12 Service

12.1 Fault information

Error memory

The error memory (P080) stores the last five error messages (errors t-0 to t-4). The error message of longest standing is deleted whenever more than five error messages have occurred. The following information is stored when the error occurs:

Fault which occurred • Status of the binary inputs/outputs • Operational status of the inverter • Inverter status • Heat sink temperature • Speed • Output current • Active current • Unit utilization • DC link circuit voltage • ON hours • Enable hours • Parameter set • Motor utilization.

Switch-off responses

There are three switch-off responses depending on the malfunction; the inverter remains blocked in fault status:

Immediate switch-off

The unit can no longer brake the drive; the output stage goes to high resistance in the event of a fault and the brake is applied immediately (DBØØ "/Brake" = "0").

Rapid stop

The drive is braked with the stop ramp t13/t23. The brake is applied once the stop speed is reached (DBØØ "/Brake" = "0"). The output stage goes to high resistance after the brake reaction time has elapsed (P732 / P735).

Emergency stop

The drive is braked with the emergency ramp t14/t24. The brake is applied once the stop speed is reached (DBØØ "/Brake" = "0"). The output stage goes to high resistance after the brake reaction time has elapsed (P732 / P735).

Reset

An error message can be acknowledged by:

- Switching the supply system off and on again

  Recommendation: Observe a minimum switch-off time of 10 s for the supply system contactor K11.
- Reset via input terminals; that is, via an appropriately assigned binary input (DIØ1 to DIØ7 with the basic unit, DI1Ø to DI17 with the DIO11B option).
- Manual reset in SHELL (P840 = "YES" or [Parameter] / [Manual reset]).
- Manual reset using the DBG60B.
- Auto reset performs up to five unit resets with an adjustable restart time.

⚠ HAZARD!

Risk of crushing if the motor starts up automatically after an auto reset.

Severe or fatal injuries.

- Do not use auto reset with drives where an automatic restart represents a danger to people or units.
- Perform a manual reset.

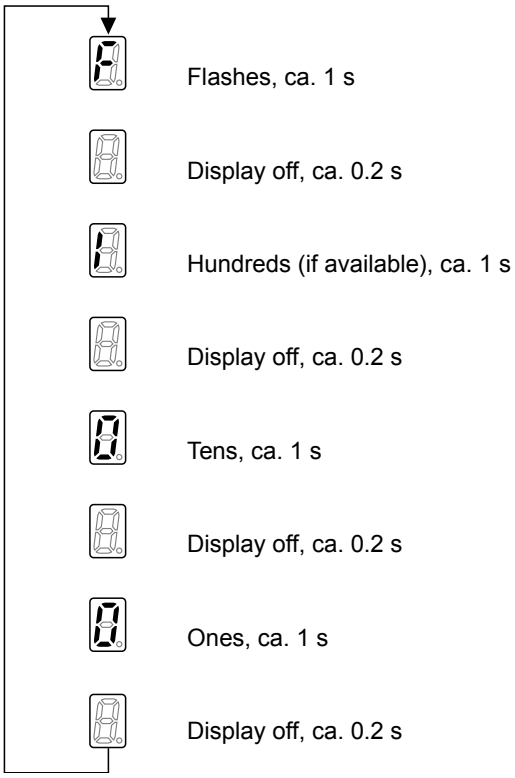
Inverter is waiting for data

If the inverter is controlled via a communication interface (fieldbus, RS485 or SBus) and the power was switched off and back on again or an error reset was performed, then the enable remains ineffective until the inverter receives valid data again via the interface, which is monitored with a timeout.

12.2 Error messages and list of errors

Error message on 7-segment display

The error code is shown in a 7-segment display. The following display sequence is used (e.g. error code 100):



Following a reset or if the error code resumes the value '0', the display switches to the operating display.

Display suberror code

The suberror code is displayed in MOVITOOLS® (as of version 4.50) or in the DBG60B keypad.

