16.2. Error codes

The following table contains the most important error codes of the inverter in ascending order.

- Clicking the error code shows you a detailed description of the error message.
- If the inverter indicates an "internal error" that is not listed here, restart the inverter. If the error persists, make a note of the error code and contact the manufacturer.

Error code		Error message	Error type	Configurable in
8784	0x2250	CiA: continuous overcurrent (inside the device)	Fault	-
8992	0x2320	CiA: Short circuit/earth leakage (internal)	Fault	-
9024	0x2340	CiA: short circuit (inside the device)	Fault	-
9040	0x2350	CiA: i²*t overload (thermal state)	Fault	0x2D4B:003 (P308.03)
9090	0x2382	I*t error	Fault	0x2D40:005 (P135.05)
9091	0x2383	I*t warning	Warning	-
9095	0x2387	Imax: Clamp responded too often	Fault	-
9096	0x2388	SLPSM stall detection active	Trouble	-
12576	0x3120	Mains phase fault	Fault	-
12672	0x3180	Operation at UPS active	Warning	-
12816	0x3210	DC bus overvoltage	Fault	-
12817	0x3211	DC bus overvoltage warning	Warning	-
12832	0x3220	DC bus undervoltage	Trouble	-
12833	0x3221	DC bus undervoltage warning	Warning	-
12834	0x3222	DC-bus voltage too low for switch-on	Warning	-
16912	0x4210	PU: overtemperature fault	Fault	-
17024	0x4280	Thermal sensor heatsink error	Fault	-
17025	0x4281	Heatsink fan warning	Warning	-
17029	0x4285	Power section overtemperature warning	Warning	-
17168	0x4310	Motor overtemperature error	Fault	0x2D49:002 (P309.02)
20754	0x5112	24 V supply critical	Warning	-
20864	0x5180	24-V supply overload	Warning	-
21376	0x5380	OEM hardware incompatible	Fault	-
24970	0x618A	Internal fan warning	Warning	-
25216	0x6280	Trigger/functions connected incorrectly	Trouble	-
25217	0x6281	User-defined fault 1	Fault	-
25218	0x6282	User-defined fault 2	Fault	-
25232	0x6290	Reversal warning	Warning	-
25233	0x6291	Number of maximum permissible faults exceeded	Fault	-
25248	0x62A0	AC Drive: user fault	Fault	-
25249	0x62A1	Network: user fault 1	Fault	-
25250	0x62A2	Network: user fault 2	Fault	-
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 section unknown	Fault	-
28800	0x7080	Monitoring of connection level (Low/High)	Fault	-
28801	0x7081	Error of analog input 1	Fault	0x2636:010 (P430.10)
28802	0x7082	Error of analog input 2	Fault	0x2637:010 (P431.10)
28803	0x7083	HTL input fault	No response	0x2641:006 (P416.06)
28833	0x70A1	Analog output 1 fault	Warning	-
28834	0x70A2	Analog output 2 fault	Warning	-

Error code		Error message	Error type	Configurable in
28961	0x7121	Pole position identification fault	Fault	0x2C60
29056	0x7180	Motor overcurrent	Fault	0x2D46:002 (P353.02)
29445	0x7305	Encoder open circuit	Warning	0x2C45 (P342.00)
29573	0x7385	Feedback system: speed limitation	Warning	-
30336	0x7680	Memory module is full	Warning	-
30337	0x7681	No memory module	Fault	-
30338	0x7682	Memory module: invalid user data	Fault	-
30340	0x7684	Data not completely saved before switch-off	Warning	-
30342	0x7686	Internal communication 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 configuration of parameter change-over	Warning	-
30358	0x7696	EPM data: unknown parameter found	Info	-
30359	0x7697	Changed parameters lost	Fault	-
33042	0x8112	Network: timeout explicit message	Warning	0x2859:006 (P515.06)
33044	0x8114	Network: overall communication timeout	Warning	See details for 33044
33045	0x8115	Time-out (PZÜ)	No response	0x2552:004 (P595.04)
33046	0x8116	Modbus TCP master time-out	Fault	0x2859:008 (P515.08)
33047	0x8117	Modbus TCP Keep Alive time-out	Fault	0x2859:009 (P515.09)
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
33168	0x8190	Network: watchdog timeout	Trouble	See details for 33168
33169	0x8191	Network: disruption of cyclic data exchange	No response	0x2859:002 (P515.02)
33170	0x8192	Network: initialisation error	Trouble	See details for 33170
33171	0x8193	Network: invalid cyclic process data	Trouble	See details for 33171
33185	0x81A1	Modbus: network time-out	Fault	0x2858:001 (P515.01)
33186	0x81A2	Modbus: incorrect request by master	Warning	-
33200	0x81B0	iCIF connection lost	Fault	-
33414	0x8286	Network: PDO mapping error	Trouble	See details for 33414
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)
36992	0x9080	Keypad removed	Fault	-
65282	0xFF02	Brake resistor: overload warning	Fault	0x2550:011 (P707.11)
65285	0xFF05	Safe Torque Off error	Fault	-
65286	0xFF06	Motor overspeed	Fault	0x2D44:002 (P350.02)
65289	0xFF09	Motor phase missing	No response	0x2D45:001 (P310.01)
65290	0xFF0A	Phase U motor phase failure	No response	0x2D45:001 (P310.01)

