

Error Code	LCD Text	Description Error Code	Extended Description Error Code	Solution
0001	Memory Error	Memory Error	Running Ram Check Error	RNET 1
0001	Module Error	KERNEL WATCHDOG TIME OUT	This indicates that one of the kernel tasks have stopped responding.	Replace module
0002	Module Error	KERNEL APP. TOO SLOW	An application functions have taken too long to finish.	Replace module
0003	Module Error	KERNEL BUFFER OVERFLOW	An ERB was full when trying to add to it.	Replace module
0004	Module Error	KERNEL BUFFER UNDERFLOW	An ERB was empty when trying to read from it.	Replace module
0005	Module Error	KERNEL MQ OVERFLOW	A TMQ was full when trying to add to it.	Replace module
0005	Module Error	KERNEL MQ OVERFLOW	A TMQ was full when trying to add to it.	Replace module
0006	Module Error	KERNEL MQ UNDERFLOW	A TMQ was empty when trying to read from it.	Replace module
0007	Module Error	KERNEL HW MONITOR FAIL	Hardware monitor test failed.	Replace module
0008	Module Error	KERNEL UNEXPECTED SCID	Received scid while SCID_ENABLED.	Replace module
0009	Module Error	KERNEL PROFILE/MODE FAIL	Failed profile/mode transaction.	Replace module
000A	DIME Error	KERNEL DIME FAILED	DIME Error	Replace module
000B	Module Error	KERNEL HW ISOLATE FAIL	Hardware monitor signals that we are isolated.	Replace module
000C	Module Error	KERNEL WRONG WAKE SOURCE	A WAKEUP message containing a different DIME-ID than the original waking node.	Replace module
000D	Module Error	KERNEL STAGE MANAGEMENT	Bad sync in stage management.	Replace module
000E	Module Error	KERNEL NODE IS BUS OFF	CAN controller is bus off.	Replace module
000F	Module Error	KERNEL PROG OBJECT FAIL	Programming object error.	Replace module
0010	Module Error	KERNEL NODE IS DISARMED	The signal 'Armed' in the Hardware Monitor transitioned to low level.	Replace module
0011	Module Error	KERNEL UNKNOWN CAN INT	Unknown CAN interrupt.	Replace module
0012	Module Error	KERNEL SERIAL OVERFLOW	Serial port transmit buffers are full.	Replace module
0013	PM Memory Error	KERNEL REP. FILE FORMAT	Unknown or invalid file format detected.	Replace module
0014	PM Memory Error	KERNEL REP. FILE MISSING	Required file not present.	Replace module
0015	PM Memory Error	KERNEL REP. SUPPORT FAIL	Repository support fault.	Replace module
0200	PM Memory Error	PM Memory Error	EEPROM Check Error	RNET 2
0203	Cal Error	Calibration Error	EEPROM Calibration Data Check Error	RNET 3
0204	Memory Error	Memory Error	EEPROM Programming Data Check Error	RNET 4
0208	Memory Error	Memory Error	EEPROM Persistent Data Check Error	RNET 1
0500	Module Error	Reference Hold Error		RNET 30
0600		Error Converting 0V Mux 0 Connection		RNET 3
0601		Error Converting 0V Mux 1 Connection		RNET 3
0602		Error Converting 0V Mux 2 Connection		RNET 3
0603		Error Converting 0V Mux 3 Connection		RNET 3
0703		Joystick Supply Failure		RNET 3
0704	JSM Error	12V Supply Failure		RNET 30
0707		Regulator Supply Failure		RNET 3
0808	Joystick Error	Joystick Error	Mid Reference Error	RNET 4
080A	Joystick Error	Joystick Error	Mid Reference Comparison Error	RNET 4
080B	Joystick Error	Joystick Error	Mid Reference Comparison Startup Error	RNET 4
0905	SID Disconnected	SID Disconnected		RNET 5
0A00	Gone to Sleep	Gone To Sleep		RNET 6
0B00		EEPROM Write Error	General failure in accessing external EEPROM.	RNET 30
0B01		EEPROM Busy Fault		RNET 30
0B02		EEPROM Timeout		RNET 30
0B08		Invalid Address or Size Given During Access		RNET 30
0E00	Joystick Error	Joystick Error	Joystick Error Right	RNET 4
0E02	Joystick Error	Joystick Error	Joystick Error ForwardJoystick Error Forward	RNET 4
1101	Module Error	CJ MODULE ERROR	Unrecoverable error(watchdog time out, )	Replace module
1102	Module Error	CJ JOYSTICK REFERENCE VOLTAGE	Reference voltage (VCC/2) out of range	Replace module
1103	Center Joystick	CJ JOYSTICK CENTER	Joystick out of center	Center Joystick
1104	Module Error	CJ JOYSTICK OUTPUT	Joystick signal Out of Range	Replace module
1105	Module Error	CJ TEST FAILED	Module Tested Flag not set in EEPROM	Replace module
1106	Module Error	CJ EEPROM	Calibrate EEPROM section corrupted	Replace module
1107	Module Error	CJ OBJ READ	Can not read Programming object in time, timed out	Replace module
1108	Module Error	CJ TIMING	ADC not synchronised	Replace module
1109	Module Error	CJ CODE	Non existing code entered	Replace module
110A	Module Error	CJ KERNEL	Kernel error	Replace module
1200	Joystick Error	Joystick Error	Dual Path Comparison Right Error	RNET 4
1201	Bad Settings	ESP PM LATCHED MODE	Power module entered Latched Drive Mode	Change settings
1202	Joystick Error	Joystick Error	Dual Path Comparison Forward Error	RNET 4
1202	Module Error	ESP REFERENCE VOLTAGE	Reference voltage (VCC/2) out of range	Replace module
1203	Module Error	ESP OFFSET VOLTAGE	PWM Offset regulation out of range	Replace module
1204	Module Error	ESP SENSOR OUTPUT	Gyro Sensor Out of Range	Replace module
1205	Module Error	ESP TEST FAILED	Module Tested Flag not set in EEPROM	Replace module
1206	Recalibrate	ESP EEPROM	Calibrate EEPROM section corrupted	Replace module
1207	Cycle Power	ESP OBJ READ	Can not read Programming object in time, timed out	Replace module
1208	Cycle Power	ESP TIMING	ADC not synchronised	Replace module
1209	Module Error	ESP CODE	Non existing code entered	Replace module
120A	Module Error	ESP KERNEL	Kernel error	Replace module
1300	Memory Error	ICS FIRMWARE CHECKSUM	ICS has faulty firmware checksum	ICS 1
1301	Memory Error	ICS MODEL CHECKSUM	ICS has no or faulty model checksum	ICS 1
1302		Current Limit Reference Fault		RNET 30
1302	Memory Error	ICS UI CHECKSUM	ICS has no or faulty UI checksum	ICS 3
1304		Current Limit Failed To Operate When Positive Input		RNET 30
1308		Current Limit Left Sense Trip		RNET 3
1309		Current Limit Right Sense Trip		RNET 3
130A		Current Limit Startup Fault		RNET 3
1310		Current Limit Sense Trip		RNET 3
1310	Over-current	ICS NODE1 OVERCURRENT	Actuator node 1 has triggered over current	ICS 14
1311	Module Error	ICS NODE1 OPEN LOAD	No load is connected to node 1	ICS 20
1312	Module Error	ICS NODE1 SENSOR FAULT	Sensor impedance is out of range on node 1	ICS 16

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1313	Inhibit Active	ICS NODE1 DMS ACTIVATED	Protection switch is activated in node 1	ICS 15
1314		ICS NODE1 FAULTY STARTUP	Start condition prevented startup	ICS 19
1318	Over-current	ICS NODE2 OVERCURRENT	Actuator node 2 has triggered over current	ICS 14
1319	Module Error	ICS NODE2 OPEN LOAD	No load is connected to node 2	ICS 20
131A	Over-current	ICS NODE2 SENSOR FAULT	Sensor impedance is out of range on node 2	ICS 16
131B	Inhibit Active	ICS NODE2 DMS ACTIVATED	Protection switch is activated in node 1	ICS 15
131C		ICS N2 FAULT AT STARTUP	Start condition prevented startup	ICS 19
1320	Module Error	ICS NODE3 OVERCURRENT	Actuator node 3 has triggered over current	ICS 14
1321	Over-current	ICS NODE3 OPEN LOAD	No load is connected to node 3	ICS 20
1322	Over-current	ICS NODE3 SENSOR FAULT	Sensor impedance is out of range on node 3	ICS 16
1323	Inhibit Active	ICS NODE3 DMS ACTIVATED	Protection switch is activated in node 1	ICS 15
1324		ICS N2 FAULTY STARTUP	Start condition prevented startup	ICS 19
1328	Module Error	ICS NODE4 OVERCURRENT	Actuator node 4 has triggered over current	ICS 14
1329	Module Error	ICS NODE4 OPEN LOAD	No load is connected to node 4	ICS 20
132A	Over-current	ICS NODE4 SENSOR FAULT	Sensor impedance is out of range on node4	ICS 16
132B	Inhibit Active	ICS NODE4 DMS ACTIVATED	Protection switch is activated in node 1	ICS 15
132C		ICS N2 FAULTY STARTUP	Start condition prevented startup	ICS 19
1330	Module Error	ICS NODE5 OVERCURRENT	Actuator node 5 has triggered over current	ICS 14
