RCC-02/-03 Quick guide

Main displays

Information

Settings

Start screen

*Only if a **BSP** battery monitor is present*

*Only if a **BSP** battery monitor is present*

*Only if a **VarioTrack** MPPT solar charge controller is present*

*Only if a **VarioTrack** MPPT solar charge controller is present*

*Only if a **VarioString** MPPT solar charge controller is present*

*Only if a **VarioString** MPPT solar charge controller is present*

ADJUSTMENT OF THE REMOTE CONTROL

Level	User ref.	Parameter	Factory value
Basic	5000	Language	0 English
Expert	**5036**	**OTHER LANGUAGES**	
Basic	5038	Choice of the second language	French
Basic	5039	Choice of the third language	German
Basic	5040	Choice of the fourth language	Spanish
Basic	5001	Time	00:00
Basic	5002	Date	0
V.O.	5012	User level	16
Expert	5019	Force remote control to user BASIC level	-
Expert	**5057**	**DATALOGGER**	
Expert	5101	Datalogger enabled	Automatic
Expert	5059	Save today's datas	-
Inst.	5109	Datalogger reset when modifying the installation	No
Inst.	5120	Erase the 30 oldest log files from the SD card	-
Expert	5123	Enabling development tracks	No
Basic	**5013**	**SAVE AND RESTORE FILES**	
Basic	5041	Save all files (system backup)	-
Basic	5068	Restore all files (system recovery)	-
Basic	5070	Apply configuration files (masterfile)	-
Expert	5032	Separator of the .csv files	Automatic
Expert	**5069**	**Advanced backup functions**	
Expert	5030	Save messages	-
Expert	**5049**	**Save and restore RCC files**	
Expert	5015	Save RCC parameters	-
Expert	5016	Load RCC parameters	-
Inst.	5097	Create RCC configuration file (masterfile)	-
Expert	5098	Load RCC configuration file (masterfile)	-
Expert	**5050**	**Save and restore Xtender files**	
Expert	5017	Save Xtender parameters	-
Expert	5018	Load Xtender parameters	-
Inst.	5033	Create Xtender configuration file (masterfile)	-
Expert	5034	Load Xtender configuration file (masterfile)	-
Expert	5045	Load Xtender parameters preset	1
Expert	**5051**	**Save and restore BSP files**	
Expert	5052	Save BSP parameters	-
Expert	5053	Load BSP parameters	-
Inst.	5054	Create BSP configuration file (masterfile)	-
Expert	5055	Load BSP configuration file (masterfile)	-
Expert	**5084**	**Save and restore VarioTrack files**	
Expert	5085	Save VarioTrack parameters	-

Level	User ref.	Parameter	Factory value
Expert	5086	Load VarioTrack parameters	-
Inst.	5087	Create VarioTrack configuration file (masterfile)	-
Expert	5088	Load VarioTrack configuration file (masterfile)	-
Expert	**5114**	**Save and restore VarioString files**	
Expert	5115	Save VarioString parameters	-
Expert	5116	Load VarioString parameters	-
Inst.	5117	Create VarioString configuration file (masterfile)	-
Expert	5118	Load VarioString configuration file (masterfile)	-
Expert	**5063**	**Save and restore MPPT Tristar files**	
Expert	5064	Save MPPT Tristar parameters	-
Expert	5065	Load MPPT Tristar parameters	-
Inst.	5066	Create MPPT Tristar configuration file (masterfile)	-
Expert	5067	Load MPPT Tristar configuration file (masterfile)	-
Inst.	5047	Format the SD card	-
Expert	5061	Start update	-
Inst.	**5042**	**MODIFICATION OF ACCESS LEVELS OF MANY PARAMETERS**	
Inst.	5043	Change all parameters access level to:	Choose
Inst.	5044	Restore default access level of all parameters	-
Basic	**5007**	**BACKLIGHT**	
Basic	5093	Backlight mode	Delayed
Basic	5009	Backlight switch off after	120 sec
Expert	5026	Red backlight flashing on Xtender off and faulty	Yes
Basic	**5021**	**EXTENDED AND SPECIAL FUNCTIONS**	
Basic	5006	Display contrast	45%
Expert	5073	Choice of standard display	Xtender
Expert	5010	Come back to standard display after	600 sec
Expert	5011	Visibility of the transitory messages	60 sec
Basic	5027	Acoustic alarm active	Yes
Expert	5031	Remote control acoustic alarm duration	120 sec
Expert	5056	Switching ON and OFF of system on level "VIEW ONLY"	Yes
Expert	5071	Reset of all the remotes control	-
Expert	5121	Reset all devices of the system	-
Expert	**5094**	**SCOM**	
Expert	5105	Test of the modem's GPRS signal level	-
Inst.	5119	Device identification (LEDs) with the SCOM address	0
Inst.	5095	Enable SCOM watchdog	No
Inst.	5096	SCOM watchdog delay before reset of Xcom-232i	60 sec

ADJUSTMENT OF THE XTENDER

Level	User ref.	Parameter	Factory value
Basic	**1100**	**BASIC SETTINGS**	
Basic	1551	Basic parameters set by means of the potentiomenter in the XTS	Yes
Basic	1107	Maximum current of AC source (Input limit)	32 Aac
Basic	1138	Battery charge current	60 Adc
Basic	1126	Smart-Boost allowed	Yes
Basic	1124	Inverter allowed	Yes
Basic	1552	Type of detection of the grid loss (AC-In)	Tolerant
Basic	1187	Standby level	10%
Basic	1395	Restore default settings	-
Inst.	1287	Restore factory settings	-
Expert	**1137**	**BATTERY MANAGEMENT AND CYCLE**	
Expert	1125	Charger allowed	Yes
Basic	1138	Battery charge current	60 Adc
Expert	1139	Temperature compensation	-3 mV/°C/cell
Expert	**1568**	**Undervoltage**	
Expert	1108	Battery undervoltage level without load	11.6/23.2/46.3 Vdc
Expert	**1531**	**Battery undervoltage dynamic compensation**	
Expert	1191	Battery undervoltage dynamic compensation	Yes
Expert	1532	Kind of dynamic compensation	Automatic
Expert	1109	Battery undervoltage level at full load	10.5/21/42 Vdc
Expert	1190	Battery undervoltage duration before turn off	3 min
Expert	1110	Restart voltage after batteries undervoltage	12/24/48 Vdc
Expert	1194	Battery adaptive low voltage (B.L.O)	No
Expert	1195	Max voltage for adaptive low voltage	12.5/25/49.9 Vdc
Expert	1307	Reset voltage for adaptive correction	13.2/26.4/52.8 Vdc
Expert	1298	Increment step of the adaptive low voltage	0.1/0.2/0.5 Vdc
Expert	1121	Battery overvoltage level	17/34.1/68.2 Vdc
Expert	1122	Restart voltage level after an battery overvoltage	16.2/32.4/64.8 Vdc
Expert	1140	Floating voltage	13.6/27.2/54.4 Vdc
Expert	1467	Force phase of floating	-
Expert	**1141**	**New cycle menu**	
Expert	1142	Force a new cycle	-
Inst.	1608	Use dynamic compensation of battery level (new cycle)	No
Expert	1143	Voltage level 1 to start a new cycle	12.5/25/49.9 Vdc
Expert	1144	Time period under voltage level 1 to start a new cycle	30 min
Expert	1145	Voltage level 2 to start a new cycle	12.3/24.6/49.2 Vdc
Expert	1146	Time period under voltage level 2 to start a new cycle	60 sec
Expert	1149	New cycle priority on absorption and equalization phases	No
Expert	1147	Cycling restricted	No

Level	User ref.	Parameter	Factory value
Expert	1148	Minimal delay between cycles	3 hours
Expert	**1451**	**Absorption phase**	
Expert	1155	Absorption phase allowed	Yes
Expert	1156	Absorption voltage	14.4/28.8/57.6 Vdc
Expert	1157	Absorption duration	2 hours
Expert	1158	End of absorption triggered with current	No
Expert	1159	Current limit to quit the absorption phase	4 Adc
Expert	1160	Maximal frequency of absorption control	No
Expert	1161	Minimal delay since last absorption	2 hours
Expert	**1452**	**Equalization phase**	
Expert	1163	Equalization allowed	No
Expert	1162	Force equalization	-
Expert	1291	Equalization before absorption phase	Yes
Expert	1290	Equalization current	60 Adc
Expert	1164	Equalization voltage	15.6/31.2/62.4 Vdc
Expert	1165	Equalization duration	0.5 hours
Expert	1166	Number of cycles before an equalization	25
Expert	1284	Equalization with fixed interval	No
Expert	1285	Weeks between equalizations	26 weeks
Expert	1168	End of equalization triggered with current	No
Expert	1169	Current threshold to end equalization phase	4 Adc
Expert	**1453**	**Reduced floating phase**	
Expert	1170	Reduced floating allowed	No
Expert	1171	Floating duration before reduced floating	1 days
Expert	1172	Reduced floating voltage	13.2/26.4/52.8 Vdc
Expert	**1454**	**Periodic absorption phase**	
Expert	1173	Periodic absorption allowed	No
Expert	1174	Periodic absorption voltage	14.4/28.8/57.6 Vdc
Expert	1175	Reduced floating duration before periodic absorption	7 days
Expert	1176	Periodic absorption duration	0.5 hours
Expert	**1186**	**INVERTER**	
Basic	1124	Inverter allowed	Yes
Expert	1286	AC Output voltage	230 Vac
Expert	1548	AC voltage increase according to battery voltage	No
Expert	1560	Max AC voltage increase with battery voltage	10 Vac
Expert	1112	Inverter frequency	50 Hz
Expert	1536	Inverter frequency increase when battery full	No
Expert	1549	Inverter frequency increase according to battery voltage	No
Expert	1546	Max frequency increase	4 Hz
Expert	1534	Speed of voltage or frequency change in function of battery	0
Expert	**1420**	**Standby and turn on**	
Basic	1187	Standby level	10%
Expert	1189	Time delay between standby pulses	0.8 sec
Expert	1188	Standby number of pulses	1
Expert	1599	Softstart duration	0 sec
Expert	1438	Solsafe presence Energy source at AC-Out side	No
Expert	**1197**	**AC-IN AND TRANSFER**	

