Quick Reference for End Users

BurnerTronic BT300

Parameter List for Software Version 3.9

Sensors and Systems for Combustion Engineering

Table of Contents

1   Validity of these Instructions

This document is a supplement to the Operating Instructions for the appliances listed below. It is only applicable together with the Operating Instructions for the affected device.
The specifications in this document refer to the software version BT300 v3.9 and UI300 v3.11 / v4.2 and higher. The following functionalities are not available with software versions <3.0 of BurnerTronic.

- CO/O_2 control
- Applications with frequency inverter functions (VSM)

The designation UI300 used in the document applies to UI300-LSB, UI300-V1 and UI300-V2.

This document is applicable for the following devices:

- BT320
- BT330
- BT331
- BT335
- BT340
- BT341

How to read the tables:

No.	Device	Description		Attributes
0001	BT300	Brightness of LCD display		
				Group: 5
				Min.: 0
				Max.: 10
				Default: 10
				Write: 0/UI
				Version: 1.0.0.0

1 Parameter number

2 Affected Device

3 Row 1   = short text
   Row 2   = description

4 Group   = classification according to functionality
   Min.   = adjustable minimum value
   Max.   = adjustable maximum value
   Default   = default value ex work

5 Write   = required release level
   UI   = editable via UI

6 Version   = version from which the parameter is active

2   List of Parameters

2.1   System

No.	Device	Description	Attribute
0001	BT300	Brightness of LCD display	
			Group: 5 Min.: 0 Max.: 10 Default: 10 Write:0/UI Version: 1.0.0.0
0002	BT300	LCD contrast	
			Group: 5 Min.: 0 Max.:25 Default: 10 Write:0/UI Version: 1.0.0.0
0003	BT300	Screensaver mode of UI	
		The screensaver is activated after the adjusted time [min] has elapsed.	Group: 5 Min.: 1 Max.: 120 Default: 0 Write: 0/UI Version: 1.0.0.0

2   List of Parameters

2.2   Maintenance

No.	Device	Description	Attribute
0010	BT300	Maintenance interval [days]	
		Extension of the maintenance interval in days 0 = no check of the maintenance interval 1 = no additional time configured, only warnings are indicated. >1 = additional time in days after the maintenance interval has ended until the system indicates an error.	Group: 10 Min.: 0 Max.: 65535 Default: 0 Write: 2 Version: 1.0.0.0
0011	BT300	Time until next burner service [days]	
		Maintenance interval = number of days until next burner maintenance 0 = no check of maintenance interval > 0 = days until next burner maintenance	Group: 10 Min.: 0 Max.: 65535 Default: 0 Write: 2 Version: 1.0.0.0

2   List of Parameters

2.3   Monitor Output

No.	Device	Description	Attribute
0024	BT300	no function	
		no function	Group: 15 Min.: 0 Max.: 999 Default: 200 Write: 2 Version: 1.0.0.0
0025	BT300	no function	
		no function	Group: 15 Min.: 0 Max.: 999 Default: 200 Write: 2 Version: 1.0.0.0
0028	BT300	no function	
		no function	Group: 15 Min.: 0 Max.: 999 Default: 999 Write: 2 Version: 1.0.0.0
0029	BT300	no function	
		no function	Group: 15 Min.: 0 Max.: 999 Default: 999 Write:2 Version: 1.0.0.0

2   List of Parameters

2.4   Output Controller

No.	Device	Description	Attribute
0040	BT300	Operating mode of firing rate controller	
		Operating mode of firing rate controller 0 = OFF 1 = constant control 2 = controlled by atmospheric conditions/external setpoint shift 3 = external firing rate (software version BT300 v 3.3 and LCM100 v1.4 and higher)	Group: 20 Min.: 0 Max.: 3 Default: 0 Write: 1/UI Version: 1.0.0.0
0043	BT300	Start-up sequence: max. actual value	
		Parameter for start-up sequence: max. start-up temperature/pressure related to actual value input. Set the temperature to which the start-up sequence shall be active until reaching.	Group: 20 Min.: 0 Max.: 999 Default: 0 Write: 0/UI Version: 1.0.0.0
0044	BT300	Start-up sequence: firing-rate [digit]	
		Start-up output in digit depending on internal firing-rate. Enter the burner firing-rate with which the burner shall start in the start-up sequence.	Group: 20 Min.: 0 Max.: 999 Default: 0 Write: 0/UI Version: 1.0.0.0
0045	BT300	Start-up sequence: start-up time [s]	
		Start-up time in seconds Enter the maximum duration, during which the start-up sequence should effect.	Group: 20 Min.: 0 Max.: 32767 Default: 0 Write: 0 Version: 1.0.0.0
0046	BT300	no function	
		no function	Group: 20 Min.: 0 Max.: 999 Default: 999 Write: 0 Version: 1.0.0.0

2   List of Parameters

No.	Device	Description	Attribute
0047	BT300	no function	
		no function	Group: 20 Min.: 0 Max.: 100 Default: 0 Write: 0 Version: 1.0.0.0
0048	BT300	Controller setpoint 1 (for constant control/minimum value for control by atmospheric condition) [°C] [bar]	
		Controller setpoint 1 minimum Setting the setpoint minimum for the controller controlled by atmospheric conditions in °C or bar. The setting is active if the input 'Setpoint changeover' = 0. If the firing rate controller is configured as a constant controller, setpoint 1 is set here.	Group: 20 Min.: 0 Max.: 999 Default: 75 Write: 0/UI Version: 1.0.0.0
0049	BT300	Controller setpoint 1 maximum value (only for control by atmospheric conditions) [°C] [bar]	
		Controller setpoint 1 maximum Enter the setpoint maximum for the controller controlled by atmospheric conditions in °C or bar. The setting is active if the input 'Setpoint changeover' = 0. If the burner firing rate controller is set to constant control, this parameter is not active.	Group: 20 Min.: 0 Max.: 999 Default: 75 Write: 0/UI Version: 1.0.0.0
0050	BT300	Controller setpoint 2 (constant control/minimum value for control by atmospheric conditions) [°C] [bar]	
		Controller setpoint 2 minimum Enter the setpoint minimum for the controller controlled by atmospheric conditions in °C or bar. The setting is active if the input 'Setpoint changeover' = 1. If the firing rate controller is configured as a constant controller, setpoint 2 is set here.	Group: 20 Min.: 0 Max.: 999 Default: 60 Write: 0/UI Version: 1.0.0.0
0051	BT300	Controller setpoint 2 maximum value (only for control by atmospheric conditions) [°C] [bar]	
		Controller setpoint 2 maximum value Enter the setpoint minimum for the controller controlled by atmospheric conditions in °C or bar. The setting is active if the input 'Setpoint changeover' = 1. If the burner firing rate controller is set to constant control, this parameter is not active.	Group: 20 Min.: 0 Max.: 999 Default: 60 Write: 0/UI Version: 1.0.0.0

2   List of Parameters

No.	Device	Description	Attribute
0052	BT300	Firing rate controller: Lower limit [°C] [digit]	
		Lower limit for mode: 'controlled by atmospheric conditions' in °C or digit. This is the lower limit of the outside temperature at mode 'controlled by atmospheric conditions'. 0 ... 249 → 0 ... 249 °C / 32 °F ... 480 °F 250 ... 500 → -250 ... 0 °C / -418 °F ... 32 °F 475 = -25 °C / -13 °F Example: Lower limit for mode: setpoint shift in 0,1 mA or digit. This is the lower limit for the current input in 0,1 mA (min = 0; max = 500) 0 = 0.0 mA 40 = 4.0 mA 200 = 20.0 mA	Group: 20 Min.: 0 Max.: 999 Default:⇔ -25°C Write: 0/UI Version: 1.0.0.0
0053	BT300	Firing rate controller: Upper limit [°C] [digit]	
		Upper limit (for mode: 'controlled by atmospheric conditions') in 0.1°C or digit. This is the upper limit of the outside temperature at mode 'controlled by atmospheric conditions'. 0 ... 249 → 0.0 ... 24.9 °C/+32 ... 76.82 °F 250 ... 500 → -25.0 ... 0.0 °C/-13 ... 32 °F Upper limit (for mode: Setpoint shift) in 0,1mA. This is the upper limit of the current input (min = 0, max = 500) 0 = 0.0 mA 40 = 4.0 mA 200 = 20.0 mA	Group: 20 Min.: 0 Max.: 999 Default: ⇔+25°C Write: 0/UI Version: 1.0.0.0
0054	BT300	Switch-off hysteresis of lower control range (burner start-up point)	
		Enter the start-up point as a difference to the setpoint. Start-up point = Setpoint - parameter value. p.ex.: Burner shall start at 110. Setpoint = 120 parameter value = 10 Start-up value = 120 - 10 = 110. If the burner shall start above the setpoint, you may also enter negative values. Thereby -1 = 65535 and -999 = 64537. Parameter value = 65536 - difference. p.ex.: Burner shall start at 125. Setpoint = 120 parameter value = 65536 - 5 = 65531 Start-up point = 120 - (-5) = 125	Group: 20 Min.: 0 Max.: 65535 Default: 1 Write: 0/UI Version: 1.0.0.0
0055	BT300	Switch-off hysteresis of upper control range [°C] [bar]	
		Enter the upper control range as the difference of the actual setpoint to the upper limit of the control range °C, bar (xx.x) or digit Depending on the settings in P 061 the content is interpreted as °C (directly, without point), as bar (resolution 0,1 bar - range from 0,1 up to 99,9 bar) or as digit.	Group: 20 Min.: 0 Max.: 999 Default: 10 Write: 0/UI Version: 1.0.0.0