1331	Module Error	ICS NODE5 OPEN LOAD	No load is connected to node 5	ICS 20
1332	Over-current	ICS NODE5 SENSOR FAULT	Sensor impedance is out of range on node 5	ICS 16
1333	Inhibit Active	ICS NODE5 DMS ACTIVATED	Protection switch is activated in node 1	ICS 15
1334		ICS N2 FAULTY STARTUP	Start condition prevented startup	ICS 19
1338	Module Error	ICS NODE6 OVERCURRENT	Actuator node 6 has triggered over current	ICS 14
1339	Bad Settings	ICS NODE6 OPEN LOAD	No load is connected to node 6	ICS 20
133A	Module Error	ICS NODE6 SENSOR FAULT	Sensor impedance is out of range on node 6	ICS 16
133B	Inhibit Active	ICS NODE6 DMS ACTIVATED	Protection switch is activated in node 1	ICS 15
133C		ICS N2 FAULTY STARTUP	Start condition prevented startup	ICS 19
1340	Module Error	ICS NODE7 OVERCURRENT	Actuator node 7 has triggered over current	ICS 14
1341	Bad Settings	ICS NODE7 OPEN LOAD	No load is connected to node 7	ICS 20
1342	Module Error	ICS NODE7 SENSOR FAULT	Sensor impedance is out of range on node 7	ICS 16
1343	Inhibit Active	ICS NODE7 DMS ACTIVATED	Protection switch is activated in node 1	ICS 15
1344		ICS N2 FAULTY STARTUP	Start condition prevented startup	ICS 19
1348	Module Error	ICS NODE8 OVERCURRENT	Actuator node 8 has triggered over current	ICS 14
1349	Bad Settings	ICS NODE8 OPEN LOAD	No load is connected to node 8	ICS 20
134A	Module Error	ICS NODE8 SENSOR FAULT	Sensor impedance is out of range on node 8	ICS 16
134B	Inhibit Active	ICS NODE8 DMS ACTIVATED	Protection switch is activated in node 1	ICS 15
134C		ICS N2 FAULTY STARTUP	Start condition prevented startup	ICS 19
1350	Module Error	ICS NODE9 OVERCURRENT	Actuator node 8 has triggered over current	ICS 14
1351	Bad Settings	ICS NODE9 OPEN LOAD	No load is connected to node 8	ICS 20
1352	Module Error	ICS NODE9 SENSOR FAULT	Sensor impedance is out of range on node 8	ICS 16
1353	Inhibit Active	ICS NODE9 DMS ACTIVATED	Protection switch is activated in node 1	ICS 15
1354		ICS N2 FAULTY STARTUP	Start condition prevented startup	ICS 19
1358	Module Error	ICS NODE10 OVERCURRENT	Actuator node 8 has triggered over current	ICS 14
1359	Bad Settings	ICS NODE10 OPEN LOAD	No load is connected to node 8	ICS 20
135A	Module Error	ICS NODE10 SENSOR FAULT	Sensor impedance is out of range on node 8	ICS 16
135B	Inhibit Active	ICS NODE10 DMS ACTIVATED	Protection switch is activated in node 1	ICS 15
135C		ICS N2 FAULTY STARTUP	Start condition prevented startup	ICS 19
1360	Module Error	ICS NODE11 OVERCURRENT	Actuator node 8 has triggered over current	ICS 14
1361	Bad Settings	ICS NODE11 OPEN LOAD	No load is connected to node 8	ICS 20
1362	Module Error	ICS NODE11 SENSOR FAULT	Sensor impedance is out of range on node 8	ICS 16
1363	Inhibit Active	ICS NODE11 DMS ACTIVATED	Protection switch is activated in node 1	ICS 15
1364		ICS N2 FAULTY STARTUP	Start condition prevented startup	ICS 19
1368	Module Error	ICS NODE12 OVERCURRENT	Actuator node 8 has triggered over current	ICS 14
1369	Bad Settings	ICS NODE12 OPEN LOAD	No load is connected to node 8	ICS 20
136A	Module Error	ICS NODE12 SENSOR FAULT	Sensor impedance is out of range on node 8	ICS 16
136B	Inhibit Active	ICS NODE12 DMS ACTIVATED	Protection switch is activated in node 1	ICS 15
136C		ICS N2 FAULTY STARTUP	Start condition prevented startup	ICS 21
1370	Module Error	ICS NODE13 OVERCURRENT	Actuator node 8 has triggered over current	ICS 14
1371	Bad Settings	ICS NODE13 OPEN LOAD	No load is connected to node 8	ICS 20
1372	Module Error	ICS NODE13 SENSOR FAULT	Sensor impedance is out of range on node 8	ICS 16
1373	Inhibit Active	ICS NODE13 DMS ACTIVATED	Protection switch is activated in node 1	ICS 15
1374		ICS N2 FAULTY STARTUP	Start condition prevented startup	ICS 19
139C	Module Error	ICS UNEXPECTED NODE	Unexpected node is connected to ICS system	ICS 5
139D	Module Error	ICS LIN BUS OFF	LIN bus is off	ICS 23
139E	Module Error	ICS URIB APPLICATION	Kernel error	ICS 3
139F	Module Error	ICS LIN GHOST CURRENT	Unexpected current on LIN bus	ICS 2
1401	Module Error	CJA MODULE ERROR	Unrecoverable error(watchdog time out, )	Replace module
1402	Module Error	CJA JOYSTICK REFERENCE VOLTAGE	Reference voltage (VCC/2) out of range	Replace module
1403	Center Joystick	CJA JOYSTICK CENTER	Joystick out of center	Center Joystick
1404		Motors Cross Coupled		RNET 3
1404	Module Error	CJA JOYSTICK OUTPUT	Joystick signal Out of Range	Calibrate Joystick
1405	Module Error	CJA TEST FAILED	Module Tested Flag not set in EEPROM	Replace module
1406	Module Error	CJA EEPROM	Calibrate EEPROM section corrupted	Replace module
1407	Module Error	CJA OBJ READ	Can not read Programming object in time, timed out	Replace module
1408	Module Error	CJA TIMING	ADC not synchronised	Replace module
1409	Module Error	CJA CODE	Non existing code entered	Replace module
140A	Module Error	CJA KERNEL	Kernel error	Replace module
1501	Module Error	MD MODULE ERROR	Unrecoverable error(watchdog time out, )	Replace module
1502	Module Error	MD COM_OFFLINE	Communication Offline	Replace module
1503		Solenoid Brake Driver Fault		RNET 3, RNET 7, RNET 8
1503	Module Error	MD COM_DATA	Communication Bad data	Replace module
1504		Solenoid Brake Interlock Fault		RNET 3, RNET 7, RNET 8

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1504	Module Error	MD COM VERSION	Communication Incorrect version	Replace module
1505	M1 Brake Error	M1 Solenoid Brake Fault		RNET 7
1505	Module Error	MD TEST FAILED	Module Tested Flag not set in EEPROM	Replace module
1506	M2 Brake Error	M2 Solenoid Brake Fault		RNET 8
1506	Module Error	MD EEPROM	Calibrate EEPROM section corrupted	Replace module
1507	Module Error	MD OBJ READ	Can not read Programming object in time, timed out	Replace module
1508	Module Error	MD COM_TIMEOUT	Communication timeout	Replace module
1509	Module Error	MD CODE	Non existing code entered	Replace module
150A	Module Error	MD KERNEL	Kernel error	Replace module
1600	High Battery	High Battery Voltage		RNET 9
1601	High Battery	High Battery Voltage	Overvoltage Comparator Tripped	RNET 9
1601	Module Error	COP MODULE ERROR	Unrecoverable error(watchdog time out, )	Replace module
1602	Module Error	COP JOYSTICK REFERENCE VOLTAGE	Reference voltage (VCC/2) out of range	Replace module
1603	Center Joystick	COP JOYSTICK CENTER	Joystick out of center	Replace module
1604	Module Error	COP JOYSTICK OUTPUT	Joystick signal Out of Range	Center Joystick
1605	Module Error	COP TEST FAILED	Module Tested Flag not set in EEPROM	Replace module
1606	Module Error	COP EEPROM	Calibrate EEPROM section corrupted	Replace module
1607	Module Error	COP OBJ READ	Can not read Programming object in time, timed out	Replace module
1608	Module Error	COP TIMING	ADC not synchronised	Replace module
1609	Module Error	COP CODE	Non existing code entered	Replace module
160A	Module Error	COP KERNEL	Kernel error	Replace module
1700		Relay On In Standby		RNET 30
1701		Relay Off In Drive		RNET 30
1701	Module Error	ER MODULE ERROR	Unrecoverable error(watchdog time out, )	Replace module
1702	Module Error	ER COM_OFFLINE	Communication Offline	Replace module
1703		Relay Interlock Fault		RNET 3, RNET 10
1703	Module Error	ER COM_DATA	Communication Bad data	Replace module
1704		Relay Driver Fault		Replace module
1704	Module Error	ER COM VERSION	Communication Incorrect version	Replace module
1705		Relay Stuck Closed		RNET 3, RNET 10
1705	Module Error	ER TEST FAILED	Module Tested Flag not set in EEPROM	Replace module
1706	Module Error	ER EEPROM	Calibrate EEPROM section corrupted	Replace module
1707	Module Error	ER OBJ READ	Can not read Programming object in time, timed out	Replace module
1708	Module Error	ER COM_TIMEOUT	Communication timeout	Replace module