Error code		Error message	Error type	Configurable in
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 error	Fault	-
65334	0xFF36	Brake resistor: overload warning	Warning	0x2550:010 (P707.10)
65335	0xFF37	Automatic start disabled	Fault	-
65366	0xFF56	Maximum motor frequency reached	Warning	-
65413	0xFF85	Keypad full control active	Warning	-

Details regarding the individual error messages

8784 | 0x2250 CiA: continuous overcurrent (inside the device) Keypad display: PU over current

Cause	Error type/response	Remedy
• Continuous overcurrent on the inverter/ motor side. • Overcurrent at the brake chopper (brake transistor). • DC bus relay has not been closed due to a malfunction.	Fault • The inverter is inhibited immediately. The motor becomes torqueless (coasts). • The error can only be reset after a blocking time of 5 s.	• Check motor and wiring for short circuits. • Check brake resistor and wiring.

8992 | 0x2320 CiA: Short circuit/earth leakage (internal) Keypad display: Earth leak

Cause	Error type/response	Remedy
• Short circuit/earth fault of motor cable • Capacitive charging current of the motor cable too high.	Fault • The inverter is inhibited immediately. The motor becomes torqueless (coasts). • The error can only be reset after a blocking time of 5 s.	• Check motor cable. • Check length of the motor cable. • Use shorter or lower-capacitance motor cable.

9024 | 0x2340 CiA: Short circuit (device internal) Keypad display: Motor shorted

Cause	Error type/response	Remedy
Short circuit of motor cable	Fault • The inverter is inhibited immediately. The motor becomes torqueless (coasts). • The error can only be reset after a blocking time of 5 s.	Check motor cable for short circuit.

9040 | 0x2350 CiA: i²*t overload (thermal state) Keypad display: i2t motor

Cause	Error type/response	Remedy
Motor thermally overloaded, e. g. by an impermissible continuous current or by frequent or too long acceleration processes.	Fault • The error can only be reset after a blocking time of 5 s. • The error type can be configured in 0x2D4B:003 (P308.03).	• Check drive dimensioning. • Check machine/driven mechanics for excessive load.

Related topics

▸ Motor overload monitoring (i²*t) 🕮 186

9090 | 0x2382 I*t error Keypad display: Ixt error

Cause	Error type/response	Remedy
Device utilisation (I*t) too high by frequent and too long acceleration processes.	Fault • The inverter is inhibited immediately. The motor becomes torqueless (coasts). • The error can only be reset after a blocking time of 3 s. • The error type can be configured in 0x2D40:005 (P135.05).	Check drive dimensioning.

Related topics

▸ Device overload monitoring (i*t) 🕮 109

9091 | 0x2383 I*t warning

Keypad display: Ixt warning

Cause	Error type/response	Remedy
Device utilisation (I*t) too high by frequent and too long acceleration processes.	Warning	Check drive dimensioning.

Related topics

▸ Device overload monitoring (i*t) 🕮 109

9095 | 0x2387 Imax: Clamp responded too often

Keypad display: Clamp timeout

Cause	Error type/response	Remedy
Maximum current of the axis (display in 0x2DDF:002) has been reached too often in succession.	Fault • The inverter is inhibited immediately. The motor becomes torqueless (coasts).	• Select a flatter speed ramp. • Reduce the load. • Set Imax controller more dynamically.

Related topics

▸ Imax controller 🕮 175

9096 | 0x2388 SLPSM stall detection active

Keypad display: SLPSM stall det.

Cause	Error type/response	Remedy
Overload of the motor with sensorless control for synchronous motors (SL-PSM).	Trouble • The inverter is inhibited immediately. The motor becomes torqueless (coasts).	• Reduce load at the axis. • Check settings of the SL-PSM parameters.

Related topics

▸ Sensorless control for synchronous motors (SL-PSM) 🕮 148

12576 | 0x3120 Mains phase fault

Keypad display: Mains Phase fail

Cause	Error type/response	Remedy
Mains phase failure	Fault • The inverter is inhibited immediately. The motor becomes torqueless (coasts).	• Check wiring of the mains connection. • Check fuses.