Level	User ref.	Parameter	Factory value
Expert	1128	Transfer relay allowed	Yes
Expert	1580	Delay before closing transfer relay	0 min
Basic	1126	Smart-Boost allowed	Yes
Inst.	1607	Limitation of the power Boost	100%
Basic	1107	Maximum current of AC source (Input limit)	32 Aac
Expert	**1471**	**Max input current modification**	
Expert	1566	Using a secondary value for the maximum current of the AC source	No
Expert	1567	Second maximum current of the AC source (Input limit)	16 Aac
Expert	1527	Decrease max input limit current with AC-In voltage	No
Expert	1554	Decrease of the max. current of the source with input voltage activated by command entry	No
Expert	1309	AC input low limit voltage to allow charger function	180 Vac
Expert	1433	Adaptation range of the input current according to the input voltage	10 Vac
Expert	1553	Speed of input limit increase	50
Expert	1295	Charge current decrease coef. at voltage limit to turn back in inverter mode	100%
Expert	1436	Overrun AC source current limit without opening the transfer relay (Input limit)	Yes
Basic	1552	Type of detection of the grid loss (AC-In)	Tolerant
Expert	1510	Tolerance on detection of AC-input loss (tolerant UPS mode)	100
Expert	1199	Input voltage giving an opening of the transfer relay with delay	180 Vac
Expert	1198	Time delay before opening of transfer relay	8 sec
Expert	1200	Input voltage giving an immediate opening of the transfer relay (UPS)	150 Vac
Inst.	1432	Absolute max limit for input voltage	270 Vac
Expert	1505	Delta frequency allowed above the standard input frequency	5 Hz
Expert	1506	Delta frequency allowed under the standard input frequency	5 Hz
Expert	1507	Duration with frequency error before opening the transfer	2 sec
Expert	1575	AC-IN current active filtering	No
Inst.	1557	Use an energy quota on AC-input	No
Inst.	1559	AC-in energy quota	1 kWh
Expert	**1201**	**AUXILIARY CONTACT 1**	
Expert	1202	Operating mode (AUX 1)	Automatic
Expert	1497	Combination of the events for the auxiliary contact (AUX 1)	Any (Function OR)
Expert	**1203**	**Temporal restrictions (AUX 1)**	
Expert	**1204**	**Program 1 (AUX 1)**	
Expert	1205	Day of the week (AUX 1)	None days
Expert	1206	Start hour (AUX 1)	07:00 hh:mm
Expert	1207	End hour (AUX 1)	20:00 hh:mm
Expert	**1208**	**Program 2 (AUX 1)**	
Expert	1209	Day of the week (AUX 1)	None days
Expert	1210	Start hour (AUX 1)	07:00 hh:mm

Level	User ref.	Parameter	Factory value
Expert	1211	End hour (AUX 1)	20:00 hh:mm
Expert	**1212**	**Program 3 (AUX 1)**	
Expert	1213	Day of the week (AUX 1)	None days
Expert	1214	Start hour (AUX 1)	07:00 hh:mm
Expert	1215	End hour (AUX 1)	20:00 hh:mm
Inst.	**1216**	**Program 4 (AUX 1)**	
Inst.	1217	Day of the week (AUX 1)	None days
Inst.	1218	Start hour (AUX 1)	07:00 hh:mm
Inst.	1219	End hour (AUX 1)	20:00 hh:mm
Inst.	**1220**	**Program 5 (AUX 1)**	
Inst.	1221	Day of the week (AUX 1)	None days
Inst.	1222	Start hour (AUX 1)	07:00 hh:mm
Inst.	1223	End hour (AUX 1)	20:00 hh:mm
Expert	**1269**	**Contact active with a fixed time schedule (AUX 1)**	
Expert	**1270**	**Program 1 (AUX 1)**	
Expert	1271	Day of the week (AUX 1)	None days
Expert	1272	Start hour (AUX 1)	07:00 hh:mm
Expert	1273	End hour (AUX 1)	20:00 hh:mm
Expert	**1274**	**Program 2 (AUX 1)**	
Expert	1275	Day of the week (AUX 1)	None days
Expert	1276	Start hour (AUX 1)	07:00 hh:mm
Expert	1277	End hour (AUX 1)	20:00 hh:mm
Expert	**1278**	**Program 3 (AUX 1)**	
Expert	1279	Day of the week (AUX 1)	None days
Expert	1280	Start hour (AUX 1)	07:00 hh:mm
Expert	1281	End hour (AUX 1)	20:00 hh:mm
Expert	**1455**	**Contact active on event (AUX 1)**	
Expert	1225	Xtender is OFF (AUX 1)	No
Expert	1518	Xtender ON (AUX 1)	No
Expert	1543	Remote entry (AUX 1)	No
Expert	1226	Battery undervoltage alarm (AUX 1)	No
Expert	1227	Battery overvoltage (AUX 1)	No
Expert	1228	Inverter or Smart- Boost overload (AUX 1)	No
Expert	1229	Overtemperature (AUX 1)	No
Expert	1520	No overtemperature (AUX 1)	No
Expert	1231	Active charger (AUX 1)	No
Expert	1232	Active inverter (AUX 1)	No
Expert	1233	Active Smart-Boost (AUX 1)	No
Expert	1234	AC input presence but with fault (AUX 1)	No
Expert	1235	AC input presence (AUX 1)	No
Expert	1236	Transfer relay ON (AUX 1)	No
Expert	1237	AC out presence (AUX 1)	No
Expert	1238	Bulk charge phase (AUX 1)	No
Expert	1239	Absorption phase (AUX 1)	No
Expert	1240	Equalization phase (AUX 1)	No
Expert	1242	Floating (AUX 1)	No
Expert	1243	Reduced floating (AUX 1)	No
Expert	1244	Periodic absorption (AUX 1)	No

Level	User ref.	Parameter	Factory value
Inst.	1601	AC-in energy quota (AUX1)	No
Expert	**1245**	**Contact active according to battery voltage (AUX 1)**	
Expert	1288	Use dynamic compensation of battery level (AUX 1)	No
Expert	1246	Battery voltage 1 activate (AUX 1)	Yes
Expert	1247	Battery voltage 1 (AUX 1)	11.7/23.4/46.8 Vdc
Expert	1248	Delay 1 (AUX 1)	1 min
Expert	1249	Battery voltage 2 activate (AUX 1)	Yes
Expert	1250	Battery voltage 2 (AUX 1)	11.9/23.9/47.8 Vdc
Expert	1251	Delay 2 (AUX 1)	10 min
Expert	1252	Battery voltage 3 activate (AUX 1)	Yes
Expert	1253	Battery voltage 3 (AUX 1)	12.1/24.2/48.5 Vdc
Expert	1254	Delay 3 (AUX 1)	60 min
Expert	1255	Battery voltage to deactivate (AUX 1)	13.5/27/54 Vdc
Expert	1256	Delay to deactivate (AUX 1)	60 min
Expert	1516	Deactivate if battery in floating phase (AUX 1)	Yes
Expert	**1257**	**Contact active with inverter power or Smart-Boost (AUX 1)**	
Expert	1258	Inverter power level 1 activate (AUX 1)	No
Expert	1259	Power level 1 (AUX 1)	120 % Pnom
Expert	1260	Time delay 1 (AUX 1)	1 min
Expert	1261	Inverter power level 2 activate (AUX 1)	No
Expert	1262	Power level 2 (AUX 1)	80 % Pnom
Expert	1263	Time delay 2 (AUX 1)	5 min
Expert	1264	Inverter power level 3 activate (AUX 1)	No
Expert	1265	Power level 3 (AUX 1)	50 % Pnom
Expert	1266	Time delay 3 (AUX 1)	30 min
Expert	1267	Inverter power level to deactivate (AUX 1)	40 % Pnom
Expert	1268	Time delay to deactivate (AUX 1)	5 min
Inst.	**1503**	**Contact active according to battery temperature (AUX 1) With BSP or BTS**	
Inst.	1446	Contact activated with the temperature of battery (AUX 1)	No
Inst.	1447	Contact activated over (AUX 1)	3 °C
Inst.	1448	Contact deactivated below (AUX 1)	5 °C
Expert	**1501**	**Contact active according to SOC (AUX 1) Only with BSP**	
Expert	1439	Contact activated with the SOC 1 of battery (AUX 1)	No
Expert	1440	Contact activated below SOC 1 (AUX 1)	50 % SOC
Expert	1581	Delay 1 (AUX 1)	12 hours
Expert	1582	Contact activated with the SOC 2 of battery (AUX 1)	No
Expert	1583	Contact activated below SOC 2 (AUX 1)	30%
Expert	1584	Delay 2 (AUX 1)	0.2 hours
Expert	1585	Contact activated with the SOC 3 of battery (AUX 1)	No
Expert	1586	Contact activated below SOC 3 (AUX 1)	20%
Expert	1587	Delay 3 (AUX 1)	0 hours
Expert	1441	Contact deactivated over SOC (AUX 1)	90 % SOC
Expert	1588	Delay to deactivate (AUX 1)	0.2 hours
Expert	1589	Deactivate if battery in floating phase (AUX 1)	Yes
Expert	1512	Security, maximum time of contact (AUX 1)	No
Expert	1514	Maximum time of operation of contact (AUX 1)	600 min
Expert	1569	Reset all settings (AUX 1)	-

