Altivar Process ATV340

V4.6IE40

1. Safety information

You can Download and install **EcoStruxure Automation Device Maintenance** here:

- https://www.se.com/ww/en/download/document/EADM/

Carefully read the instructions contained in the
Altivar User Manual for **EcoStruxure Automation Device Maintenance**,

- available here: https://www.se.com/ww/en/download/document/JYT50472/
- or available on *Windows Start Menu* > *EcoStruxure Automation Device Maintenance* > *Documents.*

2. Software enhancements in this version

- Improved the Brake sequence behavior in Master/Slave configuration

3. Notes

- To ensure that the new parameters and menus are correctly displayed, the Altivar Graphic Display Terminal labels can be updated. Refer to the instructions inside https://www.se.com/ww/en/download/document/Languages_Drives_VW3A1111/

4. Software enhancements history

Version V4.6IE39

- Introduced a new slip-compensation strategy in generator mode, configurable via the **SLPC [Gen Mode Slip Comp]** parameter.
- Expanded the allowable range of **PHS [Syn. EMF constant]** to support selected PM motors.
- Refined the behavior of **Synchronous Reluctance Motors [SRVC]** Control Law.
- Enhanced the configuration process for the I/O scanner.
- Enabled passive filter support within the **VVC [SVC V]** control law by activating the **IFI [Input Filter]** parameter.
- Added new parameters (**SMFP, SMBW, SMBA**) to mitigate encoder-related oscillations when using flexible couplings.
- Improved the availability and reliability of monitoring values for **IDAD [Opt Magn Current]** and **TRAD [Opt Rotor Time Const]**.
- Increased the upper limit of **BRTC [Braking Resist T Constant]** to accommodate braking resistors with heavy-duty cycles.
- Improved RTC handling at power-on after extended storage periods to avoid INFL issues.
- Refined the behavior of analog input intermediate points (**AIx**) at range boundaries.
- Improved configuration switching behavior when mixing open-loop and closed-loop modes to prevent unexpected **MDCF** events.
- **Hoisting:** The **TDCL [TDC Rope Length]** parameter can now be modified while the motor is running.
- Enhanced **undervoltage handling functions** when **AEMC [Adv. Motor Control]** = Yes
- Implemented additional cybersecurity enhancements.

Version V4.5IE38

- [Hoisting] Improved behavior in Open Loop with Encoder
- [Hoisting] Support of a new feature: Time Delay Control
- Support of VW3A3530D ATV dPAC Module
- Ability to configure I/O scanner from Graphic Display Terminal
- [Master / Slave] Improved behavior at Power ON
- Added new configuration of the braking resistor to be enabled only when motor is running
- Improved Undervoltage handling function
- [Braking] Offers consistent behavior of BRI and BCI settings
- [HMI] Improved refresh of Operating points for Torque curve
- Cybersecurity enhancements with the embedded Ethernet V2.3IE40

Version V4.3IE37

- Firmware evolution to support the VW3A3802 Safety Module
- Firmware evolution to support the VW3A3809 Safety over Ethernet IP Module
- Firmware evolution to support the VW3A3807 PROFIsafe Module
  Improvement of the Safety Function SLS (Safely Limited Speed) behavior with the VW3A3802 Safety Module

- [DC bus management] CRDR parameter is now available via the Graphic Display terminal to set the Damping ratio of the current loop controller.
- Cybersecurity enhancements with the embedded Ethernet V2.3IE38B4
- Cybersecurity enhancements
- Enhancement of the motor setting by providing a recommendation on parameters [Magnetizing Current] IDA and [Rotor Time Const] TRA

Version V4.2IE36

- [Ethernet] Cybersecurity enhancements with the embedded Ethernet V2.3IE37B1
- Cybersecurity enhancements
- Enhance the DC bus management by automatically activating the DC Bus Ripple monitoring
- Improve Torque Control behavior with long [Torque ramp time]
- Improve the internal errors description by displaying subcode on Error History
- Improve the Reference Copy on Channel switch to manage the bidirectional copy
- Extend the maximum Relay Holding time
- Improve the configuration save result on keypad when using more than 16 files
- Improve Master/Slave management on multi-motor switching
- Support of the new Profinet module VW3A3647

Version V4.1IE35

- Added TTOB and TOUT timeout parameters to the Graphic Display Terminal menus.
- [High Speed Hoisting] Ability to set COR and COF up to 200%
- Improvement of Gain & offset management of measured voltage & current when PHR=ACB
- Support of Undervoltage handling function with DC supply
- Ability to reset Electrical Energy counters.
- Improved PID behavior when switching from Manu to Auto
- Improvement of Encoder check function
- [Ethernet] Improved handling of ETHF alarm when switching the command channel.
- [Ethernet] ATV340**E Cybersecurity enhancements with the embedded Ethernet V2.3IE36B1

Version V3.7IE33

- New parameters CRB (Current loop configured gain) and CRBA (Current loop default gain) now available to enhance the motor speed stability.
- High speed hoisting enhancement to avoid sporadic SCF1, ANF or OPF in specific use case.
- Improvement of the AB Encoder feedback in closed loop in Ready mode.
- PID behavior enhancement when the LSP (Low Speed) is different from 0.
- Improvement of the synchronous motor setting to avoid CFF in some specific cases.
- [Ethernet] ATV340**E Ethernet cybersecurity enhancements with the embedded Ethernet V2.3IE35B1
- [Ethernet] ATV340**E Improvement in EtherNetIP with assembly 21/71 using messaging

Version V3.6IE31

- It is now possible to set the parameter [Braking Resistor] BRC to [No] NO even when [Dec.Ramp Adapt] BRA is also set to [No] NO, which results in both the deceleration ramp adaptation and braking resistor deactivated at the same time.
- New possible setting [STO fct status] STOS is now available on drive outputs (digital outputs and relays). It allows to show the status of the Safe Torque Off STO function.
- In the menu [Motor monitoring] MOP, new parameter [Torque Filter Time] TPFV has been added to define a filter time constant applicable on the non-filtered output torque and power.
- Setting the date and time through the display terminal is now possible with version V3.6IE31
- With VW3A3424 HTL encoder interface module, it is now possible to use an encoder having a pulse number [PGI] which is not a multiple of 2 or which is lower than 256.

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