

TC.ACS Incident List

V02.70

General Information

Usage of the Document

This document serves as a guide and also as a reference work. Familiarize yourself with the contents of the document to operate the product efficiently. The document must be available at all times to the personnel who are operating the product.

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Customer Support

If you have any questions, your Regatron AG sales partner will be pleased to be of assistance. However, you can also reach Regatron Customer Support at support@regatron.com.

System Incident	Single Device Incident	Board	Incident Type	Incident message TC.ACS (Long)	Description	Possible Cause	Counteraction
102	1.2	Grid	Error	Invalid State	Invalid State		Contact customer support
105	1.5	Grid	Error	Error flash write	Error when writing flash file		Contact customer support
106	1.6	Grid	Error	timeout flash	Timeout when writing/deleting flash file		Contact customer support
108	1.8	Grid	Error	Invalid EEPROM table	Initialization of parameters failed		Contact customer support
114	1.14	Grid	Error	Flash page full	Error when writing flash file		Contact customer support
115	1.15	Grid	Error	Invalid interrupt routine called	Requested state not available	Firmware failure	Contact customer support
116	1.16	Grid	Error	Old EEPROM table loaded	Past to firmware update no up-to-date parameter table given yet	EEPROM completely erased and firmware updated	Contact customer support
201	2.1	Grid	Error	Overcurrent phase SYM	Peak current in intermediate balancing circuit too high	In-phase load between phases and neutral too high Malfunction in balancing circuit	Reduce output power Contact customer support
202	2.2	Grid	Error	Overcurrent I_0	Circuit current too high	Total current to grid too high Common mode voltages can not be compensated	Reduce common mode voltage of test object Galvanically separate from grid
203	2.3	Grid	Error	Overtemperature PCB	Overtemperature PCB	Ambient temperature too high front side fan defect	Reduce ambient temperature If front side fans don't spin, Contact customer support
204	2.4	Grid	Error	Overtemperature CASE	Overtemperature case	Ambient temperature too high rear side fan defect	Reduce ambient temperature If rear side fans don't spin, Contact customer support
205	2.5	Grid	Error	Overvoltage NP to PE	Midpoint voltage of DC link voltage too high in relation to PE	Common mode voltage of test object Ground fault of test object Hardware failure	Reduce common mode voltage of test object Galvanically separate from grid Contact customer support
206	2.6	Grid	Error	Broken HW IGBT Temperature L1	Temperature sensor IGBT L1 disconnected	Gate driver cable disconnected Hardware failure	Contact customer support

System Incident	Single Device Incident	Board	Incident Type	Incident message TC.ACS (Long)	Description	Possible Cause	Counteraction
207	2.7	Grid	Error	Broken HW IGBT Temperature L2	Temperature sensor IGBT L2 disconnected	Gate driver cable disconnected Hardware failure	Contact customer support
208	2.8	Grid	Error	Broken HW IGBT Temperature L3	Temperature sensor IGBT L3 disconnected	Gate driver cable disconnected Hardware failure	Contact customer support
209	2.9	Grid	Error	Broken HW IGBT Temperature SYM	Temperature sensor IGBT SYM disconnected	Gate driver cable disconnected Hardware failure	Contact customer support
210	2.10	Grid	Error	Broken HW Temperature PCB	Temperature sensor PCB disconnected	Controller board failure	Contact customer support
211	2.11	Grid	Error	Broken HW Temperature Case	Temperature sensor Case disconnected	NTC cable disconnected Hardware failure	Contact customer support
301	3.1	Grid	Error	Overcurrent Phase L1	Peak current phase L1 too high	Output power too high Mains undervoltage transient	Reduce output power. Check supply voltage
302	3.2	Grid	Error	Overcurrent Phase L2	Peak current phase L2 too high	Output power too high Mains undervoltage transient	Reduce output power. Check supply voltage
303	3.3	Grid	Error	Overcurrent Phase L3	Peak current phase L3 too high	Output power too high Mains undervoltage transient	Reduce output power. Check supply voltage
304	3.4	Grid	Error	Fault Current (sum of Phase current)	Total of phase currents too high	Saturation of CM-inductor Ground fault ACS	Contact customer support
305	3.5	Grid	Error	Overvoltage grid	Phase to phase connection voltage too high	Overvoltage on grid	check voltage supply
306	3.6	Grid	Error	Undervoltage grid	Phase to phase connection voltage too low	Undervoltage on grid	check voltage supply
307	3.7	Grid	Error	Overvoltage DC	Over voltage on DC voltage link	Regenerative power too high load cycles too fast	Reduce regenerative power slower load cycles Activate power feed forward (Contact customer support)
308	3.8	Grid	Error	Undervoltage DC	Undervoltage on DC voltage link	Output power too high load cycles too fast	Reduce regenerative power (reduce load) slower load cycles Activate power feed forward (Contact customer support)

System Incident	Single Device Incident	Board	Incident Type	Incident message TC.ACS (Long)	Description	Possible Cause	Counteraction
309	3.9	Grid	Error	Voltagefault NP	Error voltage NP	In phase load at output too high Balancing circuit defect	Reduce phase load at output Contact customer support
310	3.10	Grid	Error	Frequency grid	Frequency deviation grid	Grid frequency beyond tolerance	Check waveform of grid voltages
311	3.11	Grid	Error	Synchronisation grid	Failure in grid synchronization	PLL cannot synchronize to grid Frequency beyond tolerance	Check waveform of grid voltages
312	3.12	Grid	Error	Timeout charging	Timeout while charging the intermediate circuit	Precharge circuit defect Charging current too low	Contact customer support
313	3.13	Grid	Error	Overtemperature1	Overtemperature phase L1	Temperature of cooling liquid too high	Reduce temperature of cooling liquid
314	3.14	Grid	Error	Overtemperature2	Overtemperature phase L2	Temperature of cooling liquid too high	Reduce temperature of cooling liquid
315	3.15	Grid	Error	Overtemperature3	Overtemperature phase L3	Temperature of cooling liquid too high	Reduce temperature of cooling liquid
316	3.16	Grid	Error	Overtemperature4	Overtemperature phase SYM	Temperature of cooling liquid too high	Reduce temperature of cooling liquid
401	4.1	Grid	Error	DESAT Phase L1 S1	Fast hardware detection of overcurrent in bridge phase L1 S1	IGBT phase L1 defect	In case of repeated occurrence Contact customer support
402	4.2	Grid	Error	DESAT Phase L1 S2	Fast hardware detection of overcurrent in bridge phase L1 S2	IGBT phase L1 defect	In case of repeated occurrence Contact customer support
403	4.3	Grid	Error	DESAT Phase L1 S3	Fast hardware detection of overcurrent in bridge phase L1 S3	IGBT phase L1 defect	In case of repeated occurrence Contact customer support
404	4.4	Grid	Error	DESAT Phase L1 S4	Fast hardware detection of overcurrent in bridge phase L1 S4	IGBT phase L1 defect	In case of repeated occurrence Contact customer support
405	4.5	Grid	Error	DESAT Phase L2 S1	Fast hardware detection of overcurrent in bridge phase L2 S1	IGBT phase L2 defect	In case of repeated occurrence Contact customer support

System Incident	Single Device Incident	Board	Incident Type	Incident message TC.ACS (Long)	Description	Possible Cause	Counteraction
406	4.6	Grid	Error	DESAT Phase L2 S2	Fast hardware detection of overcurrent in bridge phase L2 S2	IGBT phase L2 defect	In case of repeated occurrence Contact customer support
407	4.7	Grid	Error	DESAT Phase L2 S3	Fast hardware detection of overcurrent in bridge phase L2 S3	IGBT phase L2 defect	In case of repeated occurrence Contact customer support
408	4.8	Grid	Error	DESAT Phase L2 S4	Fast hardware detection of overcurrent in bridge phase L2 S4	IGBT phase L2 defect	In case of repeated occurrence Contact customer support
409	4.9	Grid	Error	DESAT Phase L3 S1	Fast hardware detection of overcurrent in bridge phase L3 S1	IGBT phase L3 defect	In case of repeated occurrence Contact customer support
410	4.10	Grid	Error	DESAT Phase L3 S2	Fast hardware detection of overcurrent in bridge phase L3 S2	IGBT phase L3 defect	In case of repeated occurrence Contact customer support
411	4.11	Grid	Error	DESAT Phase L3 S3	Fast hardware detection of overcurrent in bridge phase L3 S3	IGBT phase L3 defect	In case of repeated occurrence Contact customer support
412	4.12	Grid	Error	DESAT Phase L3 S4	Fast hardware detection of overcurrent in bridge phase L3 S4	IGBT phase L3 defect	In case of repeated occurrence Contact customer support
413	4.13	Grid	Error	DESAT Phase L4 S1	Fast hardware detection of overcurrent in bridge phase L4 S1	IGBT phase L4/SYM defect	In case of repeated occurrence Contact customer support
414	4.14	Grid	Error	DESAT Phase L4 S2	Fast hardware detection of overcurrent in bridge phase L4 S2	IGBT phase L4/SYM defect	In case of repeated occurrence Contact customer support
415	4.15	Grid	Error	DESAT Phase L4 S3	Fast hardware detection of overcurrent in bridge phase L4 S3	IGBT phase L4/SYM defect	In case of repeated occurrence Contact customer support

