

Error codes for REFUsol 012K/016K/020K/024K - UL

Code	Error message	Hex	Description	Action
0	Error management	0x000000	Error was possibly acknowledged although this was not allowed. Else, the error cause cannot be reconstructed.	Restart
131074	DC voltage 2	0x020002	DC link voltage too high: the DC link voltage exceeds the max. threshold value (P24.1)	Check DC voltage
131075	Anticlockwise phases	0x020003	Incorrect clockwise rotating field of voltage supply	Exchange two phases
131076	Overcurrent	0x020004	The line current of one of the 3 phases exceeds the max. AC limit value	Acknowledge error
196610	Parameter error 1	0x030002	A corrupt parameter file was found during initialization of the special functions. In this case, the default values were set.	Update parameter. If unsuccessful, contact REFUsol
196613	Parameter error 2	0x030005	No parameter file was found during initialization of the special functions. In this case, the default values were set.	Update parameter. If unsuccessful, contact REFUsol
196614	Parameter error 3	0x030006	The number of parameters does not correspond to the number of parameters in the file system. A new parameter file is created based on the old file.	Update parameter. If unsuccessful, contact REFUsol
262145	Internal communication	0x040001	Timeout between SR cards and power section. The power section fails to respond to SR card requests within the time grid. This error may occur if there is not enough computing time, in case of a reset or if the power section is updated.	Contact REFUsol
262160	System error 1	0x040010	This error occurs in case of a crash of a task of the operating system, which may happen if there is a stack overflow => system and software error	Contact REFUsol
327680	System error 2	0x050000	Initialization was faulty and could not be processed correctly.	Contact REFUsol
393217	Wrong time	0x060001	RTC not initialized (maybe low voltage). Inverter feeds with wrong time because the real-time clock failed to be initialized.	Contact REFUsol
458752	Update login	0x070000	More than 30 update methods were declared. System limit reached.	Restart system and retry.
458753	Update is running	0x070001	Update type already declared! No more declarations possible! Another update is already ongoing!!	Wait until update is completed Restart
524289	Wrong time	0x080001	Incorrect initialization of the real-time clock, therefore data logger fails to log.	Set time
589825	System restart	0x090001	Initialization took more than 10 minutes => restart system.	Note only

Error codes for REFUsol 012K/016K/020K/024K - UL

Code	Error message	Hex	Description	Action
589826	Program CRC error	0x90002	The CRC of the RAM in the underlying program code does not match the CRC from the flash	Firmware update and CRC check
589827	SR Watchdog Reset	0x90003	System reset by Watchdog	Contact REFUsol
589828	RAM Failure 1	0x90004	Critical error in RAM found	Contact REFUsol
655360	FPGA firmware	0x0A0000	Found wrong FPGA version type! FPGA firmware is not suitable for application.	Contact REFUsol
655361	Controller voltage 1	0x0A0001	$ UZK-High-Pos +20 V < UZK-Low-Pos $ This is not allowed to happen during ongoing operation because it indicates defective free-wheeling diodes. This might happen during first startup, if the electrolytic capacitors have not been formed yet.	Leave inverter in failure mode for 2–3 h on first startup. If it fails to acknowledge automatically, contact REFUsol.
655362	Controller voltage 2	0x0A0002	$ UZK-High-Neg +20 V < UZK-Low-Neg $ This is not allowed to happen during ongoing operation because it indicates defective free-wheeling diodes. This might happen during first startup, if the electrolytic capacitors have not been formed yet.	Wait until the controller has restabilized.
655363	Controller voltage 3	0x0A0003	Asymmetry low. The difference between the two lower DC links exceeds the limit. This error may be caused by irregular controller behavior and should therefore be scrutinized only after it has occurred repeatedly. If occurring frequently, this error may be caused by: a hardware failure in the DC detection, an insulation error or an incorrect offset calibration	If this occurs for the first time: wait until the controller has restabilized. If this occurs repeatedly: calibrate offset or exchange hardware
655364	Controller voltage 4	0x0A0004	Asymmetry hi. The difference between the two upper DC links exceeds the limit. This error is mainly caused by irregular controller behavior.	Wait until the controller has restabilized.
655365	Controller voltage 5	0x0A0005	The positive stepped-up DC link (UzkHighPos) falls below the crest working line voltage. The step-up converter controller is no longer able to set the voltage up to the desired value.	Wait until the controller has restabilized.
655366	Controller voltage 6	0x0A0006	The negative stepped-up DC link (UzkHighNeg) falls below the crest working line voltage. The step-up converter controller is no longer able to set the voltage up to the desired value.	Wait until the controller has restabilized.
655367	Controller voltage 7	0x0A0007	The positive DC link voltage (UzkLowPos) falls below the limit of P0024.0.	Wait until the controller has restabilized.

