9.3 System error messages

9.3.1 General error messages

Note!

In the case of a query via system bus (CAN), the fault messages are represented as numbers (see first column of the table).

Fault message		Description	Cause	Remedy
No.	Display			
---	---	No fault	-	-
0011	OC1	Short circuit of motor cable	Short circuit	• Search for cause of short circuit. • Check motor cable.
			Excessive capacitive charging current in the motor cable.	Use motor cable which is shorter or of lower capacitance.
0012	OC2	Motor cable earth fault	One of the motor phases has earth contact.	• Search for cause of short circuit. • Check motor cable.
0015	OC5	I x t overload	• Frequent and too long acceleration with overcurrent • Continuous overload with $I_{motor} > 1.05 \times I_{rx.}$	Check drive dimensioning.
0016	OC6	I^2xt overload	• Frequent and too long acceleration processes with motor overcurrent. • Permanent motor overload with $I_{motor} > I_{rmotor}$	Check drive dimensioning.
x018	OC8	I^2xt overload advance warning	• Frequent and too long acceleration processes with motor overcurrent. • Permanent motor overload with $I_{motor} > I_{rmotor}$	Check drive dimensioning.
1020	OU	Overvoltage in DC bus	Braking energy is too high. (DC-bus voltage is higher than set in C0173.)	• Use braking unit or regenerative module. • Check dimensioning of the brake resistance.
1030	LU	Undervoltage in the DC bus	DC bus voltage is lower than specified in C0173.	• Check mains voltage • Check supply cable
x032	LP1	Motor phase failure	A current-carrying motor phase has failed.	• Check motor. • Check motor cable. • Switch off monitoring (C0597 = 3).
			The current limit value is set too low.	• Set higher current limit value via C0599.
0050	OH	Heatsink temperature > +90 °C	Ambient temperature T_u > +40 °C or > +50 °C	• Allow module to cool and ensure better ventilation. • Check ambient temperature in the control cabinet.
			Heatsink is very dirty.	Clean heatsink.
			Wrong mounting position	Change mounting position.

Fault message		Description	Cause	Remedy
No.	Display			
x053	OH3	Motor temperature > +150 °C threshold (temperature detection via resolver or incremental value encoder)	Motor is thermally overloaded due to: ● Impermissible continuous current ● Frequent or too long acceleration processes	● Check drive dimensioning. ● Switch off monitoring (C0583 = 3).
			No PTC/temperature contact connected.	Correct wiring.
x054	OH4	Heatsink temperature > C0122	Ambient temperature T_u > +40 °C or > +50 °C	● Allow module to cool and ensure better ventilation. ● Check ambient temperature in the control cabinet. ● Switch off monitoring (C0582 = 3).
			Heatsink is very dirty.	Clean heatsink
			Wrong mounting position	Change mounting position.
			The value specified under C0122 is set too low.	Enter a higher value under C0122.
x057	OH7	Motor temperature > C0121 (temperature detection via resolver or incremental value encoder)	Motor is thermally overloaded due to: ● Impermissible continuous current ● Frequent or too long acceleration processes	● Check drive dimensioning. ● Switch off monitoring (C0584 = 3).
			No PTC/temperature contact connected.	Correct wiring.
			The value specified under C0121 is set too low.	Enter a higher value in C0121.
x058	OH8	Motor temperature via inputs T1 and T2 is too high.	Motor is thermally overloaded due to: ● Impermissible continuous current ● Frequent or too long acceleration processes	● Check drive dimensioning. ● Switch off monitoring (C0585 = 3).
			Terminals T1 and T2 are not connected	Connect PTC/temperature contact.
x061	CE0	Automation interface (AIF) communication error	Faulty transfer of control commands via AIF.	● Plug in the communication module/keypad XT firmly, screw down, if necessary. ● Switch off monitoring (C0126 = 3).
x062	CE1	Communication error on the process data input object CAN1_IN	CAN1_IN object receives faulty data or communication is interrupted.	● Check wiring at X4. ● Check sender. ● Increase monitoring time under C0357/1, if necessary. ● Switch off monitoring (C0591 = 3).
x063	CE2	Communication error on the process data input object CAN2_IN	CAN2_IN object receives faulty data or communication is interrupted.	● Check wiring at X4. ● Check sender. ● Increase monitoring time under C0357/2, if necessary. ● Switch off monitoring (C0592 = 3).
x064	CE3	Communication error on the process data input object CAN3_IN	CAN3_IN object receives faulty data or communication is interrupted.	● Check wiring at X4. ● Check sender. ● Increase monitoring time under C0357/3, if necessary. ● Switch off monitoring (C0593 = 3).