2   List of Parameters

No.	Device	Description	Attribute
0056	BT300	Burner OFF	
		Burner OFF (difference to the setpoint) [°C] or [bar] (xx.x) or [digit] Enter the firing rate controller's shut-off limit as the difference of the actual setpoint to the value by which the burner shuts off. This limit must be higher than the adjusted control range's upper limit. (P 0055). Depending on the settings in P 0061 the content is interpreted as °C (directly, without decimal point), as bar (resolution 0.1 bar - range from 0.1 up to 99.9 bar) or as digit.	Group: 20 Min.: 0 Max.: 999 Default: 15 Write: 0/UI Version: 1.0.0.0
0057	BT300	P-term of the controller	
		P-term of the controller	Group: 20 Min.: 0 Max.: 999 Default: 120 Write:0/UI Version: 1.0..0.0
0058	BT300	I-term of the controller	
		I-term of the controller	Group: 20 Min.: 0 Max.: 999 Default: 60 Write: 0/UI Version: 1.0.0.0
0059	BT300	D-term of the controller	
		D-term of the controller	Group: 20 Min.: 0 Max.: 999 Default: 20 Write: 0/UI Version: 1.0.0.0
0060	BT300	Cycle time	
		Enter the cycle time in seconds. This period lies between the single control steps. It would be wise to set this time according to the response time of the system.	Group: 20 Min.: 0 Max.: 60 Default: 5 Write: 0/UI Version: 1.0.0.0

2 List of Parameters

No.	Device	Description	Attribute
0061	BT300	Representation of actual value and set-point for firing rate controller	
		Representation of actual value and set-point for firing rate controller Define, which setpoint input of the firing rate controller is used and how it is interpreted in display and parameters (definition: kind of physical quantity). LCM version 1.0.0.0 and higher 0 = digit 1 = °C 2 = bar 3 = mA LCM version 1.2.0.0 and higher and UI version 3.3.0.0 and higher (4 = °F) (5 = psi) from BT300 version 3.9.0.0, LCM version 1.6.0.0, UI300 version 4.3 6 = kPa Not supported by UI300 HW 1 (SW version 3.12.0.0)	Group: 20 Min.: 0 Max.: 5 Default: 1 Write: 1/UI Version: 1.0
0062	BT300	4 mA corresponds to x units	
		Lower limit/pressure 4 mA at setpoint input are equal to x bar (adjustable in 0.1 bar steps). Enter the lower limit of the display range. If you have configured this input as pressure input it is 4 mA. This parameter is active only if P 61 = 2	Group: 20 Min.: 0 Max.: 999 Default: 0 Write: 1/UI Version: 1.0.0.0
0063	BT300	20 mA corresponds to x units	
		Upper limit/pressure 20 mA at setpoint input are equal to x 0.1 bar (to adjust in 0.1 bar steps). Enter the upper limit of the display range. If you have configured this input as pressure input it is 20 mA. This parameter is active only if P 61 = 2	Group: 20 Min.: 0 Max.: 999 Default: 160 Write: 1/UI Version: 1.0.0.0
0064	BT300	no function	
		no function	Group: 20 Min.: 0 Max.: 1 Default: 0/UI Write: 1 Version: 1.0.0.0
0065	BT300	Adjustment, which input of the firing rate controller is used for manual presetting of the burner firing rate	
		Adjust which one of the firing rate controller's inputs is used for manual presetting of the burner firing rate 0 = potentiometer 1 = three-point step (TPS) 2 = 4 ... 20 mA (current loop signal) 3 = 0 ... 10 V (voltage input)	Group: 20 Min.: 0 Max.: 3 Default: 2 Write: 1/UI Version: 1.0.0.0

2 List of Parameters

No.	Device	Description	Attribute
0066	BT300	Limitation of setpoint in P 48 - P 51	
		Upper limit of burner firing rate P 48 - P 51 0 = limitation is not active This parameter has the same value as P 48 - 51.	Group: 20 Min.: 0 Max.: 999 Default: 0 Write: 2 Version: 1.0.0.0 from version 3.7.0.0 on: Write: 1
0067	BT300	no function	
		no function	Group: 20 Min.: 0 Max.: 65535 Default: 0 Write: 1 Version: 1.0.0.0
0068	BT300	no function	
		no function	Group: 20 Min.: 0 Max.: 65535 Default: 0 Write: 1 Version: 1.0.0.0
0070	BT300	LCM: Calorific value of curve set 1 [kWh/l; kWh/m^3; kWh/kg]	
		LCM: Calorific value of curve set 1 Oil = kWh/l Gas = kWh/m^3 Solid fuels = kWh/kg	Group: 20 Min.: 0 Max.: 65.535 Default: 0 Write: 1 Version: 3.3
0071	BT300	LCM: Calorific value of curve set 2 [kWh/l; kWh/m^3; kWh/kg]	
		LCM: Calorific value of curve set 2 Oil= kWh/l Gas = kWh/m^3 Solid fuels = kWh/kg	Group: 20 Min.: 0 Max.: 65.535 Default: 0 Write: 1 Version: 3.3

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No.	Device	Description	Attribute
0072	BT300	LCM: Calorific value of curve set 3 [kWh/l; kWh/m^3; kWh/kg]	
		LCM: Calorific value of curve set 3 Oil = kWh/l Gas = kWh/m^3 Solid fuels = kWh/kg	Group: 20 Min.: 0 Max.: 65.535 Default: 0 Write: 1 Version: 3.3
0073	BT300	LCM: Calorific value of curve set 4 [kWh/l; kWh/m^3; kWh/kg]	
		LCM: Calorific value of curve set 4 Oil = kWh/l Gas = kWh/m^3 Solid fuels = kWh/kg	Group: 20 Min.: 0 Max.: 65.535 Default: 0 Write: 1 Version: 3.3
0074	BT300	LCM: Quantity of fuel per pulse for curve set 1 coarse value [l; m^3; kg]	
		LCM: Quantity of fuel per pulse for curve set 1 coarse value Oil = l Gas = m^3 Solid fuels = kg	Group: 20 Min.: 0 Max.: 655.35 Default: 0 Write: 1 Version: 3.3
0075	BT300	LCM: Quantity of fuel per pulse for curve set 2 coarse value [l, m^3, kg]	
		LCM: Quantity of fuel per pulse for curve set 2 coarse value Oil = l Gas = m^3 Solid fuels = kg	Group: 20 Min.: 0 Max.: 655.35 Default: 0 Write: 1 Version: 3.3
0076	BT300	LCM: Quantity of fuel per pulse for curve set 3 coarse value [l, m^3, kg]	
		LCM: Quantity of fuel per pulse for curve set 3 coarse value Oil = l Gas = m^3 Solid fuels = kg	Group: 20 Min.: 0 Max.: 655.35 Default: 0 Write: 1 Version: 3.3
0077	BT300	LCM: Quantity of fuel per pulse for curve set 4 coarse value [l, m^3, kg]	
		LCM: Quantity of fuel per pulse for curve set 4 coarse value Oil = l Gas = m^3 Solid fuels = kg	Group: 20 Min.: 0 Max.: 655.35 Default: 0 Write: 1 Version: 3.3

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No.	Device	Description	Attribute
0078	BT300	LCM: Quantity of fuel per pulse for curve set 1 fine value [ml; l; g]	
		LCM: Quantity of fuel per pulse for curve set 1 fine value Oil = ml Gas = l Solid fuels = g	Group: 20 Min.: 0 Max.: 65.535 Default: 0 Write: 1 Version: 3.3
0079	BT300	LCM: Quantity of fuel per pulse for curve set 2 fine value [ml; l; g]	
		LCM: Quantity of fuel per pulse for curve set 2 fine value Oil = ml Gas = l Solid fuels = g	Group: 20 Min.: 0 Max.: 65.535 Default: 0 Write: 1 Version: 3.3
0080	BT300	LCM: Quantity of fuel per pulse for curve set 3 fine value [ml; l; g]	
		LCM: Quantity of fuel per pulse for curve set 3 fine value Oil = ml Gas = l Solid fuels = g	Group: 20 Min.: 0 Max.: 65.535 Default: 0 Write: 1 Version: 3.3
0081	BT300	LCM: Quantity of fuel per pulse for curve set 4 fine value [ml; l; g]	
		LCM: Quantity of fuel per pulse for curve set 4 fine value Oil = ml Gas = l Solid fuels = g	Group: 20 Min.: 0 Max.: 65.535 Default: 0 Write: 1 Version: 3.3
0082	BT300	Unit of measurement of the caloric value of the 2 curve sets [4 bits/curve set]	
		(see table below)	Group: 20 Min.: 0 Max.: 65535 Default: 0 Write: 1 Version: 3.3

	Curve set 2				Curve set 1				Unit	
	128	64	32	16	8	4	2	1		
0	0	0	0	0	0	0	0	0	0	no unit
16	0	0	0	1	0	0	0	1	1	kWh/l
32	0	0	1	0	0	0	1	0	2	BTU/gal
48	0	0	1	1	0	0	1	1	3	kWh/m^3
64	0	1	0	0	0	1	0	0	4	BTU/ft^3
80	0	1	0	1	0	1	0	1	5	kWh/kg
96	0	1	1	0	0	1	1	0	6	BTU/lb

