

9.2 Error Codes

List of error codes for Service

| No. | Event identifiers | Description |
|-----|------------------------------|--|
| 0 | NO_EVENT | no errors |
| 1 | DEV_NOTE_SHOCKEVENT_1 | Shock event of category 1, will be represented in the event status fields events[0], bit 1 |
| 2 | DEV_NOTE_SWUPDATE | Device firmware has been updated |
| 3 | CHN_WARN_WARMUP1 | sensor in warm up 1 |
| 4 | CHN_WARN_WARMUP2 | sensor in warm up 2 |
| 5 | CHN_WARN_A_NEG_WARNING | value below negative warning limit |
| 6 | CHN_WARN_TEMP_HIGH | sensor temperature too high |
| 7 | CHN_WARN_TEMP_LOW | sensor temperature too low |
| 8 | CHN_WARN_BUMPTTEST_INTVAL | bump test expires soon |
| 9 | CHN_WARN_CAL_INTVAL | calibration expires soon |
| 10 | CHN_WARN_CAL_INTVAL_EXPIRED | calibration interval is expired |
| 11 | CHN_WARN_EC_CAL_INTVAL_QE | calibration of comp. channel will soon expire |
| 12 | CHN_WARN_CA_A2_LIM_60 | alarm level > 60% LEL |
| 13 | CHN_WARN_CA_CAL_INTVAL_WL | calibration will soon expire |
| 14 | CHN_WARN_EC_CAL_REQ_QE | compensation channel needs a calibration due on over |
| 15 | CHN_WARN_PEAK_DETECT_WARNING | IR peak bit warning |
| 16 | CHN_WARN_CA_SENS_PROTECT | CAT protection alarm set |
| 17 | DEV_WARN_LIFETIME_USER | customer Life time almost expired |
| 18 | DEV_WARN_DATALOGGER_90 | Data logger 90% full |
| 19 | DEV_WARN_DATALOGGER_100 | Data logger 100% full |
| 20 | DEV_WARN_PRESSURE_OVERRANGE | Pressure is over overrange pressure threshold |
| 21 | DEV_WARN_PRESSURE_UNDERRANGE | Pressure is under underrange pressure threshold |

| | | |
|----|-------------------------------|---|
| 22 | DEV_WARN_BATTERY_TOO HOT | Battery subsystem reports temperature is too hot |
| 23 | DEV_WARN_BATTERY_TOOCOLD | Battery subsystem reports that temperature is too cold |
| 24 | DEV_WARN_BATTERY_COMERROR | Communication error with battery subsystem |
| 25 | DEV_WARN_LIFETIME_USER_ALMOST | Lifetime interval that is set by customer is almost expired |
| 26 | DEV_WARN_TEMPERATURE_TOO HIGH | Temperature too high |
| 27 | DEV_WARN_TEMPERATURE_TOO LOW | Temperature too low |
| 28 | DEV_WARN_FLOW_HW_MAIN | power supply failed |
| 29 | DEV_WARN_FLOW_HW_PLUG | pressure and temperature measurement values were implausible (sensor not plugged) |
| 30 | DEV_WARN_FLOW_TEST_FAIL | x-dock flow test failed |
| 31 | CHN_ERR_ZERO_CAL_ERROR | zero calibration failed |
| 32 | CHN_ERR_SPAN_CAL_ERROR | span calibration failed |
| 33 | CHN_ERR_CAL_INTVAL_WL | calibration interval WL expired |
| 34 | CHN_ERR_A_NEG_ERROR | value below negative error limit |
| 35 | CHN_ERR_NO_SENSOR | sensor not plugged or defect |
| 36 | CHN_ERR_BUMPTTEST_INTVAL | bump test expired |
| 37 | CHN_ERR_CAL_INTVAL | calibration expired |
| 38 | CHN_ERR_INVALID_VALUE | measurement is invalid |
| 39 | CHN_ERR_BUMP_TEST_FAIL | bump test failed |
| 40 | | |
| 41 | CHN_ERR_FILTER_TEST_FAIL | filter test failed |
| 42 | CHN_ERR_ZERO_CAL_WL | Zero calibration catex WL failed |
| 43 | CHN_ERR_SPAN_CAL_WL | Span calibration catex WL failed |
| 44 | CHN_ERR_EC_SPAN_CAL_QE | calibration of compensation electrode invalid |
| 45 | CHN_ERR_CAT_O2_DEFICIENCY | oxygen less than 12 Volume% |
| 46 | CHN_ERR_IR_SENS_PARA | sensor data invalid |

