



16.6 Events, causes and remedies



The monitoring functions of the respective network are only active when network control is activated.

► [Activate network control](#) 269



If the message "KP.Error" is displayed on the keypad, this is due to one of the following causes:

- Firmware update not completed successfully.
- Internal error

Remedy:

- Update the inverter firmware to the latest version.
- If the error persists, the control unit or the device must be replaced. For this purpose, please contact the manufacturer.

16.6.1 Event ID overview

The following table contains the most important event IDs of the device in ascending order.

- Clicking the event ID shows you a detailed description of the event.
- If the device displays an "internal event" that is not listed here, restart the device. If the event persists, make a note of the event ID and contact the manufacturer.

Event ID	Event	Severity	Configurable in
8784	0x2250 CiA: Continuous over current (internal)	Fault	-
8992	0x2320 Short circuit or earth leakage at the motor end	Fault	-
9024	0x2340 Short circuit at the motor end	Fault	-
9040	0x2350 CiA: i ² t overload (thermal state)	Fault	0x2D4B:003 (P308.03)
9090	0x2382 Fault - Device utilization (ixt) too high	Fault	0x2D40:005 (P135.05)
9091	0x2383 Warning - Device utilization (ixt) too high	Warning	-
9095	0x2387 Clamp responded too often	Fault	-
9096	0x2388 SL-PSM stall detection active	Trouble	-
9098	0x238A Maximum current reached	Information	-
12576	0x3120 Mains phase fault	Fault	-
12672	0x3180 UPS operation active	Warning	-
12816	0x3210 Fault - DC bus overvoltage	Fault	-
12817	0x3211 DC bus overvoltage warning	Warning	-
12832	0x3220 Fault - DC bus undervoltage	Trouble	-
12833	0x3221 DC bus undervoltage warning	Warning	-
12834	0x3222 DC-bus voltage to low for power up	Warning	-
16912	0x4210 Fault - Power unit overtemperature	Fault	-
17024	0x4280 Fault - Heat sink temperature sensor	Fault	-
17025	0x4281 Heat sink fan warning	Warning	-
17029	0x4285 PU overtemperature warning	Warning	-
20754	0x5112 External supply voltage critical	Warning	-
20864	0x5180 Overload 24 V supply	Warning	-
21376	0x5380 OEM hardware incompatible	Fault	-
24970	0x618A Warning - Internal fan	Warning	-
25216	0x6280 Trigger/functions connected incorrectly	Trouble	-
25217	0x6281 User-defined fault 1	Fault	-
25218	0x6282 User-defined fault 2	Fault	-
25232	0x6290 Warning invert rotation	Warning	-
25233	0x6291 Maximum allowed troubles exceeded	Fault	-
25248	0x62A0 User-defined fault (LECOM)	Fault	-
25249	0x62A1 Network: user fault 1	Fault	-
25250	0x62A2 Network: user fault 2	Fault	-

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Event ID	Event	Severity	Configurable in
25265	0x62B1 NetWordIN1 configuration incorrect	Trouble	-
25505	0x63A1 CU: load error ID tag	Fault	-
25506	0x63A2 PU: load error ID tag	Fault	-
25507	0x63A3 Power unit unknown	Fault	-
28800	0x7080 Assertion level monitoring (Low/High)	Fault	-
28801	0x7081 Fault - Analog input 1	Fault	0x2636:010 (P430.10)
28802	0x7082 Analog input 2 fault	Fault	0x2637:010 (P431.10)
28833	0x70A1 Analog output 1 fault	Warning	-
28834	0x70A2 Analog output 2 fault	Warning	-
28961	0x7121 Fault - Pole position identification	Fault	0x2C60
29056	0x7180 Motor overcurrent	Fault	0x2D46:002 (P353.02)
30336	0x7680 Memory module is full	Warning	-
30337	0x7681 Memory module not present	Fault	-
30338	0x7682 Invalid user data	Fault	-
30340	0x7684 Data not compl. saved before powerdown	Warning	-
30342	0x7686 Network - Configuration error	Fault	-
30345	0x7689 Memory module: invalid OEM data	Warning	-
30346	0x768A Memory module: wrong type	Fault	-
30352	0x7690 EPM firmware version incompatible	Fault	-
30353	0x7691 EPM data: firmware type incompatible	Fault	-
30354	0x7692 EPM data: new firmware type detected	Fault	-
30355	0x7693 EPM data: PU size incompatible	Fault	-
30356	0x7694 EPM data: new PU size detected	Fault	-
30357	0x7695 Invalid parameter changeover configuration	Warning	-
30358	0x7696 EPM data: unknown parameter found	Information	-
30359	0x7697 Parameter changes lost	Fault	-
33045	0x8115 Time-out (PAM)	No response	0x2552:004 (P595.04)
33050	0x811A BACnet time-out	Fault	0x2856:001
33154	0x8182 CAN: bus off	Trouble	0x2857:010
33155	0x8183 CAN: warning	Warning	0x2857:011
33156	0x8184 CAN: heartbeat time-out consumer 1	Fault	0x2857:005
33157	0x8185 CAN: heartbeat time-out consumer 2	Fault	0x2857:006
33158	0x8186 CAN: heartbeat time-out consumer 3	Fault	0x2857:007
33159	0x8187 CAN: heartbeat time-out consumer 4	Fault	0x2857:008
33185	0x81A1 Modbus: network time-out	Fault	0x2858:001 (P515.01)
33186	0x81A2 Modbus: incorrect request by master	Warning	-
33425	0x8291 CAN: RPDO1 time-out	Fault	0x2857:001
33426	0x8292 CAN: RPDO2 time-out	Fault	0x2857:002
33427	0x8293 CAN: RPDO3 time-out	Fault	0x2857:003
33553	0x8311 Torque limit reached	No response	0x2D67:001 (P329.01)
33664	0x8380 Function not allowed in selected operating mode	Warning	-
36992	0x9080 Keypad removed	Fault	-
65285	0xFF05 Safety option - Internal error	Fault	-
65286	0xFF06 Motor overspeed	Fault	0x2D44:002 (P350.02)
65289	0xFF09 Motor phase missing	No response	0x2D45:001 (P310.01)
65290	0xFF0A Motor phase failure phase U	No response	0x2D45:001 (P310.01)
65291	0xFF0B Motor phase failure phase V	No response	0x2D45:001 (P310.01)
65292	0xFF0C Motor phase failure phase W	No response	0x2D45:001 (P310.01)
65305	0xFF19 Motor parameter identification fault	Fault	-
65311	0xFF1F FMF Error	Fault	-
65317	0xFF25 Cascading overload	Warning	-
65335	0xFF37 Automatic start disabled	Fault	-
65336	0xFF38 Load loss detected	No response	0x4006:003 (P710.03)
65337	0xFF39 Motor overload	No response	0x4007:003
65366	0xFF56 Maximum motor frequency reached	Warning	-