Error codes for REFUsol 012K/016K/020K/024K - UL

Code	Error message	Hex	Description	Action
655368	Controller voltage 8	0x0A0008	The positive DC link voltage (UzkLowPos) exceeds the limit of P0024.1.	Wait until the controller has restabilized.
655369	Controller voltage 9	0x0A0009	The negative DC link voltage (UzkLowNeg) falls below the limit of P0024.0.	Wait until the controller has restabilized.
655370	Controller volt. 10	0x0A000A	The negative DC link voltage (UzkLowNeg) exceeds the limit of P0024.1.	Wait until the controller has restabilized.
655371	Controller volt. 11	0x0A000B	The positive stepped-up DC link voltage (UzkHighPos) exceeds the limit of P0024.1.	Wait until the controller has restabilized.
655372	Controller volt. 12	0x0A000C	The negative stepped-up DC link voltage (UzkHighNeg) exceeds the limit of P0024.1.	Wait until the controller has restabilized.
655373	Line overvoltage	0x0A000D	Detecting line overvoltage. Line phase overvoltage. If $U > \text{limit_in_} \% * U_{\text{nom}}$	Possibly caused by switching actions on the net. Measure and verify the line voltage. Service if line voltage is within normal range
655374	Line undervoltage	0x0A000E	Detecting line undervoltage Supply voltage dip. $U_{\text{Min}} < 0.5 * \text{ENS_LandOfUse} \rightarrow \text{NominalVoltage}$	Possibly caused by switching actions on the net. Measure and verify the line voltage. Service if line voltage is within normal range
655375	Overvoltage phase	0x0A000F	Detecting line overvoltage on outside conductor	Possibly caused by switching actions on the net. Measure and verify the line voltage. Service if line voltage is within normal range
655376	Undervoltage phase	0x0A0010	Detecting line undervoltage on outside conductor.	Possibly caused by switching actions on the net. Measure and verify the line voltage. Service if line voltage is within normal range
655377	Frequency FLL	0x0A0011	Detecting a power error (FLL)	Check system frequency and line voltage. Service if system frequency is within normal range

Error codes for REFUsol 012K/016K/020K/024K - UL

Code	Error message	Hex	Description	Action
655378	Frequency	0x0A0012	Detecting a system frequency error (ENS)	Check system frequency and line voltage. Service if system frequency is within normal range
655379	PV isolation AFISR	0x0A0013	AFI check AFI leakage current Measured value exceeded limits: Measured value exceeds 150 mA -> turnoff within 20 ms Measured value exceeds 60 mA -> turnoff within 130 ms Measured value exceeds 30 mA -> turnoff within 280 ms	Check insulation of the system.
655380	No national code	0x0A0014	Country code not set. It is also possible that an invalid country code is set.	Reset country code, check if the indicated country code also exists in the white list. The changeover is possible only in the status "switched off" and only during the first operation hours.
655382	Inferior frequency	0x0A0016	Recognition of an undercut of the line frequency	Check net frequency and net voltage. Service if the net frequency is in the normal range.
655383	Country not admitted	0x0A0017	The country to be set is not contained in the white list (parametre 151).	Insert the country to be set into the white list (parameter 151)
655384	Voltage error max	0x0A0018	The line voltage has been over the limit value of parametre 168 (Umax) of the voltage average value check for a too long period	Check limit values
655385	Voltage error min	0x0A0019	The line voltage has been under the limit value of parametre 166 (Umin) of the voltage average value check for a too long period	Check limit values
655617	Device fault LT	0x0A0101	Hardware turnoff of power section UCE monitoring in power section	Acknowledge error
655618	Supply voltage LT	0x0A0102	Faulty supply voltage at power section An internal voltage is outside of limits	Contact REFUsol to exchange hardware
655619	PV voltage LT1	0x0A0103	Overvoltage turnoff of power section in positive DC link $ UZK-High-Pos > \text{limit (P0024.1)}$	Check solar array voltage and parameter set
655620	PV voltage LT2	0x0A0104	Overvoltage turnoff of power section in negative DC link $ UZK-High-Neg > \text{limit (P0024.1)}$	Check solar array voltage and parameter set