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416	4.16	Grid	Error	DESAT Phase L4 S4	Fast hardware detection of overcurrent in bridge phase L4 S4	IGBT phase L4/SYM defect	In case of repeated occurrence Contact customer support
504	5.4	Grid	Error	Undervoltage +15V1	Undervoltage in 15 V voltage supply	Power supply of controller board cannot be sustained. Defect IGBT-driver or IGBT	Contact customer support
505	5.5	Grid	Error	Overvoltage +15V1	Overvoltage in 15 V voltage supply	Power supply of controller board cannot be sustained.	Contact customer support
506	5.6	Grid	Error	Undervoltage +15V	Undervoltage in 15 V voltage supply	Power supply of controller board cannot be sustained.	Contact customer support
507	5.7	Grid	Error	Overvoltage +15V	Overvoltage in 15 V voltage supply	Power supply of controller board cannot be sustained.	Contact customer support
508	5.8	Grid	Error	Undervoltage -15V	Undervoltage in -15 V voltage supply	Power supply of controller board cannot be sustained.	Contact customer support
509	5.9	Grid	Error	Overvoltage -15V	Overvoltage in -15 V voltage supply	Power supply of controller board cannot be sustained.	Contact customer support
512	5.12	Grid	Error	Undervoltage +24V	Undervoltage in 24 V voltage supply	Power supply defect	Contact customer support
513	5.13	Grid	Error	Overvoltage +24V	Overvoltage in 24 V voltage supply	Power supply defect	Contact customer support
601	6.1	Grid	Error	Overcurrent PLD L1	HW overcurrent cutoff phase L1	Fast increase of current in phase 1 Phase short-circuit IGBT defect	In case of repeated occurrence Contact customer support
602	6.2	Grid	Error	Overcurrent PLD L2	HW overcurrent cutoff phase L2	Fast increase of current in phase 2 Phase short-circuit IGBT defect	In case of repeated occurrence Contact customer support
603	6.3	Grid	Error	Overcurrent PLD L3	HW overcurrent cutoff phase L3	Fast increase of current in phase 3 Phase short-circuit IGBT defect	In case of repeated occurrence Contact customer support

System Incident	Single Device Incident	Board	Incident Type	Incident message TC.ACS (Long)	Description	Possible Cause	Counteraction
604	6.4	Grid	Error	Overcurrent PLD SYM	HW overcurrent cutoff phase SYM	Fast increase of current in phase SYM Phase short-circuit IGBT defect	In case of repeated occurrence Contact customer support
607	6.7	Grid	Error	Error PLD	Error in PLD	PLD defect	Contact customer support
610	6.10	Grid	Error	Frequency detect grid	Grid Frequency couldn't be identified	No valid frequency Broken fuse	Check fuses Disconnect/reconnect supply Manually edit frequency (Contact customer support)
713	7.13	Grid	Error	Communication watchdog	Monitoring of communication with external control (i.e. ACSControl) has been triggered	Communication connection broken between control and TC.ACS	Check USB or Ethernet connection
801	8.1	Grid	Error	Timeout ACSIO Communication	Internal communication failure	Communication connection broken	In case of repeated occurrence Contact customer support
804	8.4	Grid	Error	Timeout ACSIO Startup Communication	Internal communication failure	Communication connection broken	In case of repeated occurrence Contact customer support
901	9.1	Grid	Error	I2t Phase L1	Overload interval triggered. Too much power put out	Input current exceeds I2t limit	Reduce load, reduce interval of overload
902	9.2	Grid	Error	I2t Phase L2	Overload interval triggered. Too much power put out	Input current exceeds I2t limit	Reduce load, reduce interval of overload
903	9.3	Grid	Error	I2t Phase L3	Overload interval triggered. Too much power put out	Input current exceeds I2t limit	Reduce load, reduce interval of overload
904	9.4	Grid	Error	U2t UN-NP	Monitoring of damping resistance, harmonic load too high	Reference voltage at output beyond specification (voltage as related to frequency) Test object generates too high harmonic shares in current Saturation of the CM-Inductor	Check reference voltage against characteristic. Check output current against harmonics
1605	16.5	Grid	Error	Safety relais open	ISR failure	no ISR voltage supply	Check plug on X112-2 check external voltage supply 24 V of safety circuit

System Incident	Single Device Incident	Board	Incident Type	Incident message TC.ACS (Long)	Description	Possible Cause	Counteraction
1606	16.6	Grid	Error	Power Enable ACSO	HW connection failure	HW connection broken	In case of repeated occurrence Contact customer support
1607	16.7	Grid	Error	Undefined State	Internal firmware failure	Firmware failure	Contact customer support
3206	32.6	Grid	Error	Error Checksum	RS232 communication failure	RS232 cable too long	Check cable length Reduce connectors
3207	32.7	Grid	Error	Error Parity	RS232 communication failure	RS232 cable too long	Check cable length Reduce connectors
3208	32.8	Grid	Error	Error Overrun	RS232 communication failure	RS232 cable too long	Check cable length Reduce connectors
3209	32.9	Grid	Error	Error Framing	RS232 communication failure	RS232 cable too long	Check cable length Reduce connectors
3210	32.10	Grid	Error	Error Break	RS232 communication failure	RS232 cable too long	Check cable length Reduce connectors
3216	32.16	Grid	Error	Timeout	Timeout in talk communication / incomplete message	Connection failure at communication interface external/internal	Check external communication interfaces Contact customer support
4201	1.5	Load	Error	Error flash write	Error when writing flash file		Contact customer support
4202	1.6	Load	Error	timeout flash	Timeout when writing/deleting flash file		Contact customer support
4204	1.8	Load	Error	Invalid EEPROM table	Initialization of parameters failed		Contact customer support
4206	1.10	Load	Error	Invalid Configuration	An invalid configuration/value of a parameter is loaded		Contact customer support
4209	1.13	Load	Error	XINF access timing violation	Timing violates access to external repository		Contact customer support
4210	1.14	Load	Error	Flash page full	Flash is full		In case of repeated occurrence Contact customer support
4211	1.15	Load	Error	Invalid interrupt routine called	Requested state not available		In case of repeated occurrence Contact customer support
4212	1.16	Load	Error	Old EEPROM table loaded	Internal nonvolatile storage full	Might occur after firmware update of MainDSP	In case of repeated occurrence Contact customer support

System Incident	Single Device Incident	Board	Incident Type	Incident message TC.ACS (Long)	Description	Possible Cause	Counteraction
4297	2.1	Load	Error	Overcurrent phase A1L	Overcurrent phase A1L	Load resistance too low Load transformer saturation due to too high voltage time area according to waveform put out Load capacitance, too steep voltage slope Function generator / analog reference value not zero before restart	If capacities are set, reduce Reference Slope Limit via ACSControl. Reduce load. Avoid transformer saturation by selecting an appropriate waveform. Function generator / analog reference value stop before restart
4298	2.2	Load	Error	Overcurrent phase A1R	Overcurrent phase A1R	Load resistance too low Load transformer saturation due to too high voltage time area according to waveform put out Load capacitance, too steep voltage slope Function generator / analog reference value not zero before restart	If capacities are set, reduce Reference Slope Limit via ACSControl. Reduce load. Avoid transformer saturation by selecting an appropriate waveform. Function generator / analog reference value stop before restart
4299	2.3	Load	Error	Overcurrent phase B1L	Overcurrent phase B1L	Load resistance too low Load transformer saturation due to too high voltage time area according to waveform put out Load capacitance, too steep voltage slope Function generator / analog reference value not zero before restart	If capacities are set, reduce Reference Slope Limit via ACSControl. Reduce load. Avoid transformer saturation by selecting an appropriate waveform. Function generator / analog reference value stop before restart