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Event ID		Event	Severity	Configurable in
65370	0xFF5A	Manual mode disabled	Warning	-
65371	0xFF5B	Manual mode activated	Warning	-
65372	0xFF5C	Manual mode time-out	Fault	-
65393	0xFF71	Wrong password	Warning	-
65394	0xFF72	Warning	Warning	-
65395	0xFF73	Fatal Error	Fault	-
65413	0xFF85	Keypad full control active	Warning	-



16.6.2 Causes and remedies

8784 | 0x2250 **CiA: Continuous over current (internal)**

Keypad display: **PU over current**

Cause	Remedy	Severity/response
- Continuous overcurrent on the inverter/motor side. - DC bus relay has not been closed due to a malfunction.	Check motor and wiring for short circuits.	Fault - The inverter is disabled immediately. The motor has no torque (is coasting). - The event can only be reset after a blocking time.
		Blocking time: 2 s

8992 | 0x2320 **Short circuit or earth leakage at the motor end**

Keypad display: **Earth leak**

Cause	Remedy	Severity/response
- Short circuit/earth fault of motor cable - Capacitive charging current of the motor cable too high.	- Check motor cable. - Check length of the motor cable. - Use shorter or lower-capacitance motor cable.	Fault - The inverter is disabled immediately. The motor has no torque (is coasting). - The event can only be reset after a blocking time.
		Blocking time: 2 s

9024 | 0x2340 **Short circuit at the motor end**

Keypad display: **Motor shorted**

Cause	Remedy	Severity/response
Short circuit of motor cable	Check motor cable for short circuit.	Fault - The inverter is disabled immediately. The motor has no torque (is coasting). - The event can only be reset after a blocking time.
		Blocking time: 2 s

9040 | 0x2350 **CiA: i²t overload (thermal state)**

Keypad display: **i²t motor**

Cause	Remedy	Severity/response
Motor thermally overloaded, e. g. by an impermissible continuous current or by frequent or too long acceleration processes.	- Check drive sizing. - Check machine/driven mechanics for excessive load. - Check settings of the motor data. - Reduce values for slip compensation 0x2B09:001 (P315.01), 0x2B09:002 (P315.02) and oscillation damping 0x2B0A:001 (P318.01), 0x2B0A:002 (P318.02).	Fault (configurable) The event can only be reset after a blocking time.
		Blocking time: 2 s
		Setting parameters: 0x2D4B:003 (P308.03)

Related topics

► [Motor overload monitoring \(i²t\)](#) □ 235

9090 | 0x2382 **Fault - Device utilization (ixt) too high**

Keypad display: **Ixt error**

Cause	Remedy	Severity/response
Device utilisation (ixt) too high by frequent and too long acceleration processes.	Check drive sizing. - Reduce the maximum current of the inverter 0x6073 (P324.00). - In case of high mass inertias, reduce maximum current of the inverter 0x6073 (P324.00) to 150 %.	Fault (configurable) The event can only be reset after a blocking time.
		Blocking time: 2 s
		Setting parameters: 0x2D40:005 (P135.05)

Related topics

► [Device overload monitoring \(ixt\)](#) □ 377



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9091 | 0x2383 **Warning - Device utilization (ixt) too high**

Keypad display: **Ixt warning**

Cause	Remedy	Severity/response
Device utilisation (ixt) too high by frequent and too long acceleration processes.	Check drive dimensioning.	Warning

Related topics

► [Device overload monitoring \(ixt\)](#)  377

9095 | 0x2387 **Clamp responded too often**

Keypad display: **Clamp timeout**

Cause	Remedy	Severity/response
Maximum current of the axis (display in 0x2DDF:002) has been reached too often in succession.	• Select a flatter speed ramp. • Reduce the load. • Set I_{max} controller more dynamically.	Fault

Related topics

► [I_{max} controller](#)  232

9096 | 0x2388 **SL-PSM stall detection active**

Keypad display: **SL-PSM stall det.**

Cause	Remedy	Severity/response
Overload of the motor with sensorless control for synchronous motors (SL-PSM).	• Reduce load at the axis. • Check settings of the SL-PSM parameters.	Trouble • The inverter is disabled immediately. The motor has no torque (is coasting).