Error codes for REFUsol 012K/016K/020K/024K - UL

Code	Error message	Hex	Description	Action
655621	Voltage offset LT	0x0A0105	Offset calibration values of power section as compared to SR were outside of 15-V limits	Check DC scalings. Check DC voltages. If this occurs repeatedly, exchange hardware.
655622	Current sensor LT	0x0A0106	Scanning for a failure of the current sensors of the power section	If error occurs repeatedly, contact REFUsol to exchange hardware.
655623	Activation LT4	0x0A0107	Lower DC link balancing timeout Could not step up DC links for balancing	Check DC voltage Check whether DC links are under load
655624	Activation LT	0x0A0108	Timeout of step-up process. Could not step up DC links within 1 minute.	Check DC voltage Check whether DC links are under load
655625	Parameter Fault LT5	0x0A0109	Failure during reading of or writing to PS memory Failed to store data to or read data from PS memory PS memory defective or number of parameter was changed (e.g. during updating)	After update -> restart Reimport parameter data If error occurs repeatedly, contact REFUsol to exchange hardware
655626	Communication LT	0x0A010A	Problem in communication between WS and SR. Power section fails to receive telegrams from SR within the time specified. SR reset or communication drivers defective.	In case of frequent failures, contact REFUsol to exchange hardware
655627	Activation LT1	0x0A010B	Scanning for failure of a power branch in step-up converter during activation PS branch monitoring timeout	Contact REFUsol to exchange hardware
655628	PV isolation LT	0x0A010C	Insulation error detection of power section during activation Generator insulation resistance < 1.1 Mohms	Check insulation of the system. Check P.C.B. for possible dewing
655629	Activation LT2	0x0A010D	The DC link voltage in the power section is detected to fall below the limit of 80 V and operation is not stopped	Error of overall system Restart
655649	DC-offset	0x0A0121	DC percentage in AC infeed too high	If error occurs repeatedly, contact REFUsol to exchange hardware.
655664	Overtemperature LT1	0x0A0130	Overtemperature of right cooler section RCS temperature > limit (P0027.3)	Allow the device to cool down. Acknowledge error.
655665	Overtemperature LT2	0x0A0131	Overtemperature of interior space (sensor in interior space at upper left) IUL temperature > limit (P0027.3)	Allow the device to cool down. Acknowledge error.
655666	Overtemperature LT3	0x0A0132	Overtemperature of interior space (sensor in interior space at lower right) IUR temperature > limit (P0027.3)	Allow the device to cool down. Acknowledge error.

