Schaeffler SmartCheck/ProLink Firmware Release Notes

December 14, 2021

All changes of the previous releases are included in the latest version.

Important information:

- To update the Schaeffler SmartCheck/ProLink firmware, use always the latest version of Schaeffler SmartUtility (Light) or use Schaeffler SmartWeb.
- Always use the correct image for your device, i.e. a firmware file named "SmartCheck_Firmware_..." for the Schaeffler SmartCheck or a "ProLink_Firmware_..." for the Schaeffler ProLink.
- Caution! Don't disconnect the power supply or the Ethernet connection to the Schaeffler SmartCheck/ProLink during firmware update! Otherwise, the process can not be completed and the device will no longer function properly.
- Support for Internet Explorer, Edge and Firefox has been discontinued! Schaeffler SmartWeb can still work with these browsers, but it is no longer tested. We recommend using Google Chrome.
- Features with the [license] flag are optional and require a software license to be enabled. Please contact your sales representative for more information.
- If there is any problem with the firmware update, please go to www.schaeffler.de/en/technical-support for help.

Version 1.26.0

New features:

[7618] For external inputs from SLMP or OPC/UA, the user is now able to add additional scaling factors when this is used as a speed input.

[7885] Events like a defective sensor can now trigger an email to the user.

[7966] Added context menu to the tree on the status and measurement data page to re-enable the learning mode for all configurations.

[8008] The Schaeffler ProLink now supports I/O modules.

[8051] Added automatic logout time setting to the device settings menu, so the user can decide if and when the SmartWeb automatically logs of the user.

Improvements:

[4502] When using a characteristic value calculated as DC (i.e. additional process values like speed, torque, ...), their value could become negative, which prevents the learning mode set to highest value to work correctly. Now these values are prevented to learn, since this doesn't make sense for process values. The firmware update will also correct this for existing configurations on the device.

[4803] Removed the UDP setting für SLMP-connections, since they are not stable and are not reccommended by Mitsubishi anymore.

[6533]   The NTP server setting now also accepts server names, rather than just IP addresses.

[6069]   When creating outputs for an SLMP connection, the user can now select all alarm status, value and/or alarm limit lines at once using a new context menu in the table header.

[7821]   A measurement job using a defective IEPE sensor on a Schaeffler ProLink vibration input cannot be measured and produces a warning message in the logbook. Now the number of these messages will be limited to prevent flooding the logbook.

[8073]   On gears with many teeth, the configuration wizard for the gear stage (optimised) showed an error that the needed filter setting will exceed the bandwidth of the system, even when the number of harmonics fields in the expert settings was reduced. We added another expert setting to control the number of harmonics for the filter selection for localised gear tooth damage. Reducing this number will decrease the quality of the diagnosis.

[8081]   Made several small improvements to the vibration modules firmware, which include better self-diagnosis of the hardware and checks of internal communication.

[8088]   Added a link to the Schaeffler support page to SmartWebs help page.

[8089]   Fixed two possible security risks in the OpenSSL library (CVE-2021-3711, CVE-2021-3712).

[8130]   Several network ports were closed, since they were not needed to be accessible externally. All of these did not pose an immediate security risk.

[8136]   In firmware version 1.14 an improved gear template was added, the old one was marked as deprecated (see feature 7016 in this document). As of this version, no new configurations can be created with the deprecated template, only with the new one. Existing configurations using the deprecated template can still be edited.

Bug fixes:

[6874]   Fixed a problem, where failed SLMP connections showed up as OK in the logbook.

[7373]   Fixed several minor problems in the configuration tree, like not using alphabetic ordering on all places or not showing the correct tree element, when communication channels are selected.

[7380]   The check for SLMP register names now is case insensitive, not allowing names which are only different in lower or upper case.

[7386]   Fixed several problems to not allow the user to use the last SLMP register (e.g. R32767) for data needing more than one register.

[7388]   Entering a wrong character for an SLMP start register and then correcting that, could lead to reordering all registers. Now this only happens when the user explicitly clicks the reassign button to do so.

[7391]   Fixed several problems when moving multiple register assignments at once in the SLMP output table.

[7917]   Fixed a problem where time conditions could lead to not measuring this measurement job at all.

[7923]   The trend for trigger events now only shows a narrow main alarm stripe after a trigger event, instead of a main alarm for long periods of time.

[7976]   Editing fixed value inputs could show an error message, when it was used in a base measurement. This has been corrected.

[8018]   SLMP inputs set to vibration units can no longer be used as vibration input to measurement jobs, since they are too slow.

[8024]   The name of an output configuration produced an error message, when only characters were changed from lower to upper case or vice versa. This is now allowed.

[8038]   The context menu for the hour counter allowed to change alarm limits and to start the learning mode, which makes no sense and which showed an error message when doing so. This is now disabled.

[8059]   For the Schaeffler SmartCheck, the maximum temperature limit the user can set is now $85°C$.

[8063]   Fixed a bug which prevented to the user to move forward and backward in the bearing list pages.

[8064]   Fixed a problem when multiple measurement jobs use the same trigger. Now the measurement jobs rotate after each trigger pulse, so each new pulse will trigger the next job in the list. (related, but not identical to 6566, which was fixed in 1.22.0)

[8102]   SLMP inputs didn't work, when at the same time OPC/UA without inputs was activated. Now this combination works correctly.

[8126]   After entering a wrong password to login into the Schaeffler SmartWeb, the user couldn't log in anymore even with the correct credentials. This has been corrected.

[8129]   Under certain conditions, the tree showing the measurement configurations was broken, e.g. the plus and minus symbols for expanding and collapsing didn't work anymore. This has been fixed.

[8131]   A belt drive configuration created with a firmware prior to 1.14 could not be edited with newer firmware versions, because in 1.14 the structure changed, like the defined characteristic values. Now these old belt configurations can be edited again, but without automatic update to the new structure, which is not possible anymore. Users should now create a new belt drive configuration and delete the old one, to benefit from the improved structure. (see bug 6918).