Related topics

► [Sensorless control for synchronous motor \(SL-PSM\)](#)  171

9098 | 0x238A **Maximum current reached**

Keypad display: **I_{max} reached**

Cause	Remedy	Severity/response
The actual current 0x6078 (P103.00) is equal to or higher than the max. current 0x6073 (P324.00) .	• Reduce the load on the motor or change the settings for the maximum current. 0x6073 (P324.00)	Information

12576 | 0x3120 **Mains phase fault**

Keypad display: **Mains Phase fail**

Cause	Remedy	Severity/response
Mains phase failure	• Check wiring of the mains connection. • Check fuses.	Fault

12672 | 0x3180 **UPS operation active**

Keypad display: **UPS oper. active**

Cause	Remedy	Severity/response
Operation on uninterrupted 1x230V current supply (UPS) has been activated: Only a reduced output current is provided.	Switch back to operation with regular mains voltage.	Warning

Related topics

[Operation with UPS](#)  409

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12816 | 0x3210 **Fault - DC bus overvoltage**

Keypad display: **DC Bus OV**

Cause	Remedy	Severity/response
DC-bus voltage has exceeded the error threshold for overvoltage due to a too high braking energy or a too high mains voltage. The error threshold (display in 0x2540:006 (P208.06)) results from the setting of the rated mains voltage in 0x2540:001 (P208.01) .	• Reduce dynamic performance of the load profile. • Check mains voltage. • Check settings for brake energy management.	Fault

Related topics

- ▶ [Mains voltage](#) [□ 40](#)
- ▶ [Brake energy management](#) [□ 385](#)

12817 | 0x3211 **DC bus overvoltage warning**

Keypad display: **Warn.DC Bus OV**

Cause	Remedy	Severity/response
DC-bus voltage has exceeded the warning threshold for overvoltage set in 0x2540:005 (P208.05) due to a too high braking energy or a too high mains voltage.	• Reduce dynamic performance of the load profile. • Check mains voltage. • Check settings for brake energy management.	Warning

Related topics

- ▶ [Mains voltage](#) [□ 40](#)
- ▶ [Brake energy management](#) [□ 385](#)

12832 | 0x3220 **Fault - DC bus undervoltage**

Keypad display: **DC Bus UV**

Cause	Remedy	Severity/response
DC-bus voltage has fallen below the error threshold for undervoltage. The error threshold (display in 0x2540:003 (P208.03)) results from the setting of the rated mains voltage in 0x2540:001 (P208.01) .	• Check mains voltage. • 0x2D87 (P105.00) Check DC-bus voltage. • Check mains settings. • Check fuses.	Trouble

Related topics

- ▶ [Mains voltage](#) [□ 40](#)

12833 | 0x3221 **DC bus undervoltage warning**

Keypad display: **Warn.DC Bus UV**

Cause	Remedy	Severity/response
DC-bus voltage has fallen below the warning threshold for undervoltage set in 0x2540:002 (P208.02) .	• Check mains voltage. • 0x2D87 (P105.00) Check DC-bus voltage. • Check mains settings. • Check fuses.	Warning

Related topics

- ▶ [Mains voltage](#) [□ 40](#)

12834 | 0x3222 **DC-bus voltage too low for power up**

Keypad display: **DC-bus on-UV**

Cause	Remedy	Severity/response
The input voltage is too low to switch on the inverter.	• Check mains voltage. • Check mains settings. • Check fuses.	Warning

Related topics

- ▶ [Mains voltage](#) [□ 40](#)



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16912 | 0x4210 **Fault - Power unit overtemperature**

Keypad display: **PU Overtemp.**

Cause	Remedy	Severity/response
The heatsink temperature of the power unit (display in 0x2D84:001 (P117.01)) has exceeded the fixed error threshold (100 °C). - Ambient temperature too high. - Fan or ventilation slots are polluted. - Fan is defective.	- Check mains voltage. - Provide for a sufficient cooling of the device. In case of a 100 % load, 60 °C to +70°C are normal. Display of the heatsink temperature in 0x2D84:001 (P117.01). - Clean fan and ventilation slots. If required, replace fan. - Reduce switching frequency 0x2939 (P305.00)	Fault

17024 | 0x4280 **Fault - Heat sink temperature sensor**

Keypad display: **Heatsink sensor**

Cause	Remedy	Severity/response
Sensor for the temperature monitoring of the power unit is defective. The failure of the temperature monitoring function poses the risk of overheating!	Hardware error: it is necessary to contact the manufacturer, since the device must be replaced.	Fault

17025 | 0x4281 **Heat sink fan warning**

Keypad display: **Heatsink fan**

Cause	Remedy	Severity/response
Warning of the heatsink fan.	Clean fan and ventilation slots. If required, replace fan. The fans can be unlocked via locking hooks and can then be removed.	Warning

17029 | 0x4285 **PU overtemperature warning**

Keypad display: **Warn.PU Overtemp**

Cause	Remedy	Severity/response
The heatsink temperature of the power unit (display in 0x2D84:001 (P117.01)) has exceeded the warning threshold set in 0x2D84:002. - Ambient temperature too high. - Fan or ventilation slots are polluted. - Fan is defective.	- Provide for a sufficient cooling of the device. - Clean fan and ventilation slots. - If required, replace fan.	Warning

Related topics

► [Heatsink temperature monitoring](#)  378

20754 | 0x5112 **External supply voltage critical**

Keypad display: **Ext. supply low**

Cause	Remedy	Severity/response
External supply voltage failed or too low.	- Check optional external 24V voltage supply (terminal X3/24E), if connected. - Check mains voltage.	Warning

20864 | 0x5180 **Overload 24 V supply**

Keypad display: **Overload 24V**

Cause	Remedy	Severity/response
Output current at the 24V output or at the digital outputs too high.	Check 24V output and digital outputs for earth fault or overload.	Warning

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21376 | 0x5380 **OEM hardware incompatible**

Keypad display: **Incomp. OEM HW**

Cause	Remedy	Severity/response
The control unit (OEM hardware) is not compatible with the power unit (OEM hardware).	• Use compatible hardware. • Contact the OEM.	Fault • The inverter is disabled immediately. The motor has no torque (is coasting). • The event can only be reset by mains switching.