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4300	2.4	Load	Error	Overcurrent phase B1R	Overcurrent phase B1R	Load resistance too low Load transformer saturation due to too high voltage time area according to waveform put out Load capacitance, too steep voltage slope Function generator / analog reference value not zero before restart	If capacities are set, reduce Reference Slope Limit via ACSControl. Reduce load. Avoid transformer saturation by selecting an appropriate waveform. Function generator / analog reference value stop before restart
4301	2.5	Load	Error	Overcurrent phase C1L	Overcurrent phase C1L	Load resistance too low Load transformer saturation due to too high voltage time area according to waveform put out Load capacitance, too steep voltage slope Function generator / analog reference value not zero before restart	If capacities are set, reduce Reference Slope Limit via ACSControl. Reduce load. Avoid transformer saturation by selecting an appropriate waveform. Function generator / analog reference value stop before restart
4302	2.6	Load	Error	Overcurrent phase C1R	Overcurrent phase C1R	Load resistance too low Load transformer saturation due to too high voltage time area according to waveform put out Load capacitance, too steep voltage slope Function generator / analog reference value not zero before restart	If capacities are set, reduce Reference Slope Limit via ACSControl. Reduce load. Avoid transformer saturation by selecting an appropriate waveform. Function generator / analog reference value stop before restart

System Incident	Single Device Incident	Board	Incident Type	Incident message TC.ACS (Long)	Description	Possible Cause	Counteraction
4303	2.7	Load	Error	Overcurrent phase N1L	Overcurrent phase N1L	Load resistance too low Load transformer saturation due to too high voltage time area according to waveform put out Load capacitance, too steep voltage slope Function generator / analog reference value not zero before restart	If capacities are set, reduce Reference Slope Limit via ACSControl. Reduce load. Avoid transformer saturation by selecting an appropriate waveform. Function generator / analog reference value stop before restart
4304	2.8	Load	Error	Overcurrent phase N1R	Overcurrent phase N1R	Load resistance too low Load transformer saturation due to too high voltage time area according to waveform put out Load capacitance, too steep voltage slope Function generator / analog reference value not zero before restart	If capacities are set, reduce Reference Slope Limit via ACSControl. Reduce load. Avoid transformer saturation by selecting an appropriate waveform. Function generator / analog reference value stop before restart
4305	2.9	Load	Error	Overcurrent phase A2	Overcurrent phase A2	Load resistance too low Load transformer saturation due to too high voltage time area according to waveform put out Load capacitance, too steep voltage slope Function generator / analog reference value not zero before restart	If capacities are set, reduce Reference Slope Limit via ACSControl. Reduce load. Avoid transformer saturation by selecting an appropriate waveform. Function generator / analog reference value stop before restart

System Incident	Single Device Incident	Board	Incident Type	Incident message TC.ACS (Long)	Description	Possible Cause	Counteraction
4306	2.10	Load	Error	Overcurrent phase B2	Overcurrent phase B2	Load resistance too low Load transformer saturation due to too high voltage time area according to waveform put out Load capacitance, too steep voltage slope Function generator / analog reference value not zero before restart	If capacities are set, reduce Reference Slope Limit via ACSControl. Reduce load. Avoid transformer saturation by selecting an appropriate waveform. Function generator / analog reference value stop before restart
4307	2.11	Load	Error	Overcurrent phase C2	Overcurrent phase C2	Load resistance too low Load transformer saturation due to too high voltage time area according to waveform put out Load capacitance, too steep voltage slope Function generator / analog reference value not zero before restart	If capacities are set, reduce Reference Slope Limit via ACSControl. Reduce load. Avoid transformer saturation by selecting an appropriate waveform. Function generator / analog reference value stop before restart
4308	2.12	Load	Error	Overcurrent phase N2	Overcurrent phase N2	Load resistance too low Load transformer saturation due to too high voltage time area according to waveform put out Load capacitance, too steep voltage slope Function generator / analog reference value not zero before restart	If capacities are set, reduce Reference Slope Limit via ACSControl. Reduce load. Avoid transformer saturation by selecting an appropriate waveform. Function generator / analog reference value stop before restart
4310	2.14	Load	Error	Overcurrent Sum of phase currents	Overcurrent of total of phase currents	Short-circuit to earth Load with earthed neutral conductor	Separate neutral conductor from earth Galvanically isolate system Contact customer support

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4311	2.15	Load	Error	Overcurrent Earth	Overcurrent earth	Short-circuit to earth Load with earthed neutral conductor	Separate neutral conductor from earth Galvanically isolate system Contact customer support
4312	2.16	Load	Error	DC-Overvoltage	Overvoltage dc link	Regenerative power too high Load cycles too fast Consecutive fault from device error on grid side (no regeneration possible)	Reduce regenerative power Slower load cycles Activate power feed forward (Contact customer support)
4397	3.1	Load	Error	Overvoltage phase A	Overvoltage at output terminal phase A/L1	External voltage too high	Reduce external voltage
4398	3.2	Load	Error	Overvoltage phase B	Overvoltage at output terminal phase B/L2	External voltage too high	Reduce external voltage
4399	3.3	Load	Error	Overvoltage phase C	Overvoltage at output terminal phase C/L3	External voltage too high	Reduce external voltage
4400	3.4	Load	Error	Overvoltage phase N	Overvoltage at output terminal phase N	External voltage too high	Reduce external voltage
4404	3.8	Load	Error	Overtemperature PCB	Overtemperature PCB	Ambient temperature too high front side fan defect	Reduce ambient temperature If front side fans don't spin, Contact customer support
4405	3.9	Load	Error	Overtemperature IGBT A1L	Overtemperature IGBT A1L	Overtemperature phase A Temperature of cooling liquid too high DC part in output current too high	Reduce temperature of cooling liquid Reduce DC-part in output current
4406	3.10	Load	Error	Overtemperature IGBT A1R	Overtemperature IGBT A1R	Overtemperature phase A Temperature of cooling liquid too high DC part in output current too high	Reduce temperature of cooling liquid Reduce DC-part in output current

System Incident	Single Device Incident	Board	Incident Type	Incident message TC.ACS (Long)	Description	Possible Cause	Counteraction
4407	3.11	Load	Error	Overtemperature IGBT B1L	Overtemperature IGBT B1L	Overtemperature phase B Temperature of cooling liquid too high DC part in output current too high	Reduce temperature of cooling liquid Reduce DC-part in output current
4408	3.12	Load	Error	Overtemperature IGBT B1R	Overtemperature IGBT B1R	Overtemperature phase B Temperature of cooling liquid too high DC part in output current too high	Reduce temperature of cooling liquid Reduce DC-part in output current
4409	3.13	Load	Error	Overtemperature IGBT C1L	Overtemperature IGBT C1L	Overtemperature phase C Temperature of cooling liquid too high DC part in output current too high	Reduce temperature of cooling liquid Reduce DC-part in output current
4410	3.14	Load	Error	Overtemperature IGBT C1R	Overtemperature IGBT C1R	Overtemperature phase C Temperature of cooling liquid too high DC part in output current too high	Reduce temperature of cooling liquid Reduce DC-part in output current
4411	3.15	Load	Error	Overtemperature IGBT N1L	Overtemperature IGBT N1L	Overtemperature phase N Temperature of cooling liquid too high DC part in output current too high	Reduce temperature of cooling liquid Reduce DC-part in output current
4412	3.16	Load	Error	Overtemperature IGBT N1R	Overtemperature IGBT N1R	Overtemperature phase N Temperature of cooling liquid too high DC part in output current too high	Reduce temperature of cooling liquid Reduce DC-part in output current
4497	4.1	Load	Error	DESAT Phase A1L	Fast detection of overcurrent in bridge phase A1L	IGBT Phase A defect	In case of repeated occurrence Contact customer support
4498	4.2	Load	Error	DESAT Phase A1R	Fast detection of overcurrent in bridge phase A1R	IGBT Phase A defect	In case of repeated occurrence Contact customer support
4499	4.3	Load	Error	DESAT Phase B1L	Fast detection of overcurrent in bridge phase B1L	IGBT Phase B defect	In case of repeated occurrence Contact customer support

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4500	4.4	Load	Error	DESAT Phase B1R	Fast detection of overcurrent in bridge phase B1R	IGBT Phase B defect	In case of repeated occurrence Contact customer support
4501	4.5	Load	Error	DESAT Phase C1L	Fast detection of overcurrent in bridge phase C1L	IGBT Phase C defect	In case of repeated occurrence Contact customer support
4502	4.6	Load	Error	DESAT Phase C1R	Fast detection of overcurrent in bridge phase C1R	IGBT Phase C defect	In case of repeated occurrence Contact customer support
4503	4.7	Load	Error	DESAT Phase N1L	Fast detection of overcurrent in bridge phase N1L	IGBT Phase N defect	In case of repeated occurrence Contact customer support
4504	4.8	Load	Error	DESAT Phase N1R	Fast detection of overcurrent in bridge phase N1R	IGBT Phase N defect	In case of repeated occurrence Contact customer support
4505	4.9	Load	Error	Overcurrent PLD	General Overcurrent PLD	Fast increase of current in phase Phase short-circuit IGBT defect	Analyze specific PLD Error
4506	4.10	Load	Error	Power Enable ACSC	Internal HW connection defect	HW connection broken Communication abort CTR.ACSC	In case of repeated occurrence Contact customer support
4507	4.11	Load	Error	Power Enable ACSI	Internal HW connection defect	HW connection broken Communication abort CTR.ACSI	In case of repeated occurrence Contact customer support
4508	4.12	Load	Error	Power Enable Safety Relais	ISR failure	no ISR voltage supply	Check plug on X112-1. Check external voltage supply 24 V of safety circuit
4509	4.13	Load	Error	Invalid Sens Voltage Phase A	Invalid sense voltage phase A/L1	Sense voltage of phase A beyond specified area Sense measuring configured wrong (scaling factor)	Check measuring of sense voltage Check scaling factor Check transformer turns ratio
4510	4.14	Load	Error	Invalid Sens Voltage Phase B	Invalid sense voltage phase B/L2	Sense voltage of phase B beyond specified area Sense measuring configured wrong (scaling factor)	Check measuring of sense voltage Check scaling factor Check transformer turns ratio