[8137]   When added a speed input as additional input to configurations already using a speed input, editing these configuration would show an error. This has now been corrected.

Version 1.24.20

Bug fixes:

[8062] Fixed a problem where cleaning up measurement condition and trigger trends could lead to the system not responding anymore.

Version 1.24.10

Bug fixes:

[8050] Fixed a problem when updating from older firmware versions (e.g. 1.12.30).

Version 1.24.0

New features:

[7836] Added Russian language to the SmartWebs language selection.
[7841] ProLink vibration inputs can now also be used for other signal sources like temperature or torque sensors.
[7843] The time signals now additionally contain the real start time opposed to the overall start time of the measurement job. This is relevant when using pre-triggers.
[7845] Each measurement condition now includes an operating hours counter showing for how long this condition was valid. This can be used to show for how long a component has been in service.

Improvements:

[6321] A trigger interrupts running measurement jobs. Until now, the system would check the measurement conditions for the triggered measurement after the not-triggered measurement already had been interrupted. Now, this interruption is only done when the conditions for the triggered measurement are fullfilled.
[6523] The database cleanup now also reduces the trigger and condition trends, which improves the cleanup performance.
[7235] ^{license} When trying to use an invalid license, e.g. when the license is for another device, then the license manager will now show an error message.
[7253] Removed limitations for valid IP addresses for NTP, email and SLMP, since these could prevent users in some IT environments to enter their settings.
[7333] Optimised license manager view.
[7404] ^{license} It is no longer possible, to copy a configuration created on a device WITH a certain function license and then copy, use and edit it on another device WITHOUT this license. These configurations still can be copied using the SmartUtility software, but will be ignored for measurements and cannot be edited anymore.
[7536] Improved data cleanup algorithm: until now, for a period in the past, the highest value in the trend for each characteristic value was saved, the other trend values with their time signals were deleted. This could lead to not having all values for a point in time. Now, for each highest point in one of trends, all characteristic values and time signals are saved.
[7635] Overcurrent on the digital output of a vibration module and an IEPE sensor error are now logged in the logbook.
[7725] For digital speed inputs, the user can no longer configure whether the input signal is inverted or not, since it is not relevant for a speed input.
[7824] Updated linux operating system and several system libraries to prevent minor and uncritical security risks (CVE-2018-18751, CVE-2016-10739, CVE-2018-19591, CVE-2019-15239, CVE-2020-1749, CVE-2020-16166,CVE-2019-18222, CVE-2020-10932, CVE-2018-19211, CVE-2018-19217, CVE-2018-10754, CVE-2020-1967, CVE-2019-11059, CVE-2019-11690).
[7839] ^{license} Added devices input settings to the protobuf device configuration send via email or OPC/UA.
[7840] The protobuf device configuration is now also provided via the public webservice.
[7852] Improved the error handling of the ProLink system when the normal application is not running, i.e. during reset data partition, during system boot, etc. When because of an internal error the system does not respond within 10 minutes, then the system will reset to enable communication with the device.
[7859] All information about the used open-source components and their licenses are now shown in an additional menu item in the SmartWebs help menu.
[7869] Added devices operating hours and temperature to the status page of SmartWeb.

[7897]   Improved stability of the network connection between ProLink modules and CPU, which now doesn't interrupt the measurements on some rare occasions.

Bug fixes:

[6487]   On (de-)activating the user management or changing the password, the system now locks the user interface until this is processed, preventing the user to make changes during this time, which were ignored.

[6863]   When using asian languages during configuration, it could happen that an SLMP output configuration contained identical register names, which generated an error message on saving the configuration. This has been corrected.

[7113]   In the trend view, trend points without a time signal could overlap some points with a time signal, making it impossible to view the time signal. This has been corrected.

[7154]   Changing a 0-20mA-output to 4-20mA in a SmartCheck could lead to an output current of 2.4mA. This has now been corrected to 4mA.

[7173]   The firmware update waited forever, when the user management was activated and a user other then admin started the update from SmartWeb. Now only the admin user can start the firmware update.

[7203]   Moving back- and forward in the measurement configuration wizard could change alarm settings entered before. Now the values remain as entered.

[7236]   Selecting a measurement configuration should highlight the characteristic value configurations calculated from this. Selecting a different measurement configuration just added more characteristic values instead of highlighting the right ones. This now works as it should.

[7242]   On the SmartCheck, the learning mode could be started using the teach key on the device, even when this should have been disabled in the device configuration. This now works correctly.

[7297]   The deactivation of the SmartCheck keys didn't work. Now the keys are really deactivated.

[7324]   [license] In the device configuration send by email, the learning mode type is now set correctly.

[7369]   The user could enter a time condition with identical start and end time, resulting in an error message. Now a warning is shown to prevent this setting.

[7372]   The shown upper threshold level for a measurement condition was higher than the actually allowed value. Now both are identical.

[7616]   Sensor defects are now shown as a warning symbol for those characteristic values which could not be measured because of this defect.

[7703]   The temperature value in the base measurement is now always called system temperature, both after a system reset and after editing or newly creating it.

[7719]   The button to delete measurement jobs was disabled under certain conditions with activated user management, even though the user had the right to delete configurations. This has been fixed.

[7721]   With activated user management, users without the configure inputs rights could still change SmartCheck/ProLinks vibration and temperature inputs, scaling factors and triggers/conditions This has been corrected.

[7789]   Fixed a rounding problem when entering fixed speed values with positions after decimal point. This could create a main alarm for speed values. This bug was only partly fixed in release 1.20.

[7809]   Editing fixed value inputs could show an error message, even though the changes were saved correctly. This has been fixed.

[7816]   Fixed problem which prevented to change SmartWebs language when using the Edge browser.

[7821]   A measurement job using a defective IEPE sensor on a ProLink vibration input cannot be measured and produces a warning message in the logbook. Now the number of these messages will be limited to prevent flooding the logbook.