12672 0x3180 Operation at UPS active

Keypad display: UPS oper. active

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

Related topics

UPS operation 🕮 490

12816 | 0x3210 DC bus overvoltage Keypad display: DC Bus OV

Cause	Error type/response	Remedy
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).	Fault • The inverter is inhibited immediately. The motor becomes torqueless (coasts).	• Reduce dynamic performance of the load profile. • Check mains voltage. • Check settings for the brake energy manage- ment. • Connect brake resistor to the power unit and activate the integrated brake chopper.

Related topics

▸ Mains voltage 📖 117

▸ Brake energy management 📖 385

12817 | 0x3211 DC bus overvoltage warning Keypad display: Warn.DC Bus OV

Cause	Error type/response	Remedy
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.	Warning	• Reduce dynamic performance of the load profile. • Check mains voltage. • Check settings for brake energy management. • Connect brake resistor to the power unit and activate the integrated brake chopper.

Related topics

▸ Mains voltage 📖 117

▸ Brake energy management 📖 385

12832 | 0x3220 DC bus undervoltage Keypad display: DC Bus UV

Cause	Error type/response	Remedy
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).	Trouble	• Check mains voltage. • Check DC-bus voltage. • Check mains settings.

Related topics

▸ Mains voltage 📖 117

12833 | 0x3221 DC bus undervoltage warning Keypad display: Warn.DC Bus UV

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

Related topics

▸ Mains voltage 📖 117

12834 | 0x3222 DC-bus voltage to low for power up — Keypad display: DC-bus on-UV

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

Related topics

▸ Mains voltage 📖 117

16912 | 0x4210 PU: overtemperature fault — Keypad display: PU Overtemp.

Cause	Error type/response	Remedy
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.	Fault	• Provide for a sufficient cooling of the device. • Clean fan and ventilation slots. • If required, replace fan. • Reduce switching frequency in .

17024 | 0x4280 Heat sink temperature sensor fault — Keypad display: Heatsink sensor

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

17025 | 0x4281 Heat sink fan warning — Keypad display: Heatsink fan

Cause	Error type/response	Remedy
Warning of the heatsink fan.	Warning	Check/replace the heatsink fan.

17029 | 0x4285 Power section overtemperature warning — Keypad display: Warn.PU Overtemp

Cause	Error type/response	Remedy
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.	Warning	• Provide for a sufficient cooling of the device. • Clean fan and ventilation slots. • If required, replace fan. • Reduce switching frequency in .

Related topics

▸ Heatsink Temperature Monitoring 📖 109

17168 | 0x4310 Motor overtemperature error Keypad display: Overtemp. motor

Cause	Error type/response	Remedy
The motor temperature sensor connected to terminals X109/T1 and X109/T2 measures a too high motor temperature. • Motor too hot by impermissibly high currents. • Motor too hot by frequent and too long acceleration processes.	Fault • The error can only be reset after a blocking time of 5 s. • The error type can be configured in 0x2D49:002 (P309.02).	• Check drive dimensioning. • Check motor temperature sensor and wiring.

Related topics

▸ Motor temperature monitoring 🕮 190

20754 | 0x5112 24 V supply critical Keypad display: 24V supply low

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

20864 | 0x5180 24 V supply overload Keypad display: Overlaod 24V

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

21376 | 0x5380 OEM hardware incompatible Keypad display: Incomp. OEM HW

Cause	Error type/response	Remedy
The control unit (OEM hardware) is not compatible with the power unit (OEM hardware).	Fault • The inverter is inhibited immediately. The motor becomes torqueless (coasts). • The error can only be reset by mains switching.	• Use compatible hardware. • Contact the OEM.

24970 | 0x618A Internal fan warning Keypad display: Internal fan

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

25216 | 0x6280 Trigger/functions connected incorrectly Keypad display: P400 config err

Cause	Error type/response	Remedy
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.	Trouble	Check and correct the assignment of the triggers for the functions. • With keypad or network control, the two "Enable inverter" and "Run" functions can also be set to "Constant TRUE [1]" to start the motor.

Related topics

▸ Start / stop motor 🕮 493

25217 | 0x6281 User-defined fault 1 Keypad display: User fault 1

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

Related topics

▸ Triggering a user-defined fault 🕮 543

25218 | 0x6282 User-defined fault 2 Keypad display: User fault 2

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

Related topics

▸ Triggering a user-defined fault 🕮 543

25232 | 0x6290 Reversal warning Keypad display: Invert rotation

Cause	**Error type/response**	**Remedy**
• 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).	Warning • The motor is brought to a standstill, since a reversal of the rotating direction is not permissible.	• Check setpoint selection and trigger. • Check setting in 0x283A (P304.00).