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4511	4.15	Load	Error	Invalid Sens Voltage Phase C	Invalid sense voltage phase C/L3	Sense voltage of phase C beyond specified area Sense measuring configured wrong (scaling factor)	Check measuring of sense voltage Check scaling factor Check transformer turns ratio
4597	5.1	Load	Error	Overvoltage +15V	Overvoltage in 15 V voltage supply	Power supply of controller board cannot be sustained.	Contact customer support
4598	5.2	Load	Error	Undervoltage +15V	Undervoltage in 15 V voltage supply	Power supply of controller board cannot be sustained.	Contact customer support
4599	5.3	Load	Error	Overvoltage +15V1	Overvoltage in 15 V voltage supply	Power supply of controller board cannot be sustained.	Contact customer support
4600	5.4	Load	Error	Undervoltage +15V1	Undervoltage in 15 V voltage supply	Power supply of controller board cannot be sustained.	Contact customer support
4601	5.5	Load	Error	Overvoltage +15V2	Overvoltage in 15 V voltage supply	Power supply of controller board cannot be sustained. Defect IGBTdriver or IGBT	Contact customer support
4602	5.6	Load	Error	Undervoltage +15V2	Undervoltage in 15 V voltage supply	Power supply of controller board cannot be sustained.	Contact customer support
4603	5.7	Load	Error	Overvoltage -15V	Overvoltage in -15 V voltage supply	Power supply of controller board cannot be sustained.	Contact customer support
4604	5.8	Load	Error	Undervoltage -15V	Undervoltage in -15 V voltage supply	Power supply of controller board cannot be sustained.	Contact customer support
4605	5.9	Load	Error	Overvoltage +24V	Overvoltage in 24 V voltage supply	Auxiliary power supply defect	Contact customer support
4606	5.10	Load	Error	Undervoltage +24V	Undervoltage in 24 V voltage supply	Auxiliary power supply defect	Contact customer support
4697	6.1	Load	Error	Overcurrent PLD A1L	HW overcurrent cutoff phase A	Fast increase of current in phase A Phase short-circuit IGBT defect	Check output wiring If problem occurs without load connected, Contact customer support
4698	6.2	Load	Error	Overcurrent PLD A1R	HW overcurrent cutoff phase A	Fast increase of current in phase A Phase short-circuit IGBT defect	Check output wiring If problem occurs without load connected, Contact customer support

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4699	6.3	Load	Error	Overcurrent PLD B1L	HW overcurrent cutoff phase B	Fast increase of current in phase B Phase short-circuit IGBT defect	Check output wiring If problem occurs without load connected, Contact customer support
4700	6.4	Load	Error	Overcurrent PLD B1R	HW overcurrent cutoff phase B	Fast increase of current in phase B Phase short-circuit IGBT defect	Check output wiring If problem occurs without load connected, Contact customer support
4701	6.5	Load	Error	Overcurrent PLD C1L	HW overcurrent cutoff phase C	Fast increase of current in phase C Phase short-circuit IGBT defect	Check output wiring If problem occurs without load connected, Contact customer support
4702	6.6	Load	Error	Overcurrent PLD C1R	HW overcurrent cutoff phase C	Fast increase of current in phase C Phase short-circuit IGBT defect	Check output wiring If problem occurs without load connected, Contact customer support
4703	6.7	Load	Error	Overcurrent PLD N1L	HW overcurrent cutoff phase N	Fast increase of current in phase N Phase short-circuit IGBT defect	Check output wiring If problem occurs without load connected, Contact customer support
4704	6.8	Load	Error	Overcurrent PLD N1R	HW overcurrent cutoff phase N	Fast increase of current in phase N Phase short-circuit IGBT defect	Check output wiring If problem occurs without load connected, Contact customer support
4705	6.9	Load	Error	Overload i2t IA	Overload phase A	Overload interval phase A triggered. Load too high (too much power)	Reduce load
4706	6.10	Load	Error	Overload i2t IB	Overload phase B	Overload interval phase B triggered. Load too high (too much power)	Reduce load
4707	6.11	Load	Error	Overload i2t IC	Overload phase C	Overload interval phase C triggered. Load too high (too much power)	Reduce load
4708	6.12	Load	Error	Overload i2t IN	Overload phase N	Overload interval phase N triggered. Load too high (too much power)	Reduce load
4709	6.13	Load	Error	Overload i2t IA Out Cap	Overload I2t IA Out Cap	Frequency and amplitude of voltage for output filter too high in phase A Output filter oscillation (Loadmode)	Reduce frequency or amplitude of voltage in phase A/L1 Loadmode circuit with more damping

System Incident	Single Device Incident	Board	Incident Type	Incident message TC.ACS (Long)	Description	Possible Cause	Counteraction
4710	6.14	Load	Error	Overload i2t IB Out Cap	Overload I2t IB Out Cap	Frequency and amplitude of voltage for output filter too high in phase B Output filter oscillation (Loadmode)	Reduce frequency or amplitude of voltage in phase B/L2 Loadmode circuit with more damping
4711	6.15	Load	Error	Overload i2t IC Out Cap	Overload I2t IC Out Cap	Frequency and amplitude of voltage for output filter too high in phase C Output filter oscillation (Loadmode)	Reduce frequency or amplitude of voltage in phase C/L3 Loadmode circuit with more damping
4712	6.16	Load	Error	Overload i2t IN Out Cap	Overload I2t IN Out Cap	Frequency and amplitude of voltage for output filter too high in phase N Output filter oscillation (Loadmode)	Reduce frequency or amplitude of voltage in phase N Loadmode circuit with more damping
4797	7.1	Load	Error	Preset distribution bus has no connection	Multi-Device connection (X601/X602) between the devices is not given	Multi-device connection (X601/X602) between the devices is broken No master on the bus or master off-line	Check Multi-device connection (X601/X602) between the devices Turn on master device Configure device as master
4809	7.13	Load	Error	Communication watchdog	Monitoring of communication with external control (i.e. ACSControl) has been triggered	Communication connection broken between control and TC.ACS	Check USB or Ethernet connection
4897	8.1	Load	Error	Timeout ACSIO Communication	Internal firmware error	Hardware defect	Contact customer support
4898	8.2	Load	Error	Timeout AMC1210 Communication	Internal firmware error	Hardware defect	Contact customer support
4899	8.3	Load	Error	Data not ready AMC1210	Internal firmware error	Hardware defect	Contact customer support
4900	8.4	Load	Error	Overrun transmit buffer ACSIO	Internal firmware error	Hardware defect	Contact customer support
5004	9.8	Load	Error	Broken HW PCB Temperature	Temperature sensor PCB not connected	Failure controller board	Contact customer support
5005	9.9	Load	Error	Broken HW IGBT Temperature A1L	Temperature sensor IGBT AL not connected	Gate driver cable disconnected Hardware defect	Contact customer support
5006	9.10	Load	Error	Broken HW IGBT Temperature A1R	Temperature sensor IGBT AR not connected	Gate driver cable disconnected Hardware defect	Contact customer support