Example:
Curve set 1 [kWh/l] and curve set 2 [kWh/m^3] = 49

2   List of Parameters

2.5   O$_2$ Trim

No.	Device	Description	Attribute
0100	BT300	O$_2$ trim type	
		O$_2$ trim type 0 = no O$_2$ trim (output of correction value for inactive O$_2$ trim) 1 = default 2 = without presetting of burner firing rate and optimisation curve 3 = O$_2$ display only (display of correction's neutral value) 4 ... 7 = OFF	Group: 25 Min.: 0 Max.: 25 Default: 1 Write: 1 Version: 3.0.0.0
0101	BT300	Activate O$_2$ trim from firing rate position X [digit]	
		This parameter deactivates O$_2$ trim below a defined firing rate value. Output = correction value for inactive O$_2$ trim. Editable even when burner is ON.	Group: 25 Min.: 0 Max.: 999 Default: 0 Write: 1/UI Version: 3.0.0.0
0102	BT300	Deactivate O$_2$ trim from firing rate position X [digit]	
		This parameter deactivates the O$_2$ trim above a defined firing rate value. Output = correction value for inactive O$_2$ trim. Editable even when burner is ON.	Group: 25 Min.: 0 Max.: 999 Default: 999 Write: 1/UI Version: 3.0.0.0
0103	BT300	Max. O$_2$ value during pre-ventilation [vol. % O$_2$]	
		The system monitors the threshold values. If the values are not reached, the O$_2$ trim will be deactivated. The controller outputs 'correction value for inactive O$_2$ trim'. The system checks if 'O$_2$ value during pre-ventilation' is equal to 'O$_2$ value in ambient air' ($\leq$18 vol. % O$_2$ and < 24 vol. % O$_2$).	Group: 25 Min.: 0 Max.: 250 Default: 24,5 Write: 2 Version: 3.0.0.0
0104	BT300	Min. O$_2$ value during pre-ventilation [vol. % O$_2$]	
		The system monitors the threshold values. After pre-ventilation the O$_2$ value should reach a value less than the adjusted one within 45 sec. If it doesn't reach this value, O$_2$ trim will be deactivated. The controller outputs 'correction value for inactive O$_2$ trim' (P 120).	Group: 25 Min.: 0 Max.: 25,0 Default: 16,0 Write: 2 Version: 3.0.0.0

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No.	Device	Description	Attribute
0105	BT300	Max. O_2 value after ignition [vol. % O_2]	
		The system monitors the threshold values. After pre-ventilation the O_2 value should reach a value equal or less than the adjusted one within 45 sec. If it doesn't reach this value, O_2 trim will be deactivated. The controller outputs 'correction value for inactive O_2 trim' (P 120).	Group: 25 Min.: 0 Max.: 25.0 Default: 14.0 Write: 2 Version: 3.0.0.0
0107	BT300	Fault shut-down by O_2 trim /CO controller in air deficiency is permitted.	
		Fault shut-down by O_2 trim /CO controller in air deficiency is permitted. The fault shut-down by O_2 trim /CO controller in air deficiency is activated: 0 = no 1 = yes In the case of air deficiency a fault is displayed.	Group: 25 Min.: 0 Max.: 1 Default: 0 Write: 2 Version: 3.0.0.0
0109	BT300	Dead time of O_2 trim system [s]	
		Dead time of the O_2 trim system in seconds. Target value for two pass boiler or three pass boiler: 12 seconds Editable even when burner is ON.	Group: 25 Min.: 3 Max.: 40 Default: 15 Write: 1/UI Version: 3.0.0.0
0110	BT300	O_2: P-term	
		Adjust P-term in a way that the system is able to compensate the setpoint variation of 1 to 2 vol. % O_2 in 4 to 6 steps without overshoot. Control pulse too short - increase P-term Overshoot - reduce P-term Editable even when burner is ON.	Group: 25 Min.: 1 Max.: 50 Default: 5 Write: 1/UI Version: 3.0.0.0
0111	BT300	Dead time reduction for O_2 trim system at high firing rate [s]	
		Target value for two pass boiler or three pass boiler: 3 seconds You can adjust dead time depending on the firing rate. Higher gas-rate = reduction of dead time at high firing rate.	Group: 25 Min.: 0 Max.: 5 Default: 3 Write: 2 Version: 3.0.0.0
0113	BT300	O_2 trim active after ignition [s]	
		Number of seconds after ignition until the O_2 trim is activated.	Group: 25 Min.: 0 Max.: 9999 Default: 90 Write: 2 Version: 3.0.0.0

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No.	Device	Description	Attribute
0114	BT300	O_2 dead band in [%]	
		O_2 dead band with active trim. If the actual value of O_2 is inside the dead band, the output of actuating pulses is stopped.	Group: 25 Min.: 0.0 Max.: 5.0 Default: 0.2 Write: 2 Version: 3.0.0.0
0115	BT300	Firing rate dead band of O_2 trim [digit]	
		This parameter avoids the masking of O_2 trim and therefore a presetting of the O_2 actuator at small changes of the firing rate.	Group: 25 Min.: 0 Max.: 999 Default: 40 Write: 2 Version: 3.0.0.0
0118	BT300	Minimum value for probe dynamic check [Vol.% O_2]	
		Minimum value for probe dynamic check Adjust the threshold of function monitoring 'probe dynamic check'. Factory setting: 0.2 % per Vol. O_2 0 = 'dynamic probe check' OFF'.	Group: 25 Min.: 0 Max.: 2.0 Default: 0.3 Write: 2 Version: 3.0.0.0
0120	BT300	Correction value, which is displayed with inactive O_2 trim	
		The parameter may only be set to values lower than 600. If the value is set higher than 600, the BT300 automatically operates with a value of 600.	Group: 25 Min.: 0 Max.: 1000 Default: 400 Write: 2 Version: 3.0.0.0
0121	BT300	Air deficiency - correction value	
		Air deficiency - correction value	Group: 25 Min.: 0 Max.: 999 Default: 300 Write: 2 Version: 3.0.0.0
0128	BT300	Upper O_2 monitoring band in base fire [%]	
		This parameter sets the O_2 monitoring band for base fire, related of the O_2 setpoint in %. O_2 value of the upper monitoring band = O_2 setpoint + X % of the setpoint value Example: O_2 setpoint = 3 vol. % O_2 Parameter setting = 60 % O_2 value of the upper monitoring band = 3 % O_2 + 60 % of 3 % O_2 = 3 % O_2 + 1.8% O_2 = 4.8 % O_2	Group: 25 Min.: 0 Max.: 101 Default: 60 Write: 2 Version: 3.0.0.0

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No.	Device	Description	Attribute
0129	BT300	Upper O_2 monitoring band in high fire [%]	
		This parameter sets the O_2 monitoring band for high fire, related of the O_2 setpoint in %. O_2 value of the upper monitoring band = O_2 setpoint + X % of the setpoint value Example: O_2 setpoint = 3 vol. % O_2 Parameter setting = 60 % O_2 value of the upper monitoring band = 3 % O_2 + 60 % of 3 % O_2 = 3 % O_2 + 1.8 % O_2 = 4.8 % O_2	Group: 25 Min.: 0 Max.: 101 Default: 100 Write: 2 Version: 3.0.0.0
0132	BT300	1st lower O_2 monitoring band in base fire [%]	
		This parameter sets the 1st lower O_2 monitoring band for base fire, related of the O_2 setpoint in %. O_2 value of the lower monitoring band = O_2 setpoint + X % of the setpoint value Example: O_2 setpoint = 3 vol. % O_2 Parameter setting = 40 % O_2 value of the upper 1st monitoring band = 3 % O_2 + 40 % of 3 % O_2 = 3 % O_2 + 1.2 % O_2 = 4.8 % O_2	Group: 25 Min.: 0 Max.: 100 Default: 40 Write: 2 Version: 3.0.0.0
0133	BT300	1st lower O_2 monitoring band in high fire [%]	
		This parameter sets the 1st lower O_2 monitoring band for high fire, related of the O_2 setpoint in %. O_2 value of the lower monitoring band = O_2 setpoint + X % of the setpoint value. Example: O_2 setpoint = 3 vol. % O_2 Parameter setting = 40 % O_2 value of the lower 1st monitoring band = 3 % O_2 + 40 % of 3 % O_2 = 3 % O_2 + 1.2 % O_2 = 1.8 % O_2	Group: 25 Min.: 0 Max.: 100 Default: 50 Write: 2 Version: 3.0.0.0
0136	BT300	2nd lower O_2 monitoring band in base fire [%]	
		This parameter sets the 2nd lower O_2 monitoring band for base fire, related of the O_2 setpoint in %. O_2 value of the 2nd lower monitoring band = O_2 setpoint + X % of the setpoint value Example: O_2 setpoint = 3 vol. % O_2 Parameter setting = 70 % O_2 value of the 2nd lower monitoring band = 3 % O_2 - 70 % of 3 % O_2 = 3 % O_2 - 2.1 % O_2 = 0.9 % O_2	Group: 25 Min.: 0 Max.: 100 Default: 50 Write: 2 Version: 3.0.0.0
0137	BT300	2nd lower O_2 monitoring band in high fire [%]	
		This parameter sets the 2nd lower O_2 monitoring band for high fire, related of the O_2 setpoint in %. O_2 value of the 2nd lower monitoring band = O_2 setpoint + X % of the setpoint value Example: O_2 setpoint = 3 vol. % O_2 Parameter setting = 40 % O_2 value of the 2nd lower monitoring band = 3 % O^2 - 70 % of 3 % O_2 = 3 % O_2 - 1.2 % O_2 = 1.8 % O_2	Group: 25 Min.: 0 Max.: 100 Default: 70 Write: 2 Version: 3.0.0.0