Related topics

▸ Motor rotating direction 🕮 183

25233 | 0x6291 Number of maximum permissible faults exceeded Keypad display: Trouble overflow

Cause	Error type/response	Remedy
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.	Fault • The motor remains at a standstill, no automatic restart is executed.	Check and the eliminate the fault.

Related topics

▸ Automatic restart 🕮 435

25248 | 0x62A0 AC Drive: user fault Keypad display: AC Dr. UserFault

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

25249 | 0x62A1 Network: user fault 1 Keypad display: Netw.UserFault 1

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

Related topics

▸ Further process data 🕮 220

25250 | 0x62A2 Network: user fault 2 Keypad display: Netw.UserFault 2

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

Related topics

▸ Further process data 🕮 220

25265 | 0x62B1 NetWordIN1 configuration incorrect Keypad display: NetWordIN1 error

Cause	Error type/response	Remedy
Two bits of the NetWordIN1 data word 0x4008:001 (P590.01) were assigned to the same function.	Trouble	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).

25505 | 0x63A1 CU: load error ID tag Keypad display: CU ID tag error

Cause	Error type/response	Remedy
Calibration data of the control unit not compatible or faulty.	Fault • The inverter is inhibited immediately. The motor becomes torqueless (coasts). • The error can only be reset by mains switching.	• 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.

25506 0x63A2 PU: load error ID tag Keypad display: PU ID tag error

Cause	**Error type/response**	**Remedy**
Calibration data of the power unit not compatible or faulty.	Fault • The inverter is inhibited immediately. The motor becomes torqueless (coasts). • The error can only be reset by mains switching.	• 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.

25507 0x63A3 Power section unknown Keypad display: PU unknown

Cause	**Error type/response**	**Remedy**
The power unit installed is not supported by the software.	Fault • The inverter is inhibited immediately. The motor becomes torqueless (coasts). • The error can only be reset by mains switching.	Update firmware of the inverter to the most recent version.

28800 0x7080 Monitoring of connection level (Low/High) Keypad display: Assertionlevel

Cause	Error type/response	Remedy
The last setting of the connection level differs from the saved setting.	Fault	1. Check setting in 0x2630:001 (P410.01). 2. Execute device command "Save user data" 0x2022:003 (P700.03). 3. Switch inverter off and on again.

28801 0x7081 **Error of analog input 1** Keypad display: **AI1 fault**

Cause	Error type/response	Remedy
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.	Fault • The error type can be configured in 0x2636:010 (P430.10).	• Check input signal at analog input 1. • Check configuration of the monitoring function.

Related topics

► Analog input 1 597

28802 | 0x7082 Analog input 2 fault Keypad display: AI2 fault

Cause	Error type/response	Remedy
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.	Fault • The error type can be configured in 0x2637:010 (P431.10).	• Check input signal at analog input 2. • Check configuration of the monitoring function.

Related topics

▸ Analog input 2 566

28803 | 0x7083 HTL input fault Keypad display: HTL input fault

Cause	Error type/response	Remedy
The monitoring of the input signal configured for the HTL input has been triggered.	No response • The error type can be configured in 0x2641:006 (P416.06).	• Check input signal at the HTL input. • Check configuration of the monitoring function.

Related topics

▸ HTL input setpoint source 528

28833 | 0x70A1 Analog output 1 fault Keypad display: AO1 fault

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

Related topics

▸ Analog output 1 578

28834 | 0x70A2 Analog output 2 fault Keypad display: AO2 fault

Cause	Error type/response	Remedy
Open circuit or short circuit at analog output 2.	Warning	• Check wiring of analog output 2. • Check definition of the output range in 0x263A:001 (P441.01).

Related topics

▸ Analog output 2 🕮 580

28961 | 0x7121 Pole position identification fault — Keypad display: Pole pos. error

Cause	Error type/response	Remedy
• Too many deviations during the pole position identification. • Compared to the inverter, the rated motor current is too high or too low.	Fault • The inverter is inhibited immediately. The motor becomes torqueless (coasts). • The error type can be configured in 0x2C60.	• 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.

29056 | 0x7180 Motor overcurrent — Keypad display: Mot max current

Cause	Error type/response	Remedy
The motor current has exceeded the warning/ error threshold for the motor current monitoring set in 0x2D46:001 (P353.01).	Fault • The error can only be reset after a blocking time of 1 s. • The error type can be configured in 0x2D46:002 (P353.02).	• Check motor load. • Check drive dimensioning. • Check warning/error threshold set in 0x2D46:001 (P353.01).