Error codes for REFUsol 012K/016K/020K/024K - UL

Code	Error message	Hex	Description	Action
655667	Overtemperature LT4	0x0A0133	Overtemperature of left cooler section LCS temperature > limit (P0027.3)	Allow the device to cool down. Acknowledge error.
655668	Frequency LT	0x0A0134	Error of system frequency of power section System frequency < country limit (P0046.0) System frequency > country limit (P0046.1)	Check system frequency and line voltage. Service if system frequency is within normal range
655669	Overvoltage LT	0x0A0135	Line overvoltage detector of power section Line voltage > country limit (P0047.2)	Measure and verify the line voltage. Service if line voltage is within normal range
655670	Undervoltage LT	0x0A0136	Line undervoltage detector of power section Line voltage < country limit (P0047.1)	Measure and verify the line voltage. Service if line voltage is within normal range
655671	Grid iso LT PEF	0x0A0137	Leakage current detection of power section (PEFAIL). Insulation error during operation. Is triggered by internal AFI P.C.B. and causes immediate turnoff	Contact REFUsol
655672	PV isolation AFILT	0x0A0138	Leakage current detection of power section Leakage current > limit Different reaction speeds at 20, 130, 280 mA	Contact REFUsol
655673	AFI warning	0x0A0139	Leakage current detection of power section (PEWARN). Insulation error during operation. Is triggered by internal AFI P.C.B. and causes immediate turnoff	Contact REFUsol
655674	Iso meter defective	0x0A013A	Defective insulation test unit. Timeout during DC discharge. Could not discharge UzKHigh after insulation test.	Check DC scalings. Check DC voltages. If error occurs repeatedly, contact REFUsol to exchange hardware
655675	Activation LT3	0x0A013B	Setpoint for balancing of power section not available	If this occurs repeatedly, contact REFUsol. Otherwise restart
655676	Combine Relay	0x0A013C	Wrong configuration of combiner relay	Reset country code
655677	Test Combiner Relay	0x0A013D	Selftest of combiner relay failed	Contact REFUsol
655696	Overtemperature 2	0x0A0150	Temperature greater than the specified limit	Allow the device to cool down. Acknowledge error.
655697	Overtemperature AC1	0x0A0151	Temperature greater than the specified limit	Allow the device to cool down. Acknowledge error.

Error codes for REFUsol 012K/016K/020K/024K - UL

Code	Error message	Hex	Description	Action
655698	Overtemperature AC2	0x0A0152	Temperature greater than the specified limit	Allow the device to cool down. Acknowledge error.
655699	Overtemperature Inside	0x0A0153	Temperature greater than the specified limit	Allow the device to cool down. Acknowledge error.
655700	Overtemperature DC1	0x0A0154	Temperature greater than the specified limit	Allow the device to cool down. Acknowledge error.
655701	Overtemperature DC2	0x0A0155	Temperature greater than the specified limit	Allow the device to cool down. Acknowledge error.
655702	Overtemperature U	0x0A0156	Temperature greater than the specified limit	Allow the device to cool down. Acknowledge error.
655703	Overtemperature V	0x0A0157	Temperature greater than the specified limit	Allow the device to cool down. Acknowledge error.
655704	Übertemperatur W	0x0A0158	Temperature greater than the specified limit	Allow the device to cool down. Acknowledge error.
655705	Fan Fault 1	0x0A0159	Fault of fan 1	Contact REFUsol
655706	Fan Fault 2	0x0A015A	Fault of fan 2	Contact REFUsol
655707	Fan Fault 3	0x0A015B	Fault of fan 3	Contact REFUsol
655708	Fan Fault 4	0x0A015C	Fault of fan 4	Contact REFUsol
655709	Fan Fault 5	0x0A015D	Fault of fan 5	Contact REFUsol
655710	NTC Broken wire	0x0A015E	Open circuit detection of temperature probe	Contact REFUsol
655711	NTC Short circuit	0x0A015F	Short circuit detection of temperature probe	Contact REFUsol
655712	Error Citation	0x0A0160	Error in the citation	Contact REFUsol
655713	Overcurrent HSS Pos.	0x0A0161	Shutdown caused by overcurrent in positive cycle of HSS	If error occurs repeatedly, contact REFUsol
655714	Overcurrent HSS Neg.	0x0A0162	Shutdown caused by overcurrent in negative cycle of HSS	If error occurs repeatedly, contact REFUsol
655715	Overcurrent Phase U	0x0A0163	Shutdown caused by overcurrent on phase U	If error occurs repeatedly, contact REFUsol
655716	Overcurrent Phase V	0x0A0164	Shutdown caused by overcurrent on phase V	If error occurs repeatedly, contact REFUsol
655717	Overcurrent Phase W	0x0A0165	Shutdown caused by overcurrent on phase W	If error occurs repeatedly, contact REFUsol
655718	Overvoltage ZK Pos.	0x0A0166	Overvoltage detection firmware. Positive DC bus voltage exceeds programmable threshold (UzkHighPos> Umax_Parameter)	If error occurs repeatedly, contact REFUsol