System Incident	Single Device Incident	Board	Incident Type	Incident message TC.ACS (Long)	Description	Possible Cause	Counteraction
5007	9.11	Load	Error	Broken HW IGBT Temperature B1L	Temperature sensor IGBT BL not connected	Gate driver cable disconnected Hardware defect	Contact customer support
5008	9.12	Load	Error	Broken HW IGBT Temperature B1R	Temperature sensor IGBT BR not connected	Gate driver cable disconnected Hardware defect	Contact customer support
5009	9.13	Load	Error	Broken HW IGBT Temperature C1L	Temperature sensor IGBT CL not connected	Gate driver cable disconnected Hardware defect	Contact customer support
5010	9.14	Load	Error	Broken HW IGBT Temperature C1R	Temperature sensor IGBT CR not connected	Gate driver cable disconnected Hardware defect	Contact customer support
5011	9.15	Load	Error	Broken HW IGBT Temperature N1L	Temperature sensor IGBT NL not connected	Gate driver cable disconnected Hardware defect	Contact customer support
5012	9.16	Load	Error	Broken HW IGBT Temperature N1R	Temperature sensor IGBT NR not connected	Gate driver cable disconnected Hardware defect	Contact customer support
5097	10.1	Load	Error	Overvoltage Sense phase A	Sense voltage phase A/L1 too high	Sense voltage of phase A/L1 beyond specified area	Check sense voltage Adapt voltage limits
5098	10.2	Load	Error	Overvoltage Sense phase B	Sense voltage phase B/L2 too high	Sense voltage of phase B/L2 beyond specified area	Check sense voltage Adapt voltage limits
5099	10.3	Load	Error	Overvoltage Sense phase C	Sense voltage phase C/L3 too high	Sense voltage of phase C/L3 beyond specified area	Check sense voltage Adapt voltage limits
5101	10.5	Load	Error	Overtemperature junction A	Junction temperature IGBT Phase A to high	DC current too high	reduce DC Current
5102	10.6	Load	Error	Overtemperature junction B	Junction temperature IGBT Phase B to high	DC current too high	reduce DC Current
5103	10.7	Load	Error	Overtemperature junction C	Junction temperature IGBT Phase C to high	DC current too high	reduce DC Current
5104	10.8	Load	Error	Overtemperature junction N	Junction temperature IGBT Phase N to high	DC current too high	reduce DC Current
5109	10.13	Load	Error	Limiter apparent power	Apparent power load too high	Output load too high	reduce output voltage reduce load change load conditions

System Incident	Single Device Incident	Board	Incident Type	Incident message TC.ACS (Long)	Description	Possible Cause	Counteraction
5110	10.14	Load	Error	Limiter active power	Active power load too high	Output load too high	reduce output voltage reduce load change load conditions
5111	10.15	Load	Error	Limiter reactive power	Reactive power load too high	Output load too high	reduce output voltage reduce load change load conditions
5112	10.16	Load	Error	Currentlimiter 2nd Level	2nd level current Limiter to many triggers	Load resistance too low Load transformer saturation due to too high voltage time area according to waveform put out Load capacitance, too steep voltage slope	If capacities are set, reduce Reference Slope Limit via ACSControl. Reduce load. Avoid transformer saturation by selecting an appropriate waveform.
5701	16.5	Load	Error	Safety relais open	ISR failure	no ISR voltage supply	Check plug on X112-2 Check external voltage supply 24 V of safety circuit
5703	16.7	Load	Error	Undefined State	Invalid state of state machine	Internal firmware failure	Contact customer support
5704	16.8	Load	Error	State change not possible	Device cannot reach requested state	Output capacities cannot be discharged Poorly adjusted voltage measuring	Contact customer support
6797	27.1	Load	Warning	Preset distribution message fault	Slave received a corrupt message over preset distribution bus	EMC disturbance No/defect Bus terminator Defect Bus cable	Check Bus terminator and cabels Contact customer support if occurs once in a while during voltage on
7302	32.6	Load	Error	Error Checksum	RS232 communication failure	RS232 cable too long	Check cable length Reduce connectors
7303	32.7	Load	Error	Error Parity	RS232 communication failure	RS232 cable too long	Check cable length Reduce connectors
7304	32.8	Load	Error	Error Overrun	RS232 communication failure	RS232 cable too long	Check cable length Reduce connectors
7305	32.9	Load	Error	Error Framing	RS232 communication failure	RS232 cable too long	Check cable length Reduce connectors

System Incident	Single Device Incident	Board	Incident Type	Incident message TC.ACS (Long)	Description	Possible Cause	Counteraction
7306	32.10	Load	Error	Error Break	RS232 communication failure	RS232 cable too long	Check cable length Reduce connectors
7307	32.11	Load	Error	Timeout processing Answer	Timeout in Talk communication / message cannot be replied	Internal error	Check external communication interfaces In case of repeated occurrence Contact customer support
7311	32.15	Load	Error	Error Debug	Debug-failure		Contact customer support
7312	32.16	Load	Error	Timeout	Timeout in talk communication / incomplete message	Connection failure at communication interface external/internal	Check external communication interfaces Contact customer support
8192	1.0	Control	Error	Communication EtherCAT Port 0	No MDIO communication possible to PHY of EtherCAT Port 0 or wrong PHY	Hardware problem. CTR.ACSC hardware needs to be checked in the area EtherCAT Port 0.	Contact customer support
8193	1.1	Control	Error	Communication EtherCAT Port 1	No MDIO communication possible to PHY of EtherCAT Port 1 or wrong PHY	Hardware problem. CTR.ACSC hardware needs to be checked in the area EtherCAT Port 1.	Contact customer support
8194	1.2	Control	Error	Clock Synthesizer Configuration	Failure in configuration of Clock Synthesizer	Hardware problem. CTR.ACSC hardware needs to be checked in the area of Clock Synthesizer.	Contact customer support
8195	1.3	Control	Error	I/O Expander Configuration	Failure in configuration of I/O Expander	Hardware problem. CTR.ACSC hardware needs to be checked in the area I/O Expander.	Contact customer support
8196	1.4	Control	Error	RTC Communication	Failure in communication with external RTC	Hardware problem. CTR.ACSC hardware needs to be checked in the area of external RTC.	Contact customer support
8197	1.5	Control	Error	Real time invalid	Real time invalid	Real time hasn't been set on the device or back-up battery is empty.	Contact customer support
8198	1.6	Control	Error	I2C I/O Expander	I2C error I/O Expander	Hardware problem. CTR.ACSC hardware needs to be checked in the area I/O Expander.	Contact customer support

System Incident	Single Device Incident	Board	Incident Type	Incident message TC.ACS (Long)	Description	Possible Cause	Counteraction
8199	1.7	Control	Error	I2C external RTC	I2C error external RTC	Hardware problem. CTR.ACSC hardware needs to be checked in the area of external RTC.	Contact customer support
8200	1.8	Control	Error	EEPROM deleting table 1	EEPROM failure when deleting table 1	Hardware problem. CTR.ACSC hardware needs to be checked in the area NOR Flash.	Contact customer support
8201	1.9	Control	Error	EEPROM deleting table 2	EEPROM failure when deleting table 2	Hardware problem. CTR.ACSC hardware needs to be checked in the area NOR Flash.	Contact customer support
8202	1.10	Control	Error	EEPROM loading / saving Parameters	EEPROM failure when loading or saving persistent parameters	Hardware problem. CTR.ACSC hardware needs to be checked in the area NOR Flash.	Contact customer support
8203	1.11	Control	Error	EEPROM loading / saving Licenses	EEPROM failure when loading or saving licenses	Hardware problem. CTR.ACSC hardware needs to be checked in the area NOR Flash.	Contact customer support
8204	1.12	Control	Warning	Parameter Table out of Date	Table of persistent parameters not up to date	New persistent parameters have been initialized and saved. These might need to adjusted to the application.	If this warning is shown after a firmware update it can be deleted. In this situation it is only an information that new parameters were initialized. If this warning is shown in an other situation as after a firmware update Contact customer support.
8205	1.13	Control	Error	Parameter Table invalid	No valid table of persistent parameters	All persistent parameters have been reset to default values	Contact customer support
8206	1.14	Control	Error	License Table out of Date	License table not up to date	License table has been converted to new format. Licenses should be checked.	Contact customer support
8207	1.15	Control	Error	License Table invalid	No valid license table	No valid license table provided	Contact customer support
8208	1.16	Control	Error	Timeout Talk DPRAM	Timeout in Talk communication via slave port DPRAM	Hardware problem. Connection between CTR.ACSC and CTR.ACSO must be checked.	Contact customer support