24970 | 0x618A **Warning - Internal fan**

Keypad display: **Internal fan**

Cause	Remedy	Severity/response
Warning of the internal fan.	Check/replace internal fan.	Warning

25216 | 0x6280 **Trigger/functions connected incorrectly**

Keypad display: **P400 config err**

Cause	Remedy	Severity/response
The assignment directives have not been observed. • If the "flexible I/O configuration" is active as control source, the "Enable inverter" or "Run" function must be connected to a digital input in order that the motor can be stopped again any time! • The use of the "Start forward (CW)" and "Start reverse (CCW)" functions excludes the use of the "Run forward (CW)" and "Run reverse (CCW)" functions, and vice versa.	Check and correct the assignment of the triggers to the functions. • With keypad or network control, the two "Enable inverter 0x2631:001 (P400.01)" and "Run 0x2631:002 (P400.02)" functions can also be set to "Constant TRUE [1]" to start the motor.	Trouble

Related topics

► [Start, stop and rotating direction commands](#) 55

25217 | 0x6281 **User-defined fault 1**

Keypad display: **User fault 1**

Cause	Remedy	Severity/response
Flexible I/O configuration: the "Activate fault 1" function was activated via the trigger selected in 0x2631:043 (P400.43).	Eliminate error cause and then reset error.	Fault

Related topics

► [User-defined error triggering](#) 380

25218 | 0x6282 **User-defined fault 2**

Keypad display: **User fault 2**

Cause	Remedy	Severity/response
Flexible I/O configuration: the "Activate fault 2" function was activated via the trigger selected in 0x2631:044 (P400.44).	Eliminate error cause and then reset error.	Fault

Related topics

► [User-defined error triggering](#) 380



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25232 | 0x6290 **Warning invert rotation**

Keypad display: **Invert rotation**

Cause	Remedy	Severity/response
- Negative setpoint selection with an active limitation of rotation 0x283A (P304.00). - The "Reverse rotational direction" 0x2631:013 (P400.13) function was requested with an active limitation of rotation 0x283A (P304.00).	- Check setpoint selection and trigger. - Check setting in 0x283A (P304.00).	Warning The motor is brought to a standstill, since a reversal of the rotating direction is not permissible.

Related topics

► [Control/restrict direction of rotation of the motor](#) [77](#)

25233 | 0x6291 **Maximum allowed troubles exceeded**

Keypad display: **Trouble overflow**

Cause	Remedy	Severity/response
The number of permitted restart attempts after a fault set in 0x2839:003 (P760.03) was exceeded. The fault occurred to frequently and could not be reset.	Check and the eliminate the fault.	Fault The motor remains at a standstill, no automatic restart is executed.

Related topics

► [Automatic restart after a fault](#) [379](#)

25248 | 0x62A0 **User-defined fault (LECOM)**

Keypad display: **UserFault(LECOM)**

Cause	Remedy	Severity/response
The "Activate fault" function was triggered via bit 10 of the LECOM control word 0x400B:002 (P592.02) .	Eliminate error cause and then reset error.	Fault

25249 | 0x62A1 **Network: user fault 1**

Keypad display: **Netw.UserFault 1**

Cause	Remedy	Severity/response
The "Activate fault 1" function was triggered via the NetWordIN1 data word 0x4008:001 (P590.01) .	Eliminate error cause and then reset error.	Fault

Related topics

► [Define your own control word format](#) [272](#)

25250 | 0x62A2 **Network: user fault 2**

Keypad display: **Netw.UserFault 2**

Cause	Remedy	Severity/response
The "Activate fault 2" function was triggered via the NetWordIN1 data word 0x4008:001 (P590.01) .	Eliminate error cause and then reset error.	Fault

Related topics

► [Define your own control word format](#) [272](#)

25265 | 0x62B1 **NetWordIN1 configuration incorrect**

Keypad display: **NetWordIN1 error**

Cause	Remedy	Severity/response
Two bits of the NetWordIN1 data word 0x4008:001 (P590.01) were assigned to the same function.	Check and correct configuration of the NetWordIN1 data word. The functions that are to be triggered via bits 0 ... 15 of the NetWordIN1 data word are defined in 0x400E:001 (P505.01) ... 0x400E:016 (P505.16).	Trouble

Related topics

► [Define your own control word format](#) [272](#)

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25505 | 0x63A1 **CU: load error ID tag**

Keypad display: **CU ID tag error**

Cause	Remedy	Severity/response
Calibration data of the control unit not compatible or faulty.	- Update firmware of the inverter to the most recent version. - If the error persists, the control unit or the device has to be replaced. In this case, please contact the manufacturer.	Fault - The inverter is disabled immediately. The motor has no torque (is coasting). - The event can only be reset by mains switching.

25506 | 0x63A2 **PU: load error ID tag**

Keypad display: **PU ID tag error**

Cause	Remedy	Severity/response
Calibration data of the power unit not compatible or faulty.	- Update firmware of the inverter to the most recent version. - If the error persists, the power unit or the device has to be replaced. In this case, please contact the manufacturer.	Fault - The inverter is disabled immediately. The motor has no torque (is coasting). - The event can only be reset by mains switching.

25507 | 0x63A3 **Power unit unknown**

Keypad display: **PU unknown**

Cause	Remedy	Severity/response
The power unit installed is not supported by the software.	Update firmware of the inverter to the most recent version.	Fault - The inverter is disabled immediately. The motor has no torque (is coasting). - The event can only be reset by mains switching.