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No.	Device	Description	Attribute
0140	BT300	Min. dead time with modification to self-optimising curve [s]	
		This value defines the minimum time, which is needed to update the correction curve. If the addition of the adjusted dead time (P 109) and the dead time reduction (P 111) is smaller than the value of this parameter, the measured correction value will not be stored. Due to this, the curve will not be updated. Standard value for the dead time is 12 s.	Group: 25 Min.: 10 Max.: 30 Default: 12 Write: 4 Version: 3.0.0.0
0142	BT300	Shut-down of the O_2 trim	
		Value 1 shuts off the O_2 trim. The O_2 trim displays the value for inactive controller. Editable even when burner is ON.	Group: 25 Min.: 0 Max.: 1 Default: 1 Write: 0/UI Version: 3.0.0.0
0143	BT300	Type of O_2 trim	
		Type of O_2 trim 0 = safe O_2 trim (LT3-F) 1 = standard O_2 trim (LT1/2/3)	Group: 25 Min.: 0 Max.: 1 Default: 0 Write: 1/UI Version: 3.9.0.0

2 List of Parameters

2.6 CO Control

No.	Device	Description	Attribute
0200	BT300	CO controller type	
		CO controller type: 0 = OFF 1 = default (oil: O_2 trim, gas: CO control) 2 = CO control is activated by curve (P 201 (low byte)) 3 = without dynamic optimisation, otherwise like 1 4 = without dynamic optimisation, otherwise like 2	Group: 30 Min.: 0 Max.: 4 Default: 1 Write: 1 Version: 3.0.0.0
0201	BT300	CO controller: Curve set specific activation by bit pattern	
		Curve specific activation of CO controller Low Byte (active only with P 200 = 2) - corresponding bit activated: CO controller active High Byte (always active) - Determine for every curve set, if after a CO controller shut OFF (p.ex. after fault detection of a monitoring function) O_2 trim is activated or not. Corresponding bit is activated : O_2 trim is activated Default value: 514 (O_2 trim is activated)	Group: 30 Min.: 0 Max.: 65535 Default: 514 Write: 2 Version: 3.0.0.0
0202	BT300	Low fire value: below this value the CO control is switched OFF [digit]	
		Activate CO control at this value (in digit). Below this value CO control is inactive. Editable even when burner is ON.	Group: 30 Min.: 0 Max.: 999 Default: 0 Write: 1/UI Version: 3.0.0.0
0203	BT300	High fire value: above this value CO control is switched OFF [digit]	
		Activate CO control at this firing rate position in digit. Above this value CO control is inactive. 0 = CO controller is active over the entire range. Editable even when burner is ON.	Group: 30 Min.: 0 Max.: 999 Default: 999 Write: 1/UI Version: 3.0.0.0
0204	BT300	Smallest permissible O_2 threshold value to switch OFF the CO control	
		When reaching the O_2 value in P 236, a forced shut-down of the optimisation occurs. When reaching the O_2 value in P 204 (0.1 % of O_2), the CO control is switched OFF and the function 'air deficiency' of the O_2 trim is activated. As soon as the secure SYSTEM BUS transfers an O_2 value below this parameter set limit and the parameter set time in P 205 has expired, CO control is switched OFF.	Group: 30 Min.: 0.0 Max.: 10 Default: 0.4 Write: 4 Version: 3.0.0.0

2   List of Parameters

No.	Device	Description	Attribute
0205	BT300	Smallest valid O_2 value: Tolerance time during monitoring [s]	
		As soon the safe LSB transmission transmits an O_2 value below this set limit (P 204) and the set time in P 207 has elapsed, the CO control is switched OFF.	Group: 30 Min.: 0 Max.: 30 Default: 20 Write: 4 Version: from 3.0.0.0

2   List of Parameters

2.7   CO Control Optimisation

No.	Device	Description	Attribute
0206	BT300	Max. firing rate difference to stop static optimisation [digit]	
		Maximum permissible distance of the firing rate in digits for static optimisation. During static optimisation, the internal firing rate is frozen. As soon as the distance exceeds the set value, the process is aborted and the internal firing rate is released again. Value range 0 ... 999 digit. Difference between regular firing rate input and internal firing rate.	Group: 31 Min.: 0 Max.: 999 Default: 40 Write: 2 Version: 3.0.0.0
0208	BT300	Time value to cancel a closed optimisation in the burner operation [s]	
		Time value to cancel a closed optimisation in the burner operation in seconds. P 208 is active only if P 207 is set to 0. 0 = a completed optimisation is frozen for an unlimited time. 1...= time in seconds to clear a completed optimisation while the burner is in operation (28800 s = 8 h).	Group: 31 Min.: 0 Max.: 65535 Default: 28880 Write: 2 Version: 3.0.0.0
0209	BT300	Burner downtime, after expiration the CO-optimization immediately is released at burner start [min]	
		If the burner is shut-off after POWER-ON and after curve set change for a longer time than adjusted in this parameter, optimisation will be released in all firing rate segments immediately after acceptance of the CO controller. Factory settings: 60 min	Group: 31 Min.: 0 Max.: 65535 Default: 60 Write: 4 Version: 3.0.0.0

2   List of Parameters

2.8   CO Controller Monitoring

No.	Device	Description	Attribute
0221	BT300	Observation time of the dynamic monitoring [min]	
		Tolerance time of the monitoring of the probe's dynamic in minutes. After the monitoring time has elapsed, the active part of the self-test is carried out. 0 = Monitoring OFF	Group: 32 Min.: 0 Max.: 60 Default: 15 Write: 4 Version: 3.0.0.0
0222	BT300	Minimum value to accept the dynamic monitoring [mV]	
		The minimum value of the probe's dynamic in mV. This is the minimum of the probe voltage variations to accept the dynamics. 0 = OFF	Group: 32 Min.: 0 Max.: 999 Default: 10 Write: 4 Version: 3.0.0.0
0223	BT300	Number of the tolerable failed attempts of the CO probe dynamic test at maximum correction value.	
		Number of the tolerable failed attempts of the CO probe dynamic test at maximum correction value. Dynamic test at correction value maximum. 0 = The first dynamic test, completed without success, switches OFF the CO control. 1 ... = Maximum permissible number of completed dynamic tests in which no dynamic has been detected prior to switching off the CO controller.	Group: 32 Min.: 0 Max.: 100 Default: 4 Write: 4 Version: 3.0.0.0
0224	BT300	Min O_2 value, below this value a fault shut-down occurs [0.1 %]	
		An offset of 1000 avoids a fault shut-down while a fault occurs at LAMTEC SYSTEM BUS and switched off measurement at Lambda Transmitter (p.ex. MAINTENANCE).	Group: 32 Min.: 0 Max.: 1025 Default: 0 Write: 2 Version: 3.0.0.0
0225	BT300	Monitoring time until the fault shut-down is initiated if the value falls below the minimum O_2 value [s].	
		If the O_2 minimum value set in P 224 falls below the set value, this monitoring time is started. After this time has elapsed, a fault shut-down is initiated.	Group: 32 Min.: 0 Max.: 65535 Default: 30 Write: 2 Version: 3.0.0.0

2 List of Parameters

2.9 CO Controller UCO$_e$ Monitoring

No.	Device	Description	Attribute
0226	BT300	Monitoring range of the effective CO probe voltage U_{COe} [± mV]	
		Monitoring range of the effective CO probe voltage U_{COe} [± mV] 0 = monitoring OFF	Group: 33 Min.: 0 Max.: 500 Default: 100 Write: 4 Version: 3.0.0.0
0227	BT300	Monitoring time of the effective CO probe voltage U_{COe} [s]	
		Monitoring time of the effective CO probe voltage U_{COe} [s] 0 = monitoring OFF	Group: 33 Min.: 0 Max.: 30 Default: 20 Write: 4 Version: 3.0.0.0
0228	BT300	U_{COe} + Offset for P 226 in oil operation [% to CO probe voltage]	
		Activation of the U_{COe} monitoring at O_2 trim. The U_{COe} monitoring can be activated without CO controller as well 0 = monitoring OFF	Group: 33 Min.: 0 Max.: 200 Default: 100 Write: 4 Version: 3.0.0.0

2   List of Parameters

2.10   CO Controller CO Detection

No.	Device	Description	Attribute
0232	BT300	CO edge: increasing air after change of firing rate direction [digit]	
		Number of digit which change the actual correction signal in direction increasing air immediately after changing the firing rate direction. High byte = Increasing air when changing the firing rate without change of the firing rate direction Low byte = Increasing air when changing the firing rate with change of the firing rate direction LSB initial value while changing firing rate direction applies with master-slave configuration.	Group: 34 Min.: 0 Max.: 65535 Default: 30 Write: 2 Version: 3.0.0.0
0233	BT300	CO edge: Increasing air after a completed optimisation [digit]	
		Increasing air between the CO edge and the evaluated optimisation curve. After finishing optimisation the correction value runs from the corresponding optimisation point in direction increasing air by the adjusted digit Range: 0 ... 200 is equal to 0 ... 200 digit	Group: 34 Min.: 0 Max.: 200 Default: 20 Write: 2/UI Version: 3.0.0.0