[7829]   [license] Under some conditions, the trend values for measurement triggers and conditions were not added when sending the data via email. This has been corrected.

[7834]   Having the user right to change input settings would still not allow the user to change the speed scaling factors. This is now allowed.

[7855]   When creating or editing a user defined or tracked frequency bands measurement job, the system now generates measurement and characteristic value names containing the correct signal unit, i.e. acceleration, velocity or displacement.

[7882]   Under certain conditions, the systems saved a different trigger compared to the one the user selected. Now this is correct.

[7887]   With activated user management, users with only the configure inputs rights could delete measurement jobs, conditions and triggers. This has been corrected.

[7895]   In the configuration overview, the time trigger was shown in the wrong time zone, while it worked correctly. This has been corrected.

[7922]   Using the same input signal multiple times in a measurement job (e.g. use a speed additional values as well as for the alarm map), then a faulty optimisation lead to not measuring this job at all. Now this works correctly.

[7926] Any change in a configuration would result in resetting the trend value for oil temperature exceeded to zero. This now has no effect anymore.

[7936] Changing the input channel for an existing alarm map in a measurement configuration could lead to error messages and not measuring the measurement job at all. This has been corrected.

[7938] Updated gSOAP version to fix several security risks (CVE-2020-13574 to 2020-1313578).

[7947] When all communication channel types were used, no additional Mitsubishi PLCs (via SLMP) could be added. This has been corrected.

[7949] ^{license} When the device sends large email data, then this is split up into multiple emails. Fixed a bug in this process, where under some conditions, the first email was not send correctly.

[7970] Due to a bug, it was not possible to change the minimum and maximum value of alarm map values. This has been corrected.

Version 1.22.0

New features:

[7731] ^{license} Added an onboarding function for the Schaeffler cloud. This automatically creates a new measurement job, of which the data is send to the cloud.

Bug fixes:

[6566] When multiple measurement jobs listened for the same measurement trigger, then one trigger event would trigger all jobs, which then ran one after the other. Now the first trigger event starts the first job, next event the second, and so on. After all have been run, then it starts again with the first job.

Version 1.20.0

New features:

Improvements:

[7580] The minimum number of teeth for gear measurements has been reduced from 10 to 7.

Bug fixes:

[6467] Clicking in a zoomed part of the live view window stopped the live view. This has been corrected.

[7403] ^{license} After the expiration of a temporary license, editing a measurement configuration needing this license showed an internal error message. Now it shows to the user, that the license is expired.

[7604] In the configuration window for measurement conditions, the link to the input channel showed an error message for SLMP or OPC/UA channels. Now it redirects to the channel configuration.

[7606] Downloading the register definition file for a Mitsubishi-PLC stopped working in newer versions of Google Chrome due to new security restriction. This has been fixed.

[7625] When defining a new measurement condition on the ProLink system, the dialogue showed a module instead of a channel as default input channel, resulting in an error message on a missing unit. Now no channel is selected by default.

[7727] When a measurement condition frequently cancels a running measurement, this could crash the I/O process after some time. This has been corrected.

[7763] Large configurations, i.e. more than 50 measurement jobs or 500 characteristic values, were rejected by the ProLink system. Now larger configurations are allowed.

[7789] Fixed a rounding problem when entering fixed speed values with positions after decimal point. This could create a main alarm for speed values.

[7790] Changing fixed speed inputs multiple times too quickly could lead to not reading these values correctly. This has been corrected.

[7792] ^{license} In an email using the IP address as variable, this address would be shown flipped in the email (first octet shown last). This now works as expected.

[7754] Opening the dialogue to add an output for the first time could lead to a database error, when the default values were not changed. This dialogue now works as expected.

Version 1.18.10

Bug fixes:

[7708] On power up, some ProLink CPU modules reboot multiple times between maintenance system and firmware start. This has been fixed by a new maintenance system version.

Version 1.18.0

New features:

[7239] ^{license} Implemented OPC/UA server which can provide information on the monitored machine as well as use data from the OPC/UA client as input data.
[7585] Added support for ProLink system.

Improvements:

[7449] When defining an input from a communication channel, the unit groups are now ordered alphabetically.
[7640] ^{license} Improved OPC/UA communication with Siemens PLCs compared to the pre-release version.

Bug fixes:

[7439] Deleting a fixed value input or a scaling factor produced a database error, when it was used as input in emails. This has been corrected.
[7490] The Schaeffler SmartWeb showed a time signal or spectrum, even when the time signal list of the selected trend section did not contain any data.
[7531] Adding a scaling factor for an input channel on the second to last page of the configuration wizard allowed the user to change the unit group. This has now been disabled, since the scaling factor must be in the same unit group as the underlying input.
[7538] A newly added scaling factor in the configuration wizard is now automatically selected again. This was the default behaviour in firmware versions up to 1.14.20, but was changed in 1.16.
[7551] Adding scaling factors greater than one allowed the user to enter maximum speed values which were not allowed. This has been corrected.
[7554] Resetting the data partition (Schaeffler SmartWeb - Help - Select device restart) actually selected the reset to factory defaults, removing not only the measurement data, but all settings. This now works as expected again.
[7586] When writing a lot of data to a PLC using SLMP (more than around 250 registers), the communication broke down and the communication status was shown red in the Schaeffler SmartWeb. This has been fixed.
[7623] Defining a measurement trigger or condition failed for the calculation type peak (signed). This has been corrected.
[7627] Fixed several bugs in the maintenance system (version 1.0.24) regarding use of DHCP, default network addresses and special network configurations.

Version 1.16.10

Bug fixes:

[7505] An invalid 4-20mA input could block all other measurements. Now only the measurement jobs using this input are omitted.
[7506] Occasionally measurement or time triggers did not interrupt running measurement jobs. This has now been fixed: triggered measurement jobs have a higher priority than non-triggered jobs.
[7507] Occasionally long running measurement jobs were not canceled when the used measurement condition became invalid during the measurement. Now the condition must be valid for the entire duration of the measurement.