Level	User ref.	Parameter	Factory value
Expert	**1310**	**AUXILIARY CONTACT 2**	
Expert	1311	Operating mode (AUX 2)	Reversed automatic
Expert	1498	Combination of the events for the auxiliary contact (AUX 2)	Any (Function OR)
Expert	**1312**	**Temporal restrictions (AUX 2)**	
Expert	**1313**	**Program 1 (AUX 2)**	
Expert	1314	Day of the week (AUX 2)	None days
Expert	1315	Start hour (AUX 2)	07:00 hh:mm
Expert	1316	End hour (AUX 2)	20:00 hh:mm
Expert	**1317**	**Program 2 (AUX 2)**	
Expert	1318	Day of the week (AUX 2)	None days
Expert	1319	Start hour (AUX 2)	07:00 hh:mm
Expert	1320	End hour (AUX 2)	20:00 hh:mm
Expert	**1321**	**Program 3 (AUX 2)**	
Expert	1322	Day of the week (AUX 2)	None days
Expert	1323	Start hour (AUX 2)	07:00 hh:mm
Expert	1324	End hour (AUX 2)	20:00 hh:mm
Inst.	**1325**	**Program 4 (AUX 2)**	
Inst.	1326	Day of the week (AUX 2)	None days
Inst.	1327	Start hour (AUX 2)	07:00 hh:mm
Inst.	1328	End hour (AUX 2)	20:00 hh:mm
Inst.	**1329**	**Program 5 (AUX 2)**	
Inst.	1330	Day of the week (AUX 2)	None days
Inst.	1331	Start hour (AUX 2)	07:00 hh:mm
Inst.	1332	End hour (AUX 2)	20:00 hh:mm
Expert	**1378**	**Contact active with a fixed time schedule (AUX 2)**	
Expert	**1379**	**Program 1 (AUX 2)**	
Expert	1380	Day of the week (AUX 2)	None days
Expert	1381	Start hour (AUX 2)	07:00 hh:mm
Expert	1382	End hour (AUX 2)	20:00 hh:mm
Expert	**1383**	**Program 2 (AUX 2)**	
Expert	1384	Day of the week (AUX 2)	None days
Expert	1385	Start hour (AUX 2)	07:00 hh:mm
Expert	1386	End hour (AUX 2)	20:00 hh:mm
Expert	**1387**	**Program 3 (AUX 2)**	
Expert	1388	Day of the week (AUX 2)	None days
Expert	1389	Start hour (AUX 2)	07:00 hh:mm
Expert	1390	End hour (AUX 2)	20:00 hh:mm
Expert	**1456**	**Contact active on event (AUX 2)**	
Expert	1333	Xtender is OFF (AUX 2)	Yes
Expert	1519	Xtender ON (AUX 2)	No
Expert	1544	Remote entry (AUX 2)	No
Expert	1334	Battery undervoltage alarm (AUX 2)	Yes
Expert	1335	Battery overvoltage (AUX 2)	Yes
Expert	1336	Inverter or Smart-Boost overload (AUX 2)	Yes
Expert	1337	Overtemperature (AUX 2)	Yes
Expert	1521	No overtemperature (AUX 2)	No
Expert	1339	Active charger (AUX 2)	No

Level	User ref.	Parameter	Factory value
Expert	1340	Active inverter (AUX 2)	No
Expert	1341	Active Smart-Boost (AUX 2)	No
Expert	1342	AC input presence but with fault (AUX 2)	No
Expert	1343	AC input presence (AUX 2)	No
Expert	1344	Transfer contact ON (AUX 2)	No
Expert	1345	AC out presence (AUX 2)	No
Expert	1346	Bulk charge phase (AUX 2)	No
Expert	1347	Absorption phase (AUX 2)	No
Expert	1348	Equalization phase (AUX 2)	No
Expert	1350	Floating (AUX 2)	No
Expert	1351	Reduced floating (AUX 2)	No
Expert	1352	Periodic absorption (AUX 2)	No
Inst.	1602	AC-in energy quota (AUX2)	No
Expert	**1353**	**Contact active according to battery voltage (AUX 2)**	
Expert	1354	Use dynamic compensation of battery level (AUX 2)	No
Expert	1355	Battery voltage 1 activate (AUX 2)	No
Expert	1356	Battery voltage 1 (AUX 2)	12/24/48 Vdc
Expert	1357	Delay 1 (AUX 2)	5 min
Expert	1358	Battery voltage 2 activate (AUX 2)	No
Expert	1359	Battery voltage 2 (AUX 2)	11.5/23/46.1 Vdc
Expert	1360	Delay 2 (AUX 2)	5 min
Expert	1361	Battery voltage 3 activate (AUX 2)	No
Expert	1362	Battery voltage 3 (AUX 2)	11/22.1/44.2 Vdc
Expert	1363	Delay 3 (AUX 2)	5 min
Expert	1364	Battery voltage to deactivate (AUX 2)	12.6/25.2/50.4 Vdc
Expert	1365	Delay to deactivate (AUX 2)	5 min
Expert	1517	Deactivate if battery in floating phase (AUX 2)	No
Expert	**1366**	**Contact active with inverter power or Smart-Boost (AUX 2)**	
Expert	1367	Inverter power level 1 activate (AUX 2)	No
Expert	1368	Power level 1 (AUX 2)	120 % Pnom
Expert	1369	Time delay 1 (AUX 2)	0 min
Expert	1370	Inverter power level 2 activate (AUX 2)	No
Expert	1371	Power level 2 (AUX 2)	80 % Pnom
Expert	1372	Time delay 2 (AUX 2)	5 min
Expert	1373	Inverter power level 3 activate (AUX 2)	No
Expert	1374	Power level 3 (AUX 2)	50 % Pnom
Expert	1375	Time delay 3 (AUX 2)	30 min
Expert	1376	Inverter power level to deactivate (AUX 2)	40 % Pnom
Expert	1377	Time delay to deactivate (AUX 2)	5 min
Inst.	**1504**	**Contact active according to battery temperature (AUX 2) With BSP or BTS**	
Inst.	1457	Contact activated with the temperature of battery (AUX 2)	No
Inst.	1458	Contact activated over (AUX 2)	3 °C
Inst.	1459	Contact deactivated below (AUX 2)	5 °C
Expert	**1502**	**Contact active according to SOC (AUX 2) Only with BSP**	
Expert	1442	Contact activated with the SOC 1 of battery (AUX 2)	No
Expert	1443	Contact activated below SOC 1 (AUX 2)	50 % SOC
Expert	1590	Delay 1 (AUX 2)	12 hours

Level	User ref.	Parameter	Factory value
Expert	1591	Contact activated with the SOC 2 of battery (AUX 2)	No
Expert	1592	Contact activated below SOC 2 (AUX 2)	30%
Expert	1593	Delay 2 (AUX 2)	0.2 hours
Expert	1594	Contact activated with the SOC 3 of battery (AUX 2)	No
Expert	1595	Contact activated below SOC 3 (AUX 2)	20%
Expert	1596	Delay 3 (AUX 2)	0 hours
Expert	1444	Contact deactivated over SOC (AUX 2)	90 % SOC
Expert	1597	Delay to deactivate (AUX 2)	0.2 hours
Expert	1598	Deactivate if battery in floating phase (AUX 2)	Yes
Expert	1513	Security, maximum time of contact (AUX 2)	No
Expert	1515	Maximum time of operation of contact (AUX 2)	600 min
Expert	1570	Reset all settings (AUX 2)	-
Expert	**1489**	**AUXILIARY CONTACTS 1 AND 2 EXTENDED FUNCTIONS**	
Expert	1491	Generator control active	No
Expert	1493	Number of starting attempts	5
Expert	1492	Starter pulse duration (with AUX2)	3 sec
Expert	1494	Time before a starter pulse	3 sec
Expert	1574	Main contact hold/interrupt time	0 sec
Expert	**1101**	**SYSTEM**	
Expert	**1537**	**Remote entry (Remote ON/OFF)**	
Expert	1545	Remote entry active	Open
Expert	1538	Prohibits transfert relay	No
Expert	1539	Prohibits inverter	No
Expert	1540	Prohibits charger	No
Expert	1541	Prohibits Smart-Boost	No
Expert	1542	Prohibits grid feeding	No
Expert	1566	Using a secondary value for the maximum current of the AC source	No
Expert	1567	Second maximum current of the AC source (Input limit)	16 Aac
Expert	1554	Decrease of the max. current of the source with input voltage activated by command entry	No
Expert	1576	ON/OFF command	No
Expert	1578	Activated by AUX1 state	No
Expert	1579	Prohibits battery priority	No
Inst.	1600	Disable minigrid mode	No
Expert	1296	Batteries priority as energy source	No
Expert	1297	Battery priority voltage	12.9/25.8/51.6 Vdc
Expert	1565	Buzzer alarm duration	0 min
Expert	**1129**	**Auto restarts**	
Expert	1130	After battery undervoltage	Yes
Expert	1304	Number of batteries undervoltage allowed before definitive stop	3
Expert	1404	Time period for batteries undervoltages counting	0 sec
Expert	1305	Number of batteries critical undervoltage allowed before definitive stop	10
Expert	1405	Time period for critical batteries undervoltages counting	10 sec
Expert	1131	After battery overvoltage	Yes
Expert	1132	After inverter or Smart-Boost overload	Yes