Related topics

▸ Overcurrent monitoring 🕮 193

29445 | 0x7305 Encoder open circuit — Keypad display: Encoder error

Cause	Error type/response	Remedy
The encoder signal loss monitoring function has detected a failure of the encoder signal.	Warning • The error type can be configured in 0x2C45 (P342.00).	• Check the encoder connection. • Check encoder cable for wire breakage. • Check encoder current supply.

Related topics

▸ Encoder monitoring 🕮 446

29573 | 0x7385 Feedback system: speed limitation — Keypad display: F.fdb spd limit

Cause	Error type/response	Remedy
The feedback system exceeds the maximum permissible frequency range of the digital inputs.	Warning	Check feedback system.

Related topics

▸ Encoder monitoring 🕮 446

30336 | 0x7680 Memory module is full — Keypad display: EPM full

Cause	Error type/response	Remedy
The memory module contains too many parameter settings.	Warning • The parameter settings were not saved in the memory module.	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.

30337 | 0x7681 No memory module — Keypad display: EPM not present

Cause	Error type/response	Remedy
The inverter memory module was removed.	Fault • The default setting stored in the inverter firmware has been loaded. • The error cannot be reset by the user.	1. Switch off inverter. 2. Plug the memory module into the inverter. 3. Switch the inverter on again. Note: The memory module cannot be replaced during ongoing operation!

30338 | 0x7682 Memory module invalid user data — Keypad display: EPM invalid data

Cause	Error type/response	Remedy
The user parameter settings in the memory module are invalid.	Fault • The inverter is inhibited immediately. The motor becomes torqueless (coasts). • The user parameter settings are lost. • The default settings were automatically loaded.	1. Execute user parameter settings again. 2. Execute device command "Save user data" 0x2022:003 (P700.03).

30340 | 0x7684 Data not completely saved before switch-off — Keypad display: Save incomplete

Cause	Error type/response	Remedy
Saving of the parameter settings was interrupted by an unexpected disconnection.	Warning • The user parameter settings were not fully saved. • At the next switch-on, the data stored are copied to the user memory.	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).

30342 0x7686 Internal communication error — Keypad display: Int. Comm.Err.

Cause	Error type/response	Remedy
Communication between the power unit and the control unit is faulty.	Fault • The inverter is inhibited immediately. The motor becomes torqueless (coasts).	1. Switch off inverter. 2. Install control unit correctly on power unit. 3. Switch the inverter on again.

30345 | 0x7689 Memory module: invalid OEM data — Keypad display: OEM data invalid

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

30346 | 0x768A Memory module: wrong type — Keypad display: Wrong EPM

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

30352 | 0x7690 EPM firmware version incompatible — Keypad display: EPM-FW incomp.

Cause	Error type/response	Remedy
The parameter settings saved in the memory module are incompatible with the firmware version.	Fault • The data have been loaded into the RAM memory, but they are incompatible.	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.

30353 | 0x7691 EPM data: firmware type incompatible — Keypad display: EPM: FW incomp.

Cause	Error type/response	Remedy
The parameter settings saved in the memory module are incompatible with the firmware type. Example: Memory module of an inverter with an application IO is used in an inverter with a standard IO.	Fault • The data have been loaded into the RAM memory, but they are incompatible.	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.

30354 0x7692 EPM data: new firmware type detected — Keypad display: UserCU not match

Cause	Error type/response	Remedy
The parameter settings saved in the memory module do not match the inverter hardware.	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).	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.

30355 0x7693 EPM data: PU size incompatible — Keypad display: EPM PU size inco

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

30356 0x7694 EPM data: new PU size detected — Keypad display: EPM new PU size

Cause	Error type/response	Remedy
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.	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).	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.

30357 0x7695 Invalid configuration of parameter change-over — Keypad display: InvalidChgovrCfg

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

30358 | 0x7696 EPM data: unknown parameter found — Keypad display: Unkn. Par in EPM

Cause	Error type/response	Remedy
The memory module contains parameter settings for one or several parameters that are not known to the inverter.	Info	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.

30359 | 0x7697 Changed parameters lost — Keypad display: Parameter loss

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

33042 0x8112 Network: timeout explicit message — Keypad display: TO expl. msg

Cause	Error type/response	Remedy
• Within the time-out period for explicit messages, which has been parameterised by the scanner, no "explicit message" was received. • The connection to the scanner has been interrupted. • Failure of an explicit connection.	Warning • The error type can be configured in 0x2859:006 (P515.06).	• Check cables and terminals. • Plug network cables into the Ethernet port. • Check the requested package interval (RPI) of the explicit connection. • Increase time limit for explicit messages in the scanner.