2 List of Parameters

2.11 CO Control Edge Signal

No.	Device	Description	Attribute
0234	BT300	CO recognition immediately after the ignition	
		CO recognition immediately after the ignition: 0 = OFF 1...= digits for maximum air rise	Group: 34 Min.: 0 Max.: 500 Default: 200 Write: 4 Version: 3.0.0.0
0235	BT300	Maximum permissible effective CO probe voltage U_{COe} below the CO threshold [mV]	
		Besides the binary threshold signal the CO threshold is evaluated as exceeded if U_{COe} exceeds the value set in P235.	Group: 35 Min.: 0 Max.: 500 Default: 200 Write: 4 Version: 3.0.0.0
0236	BT300	O_2 value forces the completion of the optimisation (requirement: value > P 204)	
		When reaching the O_2 value set in P 236 the optimisation is completed by force. Requirement: P 236 > P 204. During the dynamic test the value may be undershoot!	Group: 35 Min.: 0.0 Max.: 10.0 Default: 0.0 Write: 2 Version: 3.0.0.0
0237	BT300	Maximum O_2 value to accept the optimisation [%]	
		The optimisation is completed and the new point is entered in the CO optimisation curve only if the actual O_2 value is smaller than the parameter set threshold value in P 237. O_2 values above this threshold value are not entered in the visualisation curve.	Group: 35 Min.: 0.0 Max.: 21.0 Default: 5.0 Write: 2 Version: 3.0.0.0
0238	BT300	CO Threshold: Maximum time until the CO controller is switched OFF temporarily [s]	
		CO Threshold: Maximum time until the CO controller is switched OFF temporarily [s] Duration in which an active CO threshold signal is monitored. 0 = no temporary switch OFF of the CO controller by an active CO threshold signal. 1 ... = maximum time of the CO threshold signal in s until the CO controller is temporarily switched OFF.	Group: 35 Min.: 0 Max.: 300 Default: 60 Write: 4 Version: 3.0.0.0

2   List of Parameters

No.	Device	Description	Attribute
0239	BT300	CO Threshold: Maximum time until a permanent shut-down of the CO controller occurs [s]	
		The duration of an active CO threshold signal is monitored. 0 = the permanent controller switch OFF is deactivated. 1 ... = maximum time in s until the CO controller is switched OFF permanently. P 239 must be set to $\geq$ P 238 to generate a permanent switch OFF. The permanent switch off is reset by a manual acknowledgement or a restart of the burner.	Group: 35 Min.: 0 Max.: 300 Default: 300 Write: 4 Version: 3.0.0.0
0240	BT300	Switch OFF of the CO controller	
		Switch OFF of the CO controller: value 1 = shut OFF the CO-controller Can be edited even if the burner is ON.	Group: 35 Min.: 0 Max.: 1 Default: 1 Write: 0/UI Version: 3.1.0.0
0241	BT300	Fault shut-down of the U_{CO} maximum monitoring	
		Fault shut-down of the U_{CO} maximum monitoring 1 = Switches OFF the CO controller.	Group: 32 Min.: 0 Max.: 1 Default: 0 Write: 1/UI Version: 3.7.0.0
0242	BT300	U_{CO}-max value [mV + 1 V Offset]	
		Maximum U_{CO} value in mV + 1 V Offset. If the U_{CO}-max value is exceeded, a fault shut-down is initiated if this is set in P 241.	Group: 32 Min.: 0 Max.: 2000 Default: 1500 Write: 1/UI Version: 3.7.0.0
0243	BT300	Monitoring time until a fault shut-down occurs when the maximum U_{CO} value is exceeded [s].	
			Group: 32 Min.: 0 Max.: 120 Default: 30 Write: 1/UI Version: 3.7.0.0
0244	BT300	Fault shut-down by CO_e max monitoring.	
		Fault shut-down by CO_e max monitoring: 0 = inactive 1 = active	Group: 32 Min.: 0 Max.: 1 Default: 0 Write: 1/UI Version: 3.7.0.0

2　List of Parameters

No.	Device	Description	Attribute
0245	BT300	Maximum CO_e value [ppm]	
		Exceeding this value causes a fault shut-down. Requirement: The fault shut-down in P 244 is set.	Group: 32 Min.: 0 Max.: 10,000 Default: 0 Write: 1/UI Version: 3.7.0.0
0246	BT300	Monitoring time until a fault shut-down occurs when the maximum CO_e is exceeded [s].	
			Group: 32 Min.: 0 Max.: 120 Default: 30 Write: 1 Version: 3.7.0.0

2 List of Parameters

2.12 Safe CarboSen

No.	Device	Description	Attribute
0288	BT300	Duration after SiCarboSen detects the CO threshold, until the controller stops running in the direction of air deficiency [s].	
		Maximum duration in seconds after SiCarboSen detects the CO threshold, during which the controller may run onwards in the direction of air deficiency. without function	Group: 36 Min.: 0 Max.: 60 Default: 2 Write: 4 Version: 3.3.0.0
0289	BT300	Maximum duration after SiCarboSen detects the CO threshold and the controller shuts OFF [s]	
		without function	Group: 36 Min.: 0 Max.: 300 Default: 30 Write: 4 Version: 3.3.0.0
0290	BT300	SiCarboSen (P 550): Conversion factor for CO dynamics	
		Increase of dynamics - derivation by time	Group: 36 Min.: 1.0 Max.: 20.00 Default: 5.00 Write: 2 Version: 3.3.0.0
0291	BT300	SiCarboSen (P 551): IIR filter weight for CO dynamics	
		Frequency filter	Group: 36 Min.: 1 Max.: 100 Default: 10 Write: 4 Version: 3.3.0.0
0292	BT300	SiCarboSen (P 553):Threshold for detection of CO dynamics	
		without function	Group: 36 Min.: 0.0 Max.: 100.0 Default: 40.0 Write: 2 Version: 3.3.0.0

2   List of Parameters

No.	Device	Description	Attribute
0293	BT300	SiCarboSen (P 554): Activation of the dynamic detection	
		SiCarboSen (P 554): Activation of the dynamic detection 0 = dynamics are always 0. The threshold signal is always switched OFF. 1 = dynamics and threshold work as usual.	Group: 36 Min.: 0 Max.: 1 Default: 0 Write: 2 Version: 3.3.0.0
0294	BT300	SiCarboSen (P 555): Offset calculation for dynamic detection	
		Compensation of the base dynamics (P 455, LT3-F).	Group: 36 Min.: 0.0 Max.: 15.0 Default: 1.0 Write: 4 Version: 3.3

2   List of Parameters

2.13   FAT (Burner Sequencer)

No.	Device	Description	Attribute
0300	BT300	Time for forced intermittent operation [min]	
		Time for forced intermittent operation in minutes 0 = the burner can operate infinitely without interruption (value 0 for BT320 up to version 3.8.0.0 not adjustable) >0 = after this period (in minutes) the burner gets a forced interruption	Group: 40 Min.: 0 Max.: 1440 Default: * Write: 2 Version: 1.0.0.0 * Default: 1430 = BT320 0 = BT33x, BT34x from Version 3.7.0.0 on: Write: 1
0301	BT300	Automatic restart	
		Automatic restart Configuration of the automatic restart: 0 = automatic restart according to TRD 1 = without automatic restart 2 = automatic restart according to EN676 An automatic restart is only carried out from version 3.9.0.0 if the 'burner ON' signal is present.	Group: 40 Min.: 0 Max.: 10 Default: 1 Write: 2 Version: 1.0.0.0

> **NOTICE**
>
> If P 301 $\neq$ 1 and P 328 > 0, and BT300 in fault position, changing the parameters leads to a restart immediately.

> **NOTICE**
>
> Restarts according to EN676 at flame failure are carried out according to prEN676:2013 (N0630 CENTC 131 N0494 prEN 676 oKK).

No.	Device	Description	Attribute
0302	BT300	Control and monitoring of the pilot burner for oil operation	
		Control and monitoring of the pilot burner for oil operation 0 = start without pilot burner 1 = start with pilot burner 2 = the pilot burner is active in operation, too. 3 = start with pilot burner. Only pilot flame may be present during ignition. 4 = pilot burner is active in operation, with continuous operation monitoring. Only pilot flame may be present during ignition.	Group: 40 Min.: 0 Max.: 4 Default: 0 Write: 2/UI Version: 1.0.0.0

2 List of Parameters

No.	Device	Description	Attribute
0303	BT300	Control and monitoring of the pilot burner for gas operation	
		Control and monitoring of the pilot burner for gas operation 0 = start without pilot burner 1 = start with pilot burner 2 = the pilot burner is active in operation, too. 3 = start with pilot burner. Only pilot flame may be present during ignition. 4 = pilot burner is active in operation, with continuous operation monitoring. Only pilot flame may be present during ignition.	Group: 40 Min.: 0 Max.: 4 Default: 0 Write: 2 Version: 1.0.0.0
0304	BT300	Program monitoring time [s]	
		This parameter sets the program monitoring time for the integrated control unit. A fault is indicated if no ignition has occurred within this time after burner ON. If the parameter is set to 0, no fault occurs.	Group: 40 Min.: 0 Max.: 9999 Default: 600 Write: 2 Version: 1.0.0.0
0305	BT300	1st safety time for oil [s]	
		1st safety period for oil in seconds. Enter the first safety time for the oil. Respect the actual valid standards.	Group: 40 Min.: 1 Max.: 30 Default: 5 Write: 4 Version: 1.0.0.0
0306	BT300	2nd safety time for oil [s]	
		2nd safety time for oil in seconds or safety time with start without pilot burner Set the second safety time for oil in this parameter. Respect the actual valid standards while setting the time. If you don't use a pilot burner this parameter contains the safety time.	Group: 40 Min.: 1 Max.: 30 Default: 5 Write: 4 Version: 1.0.0.0
0307	BT300	1st safety time for gas [s]	
		1st safety time for gas in seconds (ignition safety time). Respect the actual valid standards.	Group: 40 Min.: 1 Max.: 30 Default: 3 Write: 4 Version: 1.0.0.0
0308	BT300	2nd safety time for gas [s]	
		2nd safety time for oil in seconds or safety time with start without pilot burner. Set the second safty time for gas in this parameter. Respect the actual valid standards while setting the time. If you don't use a pilot burner this parameter contains the safety time.	Group: 40 Min.: 1 Max.: 30 Default: 3 Write: 4 Version: 1.0.0.0