Error list

The factory set error response appears in the "Response (P)" column. (P) indicates that the response is programmable (via *P83_error response* or with IPOS$^{plus®}$). In the event of error 108, (P) indicates that the response can be programmed via *P555 DCS error response* In the event of error 109, (P) indicates that the response can be programmed via *P556 DCS alarm response*

Error			Suberror			
Code	**Designation**	**Response (P)**	**Code**	**Designation**	**Possible cause**	**Measure**
00	No fault					
01	Overcurrent	Immediate switch-off	0	Output stage	• Short circuit at output • Motor too large • Defective output stage • Ramp limit is deactivated and set ramp time is too short	• Rectify the short circuit • Connect a smaller motor • Contact SEW Service for advice if the output stage is defective. • Activate P138 and/or increase ramp time
			1	V_{CE} monitoring or undervoltage monitoring of the unit driver		
			5	Inverter remains in hardware current limit		
03	Ground fault	Immediate switch-off	0	Ground fault	Ground fault • In the motor lead • in the inverter • in the motor	• Eliminate ground fault • Consult SEW Service
04	Brake chopper	Immediate switch-off	0	DC link voltage too high in 4Q operation	• Too much regenerative power • Braking resistor circuit interrupted • Short circuit in the braking resistor circuit • Brake resistor has too high resistance • Brake chopper is defective	• Extend deceleration ramps • Check feeder cable to braking resistor • Check technical data of braking resistor • Replace MOVIDRIVE® if the brake chopper is defective
			1			
06	Supply system phase failure	Immediate switch-off	0	DC link voltage periodically too low	Phase failure	Check the supply system cable
07	DC link overvoltage	Immediate switch-off	0	DC link voltage too high in 2Q operation	DC link voltage too high	• Extend deceleration ramps • Check supply cable to the braking resistor • Check technical data of braking resistor
			1			
08	Speed monitoring	Immediate switch-off (P)	0	Inverter in current limit or in slip limit	• Speed controller or current controller (in VFC operating mode without encoder) operating at setting limit due to mechanical overload or phase failure in the power supply or motor. • Encoder not connected correctly or incorrect direction of rotation. • n_{max} is exceeded during torque control. • In operating mode VFC: Output frequency ≥ 150 Hz • In operating mode V/f: Output frequency ≥ 600 Hz	• Reduce load • Increase deceleration time (P501 or P503). • Check encoder connection, swap A/A and B/B pairs if necessary • Check encoder voltage supply • Check current limitation • Extend ramps if necessary • Check motor cable and motor • Check line phases
			3	System limit "Actual speed" exceeded. Speed difference between ramp setpoint and actual value for 2×ramp time higher than expected slip.		
			4	Maximum rotating field speed exceeded. Maximum rotating field frequency (with VFC max 150 Hz and V/f max 600 Hz) exceeded.		
09	Startup	Immediate switch-off	0	Startup missing	Inverter has not been started up for the selected operating mode.	Perform startup for the required operating mode.
			1	Wrong operating mode selected		
			2	Wrong encoder type or defective encoder card		
10	IPOS-ILLOP	Emergency stop	0	Invalid IPOS command	• Incorrect command detected during IPOS$^{plus®}$ program execution. • Incorrect conditions during command execution.	• Check the content of the program memory and, if necessary, correct. • Load the correct program into the program memory. • Check program sequence (→ IPOS$^{plus®}$ manual)

Error			Suberror			
Code	Designation	Response (P)	Code	Designation	Possible cause	Measure
11	Overtemperature	Emergency stop (P)	0	Heat sink temperature too high or temperature sensor defective	Thermal overload of inverter	Reduce load and/or provide for adequate cooling.
			3	Overtemperature switched-mode power supply		
13	Control signal source	Immediate switch-off	0	Control signal source not available, e.g. control signal source fieldbus without fieldbus card	Control signal source not defined or defined incorrectly.	Set correct control signal source (P101).
14	Encoder	Immediate switch-off	0	Encoder not connected, defective encoder, defective encoder cable	• Encoder cable or shield not connected correctly • Short circuit/broken encoder wire • Encoder defective	Check encoder cable and shield for correct connection, short circuit and broken wire.
			25	Encoder fault X15 - Speed range exceeded. Encoder at X15 turns faster than 6542 rpm.		
			26	Encoder fault X15 - Card is faulty. Error in the quadrant evaluation.		
			27	Encoder error - encoder connection or encoder is faulty.		
			28	Encoder error X15 - - Communication error RS485 channel.		
			29	Encoder error X14 - - Communication error RS485 channel.		
			30	Unknown encoder type at X14/X15		
			31	Error plausibility check Hiperface X14/X15 Increments have been lost.		
			32	Encoder error X15 Hiperface. Hiperface encoder at X15 reports fault.		
			33	Encoder error X14 Hiperface. Hiperface encoder at X14 reports fault.		
			34	Encoder error X15 Resolver. Encoder connection or encoder is faulty.		
17	System malfunction	Immediate switch-off	0	"Stack overflow" error	Inverter electronics disrupted, possibly due to effect of EMC.	Check ground connections and shielding and correct, if necessary. Contact SEW service if this error occurs again.
18			0	"Stack underflow" error		
19			0	"External NMI" error		
20			0	"Undefined opcode" error		
21			0	"Protection fault"		
22			0	"Illegal word operand access" error		
23			0	"Illegal instruction access" error		
24			0	"Illegal external bus access" error		