System Incident	Single Device Incident	Board	Incident Type	Incident message TC.ACS (Long)	Description	Possible Cause	Counteraction
8209	1.17	Control	Error	Talk Checksum	Error in checksum of Talk communication	Checksum of a received Talk frame was invalid.	Check connection (USB, Ethernet)
8210	1.18	Control	Error	Talk Overflow Receive	Overflow of Talk receiving queue	Receiving queue for Talk communication has overflowed. There may be too many open connections or replies to requests have not been waited for	Contact customer support
8211	1.19	Control	Error	Data Lines DPRAM	Test of slave port DPRAM Data lines failed	Hardware problem. Connection between CTR.ACSC and CTR.ASCO must be checked.	Contact customer support
8212	1.20	Control	Error	Address Lines DPRAM	Test of slave port DPRAM Address lines failed	Hardware problem. Connection between CTR.ACSC and CTR.ASCO must be checked.	Contact customer support
8213	1.21	Control	Error	Integrity DPRAM	Test of slave port DPRAM Integrity failed	Hardware problem. Connection between CTR.ACSC and CTR.ASCO must be checked.	Contact customer support
8214	1.22	Control	Error	Connection DPRAM	Slave Port DPRAM not connected or not ready	Hardware problem. Connection between CTR.ACSC and CTR.ASCO must be checked. Supply to CTR.ASCO must be checked	Contact customer support
8215	1.23	Control	Error	Connection CTR.ACSCO	CTR.ACSCO not connected or not ready	Hardware problem. Connection between CTR.ACSC and CTR.ASCO must be checked. Supply to CTR.ASCO must be checked	Contact customer support
8216	1.24	Control	Warning	Clearing Errors Timeout	Timeout when clearing errors (CTR.ACSCO and/or CTR.ACSI)	CTR.ACSI and/or CTR.ACSCO are not accessible, off-line or defect.	Contact customer support
8217	1.25	Control	Error	Standby-Update Timeout	Timeout when changing states from 'Standby' to 'Update' (CTR.ACSCO and/or CTR.ACSI)	CTR.ACSI and/or CTR.ACSCO are not accessible, off-line or defect.	Contact customer support

System Incident	Single Device Incident	Board	Incident Type	Incident message TC.ACS (Long)	Description	Possible Cause	Counteraction
8218	1.26	Control	Error	Standby-Update Timeout	Timeout when changing states from 'Standby' to 'Test' (CTR.ACSCO and/or CTR.ACSI)	CTR.ACSI and/or CTR.ACSCO are not accessible, off-line or defect.	Contact customer support
8219	1.27	Control	Error	Standby-Ready Timeout CTR.ACSI	Timeout when changing states from 'Standby' to 'Ready to switch on' (CTR.ACSI)	CTR.ACSI and/or CTR.ACSCO are not accessible, off-line or defect.	Contact customer support
8220	1.28	Control	Error	Update-Standby Timeout	Timeout when changing states from 'Update' to 'Standby' (CTR.ACSCO and/or CTR.ACSI)	CTR.ACSI and/or CTR.ACSCO are not accessible, off-line or defect.	Contact customer support
8221	1.29	Control	Error	Test-Standby Timeout	Timeout when changing states from 'Test' to 'Standby' (CTR.ACSCO and/or CTR.ACSI)	CTR.ACSI and/or CTR.ACSCO are not accessible, off-line or defect.	Contact customer support
8222	1.30	Control	Error	Ready-Standby Timeout CTR.ACSI	Timeout when changing states from 'Ready to switch on' to 'Standby' (CTR.ACSI)	CTR.ACSI and/or CTR.ACSCO are not accessible, off-line or defect.	Contact customer support
8223	1.31	Control	Error	Standby-SwitchedOn Timeout CTR.ACSCO	Timeout when changing states from 'Standby' to 'Switched on' (CTR.ACSCO)	CTR.ACSI and/or CTR.ACSCO are not accessible, off-line or defect.	Contact customer support
8224	1.32	Control	Error	Ready-Standby Timeout Error	Timeout when changing states from 'Ready to switch on' to 'Standby' (CTR.ACSCO and/or CTR.ACSI)	CTR.ACSI and/or CTR.ACSCO are not accessible, off-line or defect.	Contact customer support
8225	1.33	Control	Error	SwitchedOn-Ready Timeout CTR.ACSCO	Timeout when changing states from 'Switched on' to 'Ready to switch on' (CTR.ACSCO)	CTR.ACSI and/or CTR.ACSCO are not accessible, off-line or defect.	Contact customer support
8226	1.34	Control	Error	SwitchedOn-Standby Timeout CTR.ACSCO	Timeout when changing states from 'Switched on' to 'Update' (CTR.ACSCO)	CTR.ACSI and/or CTR.ACSCO are not accessible, off-line or defect.	Contact customer support
8227	1.35	Control	Error	SwitchedOn-Standby Timeout CTR.ACSI	Timeout when changing states from 'Switched on' to 'Standby' (CTR.ACSI)	CTR.ACSI and/or CTR.ACSCO are not accessible, off-line or defect.	Contact customer support

System Incident	Single Device Incident	Board	Incident Type	Incident message TC.ACS (Long)	Description	Possible Cause	Counteraction
8228	1.36	Control	Error	SwitchedOn-Standby Timeout Error	Timeout when changing states from 'Switched on' to 'Standby' (CTR.ACISO and/or CTR.ACSI)	CTR.ACSI and/or CTR.ACISO are not accessible, off-line or defect.	Contact customer support
8229	1.37	Control	Error	SwitchedOn-Ready Timeout Error	Timeout when changing states from 'Switched on' to 'Ready to switch on' (CTR.ACISO)	CTR.ACSI and/or CTR.ACISO are not accessible, off-line or defect.	Contact customer support
8230	1.38	Control	Warning	Clearing Errors Timeout Slave	Timeout when clearing errors (slave devices)	One or more slave devices seperated from Multi-Device Communication Bus, off line or defect.	Check the connections for Multi-Device Communication Bus (X603/X604)
8231	1.39	Control	Error	Standby-Update Timeout Slave	Timeout when changing states from 'Standby' to 'Update' (slave devices)	One or more slave devices seperated from Multi-Device Communication Bus, off line or defect.	Check the connections for Multi-Device Communication Bus (X603/X604)
8232	1.40	Control	Error	Standby-Test Timeout Slave	Timeout when changing states from 'Standby' to 'Test' (slave devices)	One or more slave devices seperated from Multi-Device Communication Bus, off line or defect.	Check the connections for Multi-Device Communication Bus (X603/X604)
8233	1.41	Control	Error	Standby-Ready Timeout Slave	Timeout when changing states from 'Standby' to 'Ready to switch on' (slave devices)	One or more slave devices seperated from Multi-Device Communication Bus, off line or defect.	Check the connections for Multi-Device Communication Bus (X603/X604)
8234	1.42	Control	Error	Update-Standby Timeout Slave	Timeout when changing states from 'Update' to 'Standby' (slave devices)	One or more slave devices seperated from Multi-Device Communication Bus, off line or defect.	Check the connections for Multi-Device Communication Bus (X603/X604)
8235	1.43	Control	Error	Test-Standby Timeout Slave	Timeout when changing states from 'Test' to 'Standby' (slave devices)	One or more slave devices seperated from Multi-Device Communication Bus, off line or defect.	Check the connections for Multi-Device Communication Bus (X603/X604)

System Incident	Single Device Incident	Board	Incident Type	Incident message TC.ACS (Long)	Description	Possible Cause	Counteraction
8236	1.44	Control	Error	Ready-Standby Timeout Slave	Timeout when changing states from 'Ready to switch on' to 'Standby' (slave devices)	One or more slave devices seperated from Multi-Device Communication Bus, off line or defect.	Check the connections for Multi-Device Communication Bus (X603/X604)
8237	1.45	Control	Error	Ready-SwitchedOn Timeout Slave	Timeout when changing states from 'Ready to switch on' to 'Switched on' (slave devices)	One or more slave devices seperated from Multi-Device Communication Bus, off line or defect.	Check the connections for Multi-Device Communication Bus (X603/X604)
8238	1.46	Control	Error	Ready-SwitchedOn Timeout Master	Timeout when changing states from 'Ready to switch on' to 'Switched on' (master device)	One or more slave devices seperated from Multi-Device Communication Bus, off line or defect.	Check the connections for Multi-Device Communication Bus (X603/X604)
8239	1.47	Control	Error	SwitchedOn-Ready Timeout Master	Timeout when changing states from 'Switched on' to 'Ready to switch on' (master device)	One or more slave devices seperated from Multi-Device Communication Bus, off line or defect.	Check the connections for Multi-Device Communication Bus (X603/X604)
8240	1.48	Control	Error	SwitchedOn-Ready Timeout Slave	Timeout when changing states from 'Switched on' to 'Ready to switch on' (slave devices)	One or more slave devices seperated from Multi-Device Communication Bus, off line or defect.	Check the connections for Multi-Device Communication Bus (X603/X604)
8241	1.49	Control	Error	SwitchedOn-Standby Timeout Master	Timeout when changing states from 'Switched on' to 'Standby' (master device)	One or more slave devices seperated from Multi-Device Communication Bus, off line or defect.	Check the connections for Multi-Device Communication Bus (X603/X604)
8242	1.50	Control	Error	SwitchedOn-Standby Timeout Slave	Timeout when changing states from 'Switched on' to 'Standby' (slave devices)	One or more slave devices seperated from Multi-Device Communication Bus, off line or defect.	Check the connections for Multi-Device Communication Bus (X603/X604)
8243	1.51	Control	Error	Unexpected exit from the EtherCAT state 'Operational'	Unexpected exit from the EtherCAT state 'Operational'		