2 List of Parameters

No.	Device	Description	Attribute
0309	BT300	Pre-ignition time [s]	
		Transformer time in seconds. This parameter indicates how long the ignition transformer is activated before the sole-noid valve of the pilot gas or the main gas is opened (transformer's pre-activation time). The oil pump is started simultaneously. If the period is to short to build up the oil pres-sure in the system, you should extend this period.	Group: 40 Min.: 2 Max.: 40 Default: 3 Write: 1 Version: 1.0.0.0
0310	BT300	Stabilising time [s]	
		Stabilising time in seconds. Set the stabilising period in this parameter. This parameter defines how long the pilot burner burns solely between first and second safety period (without activating the igni-tion transformer and with closed main gas valves) – Ignition – Fuel change via pilot burner	Group: 40 Min.: 3 Max.: 30 Default: 3 Write: 1 Version: 1.0.0.0
0311	BT300	Valve leakage test time [s]	
		Setting of the duration in s of the valve leakage test. Default value = 20 s Change this parameter only if the volume of the valve leakage test line and the switch-ing hysteresis of the gas-pressure monitor (minimum) do not recognise the minimum leakage volume which is defined in the standards (refer to the calculation example in the manual). If the minimum leakage volume is detected securely in a shorter period than 30 s, decrease the parameter value to safe time.	Group: 40 Min.: 5 Max.: 999 Default: 20 Write: 1/UI Version: 1.0.0.0
0312	BT300	Valve leakage test before ignition	
		Valve leakage test before ignition 0 = not necessary 1 = necessary	Group: 40 Min.: 0 Max.: 1 Default: 1 Write: 1/UI Version: 1.0.0.0

NOTICE

If P312 > 0 than P 802 should be > 0.

NOTICE

With version 3.6.0.0 -3.8.0.0 the valve leakage test must not be completely deactivated using P 312 and P 315. For version 3.6.0.0 - 3.8.0.0 this must be set by P 802.

From version 3.9.0.0 on, the valve leakage test can be deactivated again with parameters 312 and 315.

2 List of Parameters

No.	Device	Description	Attribute
0313	BT300	Valve leakage test, fill time extension main gas 1 [s]	
		Period for filling the valve leakage test line in seconds. The opening test time of main gas 1 (2.4 s) to fill-in the valve leakage test line can be extended with this parameter. 0 = opening time of main gas 1 = 2.4 s 1.... = increasing time for opening main gas 1 [s] (total opening time = value P313 + 2.4 s) Example: value P 313 = 1 - total opening time = 3.4 s	Group: 40 Min.: 0 Max.: 3 Default: 0 Write: 4 Version: 1.0.0.0
			from version 3.7.0.0 on: Write: 2
0315	BT300	Valve leakage test after operation	
		Valve leakage test after operation. 0 = not necessary 1 = necessary	Group: 40 Min.: 0 Max.: 1 Default: 0 Write: 1/UI Version: 1.0.0.0

> **NOTICE**
>
> If P 312 > 0 then P 802 has to be > 0.

> **NOTICE**
>
> With version 3.6.0.0 - 3.8.0.0 the valve leakage test must not be completely deactivated using P 312 and P 315. For version 3.6.0.0 - 3.8.0.0 this must be set by P 802.

From version 3.9.0.0 on, the valve leakage test can be deactivated again with parameters 312 and 315.

No.	Device	Description	Attribute
0316	BT300	Pre-purge suppression	
		Pre-purge suppression 0 = pre-purge suppression is not permitted 1 = not allowed (error 107) 2 = automatic pre-purge suppression permitted for all fuels when burner is inactive for less than 24 h 3 = automatic pre-purge suppression permitted for all fuels when burner is inactive for less than 24 h, but all flaps are opened and closed. 4 = automatic pre-purge suppression permitted for gas only when burner is inactive for less than 24 h. 5 = automatic pre-purge suppression permitted for oil only when burner is inactive for less than 24 h.	Group: 40 Min.: 0 Max.: 5 Default: 0 Write: 1 Version: 1.0.0.0
0318	BT300	Pre-purge period [s]	
		Set the pre-purge period in this parameter. The commissioning engineer carries out this setting. lower limit = 2 s	Group: 40 Min.: 0 Max.: 999 Default: 30 Write: 1/UI Version: 1.0.0.0

2   List of Parameters

No.	Device	Description	Attribute
0319	BT300	Post-purge time [s]	
		Set the post-purge time in seconds Set in this parameter how long BT300 continue post-purge after switch off. For this purpose the air dampers are opened. With parameter content 0 and fault shut-down, there is no post-purge. In post-purge mode the actuators are not monitored. The actuators do not run open until the flame has extinguished. But the time starts running as soon as the solenoid valves are closed. Perhaps you must add the after-burning time to the desired post-purge time.	Group: 40 Min.: 0 Max.: 999 Default: 0 Write: 1/UI Version: 1.0.0.0
0320	BT300	Oil pump ON	
		Oil pump ON This parameter defines the moment, when the oil pump is switched ON. 0 = standard (together with the spark igniter) 1 = together with the fan	Group: 40 Min.: 0 Max.: 1 Default: 0 Write: 2 Version: 1.0.0.0
0323	BT300	Irrelevance time of safety interlock chain oil when igniting on oil [s]	
		Tolerance time / irrelevance time of the safety interlock chain oil when igniting on oil in 0 ... 10 seconds. Irrelevance time after ignition (extended tolerance) for the safety interlock chain oil. The safety interlock chain's tolerance time can be extended during ignition to avoid fault shut-downs which are caused by line shocks while opening the main valves. Input in seconds. The time starts running when the main valves open. After ignition is completed this parameter has no effects to the system.	Group: 40 Min.: 0 Max.: 10 Default: 2 Write: 4 Version: 1.0.0.0
0324	BT300	Irrelevance time of safety interlock chain gas when igniting on gas [s]	
		Tolerance time / irrelevance time of the safety interlock chain gas when igniting gas in 0 ... 10 seconds. Irrelevance time after ignition (extended tolerance) for the safety interlock chain gas. You can extend the tolerance time of the safety interlock chain during ignition to avoid fault shut-downs which are caused by line shocks while opening the main valves. Input in seconds. The time starts running when the main valves open. After ignition is completed this parameter has no effects to the system. Irrelevance time starts running after opening gas valve 2 (second safety period) and ends after the time you have set in this parameter has elapsed.	Group: 40 Min.: 0 Max.: 10 Default: 2 Write: 4 Version: 1.0.0.0

2   List of Parameters

No.	Device	Description	Attribute
0325	BT300	Maintenance mode (control unit up to the stabilisation time only)	
		Maintenance mode (control unit up to the stabilisation time only) 0 = maintenance mode OFF 1 = maintenance mode ON Set the maintenance mode in this parameter. Use the maintenance mode to adjust the pilot burner or the pilot flame monitor. It enables up to 5 ignition attempts in series without pre-purge and leakage test. The controller runs to stabilisation time only. The main valves don't run open before you haven't reset this parameter. After the 5th ignition attempt the system runs pre-purge and leakage test automatically. **But:** A total reset resets the counter for maintenance mode automatically. That means, that the following start is seen as the first start and pre-purge and leakage test is run automatically. **Thus:** Reset faults with a common reset if possible.	Group: 40 Min.: 0 Max.: 1 Default: 0 Write: 1 Version: 1.0.0.0
0326	BT300	After-burning time (flame signal irrelevant) [s]	
		The after-burning time controls how long the system waits after switching-off until the 'Flame OFF' check starts. If you have set this time to 0 there isn't an after-burning time is configured and the 'Flame OFF' check doesn't run.	Group: 40 Min.: 0 Max.: 180 Default: 10 Write: 2 Version: 1.0.0.0 from version 3.7.0.0 on: Write: 1
0327	BT300	Behaviour of the ignition transformer during the switch-on sequence with oil	
		Behaviour of the ignition transformer during the switch-on sequence with oil 0 = normal behaviour: switching on the oil pump activates the ignition transformer 1 = switching on the fan activates the ignition transformer and after switching off the flame (post-ventilating time) the ignition transformer is switched on once more The spark igniter should not be activated together with the fan when continuous purge is set (P 330 = 1).	Group: 40 Min.: 0 Max.: 1 Default: 0 Write: 2 Version: 1.0.0.0
0328	BT300	Automatic restart after fault	
		Delay until the burner starts automatically. 0 = no automatic restart >0 = delay until the burner starts automatically in seconds	Group: 40 Min.: 0 Max.: 30 Default: 5 Write: 2 Version: 1.0.0.0

NOTICE

If P 301 ≠ 1 and P 328 > 0, and BT300 in fault position, changing the parameters leads to a restart immediately.