Level	User ref.	Parameter	Factory value
Expert	1533	Delay to restart after an overload	5 sec
Expert	1134	After overtemperature	Yes
Expert	1111	Autostart to the battery connection	No
Expert	**1484**	**System earthing (Earth - Neutral)**	
Expert	1485	Prohibited ground relay	Yes
Expert	1486	Continuous neutral	No
Inst.	1628	Xtender watchdog enabled (SCOM)	No
Inst.	1629	Xtender watchdog delay (SCOM)	60 sec
Basic	1395	Restore default settings	-
Inst.	1287	Restore factory settings	-
Inst.	1550	Parameters saved in flash memory	Yes
Inst.	1415	ON of the Xtenders	-
Inst.	1399	OFF of the Xtenders	-
Expert	1468	Reset of all the inverters	-
Expert	**1282**	**MULTI XTENDER SYSTEM**	
Expert	1283	Integral mode	Yes
Expert	1461	Multi inverters allowed	Yes
Expert	1462	Multi inverters independents. Need reset {1468}	No
Expert	1555	Battery cycle synchronized by the master	Yes
Expert	1547	Allow slaves standby in multi-Xtender system	Yes
Expert	1571	Splitphase: L2 with 180 degrees phaseshift	No
Inst.	1437	Minigrid compatible	No
Inst.	1577	Minigrid with shared battery energy	Yes
Inst.	1556	is central inverter in distributed minigrid	No
Expert	**1522**	**GRID-FEEDING**	
Expert	1127	Grid feeding allowed	No
Expert	1523	Max grid feeding current	10 Aac
Expert	1524	Battery voltage target for forced grid feeding	12/24/48 Vdc
Expert	1525	Forced grid feeding start time	20:00 hh:mm
Expert	1526	Forced grid feeding stop time	20:00 hh:mm
Inst.	1610	Use of the defined phase shift curve for injection	No
Inst.	1622	Cos phi at P = 0%	1
Inst.	1623	Cos phi at the power defined by param {1613}	1
Inst.	1613	Power of the second cos phi point in % of Pnom	50%
Inst.	1624	Cos phi at P = 100%	1
Inst.	1627	ARN4105 frequency control enabled	No
Inst.	1630	Delta from user frequency to start derating	1 Hz
Inst.	1631	Delta from user frequency to reach 100% derating	2 Hz

ADJUSTMENT OF THE BSP

Level	User ref.	Parameter	Factory value
Basic	**6000**	**BASIC SETTINGS**	
Basic	6057	Voltage of the system	Automatic
Basic	6001	Nominal capacity	110 Ah
Basic	6002	Nominal discharge duration (C-rating)	20 h
Basic	6017	Nominal shunt current	500 A
Basic	6018	Nominal shunt voltage	50 mV
Expert	6003	Reset of battery history	-
Basic	6004	Restore default settings	-
Inst.	6005	Restore factory settings	-
Expert	**6016**	**ADVANCED SETTINGS**	
Expert	6031	Reset of user counters	-
Expert	6055	Manufacturer SOC for 0% diplayed	30%
Expert	6056	Manufacturer SOC for 100% displayed	100%
Expert	6042	Activate the end of charge synchronization	No
Expert	6024	End of charge voltage level	13.2/26.4/52.8 V
Expert	6025	End of charge current level	2 %cap
Expert	6026	Minimum duration before end of charge	240 s
Expert	6048	Temperature correction of the end of charge voltage	0 mV/°C/cell
Expert	6044	Activate the state of charge correction by the open circuit voltage	Yes
Expert	6058	Battery current limitation activated	No
Expert	6059	Max battery charge current	150 A
Expert	6019	Self-discharge rate	3 %/month
Expert	6020	Nominal temperature	20 °C
Expert	6021	Temperature coefficient	0.5 %cap/°C
Expert	6022	Charge efficiency factor	90%
Expert	6023	Peukert's exponent	1.2
Expert	6049	Use C20 Capacity as reference value	Yes

ADJUSTMENT OF THE VARIOTRACK

Level	User ref.	Parameter	Factory value
Basic	**10000**	**BASIC SETTINGS**	
Expert	10054	Block manual programming (dip-switch)	No
Basic	10001	Voltage of the system	Automatic
Basic	10037	Synchronisation battery cycle with Xtender	Yes
Basic	10005	Floating voltage	13.6/27.2/54.4 Vdc
Basic	10009	Absorption voltage	14.4/28.8/57.6 Vdc
Basic	10017	Equalization allowed	No
Basic	10021	Equalization voltage	15.6/31.2/62.4 Vdc
Basic	10056	Restore default settings	-
Inst.	10057	Restore factory settings	-
Expert	**10003**	**BATTERY MANAGEMENT AND CYCLE**	
Basic	10037	Synchronisation battery cycle with Xtender	Yes
Expert	10002	Battery charge current	80 Adc
Expert	10334	Battery undervoltage	10/20/40 Vdc
Expert	10036	Temperature compensation	-3 mV/°C/cell
Expert	**10004**	**Floating phase**	
Basic	10005	Floating voltage	13.6/27.2/54.4 Vdc
Expert	10006	Force phase of floating	-
Expert	**10007**	**Absorption phase**	
Expert	10008	Absorption phase allowed	Yes
Basic	10009	Absorption voltage	14.4/28.8/57.6 Vdc
Expert	10010	Force absorption phase	-
Expert	10011	Absorption duration	120 min
Expert	10012	End of absorption triggered by the current	No
Expert	10013	Current threshold to end absorption phase	10 Adc
Expert	**10016**	**Equalization phase**	
Basic	10017	Equalization allowed	No
Expert	10018	Force equalization	-
Basic	10021	Equalization voltage	15.6/31.2/62.4 Vdc
Expert	10020	Equalization current	80 Adc
Expert	10022	Equalization duration	30 min
Expert	10052	Equalization with fixed interval	Yes
Expert	10025	Days between equalizations	26 days
Expert	10026	End of equalization triggered by the current	No
Expert	10027	Current threshold to end equalization phase	10 Adc
Expert	10019	Equalization before absorption phase	Yes
Expert	**10028**	**New cycle**	
Expert	10029	Force a new cycle	-
Expert	10030	Voltage level 1 to start a new cycle	12.2/24.4/48.8 Vdc
Expert	10031	Time period under voltage level 1 to start a new cycle	30 min

Level	User ref.	Parameter	Factory value
Expert	10032	Voltage level 2 to start a new cycle	11.8/23.6/47.2 Vdc
Expert	10033	Time period under voltage level 2 to start a new cycle	2 min
Expert	10034	Cycling restricted	Yes
Expert	10035	Minimal delay between cycles	1 hours
Expert	**10038**	**SYSTEM**	
Expert	10054	Block manual programming (dip-switch)	No
Expert	10060	Check Earthing	No control
Inst.	10087	Disabling of the display button	No
Expert	**10312**	**Remote entry (Remote ON/OFF)**	
Expert	10313	Remote entry active	Open
Expert	10314	ON/OFF command	No
Expert	10315	Activated by AUX1 state	No
Expert	10316	Start equalization	No
Expert	10317	Send a message when remote entry changes state	No
Expert	10335	Vérification ombrage partiel	No
Expert	10336	Durée entre les vérifications	5 min
Expert	10200	Reset PV energy meter	-
Expert	10043	Reset daily solar production meters	-
Expert	10044	Reset daily min-max	-
Basic	10056	Restore default settings	-
Inst.	10057	Restore factory settings	-
Inst.	10058	Parameters saved in flash memory	Yes
Expert	10039	ON of the VarioTrack	-
Expert	10040	OFF of the VarioTrack	-
Expert	10051	Reset of all VarioTrack	-
Expert	**10088**	**AUXILIARY CONTACT 1**	
Expert	10089	Operating mode (AUX 1)	Automatic
Expert	10090	Combination of the events for the auxiliary contact (AUX 1)	Any (Function OR)
Expert	**10092**	**Contact activated in night mode (AUX 1)**	
Expert	10093	Activated in night mode (AUX 1)	No
Expert	10094	Delay of activation after entering night mode (AUX 1)	1 min
Expert	10095	Activation time for the auxiliary relay in night mode (AUX 1)	1 min
Expert	**10318**	**Contact active with a fixed time schedule (AUX 1)**	
Expert	10319	Contact activated with fixed time schedule (AUX 1)	No
Expert	10320	Start hour (AUX 1)	07:00 hh:mm
Expert	10321	End hour (AUX 1)	20:00 hh:mm
Expert	**10096**	**Contact active on event (AUX 1)**	
Expert	10198	VarioTrack is ON (AUX 1)	No
Expert	10091	VarioTrack is OFF (AUX 1)	No
Expert	10308	Remote entry (AUX 1)	No
Expert	10097	Battery undervoltage (AUX 1)	No
Expert	10334	Battery undervoltage	10/20/40 Vdc
Expert	10098	Battery overvoltage (AUX 1)	No
Expert	10099	Earth fault (AUX 1)	No
Expert	10100	PV error (48h without charge) (AUX 1)	No
Expert	10102	Overtemperature (AUX 1)	No
Expert	10104	Bulk charge phase (AUX 1)	No
Expert	10105	Absorption phase (AUX 1)	No