Fault message		Description	Cause	Remedy
No.	Display			
x065	CE4	BUS-OFF state of system bus (CAN)	The controller has received too many faulty telegrams via the system bus (CAN) and has disconnected from the bus.	• Check wiring at X4: Is the bus correctly terminated? • Check shield connection of the cables. • Check PE connection. • Check bus load, reduce the baud rate if necessary. (Observe the cable length!) • Switch off the monitoring (C0595 = 3).
0071	CCr	System failure	Strong interference injection on the control cables	Screen control cables
			Ground or earth loops in the wiring	• Check wiring • Check PE connection
				After troubleshooting: Deenergise the device completely (disconnect 24 V supply, discharge DC bus)!
0072	PR1	Checksum error in parameter set 1 **CAUTION: The Lenze setting is loaded automatically!**	• Fault when loading a parameter set. • Interruption while transmitting the parameter set via keypad.	• Set the required parameters and store them under C0003 = 1. • As to PLC devices, check the use of pointers.
			The stored parameters are incompatible with the loaded software version.	Store the parameter set under C0003 = 1 first to allow for a faults reset.
0073	PR2	Checksum error in parameter set 2 **PLEASE NOTE: The Lenze setting is loaded automatically!**	• Fault while loading a parameter set. • Interruption during the transfer of the parameter set via keypad.	• Set the required parameters and save them with C0003 = 2.
			The parameters saved do not comply with the software version loaded.	In order to be able to acknowledge the error, first save the parameter set with C0003 = 2.
0074	PEr	Program error	Error in the program flow	Send the parameter set (on floppy disk/CD-ROM) with a detailed description of the problem to Lenze. **After troubleshooting: Deenergise the device completely (disconnect 24 V supply, discharge DC bus)!**
0075	PR0	Error in parameter set.	The operating system software has been updated.	Storage of the Lenze setting C0003 = 1.
				After troubleshooting: Deenergise the device completely (disconnect 24 V supply, discharge DC bus)!
0077	PR3	Checksum error in parameter set 3 **PLEASE NOTE: The Lenze setting is loaded automatically!**	• Fault while loading a parameter set. • Interruption during the transfer of the parameter set via keypad.	• Set the required parameters and save them with C0003 = 3.
			The parameters saved do not comply with the software version loaded.	In order to be able to acknowledge the error, first save the parameter set with C0003 = 3.
0078	PR4	Checksum error in parameter set 4 **PLEASE NOTE: The Lenze setting is loaded automatically!**	• Fault while loading a parameter set. • Interruption during the transfer of the parameter set via keypad.	• Set the required parameters and save them with C0003 = 4.
			The parameters saved do not comply with the software version loaded.	In order to be able to acknowledge the error, first save the parameter set with C0003 = 4.

Fault message		Description	Cause	Remedy
No.	Display			
0079	PI	Fault during parameter initialisation	• An error has been detected during the parameter set transfer between two devices. • The parameter set does not match the controller, e.g. if data has been transferred from a higher-power controller to a lower-power controller.	• Correct parameter set. • Send parameter set (on floppy disk/CD-ROM) and a detailed description of the problem to Lenze.
x082	Sd2	Resolver error at X7	Resolver cable interrupted.	• Check cable for open circuit. • Check resolver. • Switch off the monitoring (C0586 = 3).
x083	Sd3	Encoder error at X9	Cable interrupted.	Check cable for open circuit.
			Pin X9/8 not connected.	Apply 5 V to pin X9/8 or switch off monitoring (C0587 = 3).
x085	Sd5	Encoder error at X6/1 and X6/2 (C0034 = 1)	Current signal at X6/1 X6/2 < 2mA.	• Check cable for open circuit. • Check current signal encoder. • Switch off monitoring (C0598 = 3).
x086	Sd6	Motor temperature sensor error (X7 or X8)	Encoder for detecting the motor temperature at X7 or X8 indicates undefined values.	• Check cable for firm connection. • Switch off the monitoring (C0594 = 3).
x087	Sd7	Selection of the feedback in C0025 as absolute value encoder or alteration of the encoder constant in C0420 for setting C0025 ≥ 309	The absolute value encoder must be initialised.	Save parameter set, then completely deenergise the device, and afterwards switch it on again.
		Initialisation error of absolute value encoder at X8	• Defect of the encoder electronics • Absolute value encoder at X8 does not send data. **Tip:** The encoder must not rotate during mains switching.	• Make sure that the cable at X8 is tightened properly, and check it with regard to open circuit. • Check absolute value encoder with regard to correct function. • Set voltage supply via C0421 to 8.0 V. • No Stegmann encoder connected. • Replace defective encoder.
		Communication error of absolute value encoder at X8 during rotor position adjustment	A rotor position adjustment via C0095 = 1 could not be completed successfully.	Repeat rotor position adjustment. 📖 6.8-1 **Note:** After an Sd7 fault it is absolutely required to carry out another rotor position adjustment. Otherwise the drive may carry out uncontrolled movements after controller enable. The drive must not be commissioned without a successfully executed rotor position adjustment!
				After fault elimination: Completely deenergise device (switch off 24 V supply, discharge DC bus)!

