modbus of disturbance record: number of pages and samples in the last page in the service name corrected,  - “Disturbance trigger” added in the event record. | V2.14 | HARD 5 |
| V11.E | 30/06/08 | Software changes implemented in this version  - Compatibility with MiCOM S1 Studio,  - separate output signalization of the three  overcurrent (IA>, IB> and IC>).  - Language corrections  - hardware alarm correction after a communication port failure,  - tripping indication (LED) correction,  - phase indicator alarm modified,  - Displayed rms value corrected (when no current injected) corrected,  - CB Supervision: Samps (n) counters after a “CB operations” clear sent with a modbus writing corrected,  - process after boot or sending settings file(MiCOM S1) modified.  Other documentation changes in B96 TM  - new general presentation  - presentation of MiCOM S1 Studio (new GS section)  - TD: Phase and earth current transformers  consumption added,  - AD: more explanation added for transformers  inrush current | V2.14  S1 Studio | HARD 5 |
| V11.F | 09/2008 | Software changes implemented in this version  - “Inrush blocking” applied to IDMT curve correction | V2.14  S1 Studio | HARD 5 |

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| **Relay Type P123** | | | | |
| Software  Version | Date of  Issue | Full Description of Changes | S1  Compatibility | Backward  Compatibility  with previous  hardware |
| V11.A | 11/06/07 | Software changes implemented in this version  Inrush blocking function implementation  Calibration value memorization.  Auxiliary logic inputs temporized, with alarm displayed  or not (by setting), assignable to LED, to Trip order, to  output relays or to logic equations.  RL1 & RL2 can be configured as Fail safe  Possibility to have contact outputs inverted to trip on drop of signals  Time Synchronization through a digital Input  TMS step to 0.001 of the TMS as well as the RTMS.  That will authorize a better precision for the small values.  Logic inputs assignable to one or several internal signal. Each signal result of a logical OR of all inputs assigned to it.  Digital inputs can be directly assigned to outputs.  Increase the number of fault records from 5 to 25.  Increase the number of event records from 75 to 250.  Correction of disturbance record in case of avalanche  Event record time tagging correction  Communication protocol enhancement (Modbus,  DNP3 & Courier) | V2.14 | HARD 5 |
| V11.C |  | Software changes implemented in this version  - software minor corrections. | V2.14 | HARD 5 |
| V11.D |  | Software changes implemented in this version  - Portuguese language is added.  - Correction for communication with system (Pacis…)  - DMT temporization decimal value corrected for values >20s  - Communication Modbus correction:  . manual, self and disturbance acknowledgment of the oldest event & fault record,  . Modbus address added to the event setting group change,  - Communication Modbus of disturbance record: number of pages and samples in the last page in the service name corrected,  - “Disturbance trigger” added in the event record. | V2.14 | HARD 5 |
| V11.E | 30/06/08 | Software changes implemented in this version  - Compatibility with MiCOM S1 Studio,  - separate output signalization of the three  overcurrent (IA>, IB> and IC>).  - Language corrections  - hardware alarm correction after a communication port failure,  - tripping indication (LED) correction,  - phase indicator alarm modified,  - Displayed rms value corrected (when no current injected) corrected,  - CB Supervision: Samps (n) counters after a “CB operations” clear sent with a modbus writing corrected,  - process after boot or sending settings file(MiCOM S1) modified.  Other documentation changes in B96 TM  - new general presentation  - presentation of MiCOM S1 Studio (new GS section)  - TD: Phase and earth current transformers  consumption added,  - AD: more explanation added for transformers  inrush current | V2.14  S1 Studio | HARD 5 |
| V11.F | 09/2008 | Software changes implemented in this version  - “Inrush blocking” applied to IDMT curve correction | V2.14  S1 Studio | HARD 5 |
| V12.A | 01/2009 | Software changes implemented in this version  - New inhibited alarms added (possibility to inhibit alarm on tAux, I< and Boolean logic)  - Possibility to operate the CB and to start a disturbance from the relay HMI,  - Manual trip or manual close ordered from a logical input activation  - Possibility to start SOTF using any control close information,  - Total trips number calculated with all the CB  operations,  - Suspend IDMT curves on I> & I>>, interlock of I>  IDMT by I>> DT or I>>> DT modified,  - Possibility to start Cold Load Pickup by 52A or “not I<& I>” or “I0< & I0>”,  - Detection of open circuits conditions which produce an unbalance creating negative phase sequence current,  - Addition of a new derived earth overcurrent threshold,  - Possibility to program autoreclose blocking after a number of recluse or a defined time.  - Possibility to assign I< and tI< to any output relay and LED,  - Disturbance recorder time modified (5x3s or 3 x 5s or 2 x 7.5s or 1 x 15s)  - Logical inputs directly assignable to Boolean Logical Equations,  - tAux5 added,  - “79 internal locked” and “79 external locked” assigned to output signals,  - Selectivity between two relays with tReset +  autorecloser. | V2.14  S1 Studio | HARD 5 |
| V12.B | 09/2009 | Software changes implemented in this version  - Correction of:  . disturbance recording when two records are triggered successively,  . Chinese text (HMI display), . control trip events when RL1 is assigned to “Ctrl Trip”  . Time synchronization with logic input. | V2.14  S1 Studio | HARD 5 |
| V12.C | 03/2010 | Software changes implemented in this version  - Correction of . IDMT curve when inrush blocking is used with Ie> or Ie>>  . German labels | S1 Studio | HARD 5 |
| V12.D | 03/2010 | General: New Schneider Electric brand  Software changes implemented in this version  - Correction of data transmission (Courier protocol).  Fault extracted automatically was sometimes  incorrectly transmitted | S1 Studio | HARD 5 |
| V12.E | 11/2011 | Software changes implemented in this version  - Fault records extraction using IEC103 enhanced protocol,  - Possibility to control locally a general reset to clear all events, fault & disturbance records  - Correction of:  alarm message when an auxiliary relay is latched, alarm after a date / time failure  Output relay assignation (autorecloser)  CB failure reset before the end of a timer if current is null,  Logic equation status (address 002Ch)  At CB switching on, erratic alarm | S1 Studio | HARD 5 |