



LAMTEC Meß- und Regelungstechnik  
für Feuerungen GmbH & Co. KG

**Change Notification for  
BT300 Software Version 3.4.0.0  
UI300 Software Version 3.8.0.0  
VSM100 Software Version 1.1.0.0  
LCM100 Hardware 1.7.0.0**

<b>Version</b>	<b>Date</b>	<b>Author</b>	<b>Remark</b>
1.0	16.12.2016	B. Schukraft	Modification of BT300 Software from Version 3.3.0.0 to 3.4.0.0; UI300 from Version 3.7.0.0 to Version 3.8.0.0; VSM100 from Version 1.0.0.0 to Version 1.1.0.0; LCM100 Hardware modification



## **1 Modifications in BT300 Software Version 3.4.0.0**

### **1.1 LDR Reset Problem Def.6427**

In some cases after a power on reset the internal failure H999 D1: 1250 will be indicated. The failure indicates that the measured voltage at the LDR input is out of the valid limits. The reason for this failure is a timing problem between the main processor and the watchdog processor during reset routine. The problem is solved with software version 3.4.0.0

### **1.2 Failure U004 Def. 6521**

During a controlled shut down of the burner BT300 goes sporadic to failure U004. This is a timing problem of the watchdog processor during a self-test if the flame signal switch of quickly. With software version 3.4.0.0 the problem is solved.

### **1.3 U999: 1200 Failure during self-test of the ionisation input on the watchdog processor Def. 6534**

In case of a high ionisation current the self-test of the ionisation input sporadic fails on the watchdog processor. This causes the failure U999 D1:1200. The sequence of the self-test is unfavourable. A successful self-test is detected as faulty. The sequence of the self-test is optimised in the version 3.4.0.0, so that the failure U999 1200 will be trigger only at faulty self-test.

### **1.4 H999 D1=4901 D2=2 Def. 6540**

In existing installations the failure H999 D1:4901 D2:2 was indicated sporadic. The failure is occurred, if the calculated feedback-set-point for a VSM is out of range. This occurs during the leaving of the adjustment mode of the BT300, when a CO/O2 correction has to be made. In this case the feedback-set-point and the valid set-point range were calculated differently. We corrected the calculation with version 3.4.0.0.

### **1.5 H613 during controlled shut down Def. 6563**

If the air pressure drops out during a controlled shut down of the burner it occur a lockout with an air pressure failure. There are installations, where the air pressure drops out in this case. The air pressure supervision is not required in these installations. In according to EN 298: 2012 Chapter 3.124.5 (Gas), this is not allowed in all cases for gas burners. Therefore the parameter 333 is introduced in the software version 3.4.0.0. With this parameter The air pressure supervision may activate or deactivated. In the factory setting the air pressure supervision is active.

### **1.6 U002 during ignition of oil without oil pressure Def. 6569**

The reason for this failure is a consistency check of the watchdog processor. These checks during whole start sequence, that at least one fuel valve open when a flame is detected. If a flame is present without open fuel valve, after a tolerance time of 2 second the parasitic light failure above appears.



Before an oil valve opens, BT300 is waiting up to 5 seconds that the oil pressure and the oil safety chain is closed. During this time the ignition transformer is switched on.

If the flame supervision is with UV, an open safety chain or a missing oil min pressure occur a failure U002.

During the BT300 Mode "Ignition" flame supervision is not necessary. So we removed this supervision in the "Ignition" Mode of BT300 also for the watchdog processor.

### **1.7 Internal controller failure Def. 6571**

In some installations the watchdog processor occur sporadic failures of the O2 controller. In LSB Remote Software it is indicated as "set point curve defect". But the set point curve is correct.

The watchdog processor indicates this failure, if the active checks of the controller in the main processor are not fitting to the actual state of the controller. This happens only when the O2 controller state is changing.

With version 3.4.0.0 the tolerance time for this supervision is increased.

### **1.8 Failure U999 D1=2800 during leaving the setting mode Def. 6572**

The reason is imprecise analysis of the watchdog processor.

In version 3.4.0.0 the analysis is corrected.

