DriveControlSuite V 6.5-K

This release opens up new opportunities for your **PROFIdrive**-type applications: New telegrams and technology objects provide you with functions such as measuring gauges, cams, Dynamic Servo Control and torque reduction. In **CiA 402**-type applications, you can now use the Velocity mode.

- **PROFIdrive: telegrams, technology objects**
  SC6, SI6: For PROFIdrive-type applications, the measuring gauge technology object and a total of 5 new telegrams are now available to you. They enable the use of functions such as Dynamic Servo Control (DSC) and torque reduction (MOMRED). In conjunction with the new functions, the wizards and parameters have also been expanded. You will find more information on the new features in the PROFIdrive operating manual.
  - **Technology object: measuring gauge**
    With the help of the measuring gauge function, when the signal of a measuring input is changed by a limit switch, for example, the drive controller can detect the current actual position of the axis, store it temporarily, and transfer it to the controller via PROFINET (wizard: Measuring input).
  - **Technology object: cam, cam track**
    The cam and cam track technology objects are now available for telegrams 3, 5, 102 and 105, and are configured via the controller. You will find more information on this in the relevant Siemens function manual.
  - **Standard telegram 5: Dynamic Servo Control**
    Standard telegram 5 (set velocity 32 bit with 1 position encoder and Dynamic Servo Control) is available for application class 4.
  - **Siemens telegram 102: torque reduction**
    Siemens telegram 102 (set velocity 32 bit with 1 position encoder and torque reduction) is available for application classes 1 and 4.
  - **Siemens telegram 105: MOMRED, DSC**
    Siemens telegram 105 (set velocity 32 bit with 1 position encoder, torque reduction and Dynamic Servo Control) is available for application class 4.
  - **Siemens additional telegram 750**
    Siemens additional telegram 750 is available for all application classes. It offers additional process data for torque feedforward control via additive torque and for different torque limits in the positive and negative directions.
  - **STOBER additional telegram 900**
    STOBER Additional telegram 900 is available for all application classes and offers additional process data for free assignment.
- **CiA 402: Velocity mode**
  In CiA 402-type applications,the Velocity mode operating mode – including a new wizard and updated ESI files – is now available. You will find more information on the operating mode in the CiA 402 operating manual.

More new features

- **Security logger**
  SC6, SI6: The newly implemented security logger logs events such as firmware updates and configuration changes for the drive controller. The events are written to a security log, which you can read in to DriveControlSuite from the drive controller. Security logs that have already been read out can be viewed both online and offline in DriveControlSuite, either in the Online functions window via the new  button or in the project tree via the new Security log context menu.
- **Send configuration: Save values**
  If you send the configuration from DriveControlSuite to the drive controller, the Save values window now opens automatically. You can use the new Show window automatically (send configuration) option in the Save values window to activate/deactivate the behavior as desired.

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- **Direct connection (manual): additional IP addresses**
  You can add additional IP addresses to the search in the local network if DriveControlSuite does not automatically find the drive controllers due to the network topology. The drive controllers found are displayed under the Direct connection tab and are available for establishing the connection. You can reach the Additional IP addresses window via the context menu of the same name in the Add connection dialog box under the Direct connection tab.
- **Scope: parameter description**
  If you record the value of a parameter or use a parameter as a trigger source, you can display the associated parameter description as a tooltip in both the scope image settings and the trigger settings (button: ).
- **Scope: trigger mask**
  In the trigger settings you can switch the display of the Mask option between hexadecimal and binary display if required. The mask is displayed with leading zeros according to the data type or data width of the selected parameter.
- **Predictive Maintenance: PE planetary gear unit**
  2nd generation PE planetary gear units are now available for Predictive Maintenance configuration.
- **Predictive Maintenance: load matrix file name**
  You can now view the file name of the load matrix for Predictive Maintenance in the wizard (parameter: R106; wizard: Predictive Maintenance).
- **EtherCAT: station alias**
  EtherCAT Master (TwinCAT3): Via the controller you can optionally assign a station alias, which is stored in the non-volatile memory of the drive controller, to each drive controller in the EtherCAT network. As a result, the drive controller can be connected to any free port within the network and identified (parameter: A254). You will find more information on this in the EtherCAT operating manual.
- **Motion block end control unit: endless motion commands**
  The motion block end control unit has been extended such that switching to the subsequent motion block is now possible even for infinite motion commands. For both finite and infinite motion commands, the motion block end is reached when the motion core has successfully ended the motion command to be carried out (prerequisite: I92 = 1: Active).
- **Encoder simulation: 4096 lines/rev**
  Simulation at encoder connection X120 is now possible in even higher resolution (parameter: H130 = 7: 2048 i/r).
- **Brake management**
  SC6, SI6: In preparation for the introduction of the extended safety functions, the parameters of the functional brake management are omitted (parameters: B310, B311, E29, E177, Z772).
- **Brake connection as digital output**
  SC6, SI6: A new wizard facilitates the parameterization of the brake connections X2A or X2B as digital output when no brake is connected (wizard: Terminals > Brake connection as digital output).

