

# Firmware Release Notes

## **FIR-v2139-B1022383**

internal changes only

## **FIR-v2039-B835703**

PD4-Ex-EB-65-x controllers are now supported (PD4-E with integrated brake)

## **FIR-v2039-B829210**

internal changes only for CPBx-x-1 and CPBx-x-2

## **FIR-v2039-B807052**

- |              |   |
|--------------|---|
| General:     | <ul style="list-style-type: none"><li>- Reworked reaction to limit-switches</li><li>- Enable config of ballast resistor usage</li><li>- Added an option to disable the status or error LED</li><li>- Added a pre control for better current control</li><li>- Enhance PWM limit from 88.5% to 94.25% - more speed</li><li>- Updated PDO mapping for Assembly 100 and 101</li><li>- Adjustment of ESI file for use with OMRON PLC</li><li>- Support for CPB3/6/15</li><li>- Support of Interlock</li></ul> |
| Od:          | <ul style="list-style-type: none"><li>- Unit of 320Eh:Fh and 320Fh:5 changed from per-mille to Volt</li><li>- Unit of 320Eh:Fh and 320Fh:5 shall change from per-mille to Volt</li><li>- Over Current Error can be cleared with 6040=128</li><li>- Add an option to configure a threshold velocity where the status bit 12 in ox6041 is set</li><li>- added possibility to read out the bootloader version with 4042h:1</li></ul>   |
| Autosetup:   | <ul style="list-style-type: none"><li>- Change Visibility of Autosetup Parameters to Public</li><li>- Autosetup uses nominal current</li></ul>  |
| EtherCAT:    | <ul style="list-style-type: none"><li>- Enable setting of behaviour in case of a change to safe-OP</li><li>- Enable Firmware &amp; Bootloader update via EtherCAT FoE</li></ul>   |
| EtherNet/IP: | <ul style="list-style-type: none"><li>- DHCP host names will be applied</li></ul>   |

**FIR-v1939-B697429**

- |                  |  |
|------------------|--|
| General:         | <ul style="list-style-type: none"><li>- Enhanced brake control</li><li>- Increased the CPU capacity for NanoJ programs by decreasing the current control loop frequency to 16 kHz</li><li>- Improvement of commutation at high speed</li><li>- Adaption of brake ramp and limit switch</li></ul> |
| Modbus RTU:      | <ul style="list-style-type: none"><li>- The slave address for ModbusRTU over USB does not matter</li></ul>   |
| N5:              | <ul style="list-style-type: none"><li>- Improved stability of storing OD values for some models of the N5</li></ul>  |
| PD4-E multiturn: | <ul style="list-style-type: none"><li>- Improvement of position detection after restart</li></ul>  |

**FIR-v1926-B669333**

internal changes only

**FIR-v1926-B648637**

- |           |  |
|-----------|--|
| General:  | <ul style="list-style-type: none"><li>- Analogue value scaling now possible</li></ul>  |
| Od:       | <ul style="list-style-type: none"><li>- 0x33B0: Configuration of SSI encoder now possible</li><li>- 0x605A: Brake stays open after quick stop active</li><li>- 0x60C2: Interpolation time now settable</li></ul> |
| Autosetup | <ul style="list-style-type: none"><li>- No change of 0x320E and 0x3210 after autosetup</li></ul>   |
| PD:       | <ul style="list-style-type: none"><li>- Stay in closed loop after restore default parameters</li></ul>   |
| NP5:      | <ul style="list-style-type: none"><li>- New object: 0x3231:3 (alternate function)</li></ul>  |

**FIR-v1913-B628025**

- |              |   |
|--------------|---|
| General:     | <ul style="list-style-type: none"><li>- Resetting Halt Bit in Relative Position Movement</li><li>- sensorless commutation with a SSI sensor used</li><li>- A voltage error is raised before the ballast resistor is activated</li><li>- Slow speed mode implemented</li><li>- Support of multiple sensors</li></ul> |
| Od:          | <ul style="list-style-type: none"><li>- Closing the brake by default, if a brake can be connected</li><li>- CL4Ex: Adding 2701h customer storage area</li><li>- Error reset for 6320h possible</li><li>- Adding new objects 320Dh, 320Eh, 320Fh for nomalized PI parameters</li></ul>                               |
| Autosetup:   | <ul style="list-style-type: none"><li>- Possibility for a reduced autosetup for range limited linear actuators</li></ul>  |
| EtherNet/IP: | <ul style="list-style-type: none"><li>- Update of the .stc files</li><li>- Addition of PDI assembly</li></ul>   |
| PD4-C:       | <ul style="list-style-type: none"><li>- Reduced current limit</li></ul>   |

**FIR-v1825-B577172**

internal changes only

**FIR-v1813-B557134**

- |                 |  |
|-----------------|--|
| General:        | <ul style="list-style-type: none"><li>- Wrong default threshold for ballast circuit</li><li>- Velocity and acceleration feed forward did not work in IP mode and were wrongly scaled in CSP and clock-direction mode</li><li>- Correction of the automatic brake control with step direction</li></ul> |
| Autosetup:      | <ul style="list-style-type: none"><li>- Correction of the alignment values</li></ul>   |
| Limit Switches: | <ul style="list-style-type: none"><li>- Removed the tolerance band for limit switches</li></ul>  |
| Od:             | <ul style="list-style-type: none"><li>- Removed 2059h for devices without encoder configuration capability</li><li>- 2038h is public for all controllers</li><li>- Correction of the default values of 1011h</li><li>- Correction of the default value of 605Ah to 2</li></ul>                         |
| PDI:            | <ul style="list-style-type: none"><li>- Enable it by default and support it by Modbus RTU PDOs</li><li>- Adapt the status bits and shift some command figures</li></ul>  |
| Quick Stop:     | <ul style="list-style-type: none"><li>- Support of quick stop option codes 5 &amp; 6 in 605Ah to stay in quick-stop active state</li></ul>   |

**FIR-v1748-B538662**