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No.	Device	Description	Attribute
0329	BT300	Special functions of burner sequencer	
		Bit 0 (0x01) = 1 During ignition only the pilot valves open (v3 and higher). Gas valves 1 and 2 will open not before ignition of the main flame. Bit 1 (0x02) = 1 Pilot flame is monitored permanently even without the configuration of a permanent pilot burner. The flame monitor for the pilot flame also monitors the main flame. the 2nd flame input is monitored as the 2nd main flame input = consistency check (valid in Australia) Bit 2 (0x04) = 1 CPI/POC signal is monitored in gas operation. To ensure that the gas valves are closed before gas valve 1 or gas valve 2 open, CPI/POC signal has to apply. This must be monitored until the switching-on process has finished. Fault reset is available via LSB only. Release via LCM100 (v1.2.0.0 and higher) Bit 3 (0x08) = 1 CPI/POC signal is monitored in oil operation. To ensure that the oil valves are closed before oil valve 1 or oil valve 2 open, CPI/POC signal has to apply. This must be monitored until the switching-on process has finished. (from v3.9.0.0 on) Fault reset is available via LSB only. Release via LCM100 (v1.2.0.0 and higher)	Group: 40 Min.: 0 Max.: 7 Default: 0 Write: 2 Version: 3.2.0.0

3	2	1	0	DEC	Function
			X	1	V1 and V2 open not until ignition of the main flame
		X		2	Pilot flame is monitored permanently, 2nd flame input = 2nd main flame input (consistency check)
		X	X	3	2 + 1
	X			4	CPI/POC, monitoring for gas operation fault reset via LSB only, X10 = CPI/POC input
	X		X	5	4 + 1
	X	X		6	4 + 2
	X	X	X	7	4 + 1 + 2
X				8	CPI/POC, monitoring for oil operation fault reset via LSB only, X10 = CPI/POC input
X			X	9	8 + 1
X		X		10	8 + 2
X		X	X	11	8 + 1 + 2
X	X			12	8 + 4
X	X		X	13	8 + 4 + 1
X	X	X		14	8 + 4 + 2
X	X	X	X	15	8 + 4 + 2 + 1

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No.	Device	Description	Attribute
0330	BT300	Permanent ventilation	
		Permanent ventilation 0 = OFF 1 = ACTIVE This function should not be used together with P 327 = 1 (spark igniter will be activated together with the fan).	Group: 40 Min.: 0 Max.: 1 Default: 0 Write: 2 Version: 2.0.0.0 from version 3.7.0.0 on: Write: 1

	NOTICE

In case of a failure during the activation of continuous ventilation the fan is shut OFF.

No.	Device	Description	Attribute
0331	BT300	Delay after reaching BASE FIRE/CONTROL until recirculation channel is released [s]	
		Delay after reaching BASE FIRE/CONTROL until recirculation channel is released in seconds.	Group: 40 Min.: 0 Max.: 6000 Default: 0 Write: 2/UI Version: 3.3.0.0 from version 3.7.0.0 on: Write: 1/UI
0332	BT300	Temperature threshold of the flue gas for recirculation release [°C or °F]	
		Temperature threshold of the flue gas at which recirculation channel is released. Unit of temperature in °C or °F, depending on the settings of LCM100 Sensor value range = 0 ... 400 °C Value == 0 means, that recirculation channel is activated irrespective of the flue gas temperature	Group: 40 Min.: 0 Max.: 800 Default: 0 Write: 2/UI Version: 3.3.0.0 from version 3.7.0.0 on: Write: 1/UI
0333	BT300	Air pressure monitoring during post-purge	
		Air pressure monitoring during post-purge 0 = air pressure monitoring during post-purge **is active** - necessary for post-purge according to EN298: 2012 chapter 3.124.5 (gas operation) 1 = air pressure monitoring during post-purge **is not active**. Can be used for post-purge according to EN298: 2012 chapter 3.124.6 (oil operation) or for post-purge according to EN676 chapter 3.2.4.17.2. EN298: automatic burner control systems for burners and appliances burning gaseous or liquid fuels EN676: automatic forced draught burners for gaseous fuels	Group: 40 Min.: 0 Max.: 1 Default: 0 Write: 2 Version: 3.4.0.0

2   List of Parameters

No.	Device	Description	Attribute
0334	BT300	Minimum time in burner OFF [s]	
		Minimum time in seconds. During this time the burner is in mode OFF.	Group: 40 Min.: 0 Max.: 999 Default: 0 Write: 2 Version: 3.7.0.0
0335	BT300	Extension of the safety time in operation [s]	
		BT300 has a safety time in operation of 1 second. This means that BT300 switches off the valves max. 1 second after detection of a flame failure (front according to EN). This reaction time can be extended outside the scope of the EN (e.g. USA) with this parameter. In this case the local standards e.g. UL must be observed.	Group: 40 Min.: 0 Max.: 10 Default: 0 Write: 2 Version: 3.7.0.0
0336	BT300	Delay time, with which gas valve 2 closes after gas valve 1 at normal shut down [s]	
		To abbreviate the valve leakage test, gas valve 2 can be closed after gas valve 1. As a result, the gas between the two valves is already vented into the combustion chamber when the burner is switched off. It will be incinerated there. If the gas pressure switch has not yet switched when the burner is started, gas valve 1 is impermeable. The BT300 skips the test sequence for gas valve 1 and will only test gas valve 2. Up to version 3.7, this parameter will only be used to set the delay time after switching off the burner. The venting of the test line before operation is fixed at 2 s. From version 3.8 on, this parameter is used to set the delay time after switching off the burner and the activation time of gas valve 2 for venting the test line before operation.	Group: 40 Min.: 0 Max.: 5 Default: 2 Write: 2 Version: 3.7.0.0
0337	BT300	Switch OFF of the spark igniter before the end of the safety time	
		This parameter activates the switch OFF of the spark igniter before the end of the 1st safety time (ignition with spark igniter) or end of the 2nd safety time (ignition without spark igniter). 0 = not active (default value) 1 = active for ignition in oil operation 2 = active for ignition in gas operation 3 = active for ignition in oil and gas operation	Group: 40 Min.: 0 Max.: 3 Default: 0 Write: 1 Version: 3.9.0.0
0338	BT300	Maximum duration that the transformer may be switched ON [s]	
		The length of the transformer's duty cycle is normally based on the ignition time. In the case of delayed ignition, this parameter can be used to cause a fault switch OFF as soon as this time has been reached. 0 = Monitoring deactivated	Group: 40 Min.: 0 Max.: 999 Default: 36 Write: 1 Version: 3.9.0.0

2   List of Parameters

No.	Device	Description	Attribute
0339	BT300	Post-ventilation time in case of flame failure in fault position [s]	
		Post-ventilation time in seconds in the event of a flame fault in the fault position. 0 = no post-purge in fault position >0 = post-purge time in seconds in fault position If a fault release is carried out on the BT300 during the post-purge time, the post-purge runs first, then the fault release (fault reset) is carried out.	Group: 40 Min.: 0 Max.: 300 Default: 0 Write: 2 Version: 3.9.0.0

2 List of Parameters

2.14 Sequencer

No.	Device	Description	Attribute
0365	BT300	Limit by which pre-purge can be completed: channel 1 [digit]	
		Pre-ventilation limit (also post-purge) Enter in digit the upper limit to which the channel runs open during pre-purge. If you enter 999 (default value) the channel runs to it's upper stop. Set the pre-ventilation limit for example with air dampers to shorten the pre-purge period (but you must assure the exchange of air).	Group: 45 Min.: 0 Max.: 999 Default: 999 Write: 1 Version: 1.0.0.0
0366	BT300	Limit by which pre-purge can be completed: channel 2 [digit]	
		see P 365	Group: 45 Min.: 0 Max.: 999 Default: 999 Write: 1 Version: 1.0.0.0
0367	BT300	Limit by which pre-purge can be completed: channel 3 [digit]	
		see P 365	Group: 45 Min.: 0 Max.: 999 Default: 999 Write: 1 Version: 1.0.0.0
0368	BT300	Limit by which pre-purge can be completed: channel 4 [digit]	
		Limit by which pre-purge can be completed: channel 4 in digit see P365 Special features channel 4: The limit is reached when the setpoint feedback of channel 4 has exceeded the penultimate curve point. Minimum = 500 digit	Group: 45 Min.: 0 Max.: 999 Default: 999 Write: 1 Version: 1.0.0.0
0373	BT300	Ignition delay after recognition 'ignition position' [s]	
		Enter the delay in seconds between the moment when fuel/air ratio control detects the ignition position and ignition is released.	Group: 45 Min.: 0 Max.: 999 Default: 0 Write: 2 Version: 1.0.0.0

2   List of Parameters

No.	Device	Description	Attribute
0374	BT300	Delay for base fire with separate ignition point [s]	
		A delay time can be set here. So that the compound waits before it leaves the programmed, separate ignition point after ignition has taken place to approach the base fire point. This parameter only has an effect if a separate ignition point is also configured.	Group: 45 Min.: 0 Max.: 999 Default: 0 Write: 2 Version: 1.0.0.0
0375	BT300	Delay time for control release [s]	
		Delay for control release in seconds. The burner remains in base load during this delay.	Group: 45 Min.: 0 Max.: 999 Default: 0 Write: 2 Version: 1.0.0.0
0376	BT300	Damper delay after fan ON [s]	
		Delay for dampers after fan ON in seconds (only with burner sequencer) Enter the delay in seconds which defers the damper's running open compared with the fan release. This helps to prevent the fan motor of an increasing current consumption during the star delta starting. This parameter effects with permanent ventilation too.	Group: 45 Min.: 0 Max.: 15 Default: 5 Write: 2 Version: 1.0.0.0
0377	BT300	Firing rate position during switching OFF	
		Firing rate position during switching OFF 0 = switching OFF at actual firing rate position 1 = running to base firing rate before starting the switching OFF sequence	Group: 45 Min.: 0 Max.: 1 Default: 0 Write: 2 Version: 1.0.0.0