Error			Suberror			
Code	Designation	Response (P)	Code	Designation	Possible cause	Measure
25	EEPROM	Rapid stop	0	Read or write error on EEPROM power section	Access to the EEPROM of the memory card has failed	• Activate factory settings, perform reset and reset parameters. • Contact SEW service if the error occurs again. • Replace memory card.
			11	NV memory read error NV-RAM inside the unit		
			13	NV memory chip card System module defective		
			14	NV memory chip card Memory card defective		
			16	NV memory initialization error		
26	External terminal	Emergency stop (P)	0	External terminal	Read in external error signal via programmable input.	Eliminate respective cause; reprogram terminal if necessary.
27	limit switches are missing	Emergency stop	0	Both limit switches missing or open circuit	• Open circuit/both limit switches missing. • Limit switches are swapped over in relation to direction of rotation of motor	• Check wiring of limit switches. • Swap over limit switch connections. • Reprogram terminals
			2	Limit switch reversed		
			3	Both limit switches are active simultaneously		
28	Fieldbus Timeout	Rapid stop (P)	0	"Fieldbus timeout" error	No communication between master and slave within the projected response monitoring.	• Check communication routine of the master • Extend fieldbus timeout time (P819) or deactivate monitoring
			2	Fieldbus card does not boot		
29	Limit switch contacted	Emergency stop	0	Hardware limit switch approached	A limit switch was reached in IPOS$^{plus®}$ operating mode.	• Check travel range. • Correct user program.
30	Emergency stop Timeout	Immediate switch-off	0	Time violation stop emergency stop rate	• Drive overloaded • Emergency stop ramp too short.	• Check project planning • Extend emergency stop ramp
31	TF/TH sensor tripped	No Response (P)	0	Thermal motor protection fault	• Motor too hot, TF/TH has triggered • TF/TH of the motor not connected or connected incorrectly • MOVIDRIVE® connection and TF/TH connection on motor interrupted	• Let motor cool off and reset fault • Check connections/link between MOVIDRIVE® and TF/TH. • If no TF/TH is connected: Jumper X10:1 with X10:2. • Set P835 to "NO RESPONSE"
32	IPOS index overflow	Emergency stop	0	IPOS program faulty	Programming principles violated leading to system internal stack overflow	Check and correct the IPOS$^{plus®}$ user program (see IPOS$^{plus®}$ manual).
33	Setpoint source	Immediate switch-off	0	Setpoint source not available, e.g. control signal source fieldbus without fieldbus card	Setpoint source not defined or defined incorrectly.	Set correct setpoint source (P100).
34	Ramp Timeout	Immediate switch-off	0	Time violation rapid stop ramp	Time of downward ramps exceeded, e.g. due to overload.	• Extend the downwards ramps • Eliminate overload
35	Duty cylce	Immediate switch-off	0	Operating mode not available	• Operating mode not defined or defined incorrectly • P916 was used to set a ramp function that is needed by a MOVIDRIVE® unit in technology version. • P916 was used to set a ramp type that does not match the selected technology function. • P916 was used to set a ramp type that does not match the selected synchronization time (P888).	• Use P700 or P701 to set correct operating mode. • Use MOVIDRIVE® in technology version (..OT). • From the "Startup → Select technology function..." menu, select the technology function that matches P916 • Check the settings of P916 and P888
			1	Wrong assignment operating mode - hardware		
			2	Wrong assignment operating mode - technology function		