1709	Module Error	ER CODE	Non existing code entered	Replace module
170A	Module Error	ER KERNEL	Kernel error	Replace module
1801	Module Error	RBI MODULE ERROR	Unrecoverable error(watchdog time out, )	Replace module
1802	Module Error	RBI 12V WRONG OUTPUT	12Volt Regulator defect	Replace module
1803	Module Error	RBI 12V ON/OFF PROBLEM	12Volt on/off switch circuit problem	Replace module
1805	Module Error	RBI TEST FAILED	Module test flag not set in eeprom	Replace module
1806	Module Error	RBI EEPROM	Calibrate EEPROM section corrupted	Replace module
1807	Module Error	RBI OBJ READ	Can not read Programming object in time, timed out	Replace module
1809	Module Error	RBI CODE	Non existing code entered	Replace module
180A	Module Error	RBI KERNEL	Kernel error	Replace module
1901	Module Error	MJ MODULE ERROR	Unrecoverable error(watchdog time out, )	Replace module
1902	Module Error	MJ JOYSTICK REFERENCE VOLTAGE	Reference voltage (VCC/2) out of range	Replace module
1903	Center Joystick	MJ JOYSTICK CENTER	Joystick out of center	Center Joystick
1904	Module Error	MJ JOYSTICK OUTPUT	Joystick signal Out of Range	Replace module
1905	Module Error	MJ TEST FAILED	Module Tested Flag not set in EEPROM	Replace module
1906	Module Error	MJ EEPROM	Calibrate EEPROM section corrupted	Replace module
1907	Module Error	MJ OBJ READ	Can not read Programming object in time, timed out	Replace module
1908	Module Error	MJ TIMING	ADC not synchronised	Replace module
1909	Module Error	MJ CODE	Non existing code entered	Replace module
190A	Module Error	MJ KERNEL	Kernel error	Replace module
1911	Module Error	MJ DEVICE FAILURE	Device authentication failure	Replace module
1912	Module Error	MJ DEVICE CONNECTION	Communication errors	Replace module
1915	Module Error	MJ DEVICE NOT TESTED	Device is not tested	Replace module
1A01	Module Error	iPOD MODULE ERROR	Unrecoverable error(watchdog time out, )	Replace module
1A02	Module Error	iPOD 4.7V POWER CIRCUIT	Amplifier 4.7V power circuit failure	Replace module
1A05	Module Error	iPOD TEST FAILED	Module Tested Flag not set in EEPROM	Replace module
1A06	Module Error	iPOD EEPROM	Calibrate EEPROM section corrupted	Replace module
1A07	Module Error	iPOD OBJ READ	Can not read Programming object in time, timed out	Replace module
1A09	Module Error	iPOD CODE	Non existing code entered	Replace module
1A0A	Module Error	iPOD KERNEL	Kernel error	Replace module
1A12	Module Error	iPOD DEVICE CONNECTION	iPod is not connected	Replace module
1B01		Right Forward Current Null Bad		RNET 3
1B02		Right Reverse Current Null Bad		RNET 3
1B10		Positive Current Feedback Null Bad		RNET 3
1C01		Left Forward Current Null Bad		RNET 3
1C02		Left Reverse Current Null Bad		RNET 3
1C10		Negative Current Feedback Null Bad		RNET 3
1D00		Special Function Input Out Of Range		RNET 30
1D03		Switch input	Pullup Circuit Failure	RNET 30
1E03	Charging	Inhibit Active		RNET 11
1E07	Switch Detached	User Switch Detached		RNET 12
1E20	Inhibit Active	Inhibit Active		RNET 13
1E21	Inhibit Active	Inhibit Active		RNET 13
1E22	Inhibit Active	Inhibit Active		RNET 13
1E23	Inhibit Active	Inhibit Active		RNET 13
1E24	Inhibit Active	Inhibit Active		RNET 13
1E25	Inhibit Active	Inhibit Active		RNET 13
1E26	Inhibit Active	Inhibit Active		RNET 13

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1E27	Inhibit Active	Inhibit Active		RNET 13
1E28	Inhibit Active	Inhibit Active		RNET 13
1E29	Inhibit Active	Inhibit Active		RNET 13
1E2A	Inhibit Active	Inhibit Active		RNET 13
1E2B	Inhibit Active	Inhibit Active		RNET 13
1E2C	Inhibit Active	Inhibit Active		RNET 13
1E2D	Inhibit Active	Inhibit Active		RNET 13
1E2E	Inhibit Active	Inhibit Active		RNET 13
1E2F	Inhibit Active	Inhibit Active		RNET 13
1E30	Inhibit Active	Inhibit Active		RNET 13
1E31	Inhibit Active	Inhibit Active		RNET 13
1E32	Inhibit Active	Inhibit Active		RNET 13
1E33	Inhibit Active	Inhibit Active		RNET 13
1E34	Inhibit Active	Inhibit Active		RNET 13
1E35	Inhibit Active	Inhibit Active		RNET 13
1E36	Inhibit Active	Inhibit Active		RNET 13
1E37	Inhibit Active	Inhibit Active		RNET 13
1E38	Inhibit Active	Inhibit Active		RNET 13
1E39	Inhibit Active	Inhibit Active		RNET 13
1E3A	Inhibit Active	Inhibit Active		RNET 13
1E3B	Inhibit Active	Inhibit Active		RNET 13
1E3C	Inhibit Active	Inhibit Active		RNET 13
1E3D	Inhibit Active	Inhibit Active		RNET 13
1E3E	Inhibit Active	Inhibit Active		RNET 13
1E3F	Inhibit Active	Inhibit Active		RNET 13
2011	Master Error	Master	Model or UI has incorrect checksum or doesn't work with this firmware	ICS 1
2012	Master Error	Master	Over current in idle mode	ICS 2
2013	Master Error	Master	Problems with internal SPI communication	ICS 3
2014	Master Error	Master	Cannot write to internal flash	ICS 4
2015	Master Error	Master	Cannot update node parameters	ICS 5
2017	Master Error	Master	ICS System needs to be restarted, please cycle wheelchair power	ICS 6
201D	Master Error	Master	Unused actuator or module attached to ICS system	ICS 7
2021	Main Switchbox Error	Main switchbox	Switches are activated at start up	ICS 8
2029	Main Switchbox Error	Main switchbox	Cannot communicate on the LIN bus	ICS 9
202A	Main Switchbox Error	Main switchbox	Node is required but not present	ICS 10
202D	Main Switchbox Error	Main switchbox	Flash parameters have been updated in the node	ICS 11
2031	Second Switchbox Error	Second switchbox	Switches are activated at start up	ICS 8
2039	Second Switchbox Error	Second switchbox	Cannot communicate on the LIN bus	ICS 9
203A	Second Switchbox Error	Second switchbox	Node is required but not present	ICS 10
203D	Second Switchbox Error	Second switchbox	Flash parameters have been updated in the node	ICS 11
2041	Third Switchbox Error	Third switchbox	Switches are activated at start up	ICS 8
2049	Third Switchbox Error	Third switchbox	Cannot communicate on the LIN bus	ICS 9
204A	Third Switchbox Error	Third switchbox	Node is required but not present	ICS 10
204D	Third Switchbox Error	Third switchbox	Flash parameters have been updated in the node	ICS 11
2051	Fourth Switchbox Error	Fourth switchbox	Switches are activated at start up	ICS 8
2059	Fourth Switchbox Error	Fourth switchbox	Cannot communicate on the LIN bus	ICS 9
205A	Fourth Switchbox Error	Fourth switchbox	Node is required but not present	ICS 10
205D	Fourth Switchbox Error	Fourth switchbox	Flash parameters have been updated in the node	ICS 11
2071	Legs Error	Left Leg	Sensor; Cable between sensor and General Module; or GM is not working	ICS 12
2072	Legs Error	Left Leg	No motor can be detected, check motor and cable	ICS 13
2073	Legs Error	Left Leg	Over current when operating function, might be overload	ICS 14
2074	Legs Error	Left Leg	Pinch protection activated	ICS 15
2075	Legs Error	Left Leg	Actuator is not moving or moving too slow	ICS 16
2076	Legs Error	Left Leg	Too high speed detected on actuator, check sensor	ICS 17
2077	Legs Error	Left Leg	Drive electronics for the actuator overheated	ICS 22
2078	Legs Error	Left Leg	Fault mode has triggered	ICS 18
2079	Legs Error	Left Leg	Cannot communicate on the LIN bus	ICS 19
207A	Legs Error	Left Leg	Node is required but not present	ICS 20
207D	Legs Error	Left Leg	Flash parameters have been updated in the node	ICS 21
2081	Legs Error	Right Leg	Sensor; Cable between sensor and General Module; or GM is not working	ICS 12
2082	Legs Error	Right Leg	No motor can be detected, check motor and cable	ICS 13
2083	Legs Error	Right Leg	Over current when operating function, might be overload	ICS 14
2084	Legs Error	Right Leg	Pinch protection activated	ICS 15
2085	Legs Error	Right Leg	Actuator is not moving or moving too slow	ICS 16
2086	Legs Error	Right Leg	Too high speed detected on actuator, check sensor	ICS 17