Error codes for REFUsol 012K/016K/020K/024K - UL

Code	Error message	Hex	Description	Action
655719	Overvoltage ZK Neg.	0x0A0167	Overvoltage detection firmware. Negative DC bus voltage exceeds programmable threshold (UzkHighNeg> Umax_Parameter)	If error occurs repeatedly, contact REFUsol
655720	String Failure	0x0A0168	At least one of the input current groups is incorrectly connected	Check input wiring
663565	Overtemperature 6	0x0A200D	Temperature in device too high SR overtemperatur turnoff Cooler temperature exceeded 80 °C or temperature in interior space exceeded 75 °C	Allow the device to cool down. Acknowledge error.
720897	System 1	0x0B0001	Error in error management	Contact REFUsol
720898	System 2	0x0B0002	Not enough storage space in error memory .Error memory is full.	Contact REFUsol.
720899	System 3	0x0B0003	Error during acknowledgement function. Could not store error.	Contact REFUsol.
851969	System error	0x0D0001	Faulty inverter firmware Could not establish connection to PS during firmware update.	Restart
851970	Power sec bootloader	0x0D0002	Faulty power section bootloader .A bootloader of the power section is defective.	Contact REFUsol
851971	System restart	0x0D0003	System was restarted for firmware update.	Note only
917505	Overcurr. phase L1 1	0x0E0001	Overcurrent phase L1 Stack 1	Acknowledge error. Measure current limits and restart. If values are within normal ranges, there may be a short-circuit.
917506	Overcurr. phase L2 1	0x0E0002	Overcurrent phase L2 Stack 1	Acknowledge error. Measure current limits and restart. If values are within normal ranges, there may be a short-circuit.
917507	Overcurr. phase L3 1	0x0E0003	Overcurrent phase L3 Stack 1	Acknowledge error. Measure current limits and restart. If values are within normal ranges, there may be a short-circuit.
917509	Overcurr. phase L1 2	0x0E0005	Overcurrent phase L1 Stack 2	Acknowledge error. Measure current limits and restart. If values are within normal ranges, there may be a short-circuit.
917510	Overcurr. phase L2 2	0x0E0006	Overcurrent phase L2 Stack 2	Acknowledge error. Measure current limits and restart. If values are within normal ranges, there may be a short-circuit.