Version 1.16.0

New features:

[7183] Added function to mark measurement configuration as confidential in the configuration wizard. Combined with new user rights, this enables the user to define measurement configurations of which other users cannot see their configuration details.

[7184] When users do not have the user right to edit measurement configurations, they can be allowed to only change the speed input with a special new user right.

[7185] Added a license manager to enable special features via software licenses.

Version 1.14.20

Bug fixes:

[7194] Multiple alarm changes within seconds in a channel monitor can lead to system instability, when there is a high system load, e.g. when multiple other configurations are running and alarm changes generate large emails. This has been fixed by only storing time signals for the highest alarm change and by optimizing the overall system performance.

[7190] The logbook could show a hardware sampling rate error after changing the system time. This error now only appears when there really is a problem with the sampling rate.

Version 1.14.10

New features:

[7155] ^{license} Added buttons to test the email server settings to server wizard and server information page.

Improvements:

[6873] When an NTP server cannot be reached, e.g. because of a missing gateway, the Schaeffler SmartCheck/ProLink will now write an error message to the log book.

[7156] The peak calculation for the channel monitor is now done as a signed value, including a lower main alarm threshold.

Bug fixes:

[7049] Fixed crash of I/O-process during data download with the Schaeffler SmartWeb.

[7059] Under certain conditions, e.g. high system load when using the channel monitors, processes occasionally crashed. This has been fixed.

[7061] Using a belt drive where both sheaves had the same diameter caused the measurement to crash. This has been corrected.

[7006] The status webservice returned the field AlarmStatusSince with the time stamp of the last measurement. This has been corrected, now it returns the time stamp of the last alarm change.

[7128] On rare occasions, the Schaeffler SmartWeb asked for a user name and password, even when the user management was disabled. This has been corrected.

[7068] Editing the lower prealarm value of an alarm map could generate a database error, when the value is below the upper prealarm value. This has been corrected.

[7033] When the channel monitor changes its alarm state in less than 1s, the device doesn't save time signals for each alarm change event. This has been corrected.

[7064] In belt measurement jobs, alarm of the belt velocity and belt demodulation didn't change the alarm of the measurement job. This has been corrected.

[6998] Fixed several rounding errors in Schaeffler SmartWeb.

[7047] Fixed problem with time axis in measurement data viewer when switching between different characteristic values or channels.

[7057] Changing user settings overwrites the password, effectively locking out this user from the system. This has been corrected.

[7066] When using a channel monitor for a temperature channel and the calculation time is set at less than 1s, no values were calculated. This has been corrected.

[7063] In the liveview, when using the "show hole signal" button, only part of the signal would be shown when changing to a smaller lowpass. This has been corrected.

[7003] Fixed bug which prevented saving channel monitor configurations using an external (i.e. PLC) input.

[7055] A bug limited the length of a measurement trigger or condition calculator for input channels to a fixed value. Now the maximum number of samples can be used depending on the channel type and its sampling rate.

[7110] Removed percent-values for pre alarm values in both alarm settings dialogues, since their calculation was unlogical and different for different types of inputs.

[7109] Under certain conditions, the channel monitors store trend values more often than is configured. This has been corrected.

[7039] Fixed English translation for characteristic value settings in the channel monitor.

Version 1.14.0

New features:

[7019] ^{license} Measurement data can be sent via email. For this, the section external devices has been renamed to communication channels, which now includes email configurations and configurations for Mitsubishi PLCs using the SLMP protocol.

[7016] Added improved gear stage template, which contains an optimised set of characteristic values for monitoring different types of gear boxes. This template has been developed and validated in cooperation with a well-known gearbox manufacturer. This template should be used for all new gear box monitoring configurations. The previous gear stage template is still available for compatibility with existing monitoring configurations, but has been marked as deprecated.

[7017] When using measurement triggers, the user can now also define a lead time. This will start the recording of all time signals for a defined time before the trigger event.

[7020] For additional characteristic values (added via the measurement configuration) the user can now also define a negative main alarm threshold. This makes it possible to use symmetrical input signals (e.g. for speed signals with directional information or torque signals) and generate pre and main alarms for both positive and negative values.

[7023] ^{license} Implemented a new channel monitoring template, which enables the user to permanently monitor and alarm up to three channels.

Improvements:

[6918] The belt template created different belt wear characteristic values for driving and driven sheave, which makes no sense, since there is only one belt speed. These values have been replaced by a velocity and a demodulation characteristic value. For new measurement configurations, this new template is used automatically, for existing configurations, you have to edit and save them (in Schaeffler SmartWeb Show measurement jobs → select job → Edit → press next several times and then press OK).

[7021] Downloading data from the device without Schaeffler SmartWeb, now the username and password must be supplied in case the user management is enabled. Additionally the data container is now encrypted (a Schaeffler SmartUtility with version 1.14.0 or higher is required for importing these export files) and has a new file extension (.sdc2).

[4817] Sending a downloaded debug file via email could fail because of security settings of some email servers, which consider .scr files as possibly harmful. Now the debug log file can also be downloaded via <ip-address>/debug_info.log. To improve security, the debug log file is now also encrypted.

[7021] After booting the SmartWeb and communication by the Schaeffler SmartUtility now work as soon as the status LED stops blinking.

Bug fixes:

[6178] Schaeffler SmartWeb displayed several errors when using the Microsoft Edge browser, including very strange views in full screen mode. This has been corrected.

[6984] Fixed database errors on saving the configuration when using fixed speed inputs with other than integer numbers.

[6872] When using a speed input with a fixed value in measurement jobs, the user can change the maximum speed in the wizard (expert setting). Using other than integer values for the fixed speed input could lead to a validation error preventing to continue on to the next page. This has been corrected.

[6867]   Adding an additional input with fixed value to a measurement job could create a permanent pre or main alarm for this value and job. Now such a value will not generate an alarm anymore.