2087	Legs Error	Right Leg	Drive electronics for the actuator overheated	ICS 22
2088	Legs Error	Right Leg	Fault mode has triggered	ICS 18
2089	Legs Error	Right Leg	Cannot communicate on the LIN bus	ICS 19
208A	Legs Error	Right Leg	Node is required but not present	ICS 20
208D	Legs Error	Right Leg	Flash parameters have been updated in the node	ICS 21
2091	Legs Error	Legs	Sensor; Cable between sensor and General Module; or GM is not working	ICS 12
2092	Legs Error	Legs	No motor can be detected, check motor and cable	ICS 13

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2093	Legs Error	Legs	Over current when operating function, might be overload	ICS 14
2094	Legs Error	Legs	Pinch protection activated	ICS 15
2095	Legs Error	Legs	Actuator is not moving or moving too slow	ICS 16
2096	Legs Error	Legs	Too high speed detected on actuator, check sensor	ICS 17
2097	Legs Error	Legs	Drive electronics for the actuator overheated	ICS 22
2098	Legs Error	Legs	Fault mode has triggered	ICS 18
2099	Legs Error	Legs	Cannot communicate on the LIN bus	ICS 19
209A	Legs Error	Legs	Node is required but not present	ICS 20
209D	Legs Error	Legs	Flash parameters have been updated in the node	ICS 21
20A1	Tilt Error	Tilt	Sensor; Cable between sensor and General Module; or GM is not working	ICS 12
20A2	Tilt Error	Tilt	No motor can be detected, check motor and cable	ICS 13
20A3	Tilt Error	Tilt	Over current when operating function, might be overload	ICS 14
20A4	Tilt Error	Tilt	Pinch protection activated	ICS 15
20A5	Tilt Error	Tilt	Actuator is not moving or moving too slow	ICS 16
20A6	Tilt Error	Tilt	Too high speed detected on actuator, check sensor	ICS 17
20A7	Tilt Error	Tilt	Drive electronics for the actuator overheated	ICS 22
20A8	Tilt Error	Tilt	Fault mode has triggered	ICS 18
20A9	Tilt Error	Tilt	Cannot communicate on the LIN bus	ICS 19
20AA	Tilt Error	Tilt	Node is required but not present	ICS 20
20AD	Tilt Error	Tilt	Flash parameters have been updated in the node	ICS 21
20B1	Back Error	Back	Sensor; Cable between sensor and General Module; or GM is not working	ICS 12
20B2	Back Error	Back	No motor can be detected, check motor and cable	ICS 13
20B3	Back Error	Back	Over current when operating function, might be overload	ICS 14
20B4	Back Error	Back	Pinch protection activated	ICS 15
20B5	Back Error	Back	Actuator is not moving or moving too slow	ICS 16
20B6	Back Error	Back	Too high speed detected on actuator, check sensor	ICS 17
20B7	Back Error	Back	Drive electronics for the actuator overheated	ICS 22
20B8	Back Error	Back	Fault mode has triggered	ICS 18
20B9	Back Error	Back	Cannot communicate on the LIN bus	ICS 19
20BA	Back Error	Back	Node is required but not present	ICS 20
20BD	Back Error	Back	Flash parameters have been updated in the node	ICS 21
20C1	Seat Lift Error	Seat lift	Sensor; Cable between sensor and General Module; or GM is not working	ICS 12
20C2	Seat Lift Error	Seat lift	No motor can be detected, check motor and cable	ICS 13
20C3	Seat Lift Error	Seat lift	Over current when operating function, might be overload	ICS 14
20C4	Seat Lift Error	Seat lift	Pinch protection activated	ICS 15
20C5	Seat Lift Error	Seat lift	Actuator is not moving or moving too slow	ICS 16
20C6	Seat Lift Error	Seat lift	Too high speed detected on actuator, check sensor	ICS 17
20C7	Seat Lift Error	Seat lift	Drive electronics for the actuator overheated	ICS 22
20C8	Seat Lift Error	Seat lift	Fault mode has triggered	ICS 18
20C9	Seat Lift Error	Seat lift	Cannot communicate on the LIN bus	ICS 19
20CA	Seat Lift Error	Seat lift	Node is required but not present	ICS 20
20CD	Seat Lift Error	Seat lift	Flash parameters have been updated in the node	ICS 21
20D1	Seat Stand Error	Stand	Sensor; Cable between sensor and General Module; or GM is not working	ICS 12
20D2	Seat Stand Error	Stand	No motor can be detected, check motor and cable	ICS 13
20D3	Seat Stand Error	Stand	Over current when operating function, might be overload	ICS 14
20D4	Seat Stand Error	Stand	Pinch protection activated	ICS 15
20D5	Seat Stand Error	Stand	Actuator is not moving or moving too slow	ICS 16
20D6	Seat Stand Error	Stand	Too high speed detected on actuator, check sensor	ICS 17
20D7	Seat Stand Error	Stand	Drive electronics for the actuator overheated	ICS 22
20D8	Seat Stand Error	Stand	Fault mode has triggered	ICS 18
20D9	Seat Stand Error	Stand	Cannot communicate on the LIN bus	ICS 19
20DA	Seat Stand Error	Stand	Node is required but not present	ICS 20
20DD	Seat Stand Error	Stand	Flash parameters have been updated in the node	ICS 21
20F1	Switchbox Error	Alt switchbox	Switches are activated at start up	ICS 8
20F9	Switchbox Error	Alt switchbox	Cannot communicate on the LIN bus	ICS 9
20FA	Switchbox Error	Alt switchbox	Node is required but not present	ICS 10
20FD	Switchbox Error	Alt switchbox	Flash parameters have been updated in the node	ICS 11
2101	Extra Function Error	Option1	Sensor; Cable between sensor and General Module; or GM is not working	ICS 12
2102	Extra Function Error	Option1	No motor can be detected, check motor and cable	ICS 13
2103	Extra Function Error	Option1	Over current when operating function, might be overload	ICS 14
2104	Extra Function Error	Option1	Pinch protection activated	ICS 15
2105	Extra Function Error	Option1	Actuator is not moving or moving too slow	ICS 16
2106	Extra Function Error	Option1	Too high speed detected on actuator, check sensor	ICS 17
2107	Extra Function Error	Option1	Drive electronics for the actuator overheated	ICS 22
2108	Extra Function Error	Option1	Fault mode has triggered	ICS 18
2109	Extra Function Error	Option1	Cannot communicate on the LIN bus	ICS 19
210A	Extra Function Error	Option1	Node is required but not present	ICS 20
210D	Extra Function Error	Option1	Flash parameters have been updated in the node	ICS 21

Error Code	LCD Text	Description Error Code	Extended Description Error Code	Solution
2111	Extra Function Error	Option2	Sensor; Cable between sensor and General Module; or GM is not working	ICS 12
2112	Extra Function Error	Option2	No motor can be detected, check motor and cable	ICS 13
2113	Extra Function Error	Option2	Over current when operating function, might be overload	ICS 14
2114	Extra Function Error	Option2	Pinch protection activated	ICS 15
2115	Extra Function Error	Option2	Actuator is not moving or moving too slow	ICS 16
2116	Extra Function Error	Option2	Too high speed detected on actuator, check sensor	ICS 17
2117	Extra Function Error	Option2	Drive electronics for the actuator overheated	ICS 22
2118	Extra Function Error	Option2	Fault mode has triggered	ICS 18
2119	Extra Function Error	Option2	Cannot communicate on the LIN bus	ICS 19
211A	Extra Function Error	Option2	Node is required but not present	ICS 20
211D	Extra Function Error	Option2	Flash parameters have been updated in the node	ICS 21
2121	Extra Function Error	Option3	Sensor; Cable between sensor and General Module; or GM is not working	ICS 12
2122	Extra Function Error	Option3	No motor can be detected, check motor and cable	ICS 13
2123	Extra Function Error	Option3	Over current when operating function, might be overload	ICS 14
2124	Extra Function Error	Option3	Pinch protection activated	ICS 15
2125	Extra Function Error	Option3	Actuator is not moving or moving too slow	ICS 16
2126	Extra Function Error	Option3	Too high speed detected on actuator, check sensor	ICS 17
2127	Extra Function Error	Option3	Drive electronics for the actuator overheated	ICS 22
2128	Extra Function Error	Option3	Fault mode has triggered	ICS 18
2129	Extra Function Error	Option3	Cannot communicate on the LIN bus	ICS 19
212A	Extra Function Error	Option3	Node is required but not present	ICS 20