Fault message		Description	Cause	Remedy
No.	Display			
x088	Sd8	SinCos encoder at X8 sends inconsistent data.	The tracks in the SinCos encoder are damaged.	Replace SinCos encoder.
			Interference level on the encoder cable is too high.	• Check correct shield connection of encoder cable. • Where required, decelerate the actuation of the fault message via the filter time constant. Setting: – for ECSxS/P/M/A in C0559. – for 9300 servo cam in C0575.
		SinCos encoder at X8 does not send any data.	Open circuit.	Check cable for wire breakage.
			Incorrect encoder connected.	Connect SinCos encoder of the Stegmann company.
			SinCos encoder is defective.	Replace SinCos encoder.
			Supply voltage set incorrectly.	Set voltage supply in C0421.
				After fault correction: completely deenergise the device (switch off 24 V supply, discharge DC bus)!
x089	PL	Error during rotor position adjustment (the error is saved with mains failure protection)	• The rotor position adjustment was cancelled. • During rotor position adjustment with an absolute value encoder the error Sd7 or SD8 occurred.	Repeat rotor position adjustment. 📖 6.8-1 **Note:** After an Sd7 fault it is absolutely required to carry out another rotor position adjustment. Otherwise the drive may carry out uncontrolled movements after controller enable. The drive must not be commissioned without a successfully executed rotor position adjustment!
x091	EEr	External monitoring has been triggered via **DCTRL**.	A digital signal assigned to the TRIP-SET function has been activated.	• Check external encoder. • Switch off the monitoring (C0581 = 3).
0105	H05	Internal fault (memory)		Contact Lenze.
0107	H07	Internal fault (power stage)	During initialisation of the controller, an incorrect power stage was detected.	Contact Lenze.
x110	H10	Heatsink temperature sensor error	Sensor for detecting the heatsink temperature indicates undefined values.	• Contact Lenze. • Switch off the monitoring (C0588 = 3).
x111	H11	Temperature sensor error: Temperature inside the controller	Sensor for detecting the internal temperature indicates undefined values.	• Contact Lenze. • Switch off the monitoring (C0588 = 3).
x151	P01	Error ”negative limit switch”.	Negative limit switch was reached.	• Control drive in positive direction • Check wiring at X5/E2.
x152	P02	Error ”positive limit switch”.	Positive limit switch was reached.	• Control drive in negative direction • Check wiring at X5/E1.
x153	P03	Following error	The angle difference between set and actual position is larger than the following error limit set under C0255.	• Increase following error limit under C0255. • Switch off the monitoring (C0589 = 3).
			Drive cannot follow the digital frequency (I_{max} limit).	Check drive dimensioning.

Fault message		Description	Cause	Remedy
No.	Display			
x154	P04	Error ”negative position limit”.	Negative position limit (C1224) was not reached.	Find out why the value was not reached (e.g. ”incorrect” position targets, set function position value) and adjust the position limit in C1224 if necessary.
x155	P05	Error ”positive position limit”.	Positive position limit (C1223) was exceeded.	Find out why the value was exceeded (e.g. ”incorrect” position targets, set function position value) and adjust the position limit in C1223 if necessary.
x156	P06	No reference.	The reference point is not known. In the case of absolute positioning, no homing was performed before the first positioning.	Perform one of the following functions and restart: ● Manual homing. ● Start homing in the program. ● Set reference.
x157	P07	Parameter set mode is absolute instead of relative.	An absolute parameter set (C1311) was performed during relative positioning (position mode C1210).	Perform one of the following functions and restart: ● Change the parameter set from absolute to relative. ● Change position mode.
x158	P08	Error ”actual reference dimension offset”.	Actual reference dimension offset (C1226) outside the position limits. Error of the program function ”set position value”.	If necessary, adapt the position limit values or check whether the program function ”set position value” is to be applied.
x159	P09	Error in positioning program.	Impermissible programming	Check position program: ● A parameter set with final speed must be followed by a parameter set with positioning; it is not permissible to wait for input.
x162	P12	Error in the range of the encoder.	The range of the absolute encoder was exceeded.	● Return drive by manual positioning. ● Check position limits and adjustment of the encoder. ● Design and mount the absolute encoder in a way that does not exceed the traversing range.
x163	P13	Angle overrun.	● Phase controller limit reached ● Drive cannot follow the digital frequency (I_{max} limit).	● Enable drive ● Check drive dimensioning.
x164	P14	1. Following error.	The drive cannot follow the setpoint. The following error is greater than the limit value in C1218/1.	● Increase current limit under C0022 (observe max. motor current). ● Reduce acceleration. ● Check drive dimensioning. ● Increase limit value under C1218/1
x165	P15	2. Following error.	The drive cannot follow the setpoint. The following error is greater than the limit value in C1218/2.	● Increase current limit C0022 (observe max. motor current). ● Reduce acceleration. ● Check drive dimensioning. ● Increase limit value under C1218/2