Error			Suberror		Possible cause	Measure
Code	Designation	Response (P)	Code	Designation		
36	Option missing	Immediate switch-off	0	Hardware is missing or not permitted.	• Type of option card not allowed • Setpoint source, control signal source or operating mode not permitted for this option card • Incorrect encoder type set for DIP11B.	• Use correct option card • Set correct setpoint source (P100) • Set correct control signal source (P101) • Set correct operating mode (P700 or P701) • Set the correct encoder type
			2	Encoder slot error.		
			3	Fieldbus slot error.		
			4	Expansion slot error.		
37	System watchdog	Immediate switch-off	0	"System watchdog overflow" error	Fault during execution of system software	Contact SEW Service.
38	System software	Immediate switch-off	0	"System software" error	System malfunction	Contact SEW Service.
39	Reference travel	Immediate switch-off (P)	0	"Reference travel" error	• The reference cam is missing or does not switch • Limit switches are connected incorrectly • Reference travel type was changed during reference travel	• Check reference cam • Check limit switch connection • Check reference travel type setting and required parameters.
40	Boot synchronization	Immediate switch-off	0	Timeout at boot synchronization with option.	• Error during boot synchronization between inverter and option. • Synchronization ID not/incorrectly transmitted	Install a new option card if this fault reoccurs.
41	Watchdog option	Immediate switch-off	0	Error Watchdog timer from/to option.	• Error in communication between system software and option software • Watchdog in the IPOS$^{plus®}$ program • An application module without the application version has been loaded in a MOVIDRIVE® B unit • The wrong technology function has been set if an application module is used	• Contact SEW Service. • Check IPOS program • Check whether the unit has been activated for the application version (P079) • Check the selected technology function (P078)
			17	Watchdog IPOS error.		
42	Lag error	Immediate switch-off (P)	0	Lag error positioning	• Encoder connected incorrectly • Acceleration ramps too short • P component of positioning controller too small • Incorrectly set speed controller parameters • Value of lag fault tolerance too small	• Check encoder connection • Extend ramps • Set P component to higher value • Reset speed controller parameters • Increase lag fault tolerance • Check wiring of encoder, motor and mains phase. • Check whether mechanical system components can move freely or if they are blocked
43	RS485-Timeout	Rapid stop (P)	0	Communication time-out at RS485 interface.	Error during communication via interface RS485	Check RS485 connection (e.g. inverter - PC, inverter - DBG60B). If necessary, contact SEW Service.
44	Unit utilization	Immediate switch-off	0	Unit utilization fault	• Unit utilization (IxT value) > 125 %	• Decrease power output • Extend ramps • If suggested actions not possible, use larger inverter. • Reduce load
			8	UL monitoring fault		

Error			Suberror			
Code	Designation	Response (P)	Code	Designation	Possible cause	Measure
45	Initialization	Immediate switch-off	0	General error during initialization	• No parameters set for EEPROM in power section, or parameters set incorrectly. • Option card not in contact with backplane bus.	• Restore factory settings Consult SEW Service if the error still cannot be reset. • Insert the option card correctly.
			3	Data bus error during RAM check		
			6	CPU clock error.		
			7	Error in the current evaluation.		
			10	Error setting the flash protection		
			11	Data bus error during RAM check		
			12	Parameter setting error synchronous operation (internal synchronous operation)		
46	System bus 2 timeout	Rapid stop (P)	0	Timeout system bus CAN2	Error during communication via system bus 2.	Check system bus connection.
47	System bus 1 timeout	Rapid stop (P)	0	Timeout system bus CAN1	Error during communication via system bus 1.	Check system bus connection.
48	Hardware DRS	Immediate switch-off	0	Hardware synchronous operation	**Only with DRS11B:** • Encoder signal from master/synchronous encoder faulty. • Hardware required for synchronous operation is faulty.	• Check encoder signals of master/synchronous encoder. • Check encoder wiring. • Install a new synchronous operation card.
77	IPOS control word	No Response (P)	0	Invalid control word IPOS	**Only in IPOS$^{plus®}$ operating mode:** • An attempt was made to set an invalid automatic mode (via external controller). • P916 = BUS RAMP is set.	• Check serial connection to external control. • Check write values of external control. • Set correct value for P016.
78	IPOS SW limit switch	No response (P)	0	Software limit switch reached	**Only in IPOS$^{plus®}$ operating mode:** Programmed target position is outside travel range delimited by software limit switches.	• Check the user program • Check position of the software limit switches
79	Hardware configuration	Immediate switch-off	0	Deviating hardware configuration when replacing the memory card	The following items do not match anymore after having replaced the memory card: • Power • Rated voltage • Variant identification • Unit series • Application or standard version • Option cards	Ensure identical hardware or restore factory setting (parameter = factory setting).
80	RAM test	Immediate switch-off	0	"RAM test" error	Internal unit fault, RAM defective.	Contact SEW Service.
81	Start condition	Immediate switch-off	0	Error start condition at VFC hoist	**Only in "VFC hoist" operating mode:** The motor could not be supplied with the correct amount of current during the pre-magnetizing time: • Rated motor power too small in relation to rated inverter power. • Motor cable cross section too small.	• Check startup data and perform new startup, if necessary. • Check connection between inverter and motor. • Check cross section of motor cable and increase if necessary.
82	Open output	Immediate switch-off	0	Output open with VFC hoist	**Only in "VFC hoist" operating mode:** • Two or all output phases interrupted. • Rated motor power too small in relation to rated inverter power.	• Check connection between inverter and motor. • Check startup data and perform new startup, if necessary.