212D	Extra Function Error	Option3	Flash parameters have been updated in the node	ICS 21
2131	Extra Function Error	Option4	Sensor; Cable between sensor and General Module; or GM is not working	ICS 12
2132	Extra Function Error	Option4	No motor can be detected, check motor and cable	ICS 13
2133	Extra Function Error	Option4	Over current when operating function, might be overload	ICS 14
2134	Extra Function Error	Option4	Pinch protection activated	ICS 15
2135	Extra Function Error	Option4	Actuator is not moving or moving too slow	ICS 16
2136	Extra Function Error	Option4	Too high speed detected on actuator, check sensor	ICS 17
2137	Extra Function Error	Option4	Drive electronics for the actuator overheated	ICS 22
2138	Extra Function Error	Option4	Fault mode has triggered	ICS 18
2139	Extra Function Error	Option4	Cannot communicate on the LIN bus	ICS 19
213A	Extra Function Error	Option4	Node is required but not present	ICS 20
213D	Extra Function Error	Option4	Flash parameters have been updated in the node	ICS 21
2141	Extra Function Error	Option5	Sensor; Cable between sensor and General Module; or GM is not working	ICS 12
2142	Extra Function Error	Option5	No motor can be detected, check motor and cable	ICS 13
2143	Extra Function Error	Option5	Over current when operating function, might be overload	ICS 14
2144	Extra Function Error	Option5	Pinch protection activated	ICS 15
2145	Extra Function Error	Option5	Actuator is not moving or moving too slow	ICS 16
2146	Extra Function Error	Option5	Too high speed detected on actuator, check sensor	ICS 17
2147	Extra Function Error	Option5	Drive electronics for the actuator overheated	ICS 22
2148	Extra Function Error	Option5	Fault mode has triggered	ICS 18
2149	Extra Function Error	Option5	Cannot communicate on the LIN bus	ICS 19
214A	Extra Function Error	Option5	Node is required but not present	ICS 20
214D	Extra Function Error	Option5	Flash parameters have been updated in the node	ICS 21
2151	Extra Function Error	Option6	Sensor; Cable between sensor and General Module; or GM is not working	ICS 12
2152	Extra Function Error	Option6	No motor can be detected, check motor and cable	ICS 13
2153	Extra Function Error	Option6	Over current when operating function, might be overload	ICS 14
2154	Extra Function Error	Option6	Pinch protection activated	ICS 15
2155	Extra Function Error	Option6	Actuator is not moving or moving too slow	ICS 16
2156	Extra Function Error	Option6	Too high speed detected on actuator, check sensor	ICS 17
2157	Extra Function Error	Option6	Drive electronics for the actuator overheated	ICS 22
2158	Extra Function Error	Option6	Fault mode has triggered	ICS 18
2159	Extra Function Error	Option6	Cannot communicate on the LIN bus	ICS 19
215A	Extra Function Error	Option6	Node is required but not present	ICS 20
215D	Extra Function Error	Option6	Flash parameters have been updated in the node	ICS 21
2161	Legs Error	Articulation legs	Sensor; Cable between sensor and General Module; or GM is not working	ICS 12
2162	Legs Error	Articulation legs	No motor can be detected, check motor and cable	ICS 13
2163	Legs Error	Articulation legs	Over current when operating function, might be overload	ICS 14
2164	Legs Error	Articulation legs	Pinch protection activated	ICS 15
2165	Legs Error	Articulation legs	Actuator is not moving or moving too slow	ICS 16
2166	Legs Error	Articulation legs	Too high speed detected on actuator, check sensor	ICS 17
2167	Legs Error	Articulation legs	Drive electronics for the actuator overheated	ICS 22
2168	Legs Error	Articulation legs	Fault mode has triggered	ICS 18
2169	Legs Error	Articulation legs	Cannot communicate on the LIN bus	ICS 19
216A	Legs Error	Articulation legs	Node is required but not present	ICS 20
216D	Legs Error	Articulation legs	Flash parameters have been updated in the node	ICS 21

Error Code	LCD Text	Description Error Code	Extended Description Error Code	Solution
2171	Supportwheels error	Support Wheels	Sensor; Cable between sensor and General Module; or GM is not working	ICS 12
2172	Supportwheels error	Support Wheels	No motor can be detected, check motor and cable	ICS 13
2173	Supportwheels error	Support Wheels	Over current when operating function, might be overload	ICS 14
2174	Supportwheels error	Support Wheels	Pinch protection activated	ICS 15
2175	Supportwheels error	Support Wheels	Actuator is not moving or moving too slow	ICS 16
2176	Supportwheels error	Support Wheels	Too high speed detected on actuator, check sensor	ICS 17
2177	Supportwheels error	Support Wheels	Drive electronics for the actuator overheated	ICS 22
2178	Supportwheels error	Support Wheels	Fault mode has triggered	ICS 18
2179	Supportwheels error	Support Wheels	Cannot communicate on the LIN bus	ICS 19
217A	Supportwheels error	Support Wheels	Node is required but not present	ICS 20
217D	Supportwheels error	Support Wheels	Flash parameters have been updated in the node	ICS 21
2A00		Feedback Voltage Fault Right		RNET 19
2A01		Right Voltage Null Bad		RNET 20
2B00		Feedback Voltage Fault Left		RNET 21
2B01		Left Voltage Null Bad		RNET 12
2C00	Low Battery	Low Battery Voltage		RNET 13
2C01	Low Battery	Low Battery Voltage	Very Low Battery Voltage	RNET 14
2C02	Low Battery	Low Battery Voltage	Low Battery Lockout	RNET 15
2F01	Center Joystick	Center Joystick		RNET 16
3100		Low Bridge Voltage		RNET 17
3101		Bridge To Battery Short		RNET 22
3203		Port 2 Verification Error		RNET 18
3211	Bad Settings	Bad Settings	Parameter Range Error	RNET 19
3215		ADC Storage Error		RNET 20
3611		Failed To Arm Trip Latch		RNET 21
3A00	Bad Settings	Bad Settings		RNET 15
3A05	Cycle Power	System Power Cycle Required		RNET 16
3B00	M1 Motor Error	M1 Motor Open Circuit		RNET 17
3C00	M2 Motor Error	M2 Motor Open Circuit		RNET 18
3D00	M1 Motor Error	M1 Motor Shorted High		RNET 19
3D01	M1 Motor Error	M1 Motor Shorted Low		RNET 20
3E00	M2 Motor Error	M2 Motor Shorted High		RNET 21
3E01	M2 Motor Error	M2 Motor Shorted Low		RNET 22
7902		High Temperature		RNET 24
7C00		Thermistor Fault	Thermistor measurement is out of range	RNET 3
7E00	PM Memory Error	PM Memory Error	Running Repository Error	RNET 2
7E01	PM Memory Error	PM Memory Error	Unable to Open PM Req File	RNET 2
7E02	Memory Error	Memory Error	Unable to synchronise with Repository	RNET 1
7E03	Memory Error	Memory Error	Failed to cancel queued message	RNET 1
7E04	Memory Error	Memory Error	Repository aborted transfer	RNET 1
7E05	Memory Error	Memory Error	Repository timeout during transfer	RNET 1
7E06	Memory Error	Memory Error	Invalid Repository node number detected	RNET 1
7E07	Memory Error	Memory Error	Incompatible file format	RNET 1
7E08	Memory Error	Memory Error	Bad data in Repository file	RNET 1
7E09	Memory Error	Memory Error	Bad descriptor in Repository file	RNET 1
7E0A	Memory Error	Memory Error	Old file format in Repository cannot restore corrupt file	RNET 1
7E0B	Memory Error	Memory Error	File Slot CRC does not match	RNET 1
7E20	Memory Error	Memory Error	Get Repository Timeout	RNET 1
7E21	Memory Error	Memory Error	Release Repository Timeout	RNET 1
7E22	Memory Error	Memory Error	Check Repository Timeout	RNET 1
7E23	Memory Error	Memory Error	Repository Taken	RNET 1
7E24	Memory Error	Memory Error	Repository Not Released	RNET 1
7E25	Memory Error	Memory Error	Set Values Get File Slot Error	RNET 1
7E26	Memory Error	Memory Error	Set Values Set Slot Location Error	RNET 1
7E27	Memory Error	Memory Error	Slot Write Error	RNET 1
7E28	Memory Error	Memory Error	Set Values Slot Data Error	RNET 1
7E29	Memory Error	Memory Error	Set Values Get File Slot Error	RNET 1
7E2A	Memory Error	Memory Error	Get Values Get File Slot Error	RNET 1