33044 0x8114 Network: overall communication timeout — Keypad display: TO overall comm

Cause	Error type/response	Remedy
• EtherNet/IP: the maximum permissible time-out period for the CIP communication set in 0x23A1:010 (P510.10) has been exceeded. • Modbus TCP/IP: the maximum permissible time-out period for the TCP communication set in 0x23B1:010 (P510.10) has been exceeded.	Warning • The error type can be configured in 0x2859:007 (P515.07) (EtherNet/IP), 0x2859:007 (P515.07) (Modbus TCP).	• Check cables and terminals. • Connect network cable.

33045 0x8115 **Time-out (PZÜ)** — Keypad display: **Time-out (PAM)**

Cause	Error type/response	Remedy
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).	No response • The error type can be configured in 0x2552:004 (P595.04).	• Check communication. • Check settings of the parameter access monitoring (PAM) function.

Related topics

► Parameter access monitoring (PAM) 📖 257

33046 0x8116 Modbus TCP master time-out — Keypad display: MBTCP mast t-out

Cause	Error type/response	Remedy
No valid messages have been received by the Modbus master for a time longer than the time-out period set in 0x23B6:001 (P514.01).	Fault • The error type can be configured in 0x2859:008 (P515.08).	Check communication with the master.

Related topics

► Time-out behaviour 📖 351

33047 0x8117 Modbus TCP Keep Alive time-out Keypad display: MB.Keep Alive TO

Cause	Error type/response	Remedy
For a time longer than the time-out period set in 0x23B6:002 (P514.02), no value was entered into the Keep alive register 0x23B6:005 (P514.05).	Fault • The error type can be configured in 0x2859:009 (P515.09).	Check communication with the master.

Related topics

▶ Time-out behaviour 📖 351

33154 0x8182 **CAN: bus off** Keypad display: **CAN bus off**

Cause	Error type/response	Remedy
Too many faulty frames have been received. • Defective cable (e. g. loose contact). • Two nodes with the same node address.	Trouble • Change to the "Bus-Off" communication status. • The error type can be configured in 0x2857:010.	• 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.

33155 0x8183 **CAN: warning** Keypad display: **CAN bus warning**

Cause	Error type/response	Remedy
Too many faulty frames have been received. • Defective cable (e. g. loose contact). • Two nodes with the same node address.	Warning • The error type can be configured in 0x2857:011.	• 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.

33156 | 0x8184 CAN: heartbeat time-out consumer 1 Keypad display: CAN heartb. C1

Cause	Error type/response	Remedy
Within the heartbeat time 0x1016:001 (P520.01), no heartbeat telegram was received by node 1 to be monitored.	Fault • The error type can be configured in 0x2857:005.	• Check communication with the heartbeat producer. • Reactivate heartbeat producer.

Related topics

▶ Heartbeat protocol 📖 231

33157 | 0x8185 CAN: heartbeat time-out consumer 2 Keypad display: CAN heartb. C2

Cause	Error type/response	Remedy
Within the heartbeat time 0x1016:002 (P520.02), no heartbeat telegram was received by node 2 to be monitored.	Fault • The error type can be configured in 0x2857:006.	• Check communication with the heartbeat producer. • Reactivate heartbeat producer.

Related topics

Heartbeat protocol 📖 231

33158 | 0x8186 CAN: heartbeat time-out consumer 3 Keypad display: CAN heartb. C3

Cause	Error type/response	Remedy
Within the heartbeat time 0x1016:003 (P520.03), no heartbeat telegram was received by node 3 to be monitored.	Fault • The error type can be configured in 0x2857:007.	• Check communication with the heartbeat producer. • Reactivate heartbeat producer.

Related topics

▸ Heartbeat protocol 🕮 231

33159 | 0x8187 CAN: heartbeat time-out consumer 4 Keypad display: CAN heartb. C4

Cause	Error type/response	Remedy
Within the heartbeat time 0x1016:004 (P520.04), no heartbeat telegram was received by node 4 to be monitored.	Fault • The error type can be configured in 0x2857:008.	• Check communication with the heartbeat producer. • Reactivate heartbeat producer.

Related topics

▸ Heartbeat protocol 🕮 231

33168 | 0x8190 Network: watchdog timeout Keypad display: Watchdog timeout

Cause	Error type/response	Remedy
Time-out during cyclic data reception, e.g. due to an interrupted communication link to the master or missing cyclic data.	Trouble • The error type can be configured in 0x2859:001 (P515.01) (PROFIBUS), 0x2859:001 (P515.01) (EtherCAT), 0x2859:001 (P515.01) (EtherNet/IP), 0x2859:001 (P515.01) (PROFINET).	• Check wiring of the network. • Eliminate EMC interferences.

33169 | 0x8191 Network: disruption of cyclic data exchange Keypad display: Cycl data error

Cause	Error type/response	Remedy
The communication partner has interrupted the cyclic data exchange.	No response • The error type can be configured in 0x2859:002 (P515.02).	• Check wiring of the network. • The slave must receive new parameterisation and configuration files by the master, in order to be able to exchange data again.