Level	User ref.	Parameter	Factory value
Expert	10106	Equalization phase (AUX 1)	No
Expert	10107	Floating (AUX 1)	No
Expert	10108	Reduced floating (AUX 1)	No
Expert	10109	Periodic absorption (AUX 1)	No
Expert	**10110**	**Contact active according to battery voltage (AUX 1)**	
Expert	10111	Battery voltage 1 activate (AUX 1)	No
Expert	10112	Battery voltage 1 (AUX 1)	11.7/23.4/46.8 Vdc
Expert	10113	Delay 1 (AUX 1)	1 min
Expert	10114	Battery voltage 2 activate (AUX 1)	No
Expert	10115	Battery voltage 2 (AUX 1)	11.9/23.9/47.8 Vdc
Expert	10116	Delay 2 (AUX 1)	10 min
Expert	10117	Battery voltage 3 activate (AUX 1)	No
Expert	10118	Battery voltage 3 (AUX 1)	12.1/24.2/48.5 Vdc
Expert	10119	Delay 3 (AUX 1)	60 min
Expert	10120	Battery voltage to deactivate (AUX 1)	13.5/27/54 Vdc
Expert	10121	Delay to deactivate (AUX 1)	60 min
Expert	10122	Deactivate if battery in floating phase (AUX 1)	No
Expert	**10123**	**Contact active according to battery temperature (AUX 1) With BSP or BTS**	
Expert	10124	Contact activated with the temperature of battery (AUX 1)	No
Expert	10125	Contact activated over (AUX 1)	3 °C
Expert	10126	Contact deactivated below (AUX 1)	5 °C
Expert	10127	Only activated if the battery is not in bulk phase (AUX 1)	No
Expert	**10128**	**Contact active according to SOC (AUX 1) Only with BSP**	
Expert	10129	Contact activated with the SOC 1 of battery (AUX 1)	No
Expert	10130	Contact activated below SOC 1 (AUX 1)	50 % SOC
Expert	10131	Delay 1 (AUX 1)	12 hours
Expert	10132	Contact activated with the SOC 2 of battery (AUX 1)	No
Expert	10133	Contact activated below SOC 2 (AUX 1)	30%
Expert	10134	Delay 2 (AUX 1)	0.2 hours
Expert	10135	Contact activated with the SOC 3 of battery (AUX 1)	No
Expert	10136	Contact activated below SOC 3 (AUX 1)	20%
Expert	10137	Delay 3 (AUX 1)	0 hours
Expert	10138	Contact deactivated over SOC (AUX 1)	90 % SOC
Expert	10139	Delay to deactivate (AUX 1)	0.2 hours
Expert	10140	Deactivate if battery in floating phase (AUX 1)	No
Expert	10141	Reset all settings (AUX 1)	-
Expert	**10142**	**AUXILIARY CONTACT 2**	
Expert	10143	Operating mode (AUX 2)	Automatic
Expert	10144	Combination of the events for the auxiliary contact (AUX 2)	Any (Function OR)
Expert	**10146**	**Contact activated in night mode (AUX 2)**	
Expert	10147	Activated in night mode (AUX 2)	No
Expert	10148	Delay of activation after entering night mode (AUX 2)	1 min
Expert	10149	Activation time for the auxiliary relay in night mode (AUX 2)	1 min
Expert	**10322**	**Contact active with a fixed time schedule (AUX 2)**	
Expert	10323	Contact activated with fixed time schedule (AUX 2)	No
Expert	10324	Start hour (AUX 2)	07:00 hh:mm
Expert	10325	End hour (AUX 2)	20:00 hh:mm

Level	User ref.	Parameter	Factory value
Expert	**10150**	**Contact active on event (AUX 2)**	
Expert	10199	VarioTrack is ON (AUX 2)	No
Expert	10145	VarioTrack is OFF (AUX 2)	No
Expert	10309	Remote entry (AUX 2)	No
Expert	10151	Battery undervoltage (AUX 2)	No
Expert	10334	Battery undervoltage	10/20/40 Vdc
Expert	10152	Battery overvoltage (AUX 2)	No
Expert	10153	Earth fault (AUX 2)	No
Expert	10154	PV error (48h without charge) (AUX 2)	No
Expert	10156	Overtemperature (AUX 2)	No
Expert	10158	Bulk charge phase (AUX 2)	No
Expert	10159	Absorption phase (AUX 2)	No
Expert	10160	Equalization phase (AUX 2)	No
Expert	10161	Floating (AUX 2)	No
Expert	10162	Reduced floating (AUX 2)	No
Expert	10163	Periodic absorption (AUX 2)	No
Expert	**10164**	**Contact active according to battery voltage (AUX 2)**	
Expert	10165	Battery voltage 1 activate (AUX 2)	No
Expert	10166	Battery voltage 1 (AUX 2)	11.7/23.4/46.8 Vdc
Expert	10167	Delay 1 (AUX 2)	1 min
Expert	10168	Battery voltage 2 activate (AUX 2)	No
Expert	10169	Battery voltage 2 (AUX 2)	11.9/23.9/47.8 Vdc
Expert	10170	Delay 2 (AUX 2)	10 min
Expert	10171	Battery voltage 3 activate (AUX 2)	No
Expert	10172	Battery voltage 3 (AUX 2)	12.1/24.2/48.5 Vdc
Expert	10173	Delay 3 (AUX 2)	60 min
Expert	10174	Battery voltage to deactivate (AUX 2)	13.5/27/54 Vdc
Expert	10175	Delay to deactivate (AUX 2)	60 min
Expert	10176	Deactivate if battery in floating phase (AUX 2)	No
Expert	**10177**	**Contact active according to battery temperature (AUX 2) With BSP or BTS**	
Expert	10178	Contact activated with the temperature of battery (AUX 2)	No
Expert	10179	Contact activated over (AUX 2)	3 °C
Expert	10180	Contact deactivated below (AUX 2)	5 °C
Expert	10181	Only activated if the battery is not in bulk phase (AUX 2)	No
Expert	**10182**	**Contact active according to SOC (AUX 2) Only with BSP**	
Expert	10183	Contact activated with the SOC 1 of battery (AUX 2)	No
Expert	10184	Contact activated below SOC 1 (AUX 2)	50 % SOC
Expert	10185	Delay 1 (AUX 2)	12 hours
Expert	10186	Contact activated with the SOC 2 of battery (AUX 2)	No
Expert	10187	Contact activated below SOC 2 (AUX 2)	30%
Expert	10188	Delay 2 (AUX 2)	0.2 hours
Expert	10189	Contact activated with the SOC 3 of battery (AUX 2)	No
Expert	10190	Contact activated below SOC 3 (AUX 2)	20%
Expert	10191	Delay 3 (AUX 2)	0 hours
Expert	10192	Contact deactivated over SOC (AUX 2)	90 % SOC
Expert	10193	Delay to deactivate (AUX 2)	0.2 hours
Expert	10194	Deactivate if battery in floating phase (AUX 2)	No
Expert	10195	Reset all settings (AUX 2)	-

ADJUSTMENT OF VARIOSTRING

| Level	User ref.	Parameter	Factory value
Basic	**14000**	**BASIC SETTINGS**	
Expert	14174	Block manual programming (dip-switch)	No
Expert	14001	Battery charge current (VS-120)	120 Adc
Expert	14217	Battery charge current (VS-70)	70 Adc
Basic	14002	Configuration of PV modules (VS-120)	Automatic
Basic	14067	Restore default settings	-
Inst.	14068	Restore factory settings	-
Expert	**14003**	**BATTERY MANAGEMENT AND CYCLE**	
Basic	14036	Synchronisation battery cycle with Xtender	Yes
Expert	14001	Battery charge current (VS-120)	120 Adc
Expert	14217	Battery charge current (VS-70)	70 Adc
Expert	14216	Battery undervoltage	40 Vdc
Expert	14035	Temperature compensation	-3 mV/°C/cell
Expert	**14004**	**Floating phase**	
Expert	14005	Floating voltage	54.4 Vdc
Expert	14006	Force phase of floating	-
Expert	**14007**	**Absorption phase**	
Expert	14008	Absorption phase allowed	Yes
Expert	14009	Absorption voltage	57.6 Vdc
Expert	14010	Force absorption phase	-
Expert	14011	Absorption duration	120 min
Expert	14012	End of absorption triggered by the current	No
Expert	14013	Current threshold to end absorption phase	10 Adc
Expert	**14016**	**Equalization phase**	
Expert	14017	Equalization allowed	No
Expert	14018	Force equalization	-
Expert	14021	Equalization voltage	62.4 Vdc
Expert	14020	Equalization current	80 Adc
Expert	14022	Equalization duration	30 min
Expert	14023	Equalization with fixed interval	Yes
Expert	14024	Days between equalizations	26 days
Expert	14025	End of equalization triggered by the current	No
Expert	14026	Current threshold to end equalization phase	10 Adc
Expert	14019	Equalization before absorption phase	Yes
Expert	**14027**	**New cycle**	
Expert	14028	Force a new cycle	-
Expert	14029	Voltage level 1 to start a new cycle	48.8 Vdc
Expert	14030	Time period under voltage level 1 to start a new cycle	30 min
Expert	14031	Voltage level 2 to start a new cycle	47.2 Vdc
Expert	14032	Time period under voltage level 2 to start a new cycle	2 min
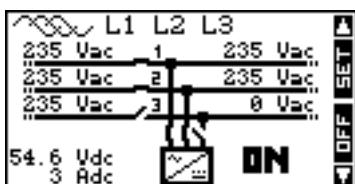
Level	User ref.	Parameter	Factory value
Expert	14033	Cycling restricted	Yes
Expert	14034	Minimal delay between cycles	1 hours
Expert	**14037**	**SYSTEM**	
Expert	14174	Block manual programming (dip-switch)	No
Expert	14040	Type of battery grounding	No control
Expert	**14194**	**Configuration for VS-120**	
Expert	14041	Type of PV grounding	No control
Expert	14175	Type of PV1 grounding	No control
Expert	14042	Type of PV2 grounding	No control
Expert	**14180**	**Type of MPPT algorithm**	
Expert	14043	Type of MPP tracking algorithm PV	LSF
Expert	14044	PV voltage fixed (for PV in series)	700 Vdc
Expert	14179	PV voltage fixed (for PV in //)	500 Vdc
Expert	14045	Ratio of PV open circuit voltage	0.7
Expert	14176	Type of MPP tracking algorithm PV1	LSF
Expert	14177	PV1 voltage fixed	500 Vdc
Expert	14178	Ratio of PV1 open circuit voltage	0.7
Expert	14046	Type of MPP tracking algorithm PV2	LSF
Expert	14047	PV2 voltage fixed	500 Vdc
Expert	14048	Ratio of PV2 open circuit voltage	0.7
Inst.	14192	Establishment time (Algo MPPT)	0 sec
Inst.	14193	Averaging time (algo MPPT)	0 sec
Inst.	14190	PV wiring type erased from memory	-
Expert	**14195**	**Configuration for VS-70**	
Expert	14196	Type of PV grounding	No control
Expert	**14180**	**Type of MPPT algorithm**	
Expert	14197	Type of MPP tracking algorithm PV	LSF
Expert	14198	PV voltage fixed	500 Vdc
Expert	14199	Ratio of PV open circuit voltage	0.7
Inst.	14192	Establishment time (Algo MPPT)	0 sec
Inst.	14193	Averaging time (algo MPPT)	0 sec
Expert	**14200**	**Remote entry (Remote ON/OFF)**	
Expert	14201	Remote entry active	Open
Expert	14202	ON/OFF command	No
Expert	14203	Activated by AUX1 state	No
Expert	14204	Start equalization	No
Expert	14205	Send a message when remote entry changes state	No
Expert	14182	Reset PV energy meter	-
Expert	14051	Reset daily solar production meters	-
Expert	14052	Reset daily min-max	-
Basic	14067	Restore default settings	-
Inst.	14068	Restore factory settings	-
Inst.	14069	Parameters saved in flash memory	Yes
Expert	14038	ON of the VarioString	-
Expert	14039	OFF of the VarioString	-
Expert	14059	Reset of all VarioString	-
Expert	**14070**	**AUXILIARY CONTACT 1**	
Expert	14071	Operating mode (AUX 1)	Automatic