Error codes for REFUsol 012K/016K/020K/024K - UL

Code	Error message	Hex	Description	Action
917511	Overcurr. phase L3 2	0x0E0007	Overcurrent phase L3 Stack 2	Acknowledge error. Measure current limits and restart. If values are within normal ranges, there may be a short-circuit.
917513	Overcurr. phase L1 3	0x0E0009	Overcurrent phase L1 Stack 3	Acknowledge error. Measure current limits and restart. If values are within normal ranges, there may be a short-circuit.
917514	Overcurr. phase L2 3	0x0E000A	Overcurrent phase L2 Stack 3	Acknowledge error. Measure current limits and restart. If values are within normal ranges, there may be a short-circuit.
917515	Overcurr. phase L3 3	0x0E000B	Overcurrent phase L3 Stack 3	Acknowledge error. Measure current limits and restart. If values are within normal ranges, there may be a short-circuit.
917517	Error management 1	0x0E000D	The device is in the "failure" state although there is no error.	The difference in temperature of two stacks is above 10 °C. Allow the device to cool down and restart.
917523	Precharging	0x0E0013	Precharging fails to reach precharging voltage.	Contact REFUsol
917525	Precharge contactor	0x0E0015	Precharging contactor fails to switch.	Check for a hardware failure on the DC side.
917526	DC main contactor	0x0E0016	DC contactor fails to switch	Contact REFUsol
917527	AC main connector	0x0E0017	AC contactor fails to switch	Contact REFUsol
917528	AC main connector	0x0E0018	AC contactor fails to switch	Contact REFUsol
917529	Line voltage 2	0x0E0019	Line voltage out of normal range	Measure and verify the line voltage. Service if line voltage is within normal range
917530	Solar cell voltage 1	0x0E001A	The DC link voltage at the WS exceeds the max. threshold value (P24.1)	Check voltage of solar array
917531	Solar cell voltage 2	0x0E001B	The solar voltage exceeds the max. threshold value (P24.1)	Check voltage of solar array
917532	Supply voltage	0x0E001C	Faulty supply voltage at power section	Contact REFUsol
917533	Overtemperature 5	0x0E001D	The controller is too hot (T° > 125 °C). The temperature monitoring unit of the controller turns off at 125 °C.	Allow the device to cool down. Acknowledge error.
917534	Communication	0x0E001E	Problem in communication between PS and SR because of an SR timeout (SR does not send parameter job).	Acknowledge error. Contact REFUsol if restart does not work

Error codes for REFUso1 012K/016K/020K/024K - UL

Code	Error message	Hex	Description	Action
917535	Parameter error	0x0E001F	Failure during reading of or writing to PS memory. Failed to store data to or read data from PS memory. PS memory defective or number of parameter was changed (e.g. during updating).	After update -> restart Reimport parameter data If error occurs repeatedly, contact REFUso1 to exchange hardware
917536	System	0x0E0020	State machine	Restart
917537	Grid failure ENS	0x0E0021	There is an external ENS error at the digital input X17 pin 1.	Check line voltage and system frequency. Check external measuring instrument and cabling.
917538	AC switch	0x0E0022	AC switch not turned on.	Turn on AC switch.
917539	Overtemperature 8	0x0E0023	Transformer too hot (message at digital input X17 pin 3).	Allow the device to cool down. Acknowledge error.
917540	DC overvoltage	0x0E0024	Failure: Overcurrent from solar cells.	Acknowledge error.
917541	Overtemperature 7	0x0E0025	Overtemperature of power section.	Allow the device to cool down. Acknowledge error.
917542	Biasing	0x0E0026	Detecting inverter overcurrent and premagnetization not completed yet.	Wait until the current controller has stabilized and premagnetization is completed. If the error cannot be acknowledged, the hardware is defective.
917543	DC current detection	0x0E0027	DC current not plausible: raw value coming from the DC current transformer is too high.	The hardware is defective.
917544	Country invalid	0x0E0028	The country with the country code or sub-code requested does not exist. If the set country is invalid, there will be an immediate failure because there is no solution.	Reset country of use (P34).
917545	Power system error 1	0x0E0029	ENS checks are performed cyclically. A timer is defined which monitors the cycle time during each ENS check in an operating state. If this timer has not yet elapsed after completion of an ENS check, this error is discarded and the inverter enters fatal warning mode.	Check line voltage and system frequency.
917546	Power class	0x0E002A	Incorrect power class	Update the device; set correct power class.
917547	Insulation 1	0x0E002B	The check-back signal of the REFU iso measuring instrument (at digital input X17 pin 8) must be applied to LOW on entering the ACTIVATION phase. If this requirement is not met, the inverter enters fatal warning mode and emits the "Isolation1" error.	Check insulation of the system.