Error			Suberror			
Code	Designation	Response (P)	Code	Designation	Possible cause	Measure
84	Motor protection	Emergency stop (P)	0	"Motor temperature simulation" error	• Motor utilization too high. • I_N-U_L monitoring 1 triggered • P530 set later to "KTY"	• Reduce load. • Extend ramps. • Observe longer pause times. • Check P345/346 • Select a larger motor
			2	Short circuit or open circuit in the temperature sensor		
			3	No thermal motor model available		
			4	UL monitoring fault		
86	Memory module	Immediate switch-off	0	Error in connection with memory module	• No memory card • Memory card defective	• Tighten knurled screw • Insert and secure memory card • Replace memory card
			2	Hardware card detection wrong memory card		
87	Technology function	Immediate switch-off	0	Technology function selected with standard unit	A technology function was activated in a standard version.	Disable technology function
88	Flying start	Immediate switch-off	0	"Flying start" error	**Only in VFC n-CTRL operating mode:** Actual speed > 6000 rpm when inverter enabled.	Inverter not enabled before actual speed is ≤ 6000 rpm.
92	DIP encoder problem	Error display (P)	1	Soiling problem Stahl WCS3	Encoder signals an error	Possible cause: Encoder is dirty → clean encoder
93	DIP encoder error	Emergency stop (P)	0	"Absolute encoder" error	The encoder signals an error, e.g. power failure. • Connection cable between the encoder and DIP11B does not meet the requirements (twisted pair, shielded). • Cycle frequency for cable length too high. • Permitted max. speed/acceleration of encoder exceeded. • Encoder defective.	• Check absolute encoder connection. • Check connection cables. • Set correct cycle frequency. • Reduce maximum traveling velocity or ramp. • Replace absolute encoder.
94	EEPROM checksum	Immediate switch-off	0	Power section parameters	Inverter electronics disrupted, possibly due to effect of EMC or a defect.	Send unit in for repair.
			5	Control unit data		
			6	Power section data		
			7	Invalid version of the configuration data set		
95	DIP plausibility error	Emergency stop (P)	0	Validity check of absolute position	No plausible position could be determined. • Incorrect encoder type set. • IPOS$^{plus®}$ travel parameter set incorrectly. • Numerator/denominator factor set incorrectly. • Zero adjustment performed. • Encoder defective.	• Set the correct encoder type. • Check IPOS$^{plus®}$ travel parameters. • Check traveling velocity. • Correct numerator/denominator factor. • After zero adjustment reset. • Replace absolute encoder.
97	Copy fault	Immediate switch-off	0	Parameter set upload is/was faulty	• Memory card cannot be written or read. • Fault during data transmission	• Repeat copying process • Restore default setting (P802) and repeat copying process
			1	Download of parameter set to unit cancelled.		
			2	Not possible to adopt parameters. Not possible to adopt parameters from memory card.		
98	CRC Error	Immediate switch-off	0	"CRC via internal flash" error	Internal unit fault Flash memory defective	Send unit in for repair.
99	IPOS ramp calculation	Immediate switch-off	0	"Ramp calculation" error	**Only in IPOS$^{plus®}$ operating mode:** Positioning ramp is sinusoidal or square and an attempt is made to change ramp times and traveling velocities with enabled inverter.	Rewrite the IPOS$^{plus®}$ program so that ramp times and traveling velocities can only be altered when the inverter is inhibited.