System Incident	Single Device Incident	Board	Incident Type	Incident message TC.ACS (Long)	Description	Possible Cause	Counteraction
8244	1.52	Control	Error	Function generator output queue empty	Function generator output queue empty	Too many block changes in a short time Main task function generator not served	Configure less block changes in a short time
8245	1.53	Control	Error	Standby-Reset CTR.ACSI Timeout	Timeout when changing states from 'Standby' to 'Reset CTR.ACSI'	CTR.ACSI and/or CTR.ACSC are not accessible, off-line or defect.	Contact customer support
8246	1.54	Control	Error	Reset CTR.ACSI-Reset CTR.ACSC Timeout	Timeout when changing states from 'Reset CTR.ACSI' to 'Reset CTR.ACSC'	CTR.ACSI and/or CTR.ACSC are not accessible, off-line or defect.	Contact customer support
8247	1.55	Control	Error	Reset CTR.ACSC-Reset CTR.ACSC Timeout	Timeout when changing states from 'Reset CTR.ACSC' to 'Reset CTR.ACSC'	CTR.ACSI and/or CTR.ACSC are not accessible, off line or defect.	Contact customer support
8248	1.56	Control	Error	Standby-Reset Timeout Slave	Timeout when changing states from 'Standby' to 'Reset' (slave devices)	One or more slave devices separated from Multi-Device Communication Bus, off line or defect.	Check the connections for Multi-Device Communication Bus (X603/X604)
8249	1.57	Control	Error	TC.VSE: Communication timeout	Communication between TC.VSE and TC.ACS is broken	Incorrect or broken connection between TC.VSE and TC.ACS	Check the connection between TC.VSE and TC.ACS
8250	1.58	Control	Error	TC.VSE: Collective error	One or more errors on TC.VSE occurred	One or more errors on TC.VSE occurred	One or more errors on TC.VSE occurred
8251	1.59	Control	Error	TC.VSE: Not connected	TC.VSE was not connected when trying to use it	TC.VSE is disabled via a digital input. Incorrect or broken connection between TC.VSE and TC.ACS.	Enable TC.VSE via the digital input. Check the connection between TC.VSE and TC.ACS
8252	1.60	Control	Error	TC.VSE: Wrong state for VSE functionality (not switched to AC line 1 or 2)	VSE functionality is enabled but TC.VSE is in a wrong state (not switched to AC line 1 or 2)	TC.VSE is disabled via a digital input. Incorrect or broken connection between TC.VSE and TC.ACS. One or more errors on TC.VSE occurred	Enable TC.VSE via the digital input. Check the connection between TC.VSE and TC.ACS Connect VSEControl with TC.VSE to check the errors

System Incident	Single Device Incident	Board	Incident Type	Incident message TC.ACS (Long)	Description	Possible Cause	Counteraction
8253	1.61	Control	Error	TC.VSE: Wrong state to start function generator with VSE functionality (not switched to AC line 1 or 2)	The function generator was started but the TC.VSE is in a wrong state (not switched to AC line 1 or 2).	TC.VSE is disabled via a digital input. Incorrect or broken connection between TC.VSE and TC.ACS. One or more errors on TC.VSE occurred	Enable TC.VSE via the digital input. Check the connection between TC.VSE and TC.ACS Connect VSEControl with TC.VSE to check the errors
8254	1.62	Control	Error	TC.VSE: Timeout during state change	Timeout during a state change on TC.VSE.	TC.VSE is disabled via a digital input. Incorrect or broken connection between TC.VSE and TC.ACS. One or more errors on TC.VSE occurred	Enable TC.VSE via the digital input. Check the connection between TC.VSE and TC.ACS Connect VSEControl with TC.VSE to check the errors
8255	1.63	Control	Error	TC.VSE: Wrong state	TC.VSE changed to a different state than expected.	TC.VSE is disabled via a digital input. Incorrect or broken connection between TC.VSE and TC.ACS. One or more errors on TC.VSE occurred	Enable TC.VSE via the digital input. Check the connection between TC.VSE and TC.ACS Connect VSEControl with TC.VSE to check the errors
8256	1.64	Control	Error	Enable signal missing	Optional enable signal not present	Optional enable signal function is enabled and a "switch on" try with enable signal not present or enable signal removed while system is "switched on"	Check for correct enable signal cabling Check if the enable signal has been released by the periphery devices
8257	1.65	Control	Error	No signal to synchronise phase A	There is no signal to synchronize phase A of the function generator on the input of the synchronisation.	Nothing connected on the analog input 1. Signal level to low. Frequency of the signal to low.	Check the connection to the analog input 1. Check the signal level that it is greater than lower limit. Check the frequency level of the signal that it is greater than lower limit.

System Incident	Single Device Incident	Board	Incident Type	Incident message TC.ACS (Long)	Description	Possible Cause	Counteraction
8258	1.66	Control	Error	No signal to synchronise phase B	There is no signal to synchronize phase B of the function generator on the input of the synchronisation.	Nothing connected on the analog input 2. Signal level to low. Frequency of the signal to low.	Check the connection to the analog input 2. Check the signal level that it is greater than lower limit. Check the frequency level of the signal that it is greater than lower limit.
8259	1.67	Control	Error	No signal to synchronise phase C	There is no signal to synchronize phase C of the function generator on the input of the synchronisation.	Nothing connected on the analog input 3. Signal level to low. Frequency of the signal to low.	Check the connection to the analog input 3. Check the signal level that it is greater than lower limit. Check the frequency level of the signal that it is greater than lower limit.
8260	1.68	Control	Error	Inconsistent multi device configuration	Controller board and Load board do not have the same multi device configuration	Talk protocol error	Check and reset the 'multi device configuration', store settings and reset system
8261	1.69	Control	Error	Talk USB tx byte not available	Error with USB transmitter	Talk message is no longer valid	Contact customer support
8262	1.70	Control	Error	Talk ethernet tx byte not available	Error with ethernet transmitter	Talk message is no longer valid	Contact customer support
8263	1.71	Control	Error	Talk handler out of memory	Overflow of Talk memory at Talk handler	Memory for Talk communication has overflowed. There may be to many open connections or replies to request have not been waited for	Contact customer support
8264	1.72	Control	Error	Talk handler unkown destination	Controller board Talk access has no receiver at specified destination	Device ID, board ID (or port ID) may not exist on controller board	Contact customer support
8265	1.73	Control	Error	Talk handler undefined receive list	Talk handler has no receive list for processing	initialisation of device may have failed	Contact customer support

System Incident	Single Device Incident	Board	Incident Type	Incident message TC.ACS (Long)	Description	Possible Cause	Counteraction
8266	1.74	Control	Error	Talk handler unkown result	Talk handler has an unkown error	initialisation of device may have failed	Contact customer support
8267	1.75	Control	Error	Talk interface out of memory	Overflow of Talk memory at USB, ethernet access	Memory for Talk communication has overflowed. There may be to many open connections or replies to request have not been waited for	Contact customer support
8268	1.76	Control	Error	Talk interface timeout	timeout while receiving a Talk message	sent Talk access is not complete, or device is overloaded	Contact customer support
8269	1.77	Control	Error	Talk interface other error	Talk access is invalid	talk access protocol is incorrect	Contact customer support
8270	1.78	Control	Error	Talk unkown destination	Talk access has no receiver at specified destination	Device ID, board ID (or port ID) may not exist in system	check device and board ID
8271	1.79	Control	Error	Talk out of memory	Overflow of Talk memory	Memory for Talk communication has overflowed. There may be to many open connections or replies to request have not been waited for	Contact customer support
8272	1.80	Control	Warning	Intern Talk talk error	Intern Talk communication send or receive is not ok	Talk communication is not correctly initialized	check firmware version on devices
8273	1.81	Control	Error	Intern Talk out of memory	Overflow of intern Talk memory	Memory for intern Talk communication has overflowed. There may be replies to requests have not been waited for	check firmware version on devices
8274	1.82	Control	Error	Intern Talk timeout	Talk Intern: No Talk answer received from subboard or slave in reasonable time	Any device in system is not connected or not functional	check connections and device states, check firmware version on devices
8275	1.83	Control	Warning	Intern Talk return "read/write only"	Talk Intern: Parameter on subboard/slave does allow only read or write access	Read access on a "write only", or write access on a "read only" parameter	check parameter access, check firmware version on devices