Level	User ref.	Parameter	Factory value
Expert	14072	Combination of the events for the auxiliary contact (AUX 1)	Any (Function OR)
Expert	**14073**	**Contact activated in night mode (AUX 1)**	
Expert	14074	Activated in night mode (AUX 1)	No
Expert	14075	Delay of activation after entering night mode (AUX 1)	1 min
Expert	14076	Activation time for the auxiliary relay in night mode (AUX 1)	1 min
Expert	**14206**	**Contact active with a fixed time schedule (AUX 1)**	
Expert	14207	Contact activated with fixed time schedule (AUX 1)	No
Expert	14208	Start hour (AUX 1)	07:00 hh:mm
Expert	14209	End hour (AUX 1)	20:00 hh:mm
Expert	**14077**	**Contact active on event (AUX 1)**	
Expert	14188	VarioString is ON (AUX 1)	No
Expert	14078	VarioString is OFF (AUX 1)	No
Expert	14214	Remote entry (AUX 1)	No
Expert	14079	Battery undervoltage (AUX 1)	No
Expert	14216	Battery undervoltage	40 Vdc
Expert	14080	Battery overvoltage (AUX 1)	No
Expert	14081	Earth fault (AUX 1)	No
Expert	14082	PV error (48h without charge) (AUX 1)	No
Expert	14083	Overtemperature (AUX 1)	No
Expert	14084	Bulk charge phase (AUX 1)	No
Expert	14085	Absorption phase (AUX 1)	No
Expert	14086	Equalization phase (AUX 1)	No
Expert	14087	Floating (AUX 1)	No
Expert	14088	Reduced floating (AUX 1)	No
Expert	14089	Periodic absorption (AUX 1)	No
Expert	**14090**	**Contact active according to battery voltage (AUX 1)**	
Expert	14091	Battery voltage 1 activate (AUX 1)	No
Expert	14092	Battery voltage 1 (AUX 1)	46.8 Vdc
Expert	14093	Delay 1 (AUX 1)	1 min
Expert	14094	Battery voltage 2 activate (AUX 1)	No
Expert	14095	Battery voltage 2 (AUX 1)	47.8 Vdc
Expert	14096	Delay 2 (AUX 1)	10 min
Expert	14097	Battery voltage 3 activate (AUX 1)	No
Expert	14098	Battery voltage 3 (AUX 1)	48.5 Vdc
Expert	14099	Delay 3 (AUX 1)	60 min
Expert	14100	Battery voltage to deactivate (AUX 1)	54 Vdc
Expert	14101	Delay to deactivate (AUX 1)	60 min
Expert	14102	Deactivate if battery in floating phase (AUX 1)	No
Expert	**14103**	**Contact active according to battery temperature (AUX 1) With BSP or BTS**	
Expert	14104	Contact activated with the temperature of battery (AUX 1)	No
Expert	14105	Contact activated over (AUX 1)	3 °C
Expert	14106	Contact deactivated below (AUX 1)	5 °C
Expert	14107	Only activated if the battery is not in bulk phase (AUX 1)	No
Expert	**14108**	**Contact active according to SOC (AUX 1) Only with BSP**	
Expert	14109	Contact activated with the SOC 1 of battery (AUX 1)	No
Expert	14110	Contact activated below SOC 1 (AUX 1)	50 % SOC

Level	User ref.	Parameter	Factory value
Expert	14111	Delay 1 (AUX 1)	12 hours
Expert	14112	Contact activated with the SOC 2 of battery (AUX 1)	No
Expert	14113	Contact activated below SOC 2 (AUX 1)	30%
Expert	14114	Delay 2 (AUX 1)	0.2 hours
Expert	14115	Contact activated with the SOC 3 of battery (AUX 1)	No
Expert	14116	Contact activated below SOC 3 (AUX 1)	20%
Expert	14117	Delay 3 (AUX 1)	0 hours
Expert	14118	Contact deactivated over SOC (AUX 1)	90 % SOC
Expert	14119	Delay to deactivate (AUX 1)	0.2 hours
Expert	14120	Deactivate if battery in floating phase (AUX 1)	No
Expert	14121	Reset all settings (AUX 1)	-
Expert	**14122**	**AUXILIARY CONTACT 2**	
Expert	14123	Operating mode (AUX 2)	Automatic
Expert	14124	Combination of the events for the auxiliary contact (AUX 2)	Any (Function OR)
Expert	**14125**	**Contact activated in night mode (AUX 2)**	
Expert	14126	Activated in night mode (AUX 2)	No
Expert	14127	Delay of activation after entering night mode (AUX 2)	1 min
Expert	14128	Activation time for the auxiliary relay in night mode (AUX 2)	1 min
Expert	**14210**	**Contact active with a fixed time schedule (AUX 2)**	
Expert	14211	Contact activated with fixed time schedule (AUX 2)	No
Expert	14212	Start hour (AUX 2)	07:00 hh:mm
Expert	14213	End hour (AUX 2)	20:00 hh:mm
Expert	**14129**	**Contact active on event (AUX 2)**	
Expert	14189	VarioString is ON (AUX 2)	No
Expert	14130	VarioString is OFF (AUX 2)	No
Expert	14215	Remote entry (AUX 2)	No
Expert	14131	Battery undervoltage (AUX 2)	No
Expert	14216	Battery undervoltage	40 Vdc
Expert	14132	Battery overvoltage (AUX 2)	No
Expert	14133	Earth fault (AUX 2)	No
Expert	14134	PV error (48h without charge) (AUX 2)	No
Expert	14135	Overtemperature (AUX 2)	No
Expert	14136	Bulk charge phase (AUX 2)	No
Expert	14137	Absorption phase (AUX 2)	No
Expert	14138	Equalization phase (AUX 2)	No
Expert	14139	Floating (AUX 2)	No
Expert	14140	Reduced floating (AUX 2)	No
Expert	14141	Periodic absorption (AUX 2)	No
Expert	**14142**	**Contact active according to battery voltage (AUX 2)**	
Expert	14143	Battery voltage 1 activate (AUX 2)	No
Expert	14144	Battery voltage 1 (AUX 2)	46.8 Vdc
Expert	14145	Delay 1 (AUX 2)	1 min
Expert	14146	Battery voltage 2 activate (AUX 2)	No
Expert	14147	Battery voltage 2 (AUX 2)	47.8 Vdc
Expert	14148	Delay 2 (AUX 2)	10 min
Expert	14149	Battery voltage 3 activate (AUX 2)	No
Expert	14150	Battery voltage 3 (AUX 2)	48.5 Vdc