28800 | 0x7080 **Assertion level monitoring (Low/High)**

Keypad display: **Assertionlevel**

Cause	Remedy	Severity/response
The last setting of the connection level differs from the saved setting.	- Execute device command "Save user data" 0x2022:003 (P700.03). - Switch inverter off and on again.	Fault

28801 | 0x7081 **Fault - Analog input 1**

Keypad display: **AI1 fault**

Cause	Remedy	Severity/response
The monitoring function of the input signal configured for analog input 1 in 0x2636:008 (P430.08) and 0x2636:009 (P430.09) has been triggered.	- Check input signal at analog input 1. - Check configuration of the monitoring function.	Fault (configurable) Setting parameters: 0x2636:010 (P430.10)

Related topics

▶ [Analog input 1](#) [251](#)

28802 | 0x7082 **Analog input 2 fault**

Keypad display: **AI2 fault**

Cause	Remedy	Severity/response
The monitoring function of the input signal configured for analog input 2 in 0x2637:008 (P431.08) and 0x2637:009 (P431.09) has been triggered.	- Check input signal at analog input 2. - Check configuration of the monitoring function.	Fault (configurable) Setting parameters: 0x2637:010 (P431.10)

Related topics

▶ [Analog input 2](#) [255](#)



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28833 | 0x70A1 **Analog output 1 fault**

Keypad display: **AO1 fault**

Cause	Remedy	Severity/response
Open circuit or short circuit at analog output 1.	- Check wiring of analog output 1. - Check definition of the output range in 0x2639:001 (P440.01).	Warning

Related topics

► [Analog output 1](#) [□ 264](#)

28834 | 0x70A2 **Analog output 2 fault**

Keypad display: **AO2 fault**

Cause	Remedy	Severity/response
Error message is not available.		Warning

28961 | 0x7121 **Fault - Pole position identification**

Keypad display: **Pole pos. error**

Cause	Remedy	Severity/response
- Too many deviations during the pole position identification. - Compared to the inverter, the rated motor current is too high or too low.	- Check setting of the motor data. - Ensure that the motor is at a standstill during the pole position identification process. - Ensure that the motor and inverter match each other in terms of power.	Fault (configurable) Setting parameters: 0x2C60

29056 | 0x7180 **Motor overcurrent**

Keypad display: **Mot max current**

Cause	Remedy	Severity/response
The motor current has exceeded the warning/error threshold for the motor current monitoring set in 0x2D46:001 (P353.01) .	- Check motor load. - Check drive dimensioning. - Check warning threshold or error threshold set in 0x2D46:001 (P353.01).	Fault (configurable) The event can only be reset after a blocking time. Blocking time: 1 s Setting parameters: 0x2D46:002 (P353.02)

Related topics

► [Overcurrent monitoring](#) [□ 239](#)

30336 | 0x7680 **Memory module is full**

Keypad display: **EPM full**

Cause	Remedy	Severity/response
The memory module contains too many parameter settings.	Execute "Save user data" 0x2022:003 (P700.03) device command again. This reinitialises the user memory with the current parameter settings. In this way, parameter settings that are no longer required are automatically deleted.	Warning The parameter settings were not saved in the memory module.

30337 | 0x7681 **Memory module not present**

Keypad display: **EPM not present**

Cause	Remedy	Severity/response
The inverter memory module was removed.	- Switch off inverter. - Plug the memory module into the inverter. - Switch the inverter on again. Note: The memory module cannot be replaced during ongoing operation!	Fault - The default setting stored in the inverter firmware has been loaded. - The error cannot be reset by the user.

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30338 | 0x7682 **Invalid user data**

Keypad display: **EPM invalid data**

Cause	Remedy	Severity/response
The user parameter settings in the memory module are invalid.	1. Execute user parameter settings again. 2. Execute device command "Save user data" 0x2022:003 (P700.03).	Fault • The user parameter settings are lost. • The default settings were automatically loaded.

30340 | 0x7684 **Data not compl. saved before powerdown**

Keypad display: **Save incomplete**

Cause	Remedy	Severity/response
Saving of the parameter settings was interrupted by an unexpected disconnection.	1. Check user parameter settings. (The loaded backup is an older version.) 2. If required, repeat the changes made last. 3. Execute device command "Save user data" 0x2022:003 (P700.03).	Warning • The user parameter settings were not fully saved. • At the next switch-on, the data stored are copied to the user memory.

30342 | 0x7686 **Network - Configuration error**

Keypad display: **Comm.error**

Cause	Remedy	Severity/response
The configuration of the fieldbus is incorrect (switch position).	1. Switch off inverter. 2. Check and rectify the "CANopen/Modbus" change-over switch. 3. Switch the inverter on again.	Fault

30345 | 0x7689 **Memory module: invalid OEM data**

Keypad display: **OEM data invalid**

Cause	Remedy	Severity/response
The OEM memory contains invalid parameter settings or is empty.	• Execute device command "Save OEM data" 0x2022:006 (P700.06). • Thus, the user parameter settings get lost!	Warning • The user parameter settings were automatically loaded.

30346 | 0x768A **Memory module: wrong type**

Keypad display: **Wrong EPM**

Cause	Remedy	Severity/response
The memory module connected is not supported by the inverter.	1. Switch off inverter. 2. Replace plugged-in memory module by a memory module that matches the inverter. 3. Switch the inverter on again.	Fault • The default setting stored in the inverter firmware has been loaded. • The error cannot be reset by the user.

30352 | 0x7690 **EPM firmware version incompatible**

Keypad display: **EPM-FW incompat.**

Cause	Remedy	Severity/response
The parameter settings saved in the memory module are incompatible with the firmware version.	1. Execute device command "Load default settings" 0x2022:001 (P700.01). 2. Execute "Save user data" 0x2022:003 (P700.03) or "Save OEM data" 0x2022:006 (P700.06) device command.	Fault • The data have been loaded into the RAM memory, but they are incompatible.



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30353 | 0x7691 **EPM data: firmware type incompatible**

Keypad display: **EPM: FW incompat.**

Cause	Remedy	Severity/response
The parameter settings saved in the memory module are incompatible with the firmware type. Example: Memory module of an inverter with an application I/O is used in an inverter with a standard I/O.	1. Execute device command "Load default settings" 0x2022:001 (P700.01) . 2. Execute "Save user data" 0x2022:003 (P700.03) or "Save OEM data" 0x2022:006 (P700.06) device command.	Fault The data have been loaded into the RAM memory, but they are incompatible.