[6982]   Fixed bug which prevented storing a gear configuration when both wheels had the same number of teeth.

[6223]   The templates for user defined frequencies also generated demodulation values when the input was set to velocity or displacement, which physically makes no sense. Now these characteristic values are omitted when the vibration signal is integrated. For existing configurations, you have to edit and save them (in Schaeffler SmartWeb Show measurement jobs → select job → Edit → press next several times and then press OK).

[5049]   Alarm limits for speed inputs are now set in a way that they do not generate an alarm when the speed is zero. This is especially important when the speed is read via SLMP (i.e. from a Mitsubishi PLC).

[6903]   Speed values used in measurement configurations were calculated as RMS, which resulted in positive speed values in the trend, even when the speed was negative. Speed is now calculated in DC, so negative speeds are displayed correctly. To use this for existing configurations, you have to edit and save them (in Schaeffler SmartWeb Show measurement jobs → select job → Edit → press next several times and then press OK).

[6821]   Working with negative speed ranges resulted in strange behaviour for the maximum speed field in the configuration assistent. Now the correct maximum speed is calculated when negative speeds are used.

[6718]   Setting the analogue input to a negative scaling factor could under certain conditions fail (settings are not saved, no error message is shown), which could show strange errors in the Schaeffler SmartWeb for next steps. This has been corrected.

Known bugs:

[6927]   Directly after a firmware update and restoring factory default settings, sending emails might fail. This only occurs with version 1.0.20 of the Maintenance System. This can occur when using DHCP and when the email server is a name rather then an IP address. In the logbook on the status page, you will see the error message "Couldn't resolve host name". In this case, restart the device or do a power cycle the return to normal operation.

Version 1.12.30

Bug fixes:

[6944]   Added support for new hardware version k.

Version 1.12.20

Bug fixes:

[6840]   Editing the register order for external outputs didn't work correctly directly after creation or when reordering after a language change. This has been corrected.

Version 1.12.10

Bug fixes:

[6828]   Changes to the register order for external outputs were ignored under certian conditions. This bug has been fixed.

Version 1.12.2

New features:

[6771]   Added Japanese translation to Schaeffler SmartWeb.

[6772]   The links between chararcteristic values and external device output registers can now be edited by the user. It is now also possible to select all or no characteristic value when selecting the values used for external output registers.

Improvements:

[6806] The characteristic of the 2kHz lowpass has been improved. It has a higher attenuation over a wide range, although the stopband starts at a slightly higher frequency. This could have some impact on the following characteristic values in the base of default measurement job: RMS broad band demodulation and periodic value demodulation.

Bug fixes:

[6790] Changing the name of the SmartCheck/ProLink via Schaeffler SmartUtility or via Schaeffler SmartWeb was reverted sometimes after a reboot, especially but not only when the new name contained a space. Now the changed name is stored correctly and will remain even after a reboot.

[6787] When the integrated signal was very small, i.e. when after the integration the amplitudes were very small, this signal could contain a significant offset. This resulted in a wrong ISO10816 or condition guard value. A change in the algorithm now prevents to offset.

[6723] When using DHCP, reboot to the maintenance system (e.g. for firmware update or boot to maintenance system) could fail if the PC also has configured the 192.168.0.* network. This has been corrected.

[6642] The link between registers and characteristic values for measurement triggers and conditions could change after export and import via Schaeffler SmartUtility, i.e. a characteristic value could use a different register to write to. Now this link will never change during im- and export.

[6205] On some occasions, there could appear peaks in the demodulation time signal, which were caused by a calculation glitch. This has been corrected.

Version 1.10.2

Bug fixes:

[6369] When in the "Save settings for time signals" section on page 3 of the configuration wizard the interval is set to "Never", no time signals will be saved at all. Even in the case of an alarm change no time signal is saved. This was misleadingly stated wrong in the tool tip before and is now corrected.

[6027] If a user has created other users, they are also deleted when their creator is deleted. The same applies if the deleted user has not created the user himself, but the user group to which they belong. In this case, both the user group and all users were deleted. This has been corrected.

[6026] When a user who has edited an input channel (e.g., vibration sensor) is deleted, the created input channel disappears irretrievably from the SmartCheck/ProLink. This has been corrected.

[6024] When a user was deleted, all measurement tasks created or edited by this user were also delete without any warning. Now a warning is shown.

Version 1.10.0

New features:

[2215] New "Machine is running" measurement condition: With this measurement condition you can detect if the relevant machine is running or not. This measurement condition is by default assigned to the basic measurement configuration present on the device and all new created measurement configurations. In the factory default setting, the fulfilment of this measurement condition is based on vibration signals. Edit the measurement condition so that it meets the requirements of your machine (e.g. the engine speed is usually a better criterion for determining whether the machine is running).

[3755] New template "Tracked frequency bands": In this template for measurement jobs, you can define speed-dependent frequency bands.

Improvements:

[5083] By using the learning mode for the ISO 10816 in the firmware version 1.4.27 the alarm limits could be set higher than the defined limits in the ISO norm (for example ISO class I with 4,5 mm/s). Downloading such a configuration with Schaeffler SmartUtility 1.6, the alarm limits will be reset to the standard norm values. In the firmware version 1.6 it isn't possible to set the alarm limit to a higher value as defined in the ISO 10816 machine classes. This has been changed in a way that the alarm limits are now free, as the standard values of the norm are just recommendations and not limits.

[5242] The behaviour of triggered measurement had an unclear description in the user manual. A triggered measurement will not be disrupted by another trigger. The documentation is now more precise.

[5537] Now the time signals are displayed with the rotational speed value (if any) in the Schaeffler SmartWeb and Schaeffler SmartUtility Viewer software.

Known bugs:

[6077] If an external controller is not accessible during a measurement (e.g. due to network failures), the measurement cannot be interrupted until an internal timeout is reached. During that time communication attempts will fail from the Schaeffler SmartUtility software.

