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A.1 Overview of all error messages

The error messages are divided into error including error number and fault location. Detailed explanations on error history and reactions can be found in chapter 6.9.1

Error-No.	Error	Fault location	Description
1	E-CPU		Hardware or software error
		0	Unidentifiable error in control print
		6	Error in self-test: Parameter initialization failed due to incorrect parameter description
		10	Insufficient RAM area for Scope function
		16	Error in program data memory (detected during run time)
		17	Error in program data memory (detected when starting device)
2	OFF		Mains failure
		1	D.C. link direct voltage < 212 V / 425 V (is also displayed with normal mains off)
3	E-OC		Overcurrent cut-off
		0	Overcurrent due to: 1. Incorrectly set parameters 2. Short circuit, ground leak or insulation fault 3. Device internal defect
		1	Ixt-shut-down below 5 Hz (quick Ixt) to protect the power stage (permissible current-time area exceeded) reported by self status monitoring
		43	Power stage protection has tripped The max. permitted motor current was exceeded in dependence on the ZK-voltage and the heat sink temperature
		46	Overcurrent shut-down after wiring test Short circuit, earth leakage or insulation faults detected
		48	Hardware detected a shutdown caused by overcurrent 1. Incorrectly set parameters 2. Short circuit, earth leak or insulation fault in operation 3. Device internal defect
		49	Software detected a shutdown caused by overcurrent A phase current exceeding the Imax of the power stage was measured over a period of one millisecond: Remedy: Reduce the load, reduce the dynamics, check mechanics for restricted movement
		50	Internal fault in overcurrent monitoring

Error-No.	Error	Fault location	Description
4	E-OV		Overvoltage cut-off
		1	Overvoltage caused by 1. Overload of brake chopper (too long or to many brake operations) 2. Mains overvoltage
5	E-OLM		Ixl-motor cut-off
		47	Ixt-shut-down to protect the motors (Permissible current-time area exceeded)
6	E-OLI		Ixt-converter cut-off
		48	I^{2}xt-shut-down to protect the power stage (permissible current-time area exceeded)
7	E-OTM		Motor overtemperature
		47	Motor overtemperature (temperature sensor in motor has responded) due to: 1. Temperature sensor not connected or incorrectly parameterized 2. Motor overloaded
8	E-OTI		Drive unit overtemperature
		44	Power stage (heat sink) overheated due to: 1. Too high ambient temperature 2. Too high load (power stage or brake chopper)
		45	Overtemperature inside the device caused by 1. Too high ambient temperature 2. Too high load (power stage or brake chopper)

Error-No.	Error	Fault location	Description
9	E-PLS		Plausibility error with parameter or program sequence
		0	Unidentifiable runtime error
		4	Unknown switching frequency or unknown device type detected
		6	The parameter list could not be initialized in the device start list. Possibly incorrect table with device class parameters.
		7	Runtime monitoring detected invalid parameter object (incorrect data type or incorrect data width)
		8	The current operation level does not contain a readable parameter, or parameter access error via KP300 (previously KP200)
		11	Runtime monitoring detected invalid length of the automatically saved memory area.
		12	Runtime error when activating an assistance parameter
		13	Unidentifiable parameter access level
		42	An exception message (Exception) was triggered
		54	Runtime error when checking an assistance parameter
		100	Internal parameter access error during controller initialization
		101	Unknown switching frequency during initialization of the PWM
		130	Error in current controller tuning
		133	Error in performance of Macro-State-Machine
		255	Userstack exceeded the maximum size

Error-No.	Error	Fault location	Description
10	E-PAR		Parameterization error
		0	Invalid parameter setting
		5	After the device boot phase the value of a parameter is outside the valid range.
		6	Fault when initially initializing the parameter list. A parameter could not be reset to default.
		7	Error when initializing a parameter with its saved setting.
		8	Error during internal parameter access via KP300 (previously KP200-XL). A parameter could not be read or written
		47	Error when initializing the motor protection module
		55	Internal error in status machine control
		100	Error in controller initialization
		101	Error when initializing the modulation
		102	Error when initializing the brake chopper
		103	Error when initializing the current model
		104	Error when initializing the current control
		105	Error when initializing the speed calculation
		106	Error when initializing the speed controller
		107	Error when initializing the torque calculation
		108	Error when initializing the position detection
		109	Error when initializing the position controller
		110	Error when initializing the V/f-characteristic control
		111	Error when initializing current controlled operation
		112	Error when initializing the flow control in field weakening range
		113	Error when initializing the mains failure support
		114	Error when initializing the current and voltage detection
		115	Error when initializing the TTL encoder evaluation, lines per revolution or transmission ratio are not supported
		116	Error when initializing the HTL encoder evaluation, lines per revolution or transmission ratio are not supported
		117	Error when initializing SSI-interface and encoder evaluation, lines per revolution or transmission ratio are not supported

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Error-No.	Error	Fault location	Description
10	E-PAR		Parameterization error
		118	Error when initializing the encoder configuration prohibited combination of encoders (e. g. a transducer is used as encoder and reference encoder)
		119	Error when initializing the control Invalid values for main inductance (zero or negative)
		120	Error when initializing the analog output
		121	Error when initializing the analog inputs
		122	Error when initializing the resolver evaluation
		123	Error when initializing the fault voltage compensation
		124	Error when initializing the speed control without sensor (SFC)
		125	Error when initializing the speed control without sensor (U/I-model)
		126	Error when initializing the external AD-converters
		127	The desired method for commutation finding is not supported
		128	Error when initializing the GPOC error correction method
		129	Error in configuration of HTL encoder. HTL-encoder was parameterized as position-speed or reference encoder, but the input terminals FIS02 and FIS02 are not set to HTL-evaluation.
		130	Error in current controller tuning
		131	Error in self-setting (test signal generator)
		132	Error in UZK-calibration
		133	Error in performance of Macro-State-Machine
11	E-FLT		Floatingpoint error
		0	General error in floating point calculation
12	E-PWR		Unknown power circuitry
		4	Power section not correctly detected
		6	Power section not correctly detected
13	E-EXT		external error message (input)
		1	Error message from an external device is present
15	E-OPT		Error on module in options module location
		26	BUSOFF
		27	Unable to send Transmit Protocol
		28	Guarding error
		29	Node-Error
		30	Initialization error