Error			Suberror			
Code	Designation	Response (P)	Code	Designation	Possible cause	Measure
100	Vibration warning	Display error (P)	0	Vibrations diagnostics warning	Vibration sensor warns (→ "DUV10A" operating instructions).	Determine cause of vibrations. Continue operation until F101 occurs.
101	Vibration error	Rapid stop (P)	0	Vibration diagnostics error	Vibration sensor reports error.	SEW-EURODRIVE recommends that you remedy the cause of the vibrations immediately
102	Oil aging warning	Display error (P)	0	Oil aging warning	Error message from the oil aging sensor	Schedule oil change.
103	Oil aging error	Display error (P)	0	Oil aging error	Error message from the oil aging sensor	SEW-EURODRIVE recommends that you change the gear unit oil immediately.
104	Oil aging overtemperature	Display error (P)	0	Oil aging overtemperature	Overtemperature signal from the oil aging sensor	• Let oil cool down • Check if the gear unit cools properly
105	Oil aging ready signal	Display error (P)	0	Oil aging ready signal	Oil aging sensor is not ready for operation	• Check voltage supply of oil aging sensor • Check and, if necessary, replace the oil aging sensor
106	Brake wear	Display error (P)	0	Brake wear error	Brake lining worn	Change brake lining (→ "Motors" operating instructions).

Error			Suberror			
Code	Designation	Response (P)	Code	Designation	Possible cause	Measure
108	DCS error	Immediate stop/malfunction (P)	0	DCS error		
			1	Error during transfer of configuration data to the monitoring unit.	Interruption in connection during program download	Send the configuration files again
			2	Configuration data for software version of the subassembly is invalid.	Subassembly configured with incorrect software version of the programming interface.	Configure subassembly with permitted version of the programming interface. Then switch subassembly off and on again.
			3	Unit was programmed with incorrect programming interface.	Program or configuration data was loaded into the unit with an incorrect programming interface.	Check the design of the subassembly. Configure again with a valid programming interface. Then switch the unit off and on again.
			4	Faulty reference voltage.	• Supply voltage of the subassembly is defective. • Faulty component in the subassembly	• Check supply voltage • Switch unit off and on again
			5			
			6	Faulty system voltage.		
			7			
			8	Faulty test voltage		
			9			
			10	Faulty DC 24 V voltage supply		
			11	Ambient temperature of the unit is not in the defined range.	Temperature at the place of operation is not in the permitted range.	Check the ambient temperature.
			12	Plausibility error position changeover	For the position changeover, ZSC, JSS or DMC is permanently activated.	• Check ZSC activation • Check JSS activation • Check DMC activation (only for monitoring via position)
			13	Faulty switching of the LOSIDE driver DO02_P / DO02_M	Short circuit of the output.	Check wiring at the output.
			14	Faulty switching of the HISIDE driver DO02_P / DO02_M		
			15	Faulty switching of the LOSIDE driver DO0_M		
			16	Faulty switching of the HISIDE driver DO0_P		
			17	Faulty switching of the LOSIDE driver DO01_M		
			18	Faulty switching of the HISIDE driver DO01_P		

Error			Suberror			
Code	Designation	Response (P)	Code	Designation	Possible cause	Measure
109	DCS alarm	Emergency stop/malfunction (P)	0	DCS alarm		
			1	Communication error between CAN interface inverter	The DCS21B/31B option does not receive any valid data from the inverter.	• Check hardware connection to the inverter • Check version of the inverter
			2 3	Plausibility error digital input at pulse P1	There is no pulse 1 voltage at the DI1 binary input.	• Check configuration of the DI1 binary input according to configuration and wiring diagram • Check wiring
			4 5	Plausibility error digital input at pulse P2		• Check configuration of the DI2 binary input according to configuration and wiring diagram • Check wiring
			6 7	Pulse 1 plausibility error at binary input DI3		• Check configuration of the DI3 binary input according to configuration and wiring diagram • Check wiring
			8 9	Pulse 1 plausibility error at binary input DI4		• Check configuration of the DI4 binary input according to configuration and wiring diagram • Check wiring
			10 11	Pulse 1 plausibility error at binary input DI5		• Check configuration of the DI5 binary input according to configuration and wiring diagram • Check wiring
			12 13	Pulse 1 plausibility error at binary input DI6		• Check configuration of the DI6 binary input according to configuration and wiring diagram • Check wiring
			14 15	Pulse 1 plausibility error at binary input DI7		• Check configuration of the DI7 binary input according to configuration and wiring diagram • Check wiring
			16 17	Pulse 1 plausibility error at binary input DI8		• Check configuration of the DI8 binary input according to configuration and wiring diagram • Check wiring