Level	User ref.	Parameter	Factory value
Expert	14151	Delay 3 (AUX 2)	60 min
Expert	14152	Battery voltage to deactivate (AUX 2)	54 Vdc
Expert	14153	Delay to deactivate (AUX 2)	60 min
Expert	14154	Deactivate if battery in floating phase (AUX 2)	No
Expert	**14155**	**Contact active according to battery temperature (AUX 2) With BSP or BTS**	
Expert	14156	Contact activated with the temperature of battery (AUX 2)	No
Expert	14157	Contact activated over (AUX 2)	3 °C
Expert	14158	Contact deactivated below (AUX 2)	5 °C
Expert	14159	Only activated if the battery is not in bulk phase (AUX 2)	No
Expert	**14160**	**Contact active according to SOC (AUX 2) Only with BSP**	
Expert	14161	Contact activated with the SOC 1 of battery (AUX 2)	No
Expert	14162	Contact activated below SOC 1 (AUX 2)	50 % SOC
Expert	14163	Delay 1 (AUX 2)	12 hours
Expert	14164	Contact activated with the SOC 2 of battery (AUX 2)	No
Expert	14165	Contact activated below SOC 2 (AUX 2)	30%
Expert	14166	Delay 2 (AUX 2)	0.2 hours
Expert	14167	Contact activated with the SOC 3 of battery (AUX 2)	No
Expert	14168	Contact activated below SOC 3 (AUX 2)	20%
Expert	14169	Delay 3 (AUX 2)	0 hours
Expert	14170	Contact deactivated over SOC (AUX 2)	90 % SOC
Expert	14171	Delay to deactivate (AUX 2)	0.2 hours
Expert	14172	Deactivate if battery in floating phase (AUX 2)	No
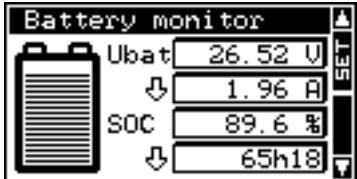
USER INFORMATION XTENDER

Info. no.	Name	Unit	Description
			Battery
3000	Ubat	Vdc	Battery voltage
3005	Ibat (m)	Adc	Battery charge current
3004	Ibat	Ausr	Wanted battery charge current
3006	Ubat ond	Vrip	Battery voltage ripple
3010	Phase	Text	Battery cycle phase (----, Bulk, Absorpt., Equalise, Floating, R.float., Per.abs., Mixing, Forming)
3003	Comp P	Cdyn	Dynamic compensation of battery voltage
3028	Mode	Text	Operating state (----, Inverter, Charger, Boost, Injection)
3001	Tbat	°C	Battery temperature
3002	Comp°C	Ctmp	Temperature compensation of battery voltage
3076	E out YD	kWh	Discharge of battery of the previous day
3078	E out Day	kWh	Discharge of battery of the current day
			Input AC
3011	U in	Vac	Input voltage

Info. no.	Name	Unit	Description
3012	I in	Aac	Input current
3138	P in	kVA	Input power
3137	P in a	kW	Input active power
3084	F in	Hz	Input frequency
3080	Eac in YD	kWh	Energy AC-In from of the previous day
3081	Eac in Day	kWh	Energy AC-In from of the current day
			Output AC
3021	U out	Vac	Output voltage
3022	I out	Aac	Output current
3139	P out	kVA	Output power
3136	Pout a	kW	Output active power
3085	F out	Hz	Output frequency
3082	Eac out YD	kWh	Consumers energy of the previous day
3083	Eac out Dy	kWh	Consumers energy of the current day
			General
3020	Transfert	Text	State of transfer relay (Opened, Closed)
3030	Rel out	Text	State of output relay (Opened, Closed)
3031	Aux 1	Text	State of auxiliary relay I (Opened, Closed)
3032	Aux 2	Text	State of auxiliary relay II (Opened, Closed)
3054	Aux I	Text	Relay aux I mode (----, A, I, M, M, G)
3055	Aux II	Text	Relay aux II mode (----, A, I, M, M, G)
3056	Lockings		Lockings flag
3019	Boost	Text	Boost active (Off, On)
3018	P sharing	Text	Input limite reached (Off, On)
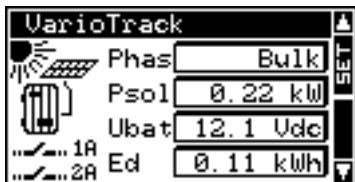
USER INFORMATION BSP

Info. no.	Name	Unit	Description
7000	Ubat	Vdc	Battery voltage
7001	Ibat	Adc	Battery current
7002	SOC	%	State of Charge
7003	Pbat	W	Power
7004	Trem		Remaining autonomy
7007	0d<	Ah	Ah charged today
7008	0d>	Ah	Ah discharged today
7009	-1d<	Ah	Ah charged yesterday
7010	-1d>	Ah	Ah discharged yesterday
7011	tot<	kAh	Total Ah charged
7012	tot>	kAh	Total Ah discharged
7013	Ttot	days	Total time
7017	cus>	Ah	Custom charge Ah counter
7018	cus<	Ah	Custom discharge Ah counter
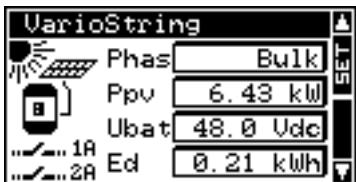
Info. no.	Name	Unit	Description
7019	Tcus	h	Custom counter duration
7029	Tbat	°C	Battery temperature
7047	Sman	%	SOC manufacturer
7053	bTyp		Battery Type. With Xcom-CAN
7054	BMSv		BMS Version. With Xcom-CAN
7055	bCap	Ah	Battery Capacity. With Xcom-CAN
7056	bmid		Reserved Manufacturer ID. With Xcom-CAN
7057	SOH	%	State Of Health. With Xcom-CAN
7058	hSOC	%	High resolution State of Charge. With Xcom-CAN

USER INFORMATION VARIOTRACK

Info. no.	Name	Unit	Description
11000	Ubat	Vdc	Battery voltage
11001	Ibat	Adc	Battery current
11002	Upv	Vdc	Voltage of the PV generator
11004	Psol	kW	Power of the PV generator
11005	Tbat	°C	Battery temperature
11006	Cd	Ah	Production in (Ah) for the current day
11007	Ed	kWh	Production in (kWh) for the current day
11008	kWhR	kWh	Produced energy resettable counter
11009	MWhT	MWh	Total produced energy
11010	Cd-1	Ah	Production in (Ah) for the previous day
11011	Ed-1	kWh	Production in (Wh) for the previous day
11015	Type	Text	Model of VarioTrack (VT-80, VT-65)
11016	Mode	Text	Operating mode (Night, StartUp, ---, Charger, ---, Security, OFF, ---, Charge , Charge V, Charge I, Charge T, Ch. Ibsp)
11017	PVmx	Vdc	Max PV voltage for the current day
11018	Ibmx	Adc	Max battery current of the current day
11019	PVxP	kW	Max power production for the current day
11020	Bmax	Vdc	Max battery voltage for the current day
11021	Bmin	Vdc	Min battery voltage for the current day
11025	Sd	h	Number of irradiation hours for the current day
11026	Sd-1	h	Number of irradiation hours for the previous day
11034	Err	Text	Type of error (No Error, BatoverV, Earth, No Batt, OverTemp, BatOverV, PvOverV, Others, ---, ---, ---, ---, HardErr)
11037	EqIn	days	Number of days before next equalization
11038	Phas	Text	Battery cycle phase (Bulk, Absorpt., Equalize, Floating, ---, ---, R.float., Per.abs., ---, ---, ---, ---)
11066	Sync	Text	Synchronisation state (---, ---, ---, ---, XTslave, VTslave, ---, ---, VTmaster, Autonom., VSslave, VSmaster)
11069	VT state	Text	State of the VarioTrack (Off, On)

USER INFORMATION VARIOSTRING

Info. no.	Name	Unit	Description
15000	Ubat	Vdc	Battery voltage
15001	Ibat	Adc	Battery current
15002	Phas	Text	Battery cycle phase (Bulk, Absorpt., Equalize, Floating, ---, ---, R.float., Per.abs., ---, ---, ---, ---)
15003	conf	Text	PV type of wiring (Unknown, Independ., Series, Parallel, Error)
15004	Upv	Vdc	PV voltage
15005	Upv1	Vdc	PV1 voltage
15006	Upv2	Vdc	PV2 voltage
15007	Ipv	Adc	PV current
15008	Ipv1	Adc	PV1 current
15009	Ipv2	Adc	PV2 current
15010	Ppv	kW	PV power
15011	Ppv1	kW	PV1 power
15012	Ppv2	kW	PV2 power
15013	Mode	Text	PV operating mode (Night, Security, OFF, Charge, ChargeV, Charge I, ChargeP, ChargeIpv, ChargeT, ---, Ch.Ibsp)
15014	Mod1	Text	PV1 operating mode (Night, Security, OFF, Charge, ChargeV, Charge I, ChargeP, ChargeIpv, ChargeT, ---, Ch.Ibsp)
15015	Mod2	Text	PV2 operating mode (Night, Security, OFF, Charge, ChargeV, Charge I, ChargeP, ChargeIpv, ChargeT, ---, Ch.Ibsp)
15016	Cd	Ah	Production PV in (Ah) for the current day
15017	Ed	kWh	Production PV in (kWh) for the current day
15018	Ed1	kWh	Production PV1 in (kWh) for the current day
15019	Ed2	kWh	Production PV2 in (kWh) for the current day
15020	kWhR	kWh	Produced PV energy resettable counter
15021	kWh1	kWh	Produced PV1 energy resettable counter
15022	kWh2	kWh	Produced PV2 energy resettable counter
15023	MWhT	MWh	Total PV produced energy
15024	MWh1	MWh	Total PV1 produced energy
15025	MWh2	MWh	Total PV2 produced energy
15026	Cd-1	Ah	Production PV in (Ah) for the previous day
15027	Ed-	kWh	Production PV in (Wh) for the previous day
15028	Ed1-	kWh	Production PV1 in (Wh) for the previous day
15029	Ed2-	kWh	Production PV2 in (Wh) for the previous day
15030	Sd	h	Number of irradiation hours for the current day
15031	Sd-1	h	Number of irradiation hours for the previous day
15032	Tbat	°C	Battery temperature
15033	Upmx	Vdc	Max PV voltage for the current day
15034	Upm1	Vdc	Max PV1 voltage for the current day
15035	Upm2	Vdc	Max PV2 voltage for the current day