30354 | 0x7692 **EPM data: new firmware type detected**

Keypad display: **UserCU not match**

Cause	Remedy	Severity/response
The parameter settings saved in the memory module do not match the inverter hardware.	1. Check parameter settings. 2. Reset error. 3. Execute "Save user data" 0x2022:003 (P700.03) or "Save OEM data" 0x2022:006 (P700.06) device command.	Fault - The data have been loaded into the RAM memory without being modified, and they are compatible. - The settings loaded must be accepted by the user (see remedy).

30355 | 0x7693 **EPM data: PU size incompatible**

Keypad display: **EPM PU size inco**

Cause	Remedy	Severity/response
The parameter settings saved in the memory module are incompatible with the inverter.	1. Execute device command "Load default settings" 0x2022:001 (P700.01) . 2. Execute "Save user data" 0x2022:003 (P700.03) or "Save OEM data" 0x2022:006 (P700.06) device command.	Fault The data have been loaded into the RAM memory, but they are incompatible.

30356 | 0x7694 **EPM data: new PU size detected**

Keypad display: **EPM new PU size**

Cause	Remedy	Severity/response
The parameter settings saved in the memory module comply with a different hardware. Example: Memory module of an inverter with a power of 3 kW is used in an inverter with a power of 18.5 kW.	1. Check parameter settings. 2. Reset error. 3. Execute "Save user data" 0x2022:003 (P700.03) or "Save OEM data" 0x2022:006 (P700.06) device command.	Fault - The data have been loaded into the RAM memory without being modified, and they are compatible. - The settings loaded must be accepted by the user (see remedy).

30357 | 0x7695 **Invalid parameter changeover configuration**

Keypad display: **InvalidChgovrCf**

Cause	Remedy	Severity/response
One or more parameters can no longer be used for the "Parameter change-over" function.	1. Check error message for parameter change-over in 0x4047:001 (P756.01) . 2. Correct the list entry shown in 0x4047:002 (P756.02) .	Warning The parameter change-over function is deactivated.

30358 | 0x7696 **EPM data: unknown parameter found**

Keypad display: **Unkn. Par in EPM**

Cause	Remedy	Severity/response
The memory module contains parameter settings for one or several parameters that are not known to the inverter.	Execute the "Save user data" 0x2022:003 (P700.03) device command. This reinitialises the user memory with the current parameter settings. In this way, parameter settings that are no longer required are automatically deleted.	Information

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30359 | 0x7697 **Parameter changes lost**

Keypad display: **Parameter loss**

Cause	Remedy	Severity/response
A voltage failure has occurred and changed parameter settings that had not been saved yet were available.	1. Execute parameter settings again. 2. Execute device command "Save user data" 0x2022:003 (P700.03).	Fault • The parameter settings changed have been lost.

33045 | 0x8115 **Time-out (PAM)**

Keypad display: **Time-out (PAM)**

Cause	Remedy	Severity/response
The parameter access monitoring (PAM) function has been activated. For a time longer than the time-out period set in 0x2552:003 (P595.03) , no value was entered into the "Keep-alive-Register" 0x2552:002 (P595.02) .	• Check communication. • Check settings of the parameter access monitoring (PAM) function.	No response (configurable) Setting parameters: 0x2552:004 (P595.04)

Related topics

► [Parameter access monitoring \(PAM\)](#)  294

33050 | 0x811A **BACnet time-out**

Keypad display: **BACnet time-out**

Cause	Remedy	Severity/response
BACnet MS/TP communication timeout	• Check communication • Restore communication or change the "Network" control mode	Fault (configurable) Setting parameters: 0x2856:001

33154 | 0x8182 **CAN: bus off**

Keypad display: **CAN: bus off**

Cause	Remedy	Severity/response
Too many faulty frames have been received. • Defective cable (e. g. loose contact). • Two nodes with the same node address.	• Check wiring of the network. • Check bus terminating resistor. • Set the identical baud rate for each node of the network. • Assign a unique node address to each node of the network. • Eliminate EMC interferences.	Trouble (configurable) • Change to the "Bus-Off" communication status. Setting parameters: 0x2857:010

33155 | 0x8183 **CAN: warning**

Keypad display: **CAN bus warning**

Cause	Remedy	Severity/response
Too many faulty frames have been received. • Defective cable (e. g. loose contact). • Two nodes with the same node address.	• Check wiring of the network. • Check bus terminating resistor. • Set the identical baud rate for each node of the network. • Assign a unique node address to each node of the network. • Eliminate EMC interferences.	Warning (configurable) Setting parameters: 0x2857:011

33156 | 0x8184 **CAN: heartbeat time-out consumer 1**

Keypad display: **CAN heartb. C1**

Cause	Remedy	Severity/response
Within the heartbeat time 0x1016:001 (P520.01) , no heartbeat telegram was received by node 1 to be monitored.	• Check communication with the heartbeat producer. • Reactivate heartbeat producer.	Fault (configurable) Setting parameters: 0x2857:005

Related topics

► [Heartbeat protocol](#)  340



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33157 | 0x8185 **CAN: heartbeat time-out consumer 2**

Keypad display: **CAN heartb. C2**

Cause	Remedy	Severity/response
Within the heartbeat time 0x1016:002 (P520.02) , no heartbeat telegram was received by node 2 to be monitored.	- Check communication with the heartbeat producer. - Reactivate heartbeat producer.	Fault (configurable) Setting parameters: 0x2857:006

Related topics

► [Heartbeat protocol](#)  340

33158 | 0x8186 **CAN: heartbeat time-out consumer 3**

Keypad display: **CAN heartb. C3**

Cause	Remedy	Severity/response
Within the heartbeat time 0x1016:003 (P520.03) , no heartbeat telegram was received by node 3 to be monitored.	- Check communication with the heartbeat producer. - Reactivate heartbeat producer.	Fault (configurable) Setting parameters: 0x2857:007