### **1.9 Activation of the alarm output with P807 = 3 Def. 6573**

With this adjustment the alarm output should in lockout without automatic restart activated. In version 3.3.0.0 during the last automatic restart after a failure the alarm output is activated for 1 second.

In version 3.4.0.0 this is corrected.

### **1.10 H999: 830 Watchdog Trigger Main Processor Def. 6583**

This failure occurs sporadic in some installations. The reason is a timing problem in the internal interrupt handling.

This is solved with version 3.4.0.0.

### **1.11 Referencing of the actuators before burner start CR-50429**

Hence the release 3.4.0.0 the BT300 may adjusted, that a referencing of the actuators will carried out before the burner start after a fuel change over. Until version 3.4.0.0 the referencing is carried out only after power on and before BT300 mode "Burner off". Therefore the Parameter 467 in introduced.

### **1.12 Extended VSM100 diagnosis data for details of failure H807 CR-52387**

In some installations with VSM100 the failure H807 occurs sporadic.

For a better diagnosis of the failure, VSM100 send after the reset its reason for the failure to the BT300. This will be stored afterwards into the failure history.

For this better diagnosis the BT300 software version 3.4.0.0 and VSM100 software version 1.1.0.0 is necessary.

### **1.13 P701 Spread factor CR-52761**

Hence release 3.4.0.0 (BT300) and version 3.8.0.0 (UI300) Parameter 701 is shifted from password level 2 to password level 1.



## **1.14 H999 D1:4800 CR52790**

In some Installations the failure H999 D1=4800 occurs sporadic during post purge. In spite of intensive research we could not find the reason for this failure.

With the release 3.4.0.0 the diagnosis of the failure is improved.

## **2 Modification in UI300**

### **2.1 Screen saver with LSB-Remote-Software Def. 6580**

Up to now the back light of UI300 was switched on all the time, when the LSB-Remote-Software was connected. With Version 3.8.0.0 the back light switches off after the delay for the screen saver.

### **2.2 O2 Value in curve setting Def. 6599**

In the curve setting menu the O2 value was not refreshed, if an LTx is connected to BT300. With version 3.8.0.0 the O2 value will be indicated and refreshed, if an LTx is connected.

### **2.3 Setting of staged operation Def. 6606**

After the adjustment of the stage change over points the actuators move to the position of the stage. Therefore a cold pre-setting of the positions of the stages must be made up to now. With version 3.8.0.0 the changeover position will be stored as position of the stage, if there is no actuator position stored.

### **2.4 Scaling of psi CR52084**

The measuring range of pressure sensors could only be adjusted only with unit bar. With version 3.8.0.0 the measuring range can also be adjusted with unit psi.

### **2.5 P701 with Password level 1 CR52762**

Hence release 3.4.0.0 (BT300) and version 3.8.0.0 (UI300) Parameter 701 is shifted from password level 2 to password level 1.

### **2.6 Request of fan activation CR52851**

If there is a VSM100 connected to BT300, there was a request for fan activation before entering the curve setting in any case. With version 3.8.0.0 the request will be only if the fan is not active yet.

### **2.7 Firing rate indication in staged operation CR54136**

It was criticised, that the actual stage is not clear indicated in screen 0000. With version 3.8.0.0, in staged operation, the number of the stage is right of the indicator bar for the internal firing rate.

### **2.8 Parameter list CR54230**

From the Sates there was the wish to adjust all parameter up to password level. With version 3.8.0.0 we

introduced a new icon . With that you can the parameter list. There all parameters with parameter number and value will be indicated up to password level 2. Depending on the password level, may be adjusted.



### **3 VSM100 Version 1.1.0.0**

In some installations with VSM100 the failure H807 occurs sporadic. In spite of intensive research we could not find the reason for this failure.

For a better diagnosis of the failure, VSM100 send after the reset its reason for the failure to the BT300. This will be stored afterwards into the failure history.

For this better diagnosis the BT300 software version 3.4.0.0 and VSM100 software version 1.1.0.0 is necessary.

### **4 Hardware modification LCM100**

If the analogue firing rate input 0...10V of LCM100 should be used, the output of the sender has to work as a current sink, with min.100 $\mu$ A at an output lower than 5V.

Since the serial no. 16170051 the hardware of LCM100 is modified. The sender must no more work as a current sink.