Error codes for REFUsol 012K/016K/020K/024K - UL

Code	Error message	Hex	Description	Action
917548	Insulation 2	0x0E002C	The ISO measuring instrument is queried and the maximum measuring time monitored in the ACTIVATION phase. If the ISO measuring instrument has failed to deliver a positive feedback after the maximum measuring time has elapsed, this error is inserted and the inverter enters fatal warning mode.	Check insulation of the system.
917549	AC curr. measurement	0x0E002D	AC current not plausible: raw value coming from the DC current transformer is too high.	Acknowledge error. Measure current limits and restart. If values are within normal ranges, there may be a short-circuit.
917550	Power system error 2	0x0E002E	Period watchdog in power monitoring module: a timer monitors the period of the controller cycle during operation. If this time has not yet elapsed after completion of a controller cycle, this error is discarded and the inverter enters fatal warning mode; otherwise, the system is late for one controller cycle.	Check line voltage and system frequency.
917551	DC voltage 1	0x0E002F	After the voltages have settled in the OFF state, the system checks whether the WR1 and WR2 (inverter 1 and inverter 2) DC link voltages are equal, i.e. if the difference between the DC link voltage measurements of stack1 and stack2 are above 30 V	Check DC voltage. Check insulation. If the error cannot be eliminated by balancing alone, the hardware must be checked.
917553	Lightning prot. error	0x0E0031	Lightning protection defective (at digital input X17 pin 7)	Check lightning protection and replace if necessary.
917554	Grid failure RZM	0x0E0032	If the control limit (40 volts) of the space vector modulation is exceeded, the inverter enters fatal warning mode.	Measure and verify the line voltage. Check cabling.
917555	DC voltage 3	0x0E0033	If the DC link voltage becomes too low (approx. 460 V), the inverter enters fatal warning mode.	Check DC voltage
917557	Overcurrent 5	0x0E0035	Failure: WR1 overcurrent	Acknowledge error. Measure current limits and restart. If values are within normal ranges, there may be a short-circuit.
917558	Overcurrent 6	0x0E0036	Failure: WR2 overcurrent	Acknowledge error. Measure current limits and restart. If values are within normal ranges, there may be a short-circuit.
917559	DC voltage 4	0x0E0037	The difference in the DC link voltages of the two stacks is higher than 100 V.	Check DC voltage. Check hardware (probably defective).

Error codes for REFUsol 012K/016K/020K/024K - UL

Code	Error message	Hex	Description	Action
917560	Power system error	0x0E0038	Overvoltage error: Is triggered in case of an extreme AC overvoltage, e.g., if the feedin is turned off, thus causing a high overvoltage which the ENS cannot detect quickly enough.	Check line voltage and system frequency.
917561	Overtemperature	0x0E0039	Line reactor cores very hot due to strongly reduced cooling air volume	Wait until the temperature of all 3 coolers have dropped below 40 °C.
917584	Overcurrent 1	0x0E0050	Warning: Power system overcurrent	Acknowledge error.
917585	Overcurrent 2	0x0E0051	Warning: WR2 overcurrent	Acknowledge error.
917586	Overcurrent 3	0x0E0052	Warning: WR1 overcurrent	Acknowledge error.
917587	Overcurrent 4	0x0E0053	Warning: DC overcurrent	Acknowledge error. Measure current limits and restart. If values are within normal ranges, there may be a short-circuit.
917760	Power sec error mess	0x0E0100	Error message from power section	There are further errors. See error memory.
1048577	Ethernet connection1	0x100001	Failed to establish Ethernet connection. The connection could not be established.	Check Ethernet connection. Check IP address. Check server address. Check server port.
1048578	Ethernet connection2	0x100002	Ethernet connection disconnected. Failed to establish a socket.	Check Ethernet connection.
1048579	Ethernet connection3	0x100003	No 100-Mbits/sec Ethernet connection	Establish Ethernet connection with 100 Mbits/sec.
10551296	Default power	0xA10000	Event: Power reduction was requested.	None
10551297	Default cos phi	0xA10001	Event: Adjustment of the fed-in reactive power was requested.	None
10551298	Default p activation	0xA10002	Event: The power reduction functionality was activated or deactivated.	None
10551299	Activation cos phi	0xA10003	Event: The functionality for specifying the reactive power default value was activated or deactivated.	None