Bug fixes:

[6114] In some cases the alarm status could drop to "no alarm" even when the setting for reset alarms was set to "manually". This issue is fixed.

[5955] The unit group 'Count' is not available any more, because this unit group is not supported by the PLC.

[3978] If a trigger or measurement condition was removed from a measurement job it was not possible to add the same trigger or measurement condition again to that measurement job. This is now possible.

[4443] It was possible to select an existing output configuration as the characteristic value of a new output configuration. When trying to save it, this led to a rejection of the new output configuration without notification. It is not possible anymore to select an output configuration as characteristic value for another output configuration.

[4855] The numerical result of a characteristic value used in an alarm formula must not be used for an external output. This now impossible to configure.

[4907] If individual characteristic values were added as external outputs for a Mitsubishi PLC, it could happen that the assignment of characteristic values to the PLC register was not correct. This issue is fixed.

[4978] The setting for the ISO 10816 alarm levels will now allow values that exceed the recommendations of the ISO 10816 norm. Prior to this change it could happen, that it was not possible to change the machine classes when in doing so the alarm limits would be higher than the recommendation of the norm.

[4979] It was not possible to change the machine classes when the alarm limits were higher than the recommendation of the norm. This issue is fixed.

[5146] If the kinematic frequencies of a bearing are changed and this is used in a measuremnt configuration the frequency bands of a dependent characteristic value for this bearing weren't changed. This has been corrected. If a bearing which is in use is changed the depending characteristic values are chaged as well.

[5153] It was possible to start a download even when for the selected time range no data was recorded. This issue is fixed.

[5356] Using characteristic values from trigger and/or measurment conditions that were used for an external output will not yield any data if the trigger or measurement condition is not used in another measurement configuration. This results in an external output channel that never has a value. For that reason its is not possible any longer to use characteristic values from trigger and measurement conditions in an external output configuration.

[5489] The alarm level showing that a measuement condition is not valid at the moment were misleadingly transfered to the device level. Now the alarm level of measurement conditions is not transfered to the device level any more.

[5514] The rotational speed signal from a PLC was not displayed correctly on the status area. This issue is fixed.

[5834] It was not possible to rename an analogue input when it was associated with a trigger or measurement condition. This issue is fixed.

[5900] It was possible to define a rotational speed value of '0.0 Hz', which led to an error. This issue is fixed.

[5923] It was not possible to change an existing configuration for user defined frequency bands by adding or removing one or more frequency bands. This issue is fixed.

[6085] The number of measurement values for trigger and measurement conditions could be set to '1' even for characteristic values of peak-to-peak and crest-factor, which is not correct as the result is always '0' (peak-to-peak, crest-factor). This has been corrected and the minimum number that can be entered in these cases is now '2'.

[6160] The lower alarm limit for 'signal always geater than' for an ISO 10816 characteristic value was accidently always set to '0' when changing a measuring configuration. This issue is fixed.

Version 1.6.30

Bug fixes:

[5973] In rare cases, the Ethernet link was down and the Schaeffler SmartCheck/ProLink device was no longer accessible over the network, so that a manual restart was necessary. This issue is fixed.

Version 1.6.20

New features:

[5329] Added French translation to Schaeffler SmartWeb.

Improvements:

[5498] An output associated with the condition guard was updated every 30 seconds or upon a state change of the alarm. This has been changed. The output is updated every second. The trend however is still updated every 30 seconds.

Bug fixes:

[5536] Using external inputs of a PLC with the type WORD yields wrong values compared to inputs of type INTEGER. This has been corrected.

[5538] Under certain circumstances it occurred that measured values from the vibration channel were abnormally high. This error has been fixed.

Version 1.6.12

New features:

[5117] The supported ESR (Extended Support Release) for Mozilla Firefox has been raised from version 24 to version 31.

Usability improvements:

[2794] Switching the language of the Schaeffler SmartWeb software reordered under some conditions the registers used for sending information to the Mitsubishi PLC, because the variable names are ordered alphabetically. Now the names of the variables are not changed after they have been created, even in case of a language change.

Improvements:

[5257] Via a slow network connection, the data download could fail. The timeouts have been increased which should prevent this error.

Bug fixes:

[3030] When changing the bearing in the configuration assistent, the fixed bearing race setting is used incorrectly under certain conditions. This has been corrected.

[3098] Following a firmware update, it was not possible to change the settings of the digital input. This has been corrected.

[3168] Using wildcards in the bearing search dialogue didn't work and has been fixed.

[4300] In an environment with strong electromagnetic fields, the current output could be reset to 0mA for some time until the following measurement. This has been corrected.

[5089] In some cases the analog output signal has a value of 0mA instead of 4mA (in the 4-20mA mode) when the Schaeffler SmartCheck/ProLink was connected to a PLC. This has been fixed.

[5118] "The position of characteristic values (for example Peak-Peak) at the handover to a Mitsubishi controler were different depending on the language setting. This could lead to store the same characteristic values in different register on the controler. Now the mapping of the characteristic values to the controlers register is identical for each language."

[5124] Due to a bug in the firmware, changing the Schaeffler SmartCheck/ProLinks name using Schaeffler SmartUtility was not possible. This has been corrected.

[5290] Due to a change in MIcrosofts Internet Explorer 11, the download of the Mitsubishi register file didn't work anymore. This issue has been fixed.

Version 1.6.10

New features:

[4293] The user can now select whether to send the characteristics values alarm status, the absolute value or both to a mitsubishi plc.

[4876] Added base configuration as new measurement job template, which is identical to the default configuration minus crest factor, Wellhausen counter and periodic value.

Improvements:

[4875] Improved the learning mode by learning longer (i.e. 1000 values by default) and by using highest values as default algorithm.

[4877] A characteristic value will always be green during learning mode.

Bug fixes:

[2364] External alarm configurations / external outputs could not be created when using SmartWeb in Chinese. This has been corrected.