Error			Suberror			
Code	Designation	Response (P)	Code	Designation	Possible cause	Measure
109	DCS alarm	Emergency stop/malfunction (P)	18 19	Pulse 2 plausibility error at binary input DI1	There is no pulse 2 voltage at the DI1 binary input.	• Check configuration of the DI1 binary input according to configuration and wiring diagram • Check wiring
			20 21	Pulse 2 plausibility error at binary input DI2		• Check configuration of the DI2 binary input according to configuration and wiring diagram • Check wiring
			22 23	Pulse 2 plausibility error at binary input DI3		• Check configuration of the DI3 binary input according to configuration and wiring diagram • Check wiring
			24 25	Pulse 2 plausibility error at binary input DI4		• Check configuration of the DI4 binary input according to configuration and wiring diagram • Check wiring
			26 27	Pulse 2 plausibility error at binary input DI5		• Check configuration of the DI5 binary input according to configuration and wiring diagram • Check wiring
			28 29	Pulse 2 plausibility error at binary input DI6		• Check configuration of the DI6 binary input according to configuration and wiring diagram • Check wiring
			30 31	Pulse 2 plausibility error at binary input DI7		• Check configuration of the DI7 binary input according to configuration and wiring diagram • Check wiring
			32 33	Pulse 2 plausibility error at binary input DI8		• Check configuration of the DI8 binary input according to configuration and wiring diagram • Check wiring
			34 35	Plausibility error in the velocity acquisition	The difference between the two velocity sensors is higher than the configured speed cut-off threshold.	• Check track again with the data of the encoder configuration. • Check the velocity sensor • Use the SCOPE function to set speed signals so that they are congruent
			36 37	Plausibility error in the position acquisition	The difference between the two position sensors is higher than the configured value.	• Check track with the configured data of the encoder setting • Check position signal • Are all signals connected correctly to the 9-pin encoder connector? • Check the encoder connector for correct wiring. Is the jumper between pin 1 and pin 2 on the 9-pin encoder connector closed (SSI absolute encoder)? • Use the SCOPE function to set positions signals so that they are congruent

Error			Suberror			
Code	Designation	Response (P)	Code	Designation	Possible cause	Measure
109	DCS alarm	Rapid stop/warning (P)	38 39	Plausibility error incorrect position range.	The current position is outside the configured range.	• Check track with the configured data of the encoder setting • Check position signal, correct offset if necessary • Use the SCOPE function to read off the position and set in ratio to the configured values
			40 41	Plausibility error incorrect speed.	The current velocity exceeds the configured maximum velocity.	• The drive moves outside the permitted and configured velocity range • Check configuration (set max. velocity) • Analyze the velocity development using the SCOPE function
			42 43	Configuration error: Acceleration	The current acceleration is outside the configured acceleration range.	• Check encoder type and configuration (SSI/incremental) • Check the encoder connection/wiring • Check polarity of the encoder data • Check function of the encoder
			44 45	Plausibility error in encoder interface (A3401 = encoder 1 and A3402 = encoder 2).	The wiring of the encoder does not correspond to the configured data.	• Check encoder type and configuration (SSI/incremental) • Check the encoder connection/wiring • Check polarity of the encoder data • Check function of the encoder
			46 47	Encoder supply voltage error (A3403=encoder 1 and A3404 = encoder 2)	Encoder voltage supply is outside the defined range (min. DC 20 V / max. DC 29 V).	• Overload in the supply voltage of the encoder; internal fuse has triggered • Check supply voltage of the DCS21B/31B option
			48 49	Reference voltage error	The reference voltage input of the encoder system is outside the defined range.	Check reference voltage input of the encoder system.
			50 51	Difference level RS485 driver 1 (error INC_B or SSI_CLK) faulty	No encoder connection, incorrect encoder type.	Check the encoder connection.
			52 53	Difference level RS485 driver 2 (error INC_A or SSI_DATA) faulty.		
			54 55	Incremental counter deviation.		
			56 57	Plausibility error in encoder interface (A3401 = encoder 1 and A3402 = encoder 2)	The wiring of the encoder does not correspond to the configured data.	• Check encoder type and configuration (SSI/incremental) • Check the encoder connection/wiring • Check polarity of the encoder data • Check function of the encoder