Related topics

► [Heartbeat protocol](#)  340

33159 | 0x8187 **CAN: heartbeat time-out consumer 4**

Keypad display: **CAN heartb. C4**

Cause	Remedy	Severity/response
Within the heartbeat time 0x1016:004 (P520.04) , no heartbeat telegram was received by node 4 to be monitored.	- Check communication with the heartbeat producer. - Reactivate heartbeat producer.	Fault (configurable) Setting parameters: 0x2857:008

Related topics

► [Heartbeat protocol](#)  340

33185 | 0x81A1 **Modbus: network time-out**

Keypad display: **Modbus time-out**

Cause	Remedy	Severity/response
No valid messages have been received via the Modbus for a longer time than the time-out time set in 0x2858:002 (P515.02) .	- Check communication with the master. - Check wiring. - Check bus termination.	Fault (configurable) Setting parameters: 0x2858:001 (P515.01)

33186 | 0x81A2 **Modbus: incorrect request by master**

Keypad display: **Modbus request**

Cause	Remedy	Severity/response
The request by the master is invalid, e. g. invalid CRC checksum, non-supported function code, or impermissible data access.	Check request by the master: - Value in the valid range? - Function code valid? - No impermissible write access? (e. g. with regard to read-only parameters)	Warning The inverter (slave) responds to the master with an error code: 0x01 = invalid function code 0x02 = invalid data address 0x03 = invalid data value 0x04 = slave device failure

33425 | 0x8291 **CAN: RPDO1 time-out**

Keypad display: **Timeout RPDO1**

Cause	Remedy	Severity/response
RPDO1 was not received within the time-out period set in 0x1400:005 (P540.05) or with the sync configured.		Fault (configurable) Setting parameters: 0x2857:001

Related topics

► [Process data transfer](#)  330

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33426 | 0x8292 **CAN: RPDO2 time-out**

Keypad display: **Timeout RPDO2**

Cause	Remedy	Severity/response
RPDO2 was not received within the time-out period set in 0x1401:005 (P541.05) or with the sync configured.		Fault (configurable)
		Setting parameters: 0x2857:002

Related topics

► [Process data transfer](#) [□ 330](#)

33427 | 0x8293 **CAN: RPDO3 time-out**

Keypad display: **Timeout RPDO3**

Cause	Remedy	Severity/response
RPDO3 was not received within the time-out period set in 0x1402:005 (P542.05) or with the sync configured.		Fault (configurable)
		Setting parameters: 0x2857:003

Related topics

► [Process data transfer](#) [□ 330](#)

33553 | 0x8311 **Torque limit reached**

Keypad display: **Torque limit**

Cause	Remedy	Severity/response
Motor has reached the torque limit: • 0x2949:003 (P337.03): Actual positive torque limit • 0x2949:004 (P337.04): Actual negative torque limit	• Observe load requirements. • Reduce motor load. • Check set torque limits and sources for the torque limits.	No response (configurable)
		Setting parameters: 0x2D67:001 (P329.01)

Related topics

► [Motor torque monitoring](#) [□ 242](#)

33664 | 0x8380 **Function not allowed in selected operating mode**

Keypad display: **Func. n. allowed**

Cause	Remedy	Severity/response
The selected function is not permissible in the chosen operating mode. • Selection of torque mode [-1] in 0x6060 (P301.00) with incompatible motor control in 0x2C00 (P300.00). • Selection of invalid drive mode [0] in 0x6060 (P301.00).	• Note: selection of torque mode [-1] in 0x6060 (P301.00) with incompatible motor control in 0x2C00 (P300.00). • Check settings of operation modes. • 0x6060 (P301.00)	Warning

36992 | 0x9080 **Keypad removed**

Keypad display: **Keypad removed**

Cause	Remedy	Severity/response
The keypad was removed while the keypad control was activated.	• Plug keypad back in or activate another control source.	Fault

Related topics

► [Changing the control source during operation](#) [□ 78](#)



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65285 | 0xFF05 **Safety option - Internal error**

Keypad display: **Safety int.Error**

Cause	Remedy	Severity/response
Error message is not available. The integrated safety technology is defective.	The inverter must be replaced. Note! The user is not allowed to change inverters that come with integrated safety technology. - The safety module must not be removed. - The user must not carry out any repairs on the safety module. - The safety module is not a spare part.	Fault - The inverter is disabled immediately. The motor has no torque (is coasting). - The event can only be reset by mains switching.

65286 | 0xFF06 **Motor overspeed**

Keypad display: **Motor overspeed**

Cause	Remedy	Severity/response
The motor speed has reached the error threshold for overspeed set in 0x2D44:001 (P350.01) .	Adapt the maximum motor speed 0x6080 (P322.00) and the warning threshold or error threshold 0x2D44:001 (P350.01) .	Fault (configurable) The event can only be reset after a blocking time.
		Blocking time: 1 s
		Setting parameters: 0x2D44:002 (P350.02)

Related topics

► [Motor speed monitoring](#)  241

65289 | 0xFF09 **Motor phase missing**

Keypad display: **Mot.Phase miss.**

Cause	Remedy	Severity/response
A failure of several motor phases has been detected.	- Check wiring between inverter and motor. - In case of a false tripping, adapt the settings for the motor phase failure detection.	No response (configurable) The event can only be reset after a blocking time.
		Blocking time: 2 s
		Setting parameters: 0x2D45:001 (P310.01)

Related topics

► [Motor phase failure detection](#)  240

65290 | 0xFF0A **Motor phase failure phase U**

Keypad display: **Phase U failure**

Cause	Remedy	Severity/response
A failure of the motor phase U has been detected.	- Check wiring between inverter and motor. - In case of a false tripping, adapt the settings for the motor phase failure detection. 0x2D45:002 (P310.02) (Current threshold) 0x2D45:003 (P310.03) (Voltage threshold)	No response (configurable) The event can only be reset after a blocking time.
		Blocking time: 2 s
		Setting parameters: 0x2D45:001 (P310.01)