[4621] After changing the IP address, Schaeffler SmartWeb would still show the old address. Now the new address is shown.

[4799] Due to changes between internet explorer 10 and 11, SmartWeb did not work with IE11. This has been corrected.

[4867] A Firmwareupdate from version 1.4.27 to version 1.6.x was not possible when the user management was activited. This has been corrected.

[4904] Removing a single characteristic value from an external alarm configuration / external outputs was not possible, the SmartWeb always returned to the previous setting. This bug has been corrected.

[4956] Due to memory leaks viewing a lot of trends will become very slow in any browser. This has been corrected.

Known bugs:

[5083] By using the learning mode for the ISO 10816 in the firmware Version 1.4.27 the alarm limits could be set higher than the defined limits in the ISO norm (for example ISO class I 4,5mm/s). Downloading such a configuration with Schaeffler SmartUtility 1.6, the alarm limits will be reseted to the standard norm values. In the firmwware version 1.6 it isn't possible to get higher alarm limit as defined in the ISO 10816.

Version 1.6.6

New features:

[968] In the configuration menu for the outputs the user now has the option to test the output by pressing a a test button, which outputs a voltage or current on the selected output.

[1639] When creating measurement triggers and conditions, the user can now select which of the following characteristic values should be used: RMS, DC, peak, peak-to–peak and crest factor.

[1703] The sampling rate of the digital speed signal has been reduced to 1280 samples per second, which is identical to that used for an analog speed input.

[1719] Until now, speed values always has to be greater than or equal to zero. Now also negative speed values are allowed, for example when the sign of the speed is used as a direction indicator. It is also possible to trigger on negative speed values or use them as measurement condition.

[1720] Until now, additional channels in measurement jobs were always calculated as RMS, preventing negative values. Now these are calculated in DC. With this for example negative speeds (e.g. for changing direction) become possible.

[1753] Added trend for measurement triggers and condition which enable the user to check when e.g. conditions are valid or not, so it becomes clear why measurements take place or not.

[1920] Measurement conditions were only checked before and after the measurement. Now the measurement conditions are checked permanently during a measurement.

[2600] In the configuration wizard the user can now define time conditions which have to be valid for the measurement job to run.

[2724] The number of samples of the vibration measurements are now as long as defined by the number of spectrum lines. All others (additional channels, speed signal and the signals used for the alarm map) are as long as the longest vibration measurement.

[2885] With the new template user defined frequency bands" the user could set frequency bands (set signal to integration) from 2Hz - 1kHz for applications where the alarm levels of the ISO 10816 value are not sufficient.

[3034] Changed status LED blinking settings (see device manual).

[3111] In the configuration wizard, the user can now select the template user defined frequency bands.

[3146] Several changes when using the learning mode:

- After the learning has finished, learning is deactivated in the configuration, i.e. it must be reactivated in the configuration wizard before a new learning can be started. The learned values are written to the configuration so that they are visible on the configuration page of Schaeffler SmartWeb and on the alarm page of the configuration wizard.

- Alarm limits can be changed regardless of the learning mode state or settings.

- When using the alarm map, changing the alarm limits in the configuration wizard only changes the limits for fields which have not yet completed learning. Learned values can only be changed via the new change alarm limits wizard.

[3386] When at least one characteristic value is learning, this is now shown in Schaeffler SmartWeb with a lamp symbol instead of a blinking alarm symbol.

[3388] When using the default configuration, the ISO 10816 characteristic value now doesn't start the learning mode automatically.

[3424] The smallest possible frequency window tolerance, which can be set in the expert settings of the configuration wizard, has been reduced from 3% to 0.1%.

[3466] Until now, the default alarm levels are stored in the configuration. Now the learned alarm values are stored, which makes it possible to restore a configration including the learned alarm values using the Schaeffler SmartUtility.

[3759] The alarm counter can now also be set to any value between 1 and 5 (previously only 1 and 5).

[4364] The external inputs (i.e. values read from a Mitsubishi-SPS) can now also be used for the alarm map.

Usability improvements:

[371] The maximum speed in the configuration assistant could be entered higher than the selected input allows. Now the value is checked against the input range.

[1034] In the measurement data section the trend is now updated periodically, so new values appear without reloading the page.

[1224] When changing the ISO machine class in the default configuration, the alarm limits are changed accordingly.

[2297] The threshold(s) for measurement triggers and conditions are now validated in SmartWeb, preventing the user from entering an illegal value.

[2353] The user can now delete measurement data in the SmartWeb.

[2655] When a system reset occurs because of an error, the configuration of the device is restored, only the measured data is lost.

[2792] Alarm limits can now be changed, using a graphical tool in the area measurement data.

[2879] Schaeffler SmartWeb now automatically sets the language to the language of the browser, provided that the language is available.

[2903] When a system starts with a empty database (i.e. without measurement data) and without NTP or backup battery, the clock is set to the release date of the firmware.

[3245] The displayed limits for the maximum speed value in the configuration assistant were always 0-3000RPM. Now the input range for the selected speed input is shown.

[3437] Schaeffler SmartWeb now automatically reloads the device configuration when Schaeffler SmartUtility sends a new configuration.

Improvements:

[ ] Handling of signals and filters has been improved, which results in a faster response when using Schaeffler SmartWeb.

[2741] The learning mode now doesn't start automatically after the first boot of the device. The user has to press the teach key.

[3112] Trigger events could not interrupt a running measurement job. Now a trigger event will interrupt a running measurement (as long as this measurement is NOT started by a trigger), so a triggered measurement will start very quickly.

[3597] To prevent unintentional keystrikes, a key lock has been implemented. To enable the keys for two minutes, first press the reset and then the teach key. After that, the key led will blink for a brief moment.

[3598] Due to slow processing in the Internet Explorer, all time signals and spektra were cut-off at 2048 values. The correct number of samples is shown in brackets in IE. Other browsers show the complete signals.

