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Basler Electric®

Introduction

This publication provides a historical summary of the changes made to the application firmware and hardware of the DECS-250N Digital Excitation Control System.

Revision history information for BESTCOMS*Plus*® software is provided in the *BESTCOMSPlus Software Revision History* document.

This information is provided for confidential use with the mutual understanding that it will not be used in any manner detrimental to the interests of Basler Electric.

Firmware Revision History

The revision history for DECS-250N application firmware is provided as follows. Revisions are presented in reverse chronological order.

Firmware Version and Date	Change
2.09.00, Jan 2026	• Added NTPv3 compatibility • Added security log functionality • Added security version reporting • Added system-in-use messaging support • Altered auto-synchronizer logic element priority so that open requests take precedence over close requests • Improved pre-position priority of release and maintain modes • Changed port access to allow reset functionality at Control level • Corrected auxiliary control FCR setpoint adjustment calculation • Corrected NTP sync issue • Increased limiter scaling ranges to 1,000% • Removed Russian language support • Miscellaneous maintenance updates
2.06.04, May 2023 1.06.04, May 2023	• Improved SCL operation during buildup
2.06.02, Aug 2022 1.06.02, Aug 2022	• Added pre-position traverse rate settings to HMI and Modbus® • Improved tracking time delay • Improved V/Hz Limiter alarm • Improved OEL scaling • Corrected syncing of Auto and Manual mode status with BESTCOMS*Plus* Control Panel • Corrected updating of Traverse Rate settings • Corrected handling of Start and Stop dates for DST • Corrected error in PSS final output • Corrected operation of logic timers and counters • Corrected UEL and Underfrequency - V/Hz alarms from annunciating when the condition does not exist • Corrected network load sharing error with redundant units
1.06.01, Feb 2020	• Modified microprocessor startup routine
1.06.00, Apr 2019	• Added grid code settings, which makes the DECS-250N compatible with grid code compliant systems

Publication **9440500994**	Revision **D**	*Revision History*	Date **01/26**	Page **1 of 4**

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Firmware Version and Date	Change
	• Metering labels updated • Added Power Input parameter in data log and real-time monitoring • Corrected Scale Factors for the Terminal Frequency and Compensated Frequency so they are in units of percent in datalogs and analysis charts • Improved Network Load Share algorithm • Improved anti reset windup for the PI controller • Changed low end range of High-Pass Filtering/Integration Inertia (H) PSS Parameter setting to 0.01 • Fixed error in the discrete proportional gain of the PID controller • Increased current ranges for Summing Point OEL and Takeover OEL to allow for proper operation at 20 Adc
1.05.06, May 2018	• Maintenance release
1.05.05, Jul 2017	• Added support for synchronizing at 25 Hz • Improved Governor Bias Control Proportional Pulse scaling. • Added time delay setting for Network Load Share Config Mismatch • Updated Default Logic for PSS and Network Load Sharing • Added support for metering DC power input • Modified behavior of tracking error in stop mode
1.05.02, May 2017	• Improved Auto Tuning on high gain systems • Improved Synchronizer breaker close timing accuracy • Modified time display for 12:00 am and pm • Improved indication of CAN Bus baud rate selection • Improved display of RTD value when no RTD is connected
1.05.01, Dec 2016	• Added active setpoints to acyclic Profibus points
1.05.00, Jun 2016	• Maintenance release for DECS-250N
1.03.02, Dec 2015	• New ranges for PSS parameters, changed default option or PID Design Mode in Auto Tune function
1.03.01, Jul 2015	• Enhanced auto synchronizer function

1.03.00, Feb 2015	• Added Chinese language
	• Added Generator/Motor operating mode selection
	• Enhanced network load sharing
	   ○ Added Network Load Share metering screen
	   ○ Added Power Input and NLS Error Percent parameter selections for configurable protection
	   ○ Added status logic elements for Config Mismatch, ID Missing, and Network Load Share Active
	   ○ Added NLS Broadcast logic element to broadcast alarms to selected units actively sharing load
	• Added VAR/PF MODE logic element
	• Changed the default value of auxiliary control gains to zero
	• Modified datalog triggering by watchdog
	• Modified the way PF is scaled when used for an analog output
	• Modified display of setpoints
	• Modified datalog to trigger on contact input open
	• Added PF Active Power Level % to Modbus
	• Expanded the range for analog outputs to –999,999 to 999,999
	• Added Modbus registers for AEM-2020 alarms

Publication	Revision		Date	Page
9440500994	D	*Revision History*	01/26	2 of 4

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Firmware Version and Date	Change
	• Modified unsecured access level security • Modified communication with IDP-800 • Modified total VA and total PF calculations • Modified frequency display in Comtrade files • Modified scaling of RTD values • Modified operation of SCL limiter
1.02.00, Jun 2014	• Added Russian language support • Added overexcitation (24) protection • Added transient excitation boosting function • Added loss of excitation (40Q) protection for motors • Added integrating reset method to takeover OEL • Added angle compensation to synchronizer and sync check (25) • Increased available real-time monitoring plots from two to six
1.01.05, Mar 2014	• Initial release

Hardware Revision History

The revision history for DECS-250N hardware is provided as follows. Revisions are presented in reverse chronological order.

Hardware Version and Date	Change
AB, Jul 2021	• Updated Analog circuit board
AA, Jul 2021	• Maintenance release
Z, Jun 2021	• Membrane now being UV printed in factory
Y, Apr 2021	• Changed to textured powder coat paint
X, Jan 2021	• Changed manufacturer of LCD
W, Sep 2020	• Connector plugs changed to UV printed terminal markings
V, Oct 2019	• Changed to UV printed panels
U, May 2019	• Updated internal LCD
T, Sep 2018	• Released BESTCOMS*Plus* version 3.19.00
S	• This revision letter not used
R, Jun 2018	• Harmonized PCBs with DECS-250N
Q	• This revision letter not used.
P, Jun 2017	• Released firmware version 1.05.05
O	• This revision letter not used
N, Aug 2016	• Released RoHS compliant PCBs
M, Jun 2016	• Released firmware version 1.05.00 and BESTCOMS*Plus* version 3.14.00
L, Dec 2015	• Released firmware version 1.03.02 and BESTCOMS*Plus* version 3.11.00
K, Sep 2015	• Updated PCB
J, Jul 2015	• Released firmware version 1.03.01
I	• This revision letter not used
H, Mar 2015	• Improved manufacturing process
G, Feb 2015	• Released firmware version 1.03.00 and BESTCOMS*Plus* version 3.08.00
F, Jan 2015	• Improved digital board components
E, Oct 2014	• Re-designed analog board to provide clearance for chassis screws

Hardware Version and Date	Change		
D, Sep 2014	• Increased length of screws holding SCR's		
C, Sep 2014	• Improved hardware on the PowerPC board		
B, Apr 2014	• Removed unused pins on ribbon cable to prevent hipot failure		
A, Jan 2014	• Initial release		