33170 | 0x8192 Network: initialisation error Keypad display: Net. Init. error

Cause	Error type/response	Remedy
The initialisation of the communication stack has been interrupted due to an incorrect address setting or communication configuration.	Trouble • The error type can be configured in 0x2859:004 (P515.04) (PROFIBUS), 0x2859:004 (P515.04) (EtherCAT), 0x2859:004 (P515.04) (EtherNet/IP), 0x2859:004 (P515.04) (PROFINET), 0x2859:004 (P515.04) (Modbus TCP).	Check master/slave configuration and restart the devices.

33171 | 0x8193 Network: invalid cyclic process data — Keypad display: Inv. cyclic data

Cause	Error type/response	Remedy
The cyclic process data received are invalid.	Trouble • The error type can be configured in 0x2859:005 (P515.05) (PROFIBUS), 0x2859:005 (P515.05) (EtherCAT), 0x2859:005 (P515.05) (EtherNet/IP), 0x2859:005 (P515.05) (PROFINET).	Check cyclic process data sent by the master.

33185 | 0x81A1 Modbus: network time-out — Keypad display: Modbus time-out

Cause	**Error type/response**	**Remedy**
No valid messages have been received via the Modbus for a longer time than the time-out time set in 0x2858:002 (P515.02).	Fault • The error type can be configured in 0x2858:001 (P515.01).	• Check communication with the master. • Check wiring. • Check bus termination.

33186 | 0x81A2 Modbus: incorrect request by master — Keypad display: Modbus request

Cause	Error type/response	Remedy
The request by the master is invalid, e. g. invalid CRC checksum, non-supported function code, or impermissible data access.	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	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)

33200 | 0x81B0 iCIF connection lost — Keypad display: iCIF disconnect.

Cause	Error type/response	Remedy
In case of the Ethernet communication interface, an internal software error has occurred.	Fault	• Switch inverter off and on again. • In the event of a power failure during a firmware download, it is required to reload the firmware via the USB module and then restart the inverter.

Related topics

▸ Firmware download with »EASY Starter (Firmware loader)« 🕮 450

33414 | 0x8286 Network: PDO mapping error — Keypad display: PDO map error

Cause	**Error type/response**	**Remedy**
• Invalid PDO assignment by the master. • Internal PDO assignment was changed and does not comply with the configuration available in the master.	Trouble • The error type can be configured in 0x2859:003 (P515.03) (PROFIBUS), 0x2859:003 (P515.03) (EtherCAT), 0x2859:003 (P515.03) (EtherNet/IP), 0x2859:003 (P515.03) (PROFINET), 0x2859:003 (P515.03) (Modbus TCP).	Check data mapping in the master and slave.

33425 0x8291 **CAN: RPDO1 time-out** — Keypad display: **Timeout RPDO1**

Cause	**Error type/response**	**Remedy**
RPDO3 was not received within the time-out period set in 0x1402:005 (P542.05) or with the sync configured.	Fault • The error type can be configured in 0x2857:001.	• Eliminate EMC interferences. • Check bus load.

Related topics

▶ Process data objects 🕮 266

33426 0x8292 **CAN: RPDO2 time-out** Keypad display: **Timeout RPDO2**

Cause	Error type/response	Remedy
RPDO2 was not received within the time-out period set in 0x1401:005 (P541.05) or with the sync configured.	Fault • The error type can be configured in 0x2857:002.	• Eliminate EMC interferences. • Check bus load.

Related topics

▶ Process data objects 📖 266

33427 0x8293 **CAN: RPDO3 time-out** Keypad display: **Timeout RPDO3**

Cause	Error type/response	Remedy
RPDO1 was not received within the time-out period set in 0x1400:005 (P540.05) or with the sync configured.	Fault • The error type can be configured in 0x2857:003.	• Eliminate EMC interferences. • Check bus load.

Related topics

▶ Process data objects 📖 266

33553 | 0x8311 Torque limit reached Keypad display: Torque limit

Cause	Error type/response	Remedy
Motor has reached the torque limit: • 0x60E0: Positive torque limit • 0x60E1: Negative torque limit • 0x6072 (P326.00): Max torque	No response • The error type can be configured in 0x2D67:001 (P329.01).	• Observe load requirements. • Reduce motor load.

Related topics

▸ Motor torque monitoring 📖 195

36992 | 0x9080 Keypad removed Keypad display: Keypad removed

Cause	Error type/response	Remedy
The keypad was removed while the keypad control was activated.	Fault	• Plug on the keypad again or • activate another control source.