7E2B	Memory Error	Memory Error	Get Values Set Slot Location Error	RNET 1
7E2C	Memory Error	Memory Error	Get Values Slot Data Error	RNET 1
7E2E	Memory Error	Memory Error	Get Size Get File Slot Error	RNET 1
7E2F	Memory Error	Memory Error	Get Slot Size Error	RNET 1
7E30	Memory Error	Memory Error	Get Operating Time Error	RNET 1
7E34	Memory Error	Memory Error	Get Eventlog Event Error	RNET 1
7E35	Memory Error	Memory Error	Get Org Number Error	RNET 1
7E36	Memory Error	Memory Error	Get Attributes Get File Slot Error	RNET 1
7E37	Memory Error	Memory Error	Get Slot Check Error	RNET 1
7E38	Memory Error	Memory Error	Set Slot Verify Error	RNET 1
7E39	Memory Error	Memory Error	Get File Attributes Error	RNET 1
7E3A	Memory Error	Memory Error	Repository Data Corrupt	RNET 1
7F00	Bad Cable	Bad Cable	CAN Transceiver in fault tolerant mode	RNET 26
8100	System Error	System Error	CAN Device Off-line	RNET 27
8101		Bus Off		RNET 30
8102		CAN Receiver Overrun		RNET 30
8103	Memory Error	Memory Error	Rebus Tx Queue Full	RNET 1
8104	System Error	System Error	Rx DLC Not As Expected	RNET 27
8105	DIME Error	DIME Error		RNET 28
8106	System Error	System Error	Config Failure	RNET 27
8107	System Error	System Error	Rebus Event Queue Overflow	RNET 27
8108	System Error	System Error	Config Data Access Error	RNET 27

<b>Error Code</b>	<b>LCD Text</b>	<b>Description Error Code</b>	<b>Extended Description Error Code</b>	<b>Solution</b>
8109	System Error	System Error	Pre-Op Failure	RNET 27
810A	PM Memory Error	PM Memory Error	SCF File Read Failure	RNET 2
810B	PM Memory Error	PM Memory Error	DCF File Read Failure	RNET 2
810C	System Error	System Error	Failed to Init DCF Tables by Pre-Op End	RNET 27
810D	System Error	System Error	Config Failure - No Repository Node	RNET 27
810E	System Error	System Error	Config Failure - Too Many Repository Nodes	RNET 27
8110		SCID Received by Waking Node		RNET 30
8140	Memory Error	Memory Error	Tx Confirm Timeout	RNET 1
8141	System Error	System Error	Config Failure - No PG Input Device	RNET 31
8142	System Error	System Error	Config Failure - Invalid PG Input Devices Param	RNET 27
8143	System Error	System Error	Config Failure - Unexpected Non PG Input Device	RNET 27
8180	Bad Settings	Bad Settings	Unable to Select Profile	RNET 15
8181	Memory Error	Memory Error	Invalid AIM Indicated	RNET 1
8182	Memory Error	Memory Error	Invalid Mode or Profile Message	RNET 1
8183	Bad Settings	Bad Settings	No Modes Available	RNET 15
8184	Module Error	Focus Mask Access Error		RNET 30
8E00	Module Error	Statemachine Queue Overflow		RNET 30
8E01	Module Error	Event Queue Overflow		RNET 30
FFFF	Memory Error		Module reporting Error, may need repair.	RNET 1, RNET 29

Remedy	Explanation and suggested actions
RNET 1	<p>This memory error could be caused by any of the modules within the R-net system.</p> <ul style="list-style-type: none"> <li>- Check all cables and connections.</li> <li>- Turn the wheelchair off and back on using the power button on the JSM or other input device.</li> </ul> <p>If the trip is still present and the system contains non-PGDT Modules (i.e. ESP, ICS Master Module, Co-Pilot, etc):</p> <ul style="list-style-type: none"> <li>- Disconnect all the non-PGDT modules and turn the wheelchair off and back on using the power button. If this has cleared the error: <ul style="list-style-type: none"> <li>- Connect each non-PGDT Module in turn, cycling the power each time.</li> </ul> </li> <li>- If the trip reappears after one of the power cycles then the last module added to the system must be causing the error.</li> </ul>
RNET 2	<p>This memory error is specific to the R-net Power Module.</p> <ul style="list-style-type: none"> <li>- Check all cables and connections.</li> <li>- Using the R-net PC Programmer, re-write the wheelchair's program file to the control system.</li> </ul> <p>The most current program file for the specific wheelchair model should be used, contact Permobil for assistance.</p>
RNET 3	<p>Perform the following steps:</p> <ul style="list-style-type: none"> <li>- Check the condition and charge level of the batteries.</li> <li>- Ensure the connections between the batteries and power module are tight and the cables are not damaged.</li> <li>- Ensure the connections between the motors and power module are tight and the cables are not damaged.</li> <li>- Remove and Restore power to the Drive System by turning the Circuit Breaker off/on or by disconnecting the Main Fuse from the batteries and reconnecting it.</li> </ul>
RNET 4	<p>The most common cause of this error is if the joystick is deflected away from center before and during the time the control system is switched on. The joystick displaced screen will be displayed for 5 seconds, if the joystick is not released within that time then an error is registered.</p> <ul style="list-style-type: none"> <li>- Ensure that the joystick is centered and power-up the control system.</li> </ul>
RNET 5	<p>The Omni has detected that the Specialty Input Device (SID) has become disconnected.</p> <ul style="list-style-type: none"> <li>- Check all cables and connectors between the Omni and the SID. If the error persists:</li> <li>- Check that the setting of the Omni parameter, 9- Way Detect, is appropriate for the SID that is being used. For example, if the SID has no detect-link (connection between pins 5 &amp; 8), then this parameter should be set to Off.</li> </ul>
RNET 6	<p>This occurs when the control system has been left inactive for a time greater than the parameter Sleep Timer. An entry is made in the system log each time this occurs.</p>
RNET 7	<p>This error occurs when the control system detects a problem in the solenoid brake connected to the M1 port of the Power Module or the connections to the brake itself.</p> <ul style="list-style-type: none"> <li>- The brake connected to M1 varies by configuration, follow cabling to ensure you are checking the correct one.</li> <li>- Check the solenoid brake, cables and connections to the power module.</li> </ul>
RNET 8	<p>This error occurs when the control system detects a problem in the solenoid brake connected to the M2 port of the Power Module or the connections to the brake itself.</p> <ul style="list-style-type: none"> <li>- The brake connected to M2 varies by configuration, follow cabling to ensure you are checking the correct one.</li> <li>- Check the solenoid brake, cables and connections to the power module.</li> </ul>
RNET 9	<p>This occurs when the control system detects that the battery voltage has risen above 35V. The most common reasons for this are overcharging of the battery or bad connections between the control system and the batteries.</p> <ul style="list-style-type: none"> <li>- Check the charge level and condition of the batteries.</li> <li>- Ensure the connections between the batteries and the control system are tight and not damaged.</li> <li>- Ensure the connection between the batteries and circuit breaker/main fuse are tight and not damaged.</li> </ul>
RNET 10	<p>This error is sometimes caused by low battery voltage or a worn or defective battery.</p> <ul style="list-style-type: none"> <li>- Check the charge level and condition of the batteries.</li> <li>- Ensure the connections between the batteries and the control system are tight and not damaged.</li> <li>- Ensure the connection between the batteries and circuit breaker/main fuse are tight and not damaged.</li> </ul>