[3688] All prealarm levels are now entered as absolute values instead of percentages. This prevent a lot of confusion when using signals which are partly or completely negative.

[3761] When using the digital input as speed input, the number of pulses per revolution can now be up to 10,000 (was 250).

[3946] In the default configuration, the ISO machine class has been changed from class I to class II.

Bug fixes:

[568] The integration of vibration signals (i.e. when the accelleration signal is converted to velocity or displacement signal) had a high attenuation below 20Hz. Now the integrator has been improved and lower attenuation at lower frequencies.

[1463] Temperature values were calculated as RMS values, which rectified negative temperatures. These were then shown incorrectly on the status page and prevented the use of negative thresholds for triggers and conditions. Now the temperature value is calculated as DC value and can become negative.

[1577] Until now the icon in front of a time signal in the section "measurement data" showed a main alarm (red icon), when a characteristic value had an error, e.g. when the speed signal was zero. Now this is shown with a special icon.

[1650] Integration of the vibration signal to velocity or displacement could not be selected in the live view. Now the velocity and displacement units can be selected and the integrated signal is shown.

[1664] On some devices, the analog alarm output would show "no alarm" by outputting the maximum value. This has been corrected.

[1725] When a trend started with error values (e.g. when the speed signal was missing), the alarm limits were not shown correcty.Now the alarm limits are shown correctly even when the trend values have an error.

[1777] An interruption during sending of a new configuration by the Schaeffler SmartUtility could delete the active configuration on the device without having the new configuration. This has been corrected.

[1789] When editing the default configuration after changing the language of Schaeffler SmartWeb, the name of the default configuration and the temperature value were not translated into the changed language. This has now been corrected.

[1797] When the Schaeffler SmartCheck/ProLink is set do DHCP, but not DHCP-server is found, the DHCP-field in the SmartUtility is not activated for this device. This has been corrected.

[1821] Removing additional channels in the configuration wizard could lead to deleting the entire measurement job. This has been corrected.

[1878] Changing the name of a channel used as additional characteristic value removed this value from a measurement configuration. This has been corrected.

[2102] Sometimes the trend in the measurement data section showed no or too few values, when the last measurement was older than 2 weeks. This has been corrected.

[2244] When a device used DHCP and the network connection was lost, it droped back to the default IP address and didn't restart the DHCP client. Now loosing the network connection doesn't change the IP address nor the DHCP settings.

[2248] Added a check which prevent the creation of two external devices with the same IP address and port number.

[2310] When viewing the status page, the live value for a channel with a negative scaling factor was wrong. This has been corrected.

[2523] For time signals, the user can now choose not to save time signals at all. In case of an alarm change saving of time signals is obligatory.

[2601] When using a time or measurement trigger in combination with measurement conditions, then the system would wait for the condition to become valid after the trigger event. This means, that the measurement would start some time after the trigger event, i.e. when the condition become valid. Now the condition is checked at the time of the trigger event. When valid, the measurement job is started. When not, the trigger event is ignored and the system will wait for the next trigger event.

[3297] When the system clock is changed to a time in the past, the outputs were not changed until the original time has been reached. Now the outputs are changed even when the system time is changed.

[3316] If the SmartCheck/ProLink remains in the delivery staus (regarding IP settings), then the connection between Schaeffler SmartWeb and Schaeffler SmartCheck/ProLink occasionally breaks down. This has been corrected.

[3356] After a communication problem with a Mitsubishi SPS, the status flag in the SPS is never changed to OK after the communication resumes.

[4095] Alarm levels for the ISO10816 value could be set higher then allowed by the standard, but ignored by the firmware. Now the user receives an error, when the alarm levels are set too high.

[4322] In some conditions, a measurement using a measurement condition on the digital input ran all the time, regardless of the state of the digital input. Now the state is evaluated correctly.

[4341] The state of the outputs was set after the first measurement. When this measurement used a trigger or condition, this could be a long time. Now the output is always initialized to its zero-state (e.g. 4mA for a 4-20mA-output) after a configuration change.

Known bugs:

[3100] Time triggers and time conditions always use standard time, daylight saving is ignored.

[3586] When the digital output is burdened with a current greater than the specified limit of 1A, the output could be switched off. After some time, the output should be reset and can be used normally. Because of an error, the reset doesn't work, so the device has to be switched off and on again for the digital output to operate normally again.

Version 1.4.27

New features:

[3192] Added Spanish translation to Schaeffler SmartWeb.

[3398] Improved self monitioring capabilities of the firmware ensuring a restart of the firmware in case of a software error.

Improvements:

[3516] To prevent unintentional keystrokes, a key lock has been implemented. To enable the keys for two minutes, first press the reset and then the teach key. After that, the key led will flash for a brief moment.

Bug fixes:

[1772] When editing the default measurement job in any language other than German, the name was changed to the German one ("Standardmessaufgabe"). This has been corrected.

[2966] Under certain conditions the system would stop storing data until the next reboot. This has been corrected.

[3485] Google Chrome couldn't show measuring graphs as of version 25. This has been corrected. Be ware: Google Chrome will work, but is not officially supported nor tested!

[3491] Entering numbers in Schaeffler SmartWeb didn't work anymore as of Firefox version 20. This has been corrected.

[3496] A bug that prevented the use of both outputs with the same characteristic value as source (only one of the outputs was updated) was fixed. Now both outputs can be used with the same source characteristic value.

[3589] When using measurement conditions, it could happed that over time no more measurements could be done and live view and live characteristic values didn't work anymore. A reset of the device, changing a configuration or reading data with the Schaeffler SmartUtility would return the device to normal operation. Now the measurement conditions can be used without limitations.

[3592] Under certain rare conditions the system could switch into a state in which the device didn't react to anything. This has been corrected.

[3192] Added Spanish translation to Schaeffler SmartWeb.

[3398] Improved self monitioring capabilities of the firmware ensuring a restart of the firmware in case of a software error.