Error-No.	Error	Fault location	Description
16	E-CAN		CAN bus error
		0	CAN bus error
		31	BUSOFF detected
		32	Unable to send Transmit Telegram
		33	Guarding error
		34	Node-Error
		35	Initialization error
		36	PDO object outside value range
		37	Error in initialization of communication parameters
		38	Target position memory - overflow
		39	Heartbeat - Error
		40	invalid CAN-address
		41	Insufficient memory to save communication objects
		42	Guarding error in monitoring of a Sync/PDO object

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Error-No.	Error	Fault location	Description
17	E-PLC		Error in processing of PLC sequential program
		0	Error in sequencing control (PLC)
		210	Error triggered through PLC (SET ERR = 1, Mxxx mit Mxxx = 1)
		211	Error in sub-program invocation / return with CALL / RET. Stack underflow: unexpected RET without previous CALL-invocation. Stack overflow: max. nesting depth (250 CALL - invocations) reached
		212	Error when writing parameters (buffer full). Writing from the interrupt takes place via a buffer for max.30 entries, whereby the buffer itself is processed in the main loop. If this message occurs, the buffer capacity has been reached, i.e. the main loop was unable to process all assigned parameters. The command WAIT PAR has the effect, that the program processing is stopped, until all parameters have been written and the buffer has been emptied. With a high number of parameter access operations (more than 30 successive parameter assignments) or when assuring the parameter write access during the further processing of the program, a WAIT PAR should be inserted.
		213	Error when writing parameters. Parameter does not exist, is no field parameter. Value range violation, value cannot be written, etc.
		214	Error when reading parameters. Parameter does not exist or is no field parameter.
		215	Internal error: No code available or program instruction cannot be executed.
		216	Internal error: No code available, program instruction cannot be executed or jump to next unused address. This error occurs when a sequential program is loaded while a sequential program is still active in the controller, whereby the new program has different line numbers. If not absolutely necessary, you should switch off the PLC when loading a program.
		217	During a division operation in the program a division by zero has occurred.
		220	Error in floating point operation in sequencing control. The sequencing control is in wait state and shows the faulty program line. Check the cancellation conditions (value ranges) for floating point operations. If necessary correct the sequencing program or the faulty program line. Note: In floating point calculations value range violations (0...3.37E+38) can occur. When comparing two floating point variables the cancellation condition may probably not be reached. Make sure to use unambiguous and plausible value ranges in programming.
		221	The cycle time of the sequencing control has been exceeded, i.e. the processing of the program takes more time than permitted.
		223	Error in indexed addressing, e.g. SET H000 = H[C01]

Error-No.	Error	Fault location	Description
18	E-SIO		Error in serial interface
		9	Watchdog for monitoring of communication via LustBus has tripped.
19	E-EEP		Faulty EEPROM
		0	Error when accessing the parameter ROM
		2	Error when writing to the parameter ROM
		4	Error when reading the parameter ROM in the device boot phase
		7	Error when writing a String parameter to the parameter ROM
		11	Checksum error when initializing the AutoSave parameters
		15	Checksum error when initializing the device setting
20	E-WBK		Open circuit at current input 4-20 mA
		1	Wire breakage at current input 4 to 20mA detected
		127	Phase failure on motor detected
30	E-ENC		Error in rotary position transducer interface
		0	Error in encoder interface
		1	Error in encoder interface: Wire breakage in track signals detected
		117	Initialization of SSI-interface
		127	Error in commutation finding The commutation angle has not been determined accurately enough.
		137	Wire breakage SSI encoder
32	E-FLW		Servo lag
		240	Servo lag
33	E-SWL		Software limit switch evaluation has responded
		0	Error in internal setpoint limitation
		243	Positive software limit switch has responded.
		244	Positive software limit switch has responded.
		246	Internal setpoint limitation Travel set rejected by the contacted hardware or software limit switch due to a limitation of the travel range.

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Error-No.	Error	Fault location	Description
36	E-POS		Positioning error
		0	Error in positioning and sequencing control
		241	Error of hardware limit switch detected during referencing or no reference cam found
		242	Error of hardware limit switch interchanged during referencing.
		245	No reference point defined
		247	Timeout reached at target position
		248	Feed release missing (technology not ready, feed release missing (HALT active), quick stop active)
		249	Positioning currently not permitted (referencing active, step mode active, positioning inactive)
		250	Initialization of standardization block: the total transmission ratio (numerator/denominator) can no longer be displayed in 16 bit.
		251	Standardization: the standardized position can no longer be displayed in 32-bit.
38	E-HW		Hardware limit switched has been approached
		51	Left hardware limit switched has been contacted
		52	Right hardware limit switched has been contacted
39	E-HWE		Hardware limit switched mixed up
		1	Hardware limit switched mixed up negative setpoint for positive limit switch or positive setpoint for negative limit switch
41	E-PER		
		4	Internal error in CPU periphery.