Info. no.	Name	Unit	Description
15036	Ibmx	Adc	Max battery current of the current day
15037	Ppmx	kW	Max PV power for the current day
15038	Ppm1	kW	Max PV1 power for the current day
15039	Ppm2	kW	Max PV2 power for the current day
15040	Ubmx	Vdc	Max battery voltage for the current day
15041	Ubmn	Vdc	Min battery voltage for the current day
15042	Tabs	h	Time in absorption of the current day
15049	Err	Text	Type of error (None, OverV_B, OverV_PV, OverV_PV1, OverV_PV2, Overl_PV, Overl_PV1, Overl_PV2, GroundBat, GroundPV, GroundPV1, GroundPV2, OverTemp, UnderV_B, Cabling, Other)
15050	Sync	Text	Synchronized with Xtender battery cycle (No, Yes)
15051	Sync	Text	Synchronisation state (---, ---, ---, ---, XTslave, VTslave, ---, ---, VTmaster, Autonom, VSslave, VSmaster)
15052	Eqln	days	Number of days before next equalization
15053	Bset	Vdc	Battery set point
15108	VS state	Text	State of the VarioString (Off, On)

MESSAGES AND ACCOUNT OF EVENTS

User ref.	Description
0	Warning (000): Battery low
1	Warning (001): Battery too high
2	Warning (002): Bulk charge too long
3	(003): AC-In synchronization in progress
4	Warning (004): Input frequency AC-In wrong
5	Warning (005): Input frequency AC-In wrong
6	Warning (006): Input voltage AC-In too high
7	Warning (007): Input voltage AC-In too low
8	Halted (008): Inverter overload SC
9	Halted (009): Charger short circuit
10	(010): System start-up in progress
11	Warning (011): AC-In Energy quota
12	(012): Use of battery temperature sensor
13	(013): Use of additional remote control
14	Halted (014): Over temperature EL
15	Halted (015): Inverter overload BL
16	Warning (016): Fan error detected
17	(017): Programing mode
18	Warning (018): Excessive battery voltage ripple
19	Halted (019): Battery undervoltage
20	Halted (020): Battery overvoltage
21	(021): Transfer not authorized, ACout current is higher than {1107}
22	Halted (022): Voltage presence on AC-Out
23	Halted (023): Phase not defined
24	Warning (024): Change the clock battery
25	Halted (025): Unknown Command board. Software upgrade needed
26	Halted (026): Unknown Power board. Software upgrade needed
27	Halted (027): Unknown extension board. Software upgrade needed
28	Halted (028): Voltage incompatibility Power - Command
29	Halted (029): Voltage incompatibility Ext. - Command
30	Halted (030): Power incompatibility Power - Command
31	Halted (031): Command board software incompatibility
32	Halted (032): Power board software incompatibility
33	Halted (033): Extension board software incompatibility
34	Halted (034): FID corruption, call factory
35	(035): Memory structure modified
36	Halted (036): Parameter file lacking
37	Warning (037): Message file lack. SW upgrade advised
38	Warning (038): Upgrade of the device software advised
39	Warning (039): Upgrade of the device software advised

User ref.	Description
40	Warning (040): Upgrade of the device software advised
41	Warning (041): Over temperature TR
42	Halted (042): Unauthorized energy source at the output
43	(043): Start of monthly test
44	(044): End of successfully monthly test
45	Warning (045): Monthly autonomy test failed
46	(046): Start of weekly test
47	(047): End of successfully weekly test
48	Warning (048): Weekly autonomy test failed
49	(049): Transfer opened because ACin max current exceeded {1107}
50	Error (050): Incomplete data transfer
51	(051): The update is finished
52	(052): Your installation is already updated
53	Halted (053): Devices not compatible, software update required
54	(054): Please wait. Data transfer in progress
55	Error (055): No SD card inserted
56	Warning (056): Upgrade of the RCC software advised
57	(057): Operation finished successfully
58	Halted (058): Master synchronization missing
59	Halted (059): Inverter overload HW
60	Warning (060): Time security 1512 AUX1
61	Warning (061): Time security 1513 AUX2
62	Warning (062): Genset, no AC-In coming after AUX command
63	(063): Save parameter XT
64	(064): Save parameter BSP
65	(065): Save parameter MPPT
71	Error (071): Insufficient disk space on SD card
72	Halted (072): COM identification incorrect
73	(073): Datalogger is enabled on this RCC
74	(074): Save parameter Xcom-MS
75	(075): MPPT MS address changed successfully
76	Error (076): Error during change of MPPT MS address
77	Error (077): Wrong MPPT MS DIP Switch position
78	(078): SMS or email sent
79	Halted (079): More than 9 XTs in the system
80	Halted (080): No battery (or reverse polarity)
81	Warning (081): Earthing fault
82	Halted (082): PV overvoltage
83	Warning (083): No solar production in the last 48h
84	(084): Equalization performed
85	Error (085): Modem not available
86	Error (086): Incorrect PIN code, unable to initiate the modem
87	Error (087): Insufficient Signal from GSM modem
88	Error (088): No connection to GSM network
89	Error (089): No server access
90	(090): Server connected
91	Error (091): Update software of other RCC or Xcom-232i
92	Error (092): More than 3 RCC or Xcom-232i in the system

User ref.	Description
93	Error (093): More than 1 BSP in the system
94	Error (094): More than 1 Xcom MS in the system
95	Error (095): More than 15 VarioTrack in the system
121	Error (121): Impossible communication with target device
122	Error (122): SD card corrupted
123	Error (123): SD card not formatted
124	Error (124): SD card not compatible
125	Error (125): SD card format not recognized. Should be FAT
126	Error (126): SD card write protected
127	Error (127): SD card, file(s) corrupted
128	Error (128): SD card file or directory could not be found
129	Error (129): SD card has been prematurely removed
130	Error (130): Update directory is empty
131	(131): The VarioTrack is configured for 12V batteries
132	(132): The VarioTrack is configured for 24V batteries
133	(133): The VarioTrack is configured for 48V batteries
134	(134): Reception level of the GSM signal
137	(137): VarioTrack master synchronization lost
138	Error (138): XT master synchronization lost
139	(139): Synchronized on VarioTrack master
140	(140): Synchronized on XT master
141	Error (141): More than 1 Xcom SMS in the system
142	Error (142): More than 15 VarioString in the system
143	(143): Save parameter Xcom SMS
144	(144): Save parameter VarioString
145	Error (145): SIM card blocked, PUK code required
146	Error (146): SIM card missing
147	Error (147): Install R532 firmware release prior to install an older release
148	(148): Datalogger function interrupted (SD card removed)
149	Error (149): Parameter setting incomplete
150	Error (150): Cabling error between PV and VarioString
162	Error (162): Communication loss with RCC or Xcom232i
163	Error (163): Communication loss with Xtender
164	Error (164): Communication loss with BSP
165	Error (165): Communication loss with Xcom MS
166	Error (166): Communication loss with VarioTrack
167	Error (167): Communication loss with VarioString
168	(168): Synchronized with VarioString master
169	(169): Synchronization with VarioString master lost
170	Warning (170): No solar production in the last 48h on PV1
171	Warning (171): No solar production in the last 48h on PV2
172	Error (172): FID change impossible. More than one unit.
175	Halted (175): Critical undervoltage
176	(176): Calibration setting lost
177	(177): An Xtender has started up
178	(178): No BSP. Necessary for programming with SOC
179	(179): No BTS or BSP. Necessary for programming with temperature
180	(180): Command entry activated

User ref.	Description
181	Error (181): Disconnection of BTS
182	(182): BTS/BSP battery temperature measurement used by a device
183	Halted (183): An Xtender has lost communication with the system
184	Error (184): Check phase orientation or circuit breakers state on AC-In
185	Warning (185): AC-In voltage level with delay too low
186	Halted (186): Critical undervoltage (fast)
187	Halted (187): Critical overvoltage (fast)
188	(188): CAN stage startup
189	Error (189): Incompatible configuration file
190	(190): The Xcom-SMS is busy
191	(191): Parameter not supported
192	(192): Unknown reference
193	(193): Invalid value
194	(194): Value too low
195	(195): Value too high
196	(196): Writing error
197	(197): Reading error
198	(198): User level insufficient
199	(199): No data for the report
200	Error (200): Memory full
202	Warning (202): External alarm arrives
203	(203): External alarm leaves
204	Halted (204): External stop arrives
205	(205): External stop leaves
206	Halted (206): Board hardware incompatibility
207	(207): AUX1 relay activation
208	(208): AUX1 relay deactivation
209	(209): AUX2 relay activation
210	(210): AUX2 relay deactivation
211	(211): Command entry deactivated
212	Error (212): VarioTrack software incompatibility. Upgrade needed
213	(213): Battery current limitation by the BSP stopped
214	Warning (214): Half periode RMS voltage limit exceeded, transfer opened
215	Warning (215): UPS limit reached, transfer opened
216	Warning (216): Scom watchdog caused the reset of Xcom-232i
217	Warning (217): CAN problem at Xtender declaration
218	Warning (218): CAN problem while writing parameters
222	(222): Front ON/OFF button pressed
223	(223): Main OFF detected
224	(224): Delay before closing transfer relay in progress {1580}
225	Error (225): Communication with lihium battery lost
226	(226): Communication with lihium battery back