RNET 11	<p>This occurs when the control system detects that a charger is connected to the front of the JSM/OMNI or the chassis mounted charger connector. The Battery charging screen (climbing bars) will be displayed during charger connection.</p> <ul style="list-style-type: none"> <li>- An entry is made in the system log each time this occurs. Disconnect the charger from the Wheelchair.</li> </ul> <p>If the trip is still present after the charger has been disconnected, the Joystick Module may be defective, contact Permobil.</p>
RNET 12	<p>The Omni has detected that the User Switch has become disconnected from the U1 or U2 port of the Omni.</p> <ul style="list-style-type: none"> <li>- Check all cables and connectors between the Omni ports and the User Switch.</li> </ul> <p>If the trip is still present after the above checks have been made, then the User Switch may be defective. Try replacing it with a known good switch.</p> <p>If it is required to use the Omni without a User Switch being connected, then the parameter Switch Detect should be set to Off. If a User Switch is not used the responsibility for that decision lies with the healthcare professional.</p>
RNET 13	<p>This occurs when any of the Inhibit inputs are active and in a latched state. The actual inhibit that is active is indicated by the last 2 digits of the Error Code. The code is in Hex. For example:</p> <ul style="list-style-type: none"> <li>1E20 - For Inhibit 2</li> <li>1E21 - For Inhibit 3</li> <li>1E22 - For Inhibit 4</li> <li>1E23 - For Inhibit 5</li> </ul> <ul style="list-style-type: none"> <li>- Turn the wheelchair off and on, this will drop the inhibit out of its latched state, that might clear the trip.</li> <li>- Check all wiring and switches connected to the indicated Inhibits.</li> </ul>
RNET 14	<p>This error occurs when the controller detects that the battery voltage has fallen below 16V.</p> <ul style="list-style-type: none"> <li>- Check the charge level and condition of the batteries.</li> <li>- Ensure the connections between the batteries and the control system are tight and not damaged.</li> <li>- Ensure the connection between the batteries and circuit breaker/main fuse are tight and not damaged.</li> </ul>
RNET 15	<p>This error occurs when the control system detects incorrect or invalid program settings.</p> <ul style="list-style-type: none"> <li>- Make a note of the current parameter settings by reading them from the controller and saving or printing them.</li> <li>- Check that all parameter settings appear correct. Re-program the control system using the R-net PC Programmer. If the error persists: <ul style="list-style-type: none"> <li>- Reset the control system to factory default settings using the Return to Defaults command.</li> </ul> </li> <li>- Using the previously saved or printed parameter settings, re-program the required settings in small groups, cycling the power after each group to see if the trip occurs again.</li> </ul>
RNET 16	<p>This message is displayed when the R-net system encounters a change in the system or program settings, and must power down and back up again for the adjustments to be held. It is not a trip condition, but an indication that the Cycle Power function has been activated.</p> <ul style="list-style-type: none"> <li>- Turn the wheelchair off and back on using the power button on the JSM or other input device.</li> </ul>
RNET 17	<p>This error occurs when the control system detects that the motor connected to the M1 port of the Power Module has become disconnected.</p> <ul style="list-style-type: none"> <li>- The motor connected to M1 varies by configuration, follow cabling to ensure you are checking the correct one.</li> <li>- Check the motor cables and connections between the motor and control system, ensure there is no damage.</li> <li>- Check the motor for proper operation using a voltmeter and/or external power source.</li> </ul>
RNET 18	<p>This error occurs when the control system detects that the motor connected to the M2 port of the Power Module has become disconnected.</p> <ul style="list-style-type: none"> <li>- The motor connected to M2 varies by configuration, follow cabling to ensure you are checking the correct one.</li> <li>- Check the motor cables and connections between the motor and control system, ensure there is no damage.</li> <li>- Check the motor for proper operation using a voltmeter and/or external power source.</li> </ul>
RNET 19	<p>This occurs when the control system detects that the motor connected to M1 on the Power Module has "short-circuited" to a battery positive connection.</p> <ul style="list-style-type: none"> <li>- The motor connected to M1 varies by configuration, follow cabling to ensure you are checking the correct one.</li> <li>- Check the motor cables and connections between the motor and control system, ensure there is no damage.</li> <li>- Check for voltage between the M1 motor connections and the positive battery terminals when the wheelchair is on, but not driving the motors.</li> <li>- Check the motor for proper operation using a voltmeter and/or external power source.</li> </ul>
RNET 20	<p>This occurs when the control system detects that the motor connected to M1 on the Power Module has "short-circuited" to a battery negative connection.</p> <ul style="list-style-type: none"> <li>- The motor connected to M1 varies by configuration, follow cabling to ensure you are checking the correct one.</li> <li>- Check the motor cables and connections between the motor and control system, ensure there is no damage.</li> <li>- Check for voltage between the M1 motor connections and the negative battery terminals when the wheelchair is on, but not driving the motors.</li> <li>- Check the motor for proper operation using a voltmeter and/or external power source.</li> </ul>

Remedy	Explanation and suggested actions
RNET 21	This occurs when the control system detects that the motor connected to M2 on the Power Module has "short-circuited" to a battery positive connection. <ul style="list-style-type: none"> <li>- The motor connected to M2 varies by configuration, follow cabling to ensure you are checking the correct one.</li> <li>- Check the motor cables and connections between the motor and control system, ensure there is no damage.</li> <li>- Check for voltage between the M2 motor connections and the positive battery terminals when the wheelchair is on, but not driving the motors.</li> <li>- Check the motor for proper operation using a voltmeter and/or external power source.</li> </ul>
RNET 22	This occurs when the control system detects that the motor connected to M2 on the Power Module has "short-circuited" to a battery negative connection. <ul style="list-style-type: none"> <li>- The motor connected to M2 varies by configuration, follow cabling to ensure you are checking the correct one.</li> <li>- Check the motor cables and connections between the motor and control system, ensure there is no damage.</li> <li>- Check for voltage between the M2 motor connections and the negative battery terminals when the wheelchair is on, but not driving the motors.</li> <li>- Check the motor for proper operation using a voltmeter and/or external power source.</li> </ul>
RNET 23	This message is displayed when the Latched Drive Timeout period is exceeded. It is not a trip condition, but an indication that the Timeout period has been exceeded. <ul style="list-style-type: none"> <li>- If the Latched Drive Timeout period is not long enough, adjust the Latched Timeout parameter.</li> </ul>
RNET 24	This error occurs when the control system reaches its Temperature Threshold and thus becomes too hot. The controller goes out of drive into standby to allow the controller to cool down. An entry is made in the system log each time the controller gets too hot and goes out of drive.