System Incident	Single Device Incident	Board	Incident Type	Incident message TC.ACS (Long)	Description	Possible Cause	Counteraction
8276	1.84	Control	Warning	Intern Talk return "parameter not exist"	Talk Intern: Parameter does not exist	The parameter index does not exist on subboard/slave	check the parameter index, check firmware version on devices
8277	1.85	Control	Warning	Intern Talk return "value exceeded"	Talk Intern: Written value exceeds min / max of subboard / slave parameter	The written parameter value was too large or too small for subboard / slave parameter	check the parameter for valid values, check firmware version on devices
8278	1.86	Control	Warning	Intern Talk talk return "not OK"	Talk Intern: Parameter on subboard / slave could not be read or written	Read or write of parameter is not allowed or actual state disallow access	check parameter, check firmware version on devices
8279	1.87	Control	Warning	Simulation mode not active on all devices	At least one device in system could not activate simulation mode	At least one device is not allowed for simulation mode	enable desktop mode for simulation mode
8280	1.88	Control	Error	Multi-Device Communication Bus error bits	Error on Multi-Device Communication Bus	Cable not correctly connected Hardware problem.	Ensure that cables are correctly connected. Contact customer support
8281	1.89	Control	Error	Multi-Device Communication Bus discovery error	Configured number of devices cannot be found within the predefined timeout range.	Cable not correctly connected Hardware problem 'Multi-Device configuration': 'number of device' may not be correct.	Ensure that cables are correctly connected. Check 'multi device configuration'. Contact customer support
8282	1.90	Control	Error	Multi-Device Communication Bus low level protocol	At least one device in the system has an outdated communication protocol	At least one device in the system is an outdated version.	Update the outdated devices in the system
8283	1.91	Control	Error	Multi-Device Communication Bus timeout	Multi-Device Communication Bus has been interrupted	Cable not correctly connected	Ensure that cables are correctly connected
8284	1.92	Control	Error	Multi-Device Communication Bus rx fifo error	Data received from other devices in the system cannot be read from the internal buffer	Cable not correctly connected Hardware problem.	Ensure that cables are correctly connected. Contact customer support.

System Incident	Single Device Incident	Board	Incident Type	Incident message TC.ACS (Long)	Description	Possible Cause	Counteraction
8285	1.93	Control	Error	Multi-Device Communication Bus CRC error	Cyclic Redundancy Check failed during Multi-Device Communication	Cable not correctly connected Hardware problem.	Ensure that cables are correctly connected. Contact customer support
8286	1.94	Control	Error	Multi-Device Communication Bus EOF error	Multi-Device Communication Bus data reception incomplete.	Cable not correctly connected Hardware problem.	Ensure that cables are correctly connected. Contact customer support
8287	1.95	Control	Error	Multi-Device Communication Bus system info timeout	Unable to determine which slaves in the system are active or passive	Cables not correctly connected	Ensure that cables are correctly connected
8288	1.96	Control	Error	Multi-Device Communication Bus configuration error	Unable to configure the slaves in the Multi-Device System	Cables not correctly connected Firmware differences between devices	Ensure that cables are correctly connected Update devices
8289	1.97	Control	Error	Multi-Device Communication Bus missed data	Some Multi-Device Communication Bus messages were expected but not received	Cable not correctly connected Hardware problem.	Ensure that cables are correctly connected. Contact customer support
8290	1.98	Control	Error	Multi-Device Communication Bus already sending data	Device could not send data because the communication bus is busy	Hardware problem.	Contact customer support
8291	1.99	Control	Error	Multi-Device Communication Bus missing slaves	Multi-Device Communication Bus received an invalid message	Hardware problem.	Contact customer support
8292	2.0	Control	Error	Multi-Device Communication Bus unknown ID	Multi-Device Communication Bus received an invalid message	Hardware problem.	Contact customer support
8293	2.1	Control	Error	Developer-Standby Timeout	Timeout when changing states from 'Developer' to 'Standby' (CTR.ACSD and/or CTR.ACSI)	CTR.ACSI and/or CTR.ACSD are not accessible, offline or defect.	Contact customer support

System Incident	Single Device Incident	Board	Incident Type	Incident message TC.ACS (Long)	Description	Possible Cause	Counteraction
8294	2.2	Control	Error	Developer-Standby Timeout	Timeout when changing states from 'Developer' to 'Standby' (slave devices)	One or more slave devices seperated from Multi-Device Communication Bus, off line or defect.	Check the connections for Multi-Device Communication Bus (X603/X604)
8295	2.3	Control	Warning	Inconsistent system incident list	Inconsistency while collection incident for system incident list from devices.	Talk protocol error	Contact customer support
8296	2.4	Control	Error	Multi-Device Communication Bus IO Timeout	Multi-Device Communication Bus IO inputs in manually configured slave take too long to send to other slaves	Talk protocol error Incorrect Multi-Device Communication Bus IO configuration	Increase Communication Timeout Reduce number of Target Devices
8297	2.5	Control	Warning	Enable signal missing	Optional enable signal not present	Optional enable signal function is enabled but signal is not present	Check for correct enable signal cabling Check if the enable signal has been released by the periphery devices
8298	2.6	Control	Warning	License "Current Control" expired	The license for the option Current Control has expired.	License was only temporary or removed manually	Request new license or select Voltage Control as controller mode.
8299	2.7	Control	Warning	License "Master" expired	The license for operating the device as a master device within a Multi-Device System has expired.	License was only temporary or removed manually	Request new license or change from master device to slave device
8300	2.8	Control	Warning	CANmp Talk out of Memory	CANmp Selective Parameter Access (Talk Interface) out of Memory	Access Results are not collected from Device	Activate ActParameter-* -Result in dbc Configuration file and read Signal after SetParameter-* Access
8301	2.9	Control	Warning	CANmp Store Settings Failed	CANmp command "store settings" failed	EEPROM action failed	Retry command "store settings"
8302	2.10	Control	Error	Communication Watchdog Timeout	Activated Communication Watchdog run into timeout	TC.ACS does not receive Messages in timeout time, or Watchdog Timeout is set too small	Check delay time between each message sent to TC.ACS and actual set Watchdog Timeout
8303	2.11	Control	Warning	License "Phase Connection" expired	The license for the option Phase Connection has expired.	License was only temporary or removed manually	Request new license or select phase connection 3L(AC/DC)

System Incident	Single Device Incident	Board	Incident Type	Incident message TC.ACS (Long)	Description	Possible Cause	Counteraction
8304	2.12	Control	Warning	License "RL" or "RLC" expired.	The license for the optional operating mode Load Simulation has expired.	License was only temporary or removed manually	Request new license or change operating mode
8305	2.13	Control	Warning	Operating mode "Amplifier" not available.	The analog inputs are not available as input source	Extension card has been replaced with "Sense" or is incorrectly configured in FW	Contact customer support
8306	2.14	Control	Warning	Operation mode "TC.ACS.CANmp Waveform Generator" not available	The TC.ACS.CANmp Waveform Generator is not available as input source	Extension card CAN.ACS may be missing or is not configured in FW	Contact customer support
8307	2.15	Control	Warning	Incident History Access problem	Could not read incident history entry	EEPROM action failed	Contact customer support
8308	2.16	Control	Warning	EEPROM init / store / clear Incident History	Incident History could not be stored, cleared or initialised	Hardware problem. CTR.ACSC hardware needs to be checked in the area NOR Flash.	Contact customer support
8309	2.17	Control	Warning	License "Power Mode" expired	The license for the option Power Mode has expired.	License was only temporary or removed manually	Request new license or change operating mode
8310	2.18	Control	Warning	License "Grid Impedance" expired	The license for the Grid Impedance simulation / compensation has expired	License was only temporary or removed manually	Request new license or change operating mode
8311	2.19	Control	Error	Connection loss with slaves	The master lost connections to the slaves	One or more slaves are disconnected or crashed	Check the connection (X603/X604) Reset System
8312	2.20	Control	Error	Synchronisation failed phase A	Synchronisation to signal not possible for phase A	Signal to synchronise is not a sine or has too many disturbances.	Contact customer support
8313	2.21	Control	Error	Synchronisation failed phase B	Synchronisation to signal not possible for phase B	Signal to synchronise is not a sine or has too many disturbances.	Contact customer support
8314	2.22	Control	Error	Synchronisation failed phase C	Synchronisation to signal not possible for phase C	Signal to synchronise is not a sine or has too many disturbances.	Contact customer support
12032	39.40	Control	Error/Warning	Customer specific Incident1	1st. Customer specific Incident	Customer specific	Customer specific
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System Incident	Single Device Incident	Board	Incident Type	Incident message TC.ACS (Long)	Description	Possible Cause	Counteraction
12287	41.95	Control	Error/Warning	Customer specific Incident256	256. Customer specific Incident	Customer specific	Customer specific

This product is developed, produced and tested according to ISO 9001 by REGATRON.

For detailed technical information, contact REGATRON or your local sales partner.

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All product specifications and information contained herein are subject to change without notice.

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