Related topics

▸ Control source change-over 📖 488

65282 | 0xFF02 Brake resistor: overload warning Keypad display: BrkResistor OL.F

Cause	Error type/response	Remedy
The calculated thermal load of the brake resistor has reached the error threshold set in 0x2550:009 (P707.09). The regenerative energy is too high.	Fault • The inverter is inhibited immediately. The motor becomes torqueless (coasts). • The error can only be reset after a blocking time of 5 s. • The error type can be configured in 0x2550:011 (P707.11).	• Check drive dimensioning. • Check settings for the brake energy manage- ment. Note: The error status will be reset if the thermal load falls below the error threshold - 20 %.

Related topics

▸ Use of a brake resistor 📖 387

65285 | 0xFF05 Safe Torque Off error — Keypad display: STO error

Cause	Error type/response	Remedy
The safety module or safety circuit of the device was detected as being defective.	Fault • The inverter is inhibited immediately. The motor becomes torqueless (coasts). • The error can only be reset by mains switching.	Hardware error: it is necessary to contact the manufacturer since the device must be replaced.

65286 | 0xFF06 Motor overspeed — Keypad display: Motor overspeed

Cause	Error type/response	Remedy
The motor speed has reached the error threshold for overspeed set in 0x2D44:001 (P350.01).	Fault • The error can only be reset after a blocking time of 1 s. • The error type can be configured in 0x2D44:002 (P350.02).	Check application.

Related topics

▸ Motor speed monitoring 📖 195

65289 0xFF09 Motor phase missing — Keypad display: Mot.Phase miss.

Cause	**Error type/response**	**Remedy**
A failure of several motor phases has been detected.	No response • The error can only be reset after a blocking time of 2 s. • The error type can be configured in 0x2D45:001 (P310.01).	• Check wiring between inverter and motor. • In case of a false tripping, adapt the settings for the motor phase failure detection.

Related topics

▶ Motor phase failure detection 📖 223

65290 0xFF0A Phase U motor phase failure — Keypad display: Phase U failure

Cause	**Error type/response**	**Remedy**
A failure of the motor phase U has been detected.	No response • The error can only be reset after a blocking time of 2 s. • The error type can be configured in 0x2D45:001 (P310.01).	• Check wiring between inverter and motor. • In case of a false tripping, adapt the settings for the motor phase failure detection.

Related topics

▶ Motor phase failure detection 📖 223

65291 0xFF0B Motor phase failure phase V — Keypad display: Phase V failure

Cause	Error type/response	Remedy
A failure of the motor phase V has been detected.	No response • The error can only be reset after a blocking time of 2 s. • The error type can be configured in 0x2D45:001 (P310.01).	• Check wiring between inverter and motor. • In case of a false tripping, adapt the settings for the motor phase failure detection.

Related topics

▶ Motor phase failure detection 223

65292 0xFF0C Motor phase failure phase W — Keypad display: Phase W failure

Cause	Error type/response	Remedy
A failure of the motor phase W has been detected.	No response • The error can only be reset after a blocking time of 2 s. • The error type can be configured in 0x2D45:001 (P310.01).	• Check wiring between inverter and motor. • In case of a false tripping, adapt the settings for the motor phase failure detection.

Related topics

▶ Motor phase failure detection 223

65305 | 0xFF19 Motor parameter identification fault — Keypad display: Motor ID fault

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

65334 | 0xFF36 Brake resistor: overload warning — Keypad display: BrkResistor OL.W

Cause	Error type/response	Remedy
The calculated thermal load of the brake resistor has reached the warning threshold set in 0x2550:008 (P707.08). The regenerative energy is too high.	Warning • The error type can be configured in 0x2550:010 (P707.10).	• Check drive dimensioning. • Check settings for the brake energy management. Note: The warning status is reset if the thermal load falls below the warning threshold of 20 %.

Related topics

▶ Use of a brake resistor 387

65335 | 0xFF37 Automatic start disabled — Keypad display: Auto start disab

Cause	Error type/response	Remedy
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]".	Fault	Deactivate start command and reset error.

65366 | 0xFF56 Maximum motor frequency reached — Keypad display: Max. motor freq.

Cause	Error type/response	Remedy

Cause	Error type/response	Remedy
• The maximum motor speed set in 0x6080 (P322.00) is active. • The maximum output frequency of the inverter has been reached.	Warning	Check application.

65413 0xFF85 Keypad full control active Keypad display: Keypad full ctrl

Cause	**Error type/response**	**Remedy**
If the "Keypad Full Control" control mode is active.	Warning • Both the activity of controlling and the set-point selection are carried out via the keypad.	Clicking the **CTRL** keypad key stops the control mode again.

Related topics

▸ Keypad Configuration of R/F and CTRL buttons 📖 366