RNET 25	This error refers to a problem with the PGDT Seating Module (SM) or Intelligent Seating Module (ISM). Permobil Wheelchairs do not utilize these modules, therefore this error code should not be seen on Permobil products.
RNET 26	This error is displayed when the control system detects a fault in the wiring in the R-net bus cables between any of the modules. <ul style="list-style-type: none"> <li>- Confirm that all cables are securely connected to their mating connectors (no yellow showing.)</li> <li>- Check all cables and connections for continuity from one end of the cable to the other, using an ohmmeter.</li> <li>- If there is any visible damage to any cable, replace it.</li> </ul> <ul style="list-style-type: none"> <li>- Disconnect one cable from the system at a time cycling the power after each disconnection. When the error is no longer displayed, that cable or the module it connects to is at fault.</li> </ul>
RNET 27	This occurs when the system detects a trip that cannot be attributed to a specific module. <ul style="list-style-type: none"> <li>- Check all cables and connections.</li> <li>- Turn the wheelchair off and back on using the power button on the JSM or other input device.</li> </ul> If the trip is still present and the system contains non-PGDT Modules (i.e. ESP, ICS Master Module, Co-Pilot, etc): <ul style="list-style-type: none"> <li>- Disconnect all the non-PGDT modules and turn the wheelchair off and back on using the power button. If this has cleared the trip:</li> <li>- Connect each non-PGDT Module in turn, cycling the power each time.</li> </ul> If the error reappears after one of the power cycles then the last module added to the system must be causing the error.
RNET 28	This error occurs when the control system detects an identification conflict between two modules in the system. If a new module has been introduced: <ul style="list-style-type: none"> <li>- Disconnect the new module and cycle the power.</li> <li>- If no trip is present connect the new module to the system and cycle the power.</li> <li>- If the trip reappears then the new module must be the cause of the problem.</li> </ul> If there have been no additions: <ul style="list-style-type: none"> <li>- Disconnect one module at a time.</li> <li>- Cycle power as each module is removed using the power button on the JSM or other input device.</li> </ul> <ul style="list-style-type: none"> <li>- When the error is no longer displayed, reconnect the modules in reverse order to help identify the conflicting devices.</li> </ul> If the error is still present after the above checks have been made, contact Permobil for further assistance.
RNET 29	This error refers to an unknown problem with the module that is reporting the error. <ul style="list-style-type: none"> <li>- Access the System Fault Log using the On-Board Programming (OBP) or the R-net PC Programmer. Find the module name/ID that has an FFFF error in its error log.</li> <li>- The module with FFFF in its error log needs to be investigated and may need to be repaired or replaced.</li> </ul>
RNET 30	This occurs when the control system detects a trip within a specific module. The module will be identified on the diagnostics screen. <ul style="list-style-type: none"> <li>- Check all cables and connectors to the module.</li> <li>- Cycle the power.</li> <li>- (If possible) Remove the module reporting the trip from the system.</li> <li>- Cycle the power.</li> </ul> <ul style="list-style-type: none"> <li>- If the error has gone, the module reporting the error may require repair, contact your service center.</li> </ul>
RNET 31	This occurs when the system detects a trip that cannot be attributed to a specific module. <ul style="list-style-type: none"> <li>- Check all cables and connections.</li> <li>- Cycle the power.</li> </ul> If the trip is still present and the system contains 3rd Party Modules: <ul style="list-style-type: none"> <li>- Disconnect all the none-PGDT modules and cycle the power.</li> </ul> If this has cleared the trip: <ul style="list-style-type: none"> <li>- Connect each 3rd Party Module in turn, cycling the power each time.</li> </ul> <ul style="list-style-type: none"> <li>- If the trip reappears after one of the power cycles then the last module to have been added to the system must be defective.</li> </ul> If the trip is still present after the above checks have been made, then the PGDT control system may be defective and should be returned to PG Drives Technology.
ICS 1	The ICS master is not correctly updated or there is a memory error. An UI or Model checksum error is detected. - Try reprogramming the master configuration. If that doesn't help, replace the ICS Master Module..
ICS 2	This error comes when the Master has detected that the LIN-bus current was unexpectedly high when no actuator movement was ordered. Reason is probably that the output transistor in an actuator node (GM or Smart actuator) is constantly active. - Turn the system off and on and see if any actuator moves for a second before the error is indicated again. Note: If the faulty unit is trying to drive the system into a hard stop no movement will be possible.
ICS 3	Problems with internal SPI communication, that means the communication between the URIB and the Master Main-PCB in the ICS Master Module. - For old versions, try to update Master Firmware and/or the URIB-software. If this doesn't help or if the error is constantly repeated the Master Module needs to be replaced.
ICS 4	This error indicates that the CPU in the Master Module can not write to the internal flash memory. - If this error is repeated the Master Module needs to be replaced.
ICS 5	ICS Master is not able to update parameters in a node memory. Read data doesn't match the data written to the node. - Replace the node. - If that doesn't help, replace the ICS Master Module.
ICS 6	Restart system by cycling power. Use the Rnet system ON/OFF button.
ICS 7	This error comes when the Master has detected that there is a Smart actuator or a General Module that has no defined function connected to the LIN-bus. This can happen for example if a system that is equipped with a special adaptation is reprogrammed using a standard config-file. - Try to use the factory back-up file (custom shop) to reprogram the system. Contact Permobil Customer Support for help if needed.
ICS 8	If a switch/button on the switchbox is activated/pressed when system is starting-up will not generate any error-code. But the system will ignore the button until it is released and activated again. This error code not reported on display or in log.
ICS 9	Switchbox is detected on the LIN-bus but the messages from it has the wrong checksum. - Replace the Switchbox.
ICS 10	Not implemented. This error code will never occur.
ICS 11	Restart is required. Switch OFF/ON system.
ICS 12	Check the cables and the connectors between the General Module and the sensor
ICS 13	Check the cables and the connector between the motor and the General Module or the Smart Actuator Electronics.
ICS 14	Overcurrent is detected when the current to the actuator motor exceeds a predefined value a short time. This can be due that the actuator hits the actuator hard end stop or any other hard stop. It could also be due to overload from the user weight or from that something is not moving as easy as it should. - Find out where in the movement the over current occurs. - Check that the actuator do not move into a hard end stop. - Check that the seat function can do a full movement as expected without user. - Replace actuator if no other reason for the overcurrent is found.

Remedy	Explanation and suggested actions
ICS 15	Check if the Pinch Protection switch is activated. - Check cable and connector between the Pinch Protection switch and the General Module. - Check if possible the function of the switch using a voltage meter or ohm-meter . - Replace the switch or/and the General Module.
ICS 16	This error can only occur if the movement of the actuator is monitored. The node detects no or too little/slow changes of the position feedback signal. - For external position feedbacks (e.g. SoftPot) check wiring and connectors. - Check that the actuator position (length) shown in WB corresponds to the physical position/length. - Change feedback sensor/Smart Actuator if no other reason found.
ICS 17	This error can only occur if the movement of the actuator is monitored. The node detects too fast changes of the position feedback signal. - For external position feedbacks (e.g. SoftPot) check wiring and connectors. - Check that the actuator position (length) shown in WB corresponds to the physical position/length. - Change feedback sensor/Smart Actuator if no other reason found.
ICS 18	The node has detected an internal fault, for example a faulty voltage level. - Replace the node. When n actuator with REAC DigPot is used this error code indicates a short-circuit on the DigPot's output (motor connections).
ICS 19	The node is detected on the LIN-bus but the messages from it has the wrong checksum. -Replace the General Module or Smart Actuator.
ICS 20	Master can't detect that the node is connected. - Check connections to the General Module or Smart Actuator. - If connections are ok replace the General Module or Smart Actuator.
ICS 21	Restart is required. Switch OFF/ON system.
ICS 22	The Smart Actuator or General Module has detected a too high temperature on the PCB. This is probably caused by heavy load (current) during a longer time, probably when the actuator has been used with reduced speed. - Wait for unit to cool down.