Optimizations

- **Quick stop for enable-off**
  For enable-off, a quick stop can now be executed for CiA 402-type applications and PROFIdrive (parameter: A44) as well.
- **CiA 402: Profile torque mode**
  For CiA 402-type applications with Profile torque mode there were optimizations for the calculation of the build-up or reduction of torque/force. The change of torque/force is now maximum by default and the internal calculation is now done using the load-side reference value for torque/force (parameters: A561, C09).
- **PROFINET: cycle times > 1 ms**
  Cycle times greater than 1 ms are also now supported correctly for process data communication via PROFINET.

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- **Delete safety configuration**
  SD6: When the safety configuration in the SE6 safety module is being deleted, the checksum is now set to 0 immediately after a successful action. The drive controller no longer needs to be restarted (action: S33; checksum: S09).
- **DBCW: material velocity fieldbus scaling**
  If you transmit the process data in a scaled form, you can now define the number of decimal places for the material velocity uniformly in Drive Based Center Winder-type applications (parameter: G66).
- **DBS: set reference**
  In Drive Based Synchronous-type applications, the handshake between drive controller and controller if you set the reference via the control word of the application (parameter: I210, bit 11) was optimized.
- **TwinCAT 3 function blocks**
  EtherCAT master (TwinCAT 3): After referencing, the STOBER_MC_Home function block now automatically switches back to the operating mode before referencing (modes of operation: A541). The STOBER_Backup_Restore function block was minimally optimized with regard to the interface to CiA 402 and reading out the production number of the drive controller. You will find more information on the function blocks for TwinCAT 3 in the new TwinCAT 3 manual – Function blocks for 6th generation drive controllers.
- **SSI encoder: error tolerance**
  For the evaluation of SSI encoders on X120, the transmission time calculation has been revised to enable higher sampling rates and thus optimize the error tolerance.
- **EtherCAT time**
  SD6: The EtherCAT network system time is now no longer displayed as a hexadecimal value but instead, in the date and time format (parameter: A285; format: YYYY-MM-DD / HH:MM:SS).
- **Autostart: motor control**
  If the autostart option for the Drive Based device state machine is active, the drive controller now remains in the state E48 = 0: Self test until the motor control is initialized (Autostart: A34).

DriveControlSuite V 6.5-K SP1

This release is a product update and includes general optimizations.

- **Project update**
  When updating existing project configurations to firmware V 6.5-K, the parameter values are now applied correctly.
- **Event 47: tolerance time**
  For the protective function of event 47: Torque/force-max. limit the lower limit value has been reduced from 1 s to 0 s, so that you can now define very short tolerance times for scope images, for example (parameter: U21; prerequisite: U20 = 2: Warning).

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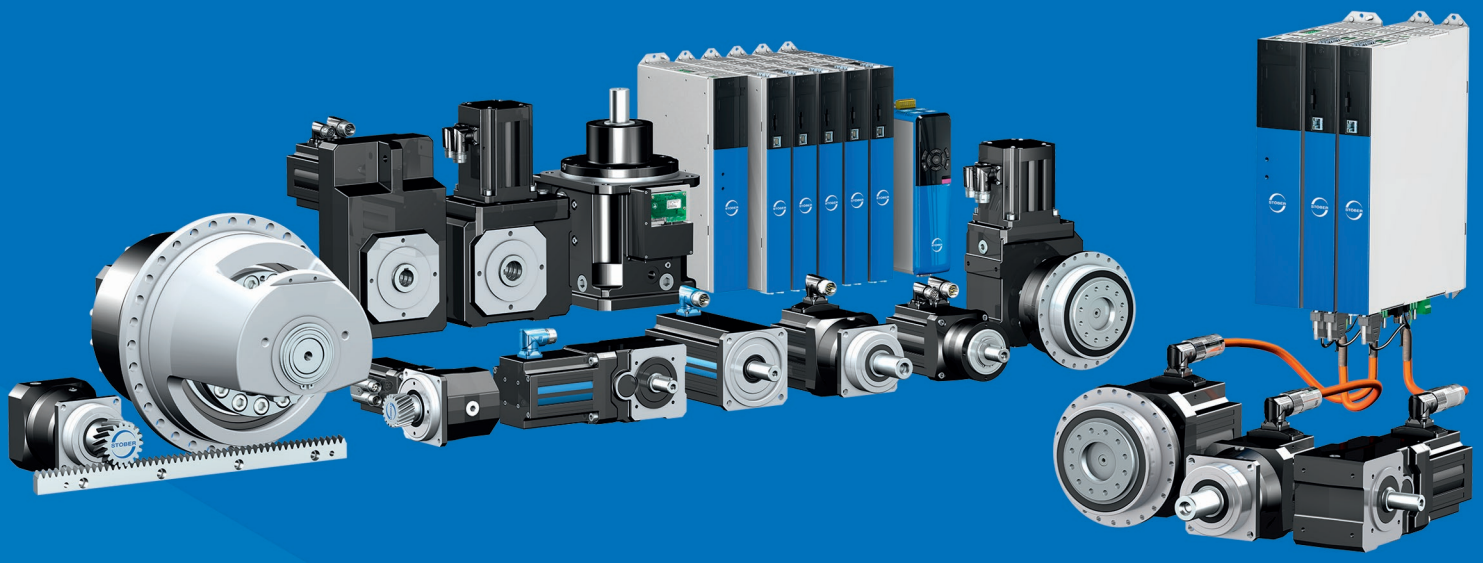

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