Related topics

► [Motor phase failure detection](#)  240

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65291 | 0xFF0B **Motor phase failure phase V**

Keypad display: **Phase V failure**

Cause	Remedy	Severity/response
A failure of the motor phase V has been detected.	- Check wiring between inverter and motor. - In case of a false tripping, adapt the settings for the motor phase failure detection. 0x2D45:002 (P310.02) (Current threshold) 0x2D45:003 (P310.03) (Voltage threshold)	No response (configurable)
		The event can only be reset after a blocking time.
		Blocking time: 2 s Setting parameters: 0x2D45:001 (P310.01)

Related topics

► [Motor phase failure detection](#)  240

65292 | 0xFF0C **Motor phase failure phase W**

Keypad display: **Phase W failure**

Cause	Remedy	Severity/response
		No response (configurable)
		The event can only be reset after a blocking time.
		Blocking time: 2 s Setting parameters: 0x2D45:001 (P310.01)

Related topics

► [Motor phase failure detection](#)  240

65305 | 0xFF19 **Motor parameter identification fault**

Keypad display: **Motor ID fault**

Cause	Remedy	Severity/response
During the automatic identification of the motor, an error has occurred.	- Set motor data so that they comply with the data on the motor nameplate. - Check wiring of the motor.	Fault

65311 | 0xFF1F **FMF Error**

Keypad display: **FMF Error**

Cause	Remedy	Severity/response
Configuration or runtime error	- Check configuration - Check FMF error code 0x4050:002 to determine the error cause.	Fault

65317 | 0xFF25 **Cascading overload**

Keypad display: **Cascad. overload**

Cause	Remedy	Severity/response
Cascade function for pumps and fans The maximum frequency in 0x2916 (P211.00) has been reached and no free additional pump is available.	- Check configuration of the cascade function. - Check drive sizing.	Warning

Related topics

► [Cascade function for pumps and fans](#)  412

65335 | 0xFF37 **Automatic start disabled**

Keypad display: **Auto start disab**

Cause	Remedy	Severity/response
At mains connection, a start command was already available and the automatic start at power-up is set in 0x2838:002 (P203.02) to "Off [0]".	Deactivate starting command and reset error.	Fault



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65336 | 0xFF38 **Load loss detected**

Keypad display: **Load loss**

Cause	Remedy	Severity/response
In a running motor, the motor load (current) is monitored. When the motor load falls below the threshold value specified in Load loss detection: threshold (0x4006:001 (P710.01)) for the period of time specified in Load loss detection: delay time (0x4006:002 (P710.02)), load loss protection is triggered.	Check utilisation	No response (configurable) Setting parameters: 0x4006:003 (P710.03)

65337 | 0xFF39 **Motor overload**

Keypad display: **Motor overload**

Cause	Remedy	Severity/response
If the apparent motor current exceeds a defined threshold value 0x4007:002 for a certain amount of time 0x4007:001, heavy duty monitoring is triggered.	Check the motor load.	No response (configurable) Setting parameters: 0x4007:003

65366 | 0xFF56 **Maximum motor frequency reached**

Keypad display: **Max. motor freq.**

Cause	Remedy	Severity/response
- The limitation of the maximum motor speed set in 0x6080 (P322.00) is active. - The maximum output frequency of the inverter has been reached. - Depending on the parameter setting of 0x2D44:001 (P350.01) (Overspeed monitoring: threshold), the speed limitation (0x6080 / Max. motor speed) may become active before speed monitoring.	Check application.	Warning

65370 | 0xFF5A **Manual mode disabled**

Keypad display: **Man. mode disabl**

Cause	Remedy	Severity/response
Indicates the deactivation of the manual speed control.		Warning

65371 | 0xFF5B **Manual mode activated**

Keypad display: **Man. mode act.**

Cause	Remedy	Severity/response
Indicates the activation of the manual speed control.		Warning

65372 | 0xFF5C **Manual mode time-out**

Keypad display: **ManMode time-out**

Cause	Remedy	Severity/response
If "manual operation" is active, an error is generated in case the communication links get lost.	The error can be only be reset if the connection is restored or the control mode is changed to a different value than "manual operation".	Fault

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65393 | 0xFF71 **Wrong password**

Keypad display: **Wrong password**

Cause	Remedy	Severity/response
A wrong password has been entered several times.	Wait until the blocking time has elapsed and then enter the correct password.	Warning - The blocking time for entering a password is more than 10 seconds. (The blocking time is doubled every time an incorrect password is entered.) - No password can be entered as long as the blocking time is active.

Related topics

► [Access protection](#)  367

65394 | 0xFF72 **Warning**

Keypad display: **Warning**

Cause	Remedy	Severity/response
Inverter is not compatible with the Controller/PLC (brand protection). - The Controller has not written a deactivation password in the parameter yet. - The deactivation password written by the Controller is incorrect.	Use corresponding (compatible) OEM components.	Warning - No response from the inverter. - The decision on whether the machine will be commissioned or not is made by the Controller.

Related topics

► [Access protection](#)  367

65395 | 0xFF73 **Fatal Error**

Keypad display: **Fatal Error**

Cause	Remedy	Severity/response
Error when reading the data from the control unit.	- Switch inverter off and on again. - If the error occurs again, the manufacturer must be contacted, since the control unit or the device has to be replaced.	Fault Operation of the inverter is not possible.

65413 | 0xFF85 **Keypad full control active**

Keypad display: **Keypad full ctrl**

Cause	Remedy	Severity/response
If the "Keypad Full Control" control mode is active.	To exit the control mode, press the keypad key CTRL .	Warning Both the activity of controlling and the setpoint selection are carried out via the keypad.

Related topics

► [Keypad full control](#)  59