| | | |
|----|------------------------------------|--|
| 47 | CHN_ERR_IR_SUB_SYS | error in IR sub-system |
| 48 | CHN_ERR_IR_PEAK_DETECT_ERROR | IR peak detect bit set |
| 49 | CHN_ERR_CAT_CONTAMINATED | catex contaminated |
| 50 | CHN_ERR_ADC_RANGE | Cat/EC/PID channel ADC range error detected. |
| 51 | CHN_ERR_IR_ADD_H2_ERROR | IR-H2 addition active, but H2 channel is in error state; consequential error |
| 52 | CHN_ERR_PARTNUMBER | Sensor part number is not valid |
| 53 | | |
| 54 | | |
| 55 | DEV_ERR_LIFETIME_USER | customer lifetime expired |
| 56 | DEV_ERR_BUMPTTEST_INTVAL | bump test interval expired |
| 57 | DEV_ERR_ALARMTEST | test alarm elements failed |
| 58 | DEV_ERR_CONFIG_CHECK_ERROR | configuration check failed |
| 59 | DEV_ERR_CAL_INTVAL | calibration interval expired |
| 60 | DEV_ERR_CHKSUM_FW | wrong checksum in firmware |
| 61 | DEV_ERR_CHKSUM_PARA | wrong checksum in parameter |
| 62 | DEV_ERR_RAMTEST | RAM test failed |
| 63 | DEV_ERR_HARDWARE | error in hardware |
| 64 | DEV_ERR_ALARMTEST_LED | test alarm element led failed |
| 65 | DEV_ERR_ALARMTEST_HORN | test alarm element horn failed |
| 66 | DEV_ERR_ALARMTEST_MOTOR | test alarm element motor failed |
| 67 | DEV_ERR_WRONG_SW_VERS | invalid software version |
| 68 | | |
| 69 | DEV_ERR_LOCK_INSTR | instrument was locked by X-Dock |
| 70 | DEV_ERR_PUMPNOTCONFIGURED | Pump adapter is attached to device, but no pump is configured |
| 71 | DEV_ERR_ADC_HW_ERROR | EC ADC hardware error detected. |
| 72 | DEV_ERR_HALLSENSOR_MORETHANONEHIGH | More than one Hall sensor was observed with a logical level "high" |
| 73 | DEV_ERR_FLOW_HW_TEMP_SENSOR | temperature measurement value |

| | | |
|----|-----------------------------------|--|
| | | was implausible (plug differential pressure) |
| 74 | DEV_ERR_FLOW_HW_P_SENSOR | pressure measurement value was implausible (plug differential pressure) |
| 75 | DEV_ERR_FLOW_HW_PUMP_CURRENT | current measurement value was implausible (pump) |
| 76 | DEV_ERR_FLOW_RANGE | range error of the flow measurement value (lower limit) |
| 77 | DEV_ERR_PRESSURE_OVERRANGE | Pressure is over extended overrange pressure threshold |
| 78 | DEV_ERR_PRESSURE_UNDERRANGE | Pressure is under extended underrange pressure threshold |
| 79 | DEV_ERR_PRESSURE_COMERROR | Communication error with pressure sensor |
| 80 | DEV_ERR_ACCELERATION_COMERROR | Communication error with acceleration sensor |
| 81 | DEV_ERR_VOLTAGE_ALARM | Alarm voltage is out of specification |
| 82 | DEV_ERR_VOLTAGE_REFERENCE | Reference voltage is out of specification |
| 83 | CHN_ERR_CATEX_OVERDOSE | Right after warm-up 1 an overdose concentration was observed by the CatEx sensor |
| 84 | CHN_WARN_BUMPTTEST_INTVAL_EXPIRED | Bumptest interval is expired, warning reaction |
| 85 | DEV_BATTERY_PREALARM | Battery voltage is low, shutdown in about 20 minutes |
| 86 | DEV_BATTERY_MAINALARM | Battery voltage is very low, shutdown in a few seconds |
| 87 | CHN_ERR_T90_TEST_FAILED | T ₉₀ test for a specific channel failed |
| 88 | DEV_ERR_CAL_INTVAL_WL | thermal conduction calibration interval expired |
| 89 | CHN_WARN_CA_CAL_INTVAL_WL_EXPIRED | calibration interval WL is expired |
| 90 | CHN_ERR_CAT_PID_CURRENT | CAT + PID current supply error |

| | | |
|-----|-----------------------------------|--|
| 91 | CHN_ERR_PID_VOLTAGE | PID sensor voltage is too low |
| 92 | CHN_ERR_REF_VOLTAGE | PID error supply voltage+D73 |
| 93 | DEV_WARN_TIME_RESET | Device time was reset due to power loss |
| 94 | DEV_ERR_MANIFEST | Update manifest periodic validation failed |
| 95 | DEV_ERR_VERSIONCHECK_DB | DB version is not okay for this firmware |
| 96 | DEV_ERR_VERSIONCHECK_BATT | Akku version is not okay for this firmware |
| 97 | CHN_WARN_A_NEG_WARNING_QE | value below negative warning limit |
| 98 | CHN_ERR_ZERO_CAL_ERROR_QE | zero calibration failed |
| 99 | CHN_ERR_A_NEG_ERROR_QE | value below negative error limit |
| 100 | CHN_WARN_PID_SPAN | PID span value is smaller than / equal to cal_spanwarn. As remedy the lamp should be controlled. |
| 101 | DEV_ERR_ENDOFLINE | End of line and enforced silence flags are not set |
| 102 | DEV_ERR_TEMPERATURE_TOOHIGH | Temperature too high |
| 103 | DEV_ERR_TEMPERATURE_TOLOW | Temperature too low |
| 104 | CHN_WARN_EC_CAL_INTVAL_QE_EXPIRED | calibration of comp. channel is expired |
| 105 | CHN_ERR_EC_CAL_INTVAL_QE_EXPIRED | calibration of comp. channel is expired |