Error			Suberror			
Code	Designation	Response (P)	Code	Designation	Possible cause	Measure
109	DCS alarm	Rapid stop/warning (P)	58	Plausibility error SIN/COS encoder connection.	Incorrect encoder type connected.	• Check the encoder connection • Check the encoder connection (jumper between pin 1 and pin 2)
			59			
			60	Plausibility error SSI encoder connection		
			61			
			62		Phase error of the incremental or sin/cos encoder.	• Check the encoder connection • Replace the defective encoder
			63			
			64	Plausibility error - SSI encoder connection.	Connected encoder type does not correspond to the configuration.	• Check the encoder connection • Check connected encoder
			65			
			66	Plausibility error - SSI Listener encoder connection.		
			67			
			68	Faulty switching of the LOSIDE driver DO2_M	DC 0 V short circuit at the output.	Check wiring at the output.
			69	Faulty switching of the HISIDE driver DO2_P		
			70	Faulty switching of the LOSIDE driver DO0_M		
			71	Faulty switching of the HISIDE driver DO0_P		
			72	Faulty switching of the LOSIDE driver DO1_M		
			73	Faulty switching of the HISIDE driver DO1_P		
			74	Watchdog undervoltage test for LOSIDE driver	DC 0 V short circuit at on of the DC 0 V outputs.	Check wiring at the outputs.
			75	Watchdog undervoltage test for HISIDE driver	DC 24 V short circuit at on of the DC 24 V outputs.	
			76	CCW and CW monitoring (in DMC module) activated simultaneously.	Multiple activation.	Only one direction of rotation can be activated in the DMC module.
			77			
			78	CCW and CW monitoring range of the OLC activated simultaneously		
			79			
			80	CCW and CW monitoring (in JSS module) was activated simultaneously.		
			81			
			82	Timeout error MET. Time monitoring start signal for confirmation button.	Input element with time monitoring is faulty.	• Check wiring of input element • Input element is faulty
			83			
			84	Timeout error MEZ. Time monitoring for two-hand button.	Two-hand operation with time monitoring is faulty.	
			85			
			86	EMU1 monitoring error	Faulty monitoring of the external disconnection channel	• Check hardware connections • Pick-up or release time to short • Check switching contacts
			87			
			88	EMU2 monitoring error		
			89			
110	"Ex-e protection" error	Emergency stop	0	Duration of operation below 5 Hz exceeded	Duration of operation below 5 Hz exceeded	• Check project planning • Shorten duration of operation below 5 Hz
113	Analog input open circuit	No response (P)	0	AI1 analog input open circuit	AI1 analog input open circuit	Check wiring
116	"Timeout MOVI-PLC" error	Rapid stop / warning	0	MOVI-PLC® communication timeout		• Check startup • Check wiring

12.3 SEW electronics service

Sending in for repair

Please contact the **SEW-EURODRIVE electronics service if an error cannot be rectified** (→ "Customer and spare parts service").

When contacting SEW electronics service, always quote the digits on the status label so that our service personnel can assist you more effectively.

Please provide the following information when sending the unit in for repair:

- Serial number (→ nameplate)
- Unit designation
- Standard version or application version
- Digits on the status label
- Short description of application (drive application, control via terminals or serial)
- Connected motor (motor type, motor voltage, ⅄ or Δ connection)
- Type of fault
- Accompanying circumstances
- Your own presumptions as to what has happened
- Any unusual events preceding the problem, etc.

12.4 Extended storage

If the unit is being stored for a long time, connect it to the line voltage for at least 5 minutes every 2 years. Otherwise, the unit's service life may be reduced.

Procedure when maintenance has been neglected:

Electrolytic capacitors are used in the inverters. They are subject to aging effects when deenergized. This effect can damage the capacitors if the unit is connected using the rated voltage after a longer period of storage.

If you have not performed maintenance regularly, SEW-EURODRIVE recommends that you increase the line voltage slowly up to the maximum voltage. This can be done, for example, by using a variable transformer for which the output voltage has been set according to the following overview.

The following stages are recommended:

AC 400/500 V units:

- Stage 1: AC 0 V to AC 350 V within a few seconds
- Stage 2: AC 350 V for 15 minutes
- Stage 3: AC 420 V for 15 minutes
- Stage 4: AC 500 V for 1 hour

AC 230 V units:

- Stage 1: AC 170 V for 15 minutes
- Stage 2: AC 200 V for 15 minutes
- Stage 3: AC 240 V for 1 hour

After you have completed the regeneration process, the unit can be used immediately or stored again for an extended period with maintenance.

12.5 Disposal

Dispose of materials separately in accordance with the current regulations in force, for example:

- Electronics scrap (circuit boards)
- Plastic (housing)
- Sheet metal
- Copper