Fault message		Description	Cause	Remedy
No.	Display			
x166	P16	Faulty transfer of system bus (CAN) sync telegram.	The sync telegram from the master (PLC) is out of sync cycle.	● Set the ”sync cycle” to the transmission cycle of the master (PLC) under C1121. ● Note: – C0362 displays the time interval between 2 sync telegrams. – C0362 = 0: communication interrupted.
			The sync telegram of the master (PLC) is not received.	● Check communication channel. ● Check baud rate, controller address. ● Note: – C0362 displays the time interval between 2 sync telegrams. – C0362 = 0: communication interrupted.
			The controller is enabled too fast.	Delay the controller enable. The time delay required depends on the time interval between the sync telegrams.
x167	P17	Error ”touch probe control”.	Various function blocks use the touch probe input at the same time (e.g. FB DFSET and POS). A conflict arises.	● Configure another touch probe input for FB POS (not possible for FB DFSET). ● Switch off monitoring (C1289/1).
x168	P18	Internal limitation.	Arithmetic operation generated data cannot be varied arbitrarily. Wrongly specified values were automatically limited internally.	
			C1298 = 1: The negative position limit in C1223 is outside the possible display range of $1 \le (C1223 \times C1205) \le 1.07E9$ inc	Check the values in C1202/4, C1207/1, C1207/2. Read out the limited value in C1220/10 and enter it in C1223 if necessary.
			C1298 = 2: The positive position limit in C1224 is outside the possible display range of $1 \le (C1224 \times C1205) \le 1.07E9$ inc	Check the values in C1202/4, C1207/1, C1207/2. Read out the limited value in C1220/11 and enter it in C1224 if necessary.
			C1298 = 3: The maximum speed v_{max} in C1240 is outside the possible display range of $1 \le (C1240 \times C1205 \times 16.384) \le 2.14E9$ inc or v_{max} not $C1240 / C1204 \times 60 \le 1.5 \times n_{max}$	Check the values in C0011, C1202/4, C1207/1, C1207/2. Read out the limited value in C1220/12 and enter it in C1240 or adjust the value in C1240 to C0011 if necessary.
			C1298 = 4: The maximum acceleration a_{max} in C1250 is outside the possible display range of $1 \le (C1250 \times C1205 \times 16.384 / 1000) \le 2.8634E7$ inc	Check the values in C1202/4, C1207/1, C1207/2. Read out the limited value in C1220/13 and enter it in C1250 if necessary.
			C1298 = 5: An internal value range has been exceeded for a speed standardisation. Valid range: $1 \le (C0011 \times C1207/1 / C1207/2 \; 65536 / 60000) \le 32767$	Check the values in C0011, C1207/1, C1207/2 and correct them.

Fault message		Description	Cause	Remedy
No.	Display			
x169	P19	The input values at X9 are limited.	The function block DFIN limits the input values. This causes the loss of increments.	• Reduce the frequency on the digital frequency connection. • Check the settings for the slave (C0425) and for the master (C0030). These settings must be identical.
x190	nErr	Speed control error (Speed out of tolerance margin (C0576))	• Active load (e.g. for hoists) is too high. • Mechanical blockades on the load side	Check drive dimensioning.
x200	NMAX	Maximum system speed (C0596) has been exceeded.	• Active load (e.g. for hoists) is too high. • Drive is not speed-controlled, torque is excessively limited.	• Check drive dimensioning. • Increase torque limit, if necessary. • Switch off monitoring (C0607 = 3).

Representation of the error number:
x 0 = TRIP, 1 = message, 2 = warning
E. g. ”2091”: An external monitoring function has triggered EEr warning

9.3.2 Resetting system error messages

Reaction	Measures to reset the fault message
TRIP/ FAIL-QSP	**Note!** If a TRIP/FAIL QSP source is still active, the pending TRIP/FAIL QSP cannot be reset.
	The TRIP/FAIL QSP can be reset by: • pressing ⇨ STOP on keypad XT EMZ9371 BC. Then, press RUN to re-enable the controller. • Set code C0043 = 0. • Control word C0135, bit 11 • Control word AIF • Control word system bus (CAN) / MotionBus (CAN) at ECSxS/P/M After the reset of the TRIP/FAIL QSP, the drive remains at standstill.
Message	**Danger!** The fault message is reset automatically after the fault has been eliminated, and the drive restarts automatically.
Warning	After the fault has been eliminated, the fault message is reset automatically.