2   List of Parameters

2.15   Configuring channels

No.	Device	Description	Attribute
0400	BT300	Function definition channel 1	
		This parameter defines which type of actuator an output channel drives. This defines indirectly the actuator's behaviour at band shift, at performance change, and at drift compensation. Potentially these defines special functions e.g. if a channel is configured to recirculation or flue gas. Channel functions: 0 = OFF 1 = recirculation damper (Bt300 v3.3 and higher) 2 = fuel 3 = air damper 4 = reserved (error 107) 5 = reserved (error 107) 6 = reserved (error 107)	Group: 50 Min.: 0 Max.: 6 Default: 3 Write: 2 Version: 1.0.0.0
0401	BT300	Function definition channel 2	
		see P 400	Group: 50 Min.: 0 Max.: 6 Default: 2 Write: 2 Version: 1.0.0.0
0402	BT300	Function definition channel 3	
		see P 400 (BT320)	Group: 50 Min.: 0 Max.: 6 Default: * Write: 2 Version: 1.0.0.0 * Default: 0 (BT320) Default: 3 (BT33x and BT34x)
0403	BT300	Function definition channel 4	
		see P 400	Group: 50 Min.: 0 Max.: 6 Default: 0 Write: 2 Version: 1.0.0.0

2   List of Parameters

No.	Device	Description	Attribute
0405	BT300	Channel enable for curve set 1	
		Switch-off bit for each curve set. If bit 'x' is set, channel in curve set 'x' is in use.	Group: 50
		Define with this parameter active channel in a curve set. All channels are activated by default. With this function you can change e.g. channel activities at oil/gas operation (BT34x). Selection via bit pattern.	Min.: 0 Max.: 15 Default: 15 Write: 2 Version: 1.0.0.0

Channel 1	Channel 2	Channel 3	Channel 4	Value
1	0	0	0	1
0	1	0	0	2
1	1	0	0	3
0	0	1	0	4
1	0	1	0	5
0	1	1	0	6
1	1	1	0	7
0	0	0	1	8
1	0	0	1	9
0	1	0	1	10
1	1	0	1	11
0	0	1	1	12
1	0	1	1	13
0	1	1	1	14
1	1	1	1	15

1 = active
0 = inactive

No.	Device	Description	Attribute
0406	BT300	Channel enable for curve set 2	
		with bit pattern see P 405	Group: 50 Min.: 0 Max.: 15 Default: 15 Write: 2 Version: 1.0.0.0

2   List of Parameters

No.	Device	Description	Attribute
0409	BT300	Running direction during fault: channel 1	
		Running direction of the channels during fault in low-byte when high-byte is OFF 0 = channel OFF. Actuator is in any position 1 = channel runs to upper stop 2 = channel runs to lower stop 3 = controlling with firing rate presetting (uiLastvorgabe) 4 = such as 3 5 = such as 1 6 = channel runs to ignition position 7 = such as 6 8 = channel runs to base firing rate 9 = such as 8 10 = permanent signal OPEN in the case of flame-out 11 = permanent signal CLOSE in the case of flame-out 12 = CLOSE 13 = CLOSE 14 = CLOSE 15 = CLOSE This parameter describes how the actuator acts during a fault shut down. Enter the running direction or the running direction in combination with an external operation.	Group: 50 Min.: 0 Max.: 4095 Default: 2 Write: 2 Version: 3.7.0.0

NOTICE

Because BT300 is in fault condition yet the actuator's function cannot be monitored securely after this fault shut down.

If reaching the entered position securely must be assured this has to be provided by an extra query measure like a limit switch (may be possible with defined flap positions for turbine exhaust systems etc.).

No.	Device	Description	Attribute
0410	BT300	Running direction during fault: channel 2	
		see P 409	Group: 50 Min.: 0 Max.: 4095 Default: 2 Write: 2 Version: 3.7.0.0
0411	BT300	Running direction during fault: channel 3	
		see P 409	Group: 50 Min.: 0 Max.: 4095 Default: 2 Write: 2 Version: 3.7.0.0

2   List of Parameters

No.	Device	Description	Attribute
0412	BT300	Running direction during fault: channel 4	
		see P 409	Group: 50 Min.: 0 Max.: 4095 Default: 2 Write: 2 Version: 3.7.0.0
0414	BT300	Recirculation delay [1 s]	
		Delay after which the recirculation damper runs to the pre-purge position. During this period, only the boiler is purged. The total pre-purge time (P 318) must be set higher than the time in this parameter.	Group: 50 Min.: 0 Max.: 999 Default: 10 Write: 1 Version: 3.3.0.0
0415	BT300	Fuel remains CLOSED during pre-purge	
		Behaviour of the fuel channels at pre-purge in operation with LNG (liquefied natural gas) 0 = normal operation 1 = fuel allocated actuators remain closed at pre-purge Fuel remains closed at pre-purge Switch (ON/OFF) If you have set this parameter to 1 fuel allocated actuators remain closed at pre-purge. If you use BT300 in a LNG plant the fuel actuator may not run open during pre-purge. In this case you must set this parameter to 'ON'. You must enter the range limits manually or you must deactivate the determination of range limits. (see P 650 seqq.)	Group: 50 Min.: 0 Max.: 1 Default: 0 Write: 2 Version: 1.0.0.0

2 List of Parameters

2.16 Actuators

No.	Device	Description	Attribute
0453	BT300	Running time for continuous output: channel 4 [digit/min]	
		If the channel is configured as continuous, you can set in this parameter how fast this output may change (maximum). The time you set in this parameter is the minimum running time. Because of the fuel/air ratio control routine it might happen that this time exceeds (e.g. if you use slower flap drives in another channel). Primarily this parameter is used to get some adaptation while actuating frequency converters. The value in this parameter should match the acceleration time programmed to the frequency converter.	Group: 55 Min.: 0 Max.: 65535 Default: 1500 Write: 2 Version: 1.0.0.0
0455	BT300	Configuration of the actuator type: channel 1	
		Configuration of the actuator type for every channel: 1 = actuators 0,8 Nm (665R5500...); 1,2 Nm (662R5001...) and 3 Nm (662R5003...) 2 = actuators 9 Nm (662R5009...) from version 3.7.0.0 on: 3 = new actuators are in the pipeline 4 = 1 + referencing to the upper stop 5 = 2 + referencing to the upper stop 6 = 3 + referencing to the upper stop	Group: 55 Min.: 1 Max.: 6 Default: 1 Write: 2 Version: 1.0.0.0
0456	BT300	Configuration of the actuator type: channel 2	
		see P 455	Group: 55 Min.: 1 Max.: 2 Default: 1 Write: 2 Version: 1.0.0.0
0457	BT300	Configuration of the actuator type: channel 3	
		see P 455	Group: 55 Min.: 1 Max.: 2 Default: 1 Write: 2 Version: 1.0.0.0
0458	BT300	CLOSE position of the connected damper: channel 1	
		Position for each channel in which the connected damper is in CLOSE position. 0 = CLOSE position on 12 o'clock 1 = CLOSE position on 9 o'clock for actuators 1.2 Nm (662R5001...); 3 Nm (662R5003...); 9 Nm (662R05009...) or position on 3 o'clock for actuators 0.8 Nm (663R550...)	Group: 55 Min.: 0 Max.: 1 Default: 0 Write: 2 Version: 1.0.0.0

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No.	Device	Description	Attribute
0459	BT300	CLOSE position of the connected damper: channel 2	
		see P 458	Group: 55 Min.: 0 Max.: 1 Default: 0 Write: 2 Version: 1.0.0.0
0460	BT300	CLOSE position of the connected damper: channel 3	
		see P 458	Group: 55 Min.: 0 Max.: 1 Default: 0 Write: 2 Version: 1.0.0.0
0461	BT300	Behaviour of the actuator's protection against the permutation at Power ON	
		Behaviour of the actuator's protection against the permutation at Power ON 2 = permutation activated, execution after connecting the power supply and after every cold start. 0 = inactive	Group: 55 Min.: 0 Max.: 1 Default: 0 Write: 2 Version: 1.0.0.0
0467	BT300	Referencing of the actuators	
		Referencing of the actuators 0 = Actuators are referenced after every normal shut down and every burner shut down (power OFF). 1 = 0 and additional before every burner start. 2 = 0 and additional before the start of the burner with the new selected fuel after changing the fuel (BT340).	Group: 55 Min.: 0 Max.: 2 Default: 0 Write: 1 Version: 3.4.0.0

2   List of Parameters

2.17   Electronic Ratio Control

No.	Device	Description	Attribute
0508	BT300	Band shift channel 1 [digit]	
		Band shift at change of the firing rate Enter the channel's band shift at change of the firing rate in digit. The electronic fuel/air ratio control evaluates the direction automatically where the band shift shall effect by the configuration of the respective actuator (air upwards, fuel downwards). The band shift affects only if the firing rate changes in the direction which is the leading air procedure (at reduction of the firing rate fuel leads, at increasing firing rate air leads). It depends on the actuator's effect on the Lambda which values you must enter.	Group: 60 Min.: 0 Max.: 50 Default: 4 Write: 2 Version: 1.0.0.0
0509	BT300	Band shift channel 2 [digit]	
		see P 508	Group: 60 Min.: 0 Max.: 50 Default: 4 Write: 2 Version: 1.0.0.0
0510	BT300	Band shift channel 3 [digit]	
		see P 508	Group: 60 Min.: 0 Max.: 50 Default: 4 Write: 2 Version: 1.0.0.0
0511	BT300	Band shift channel 4 [digit]	
		see P 508	Group: 60 Min.: 0 Max.: 50 Default: 4 Write: 2 Version: 1.0.0.0
0513	BT300	Running time for TPS load input [digit/min]	
		Running time term for TPS (three-point-step) firing rate input. Set in this parameter how fast the external firing rate's signal changes if the firing rate's presetting is set by TPS signal. With TPS-signal a counter creates the external firing rate. Depending on the contact the counter counts up or down. This parameter defines the counter's speed. The parameter sets the counter in digits per minute. If the firing rate input is not a TPS input you must set this parameter to 0.	Group: 60 Min.: 0 Max.: 65535 Default: 1000 Write: 1/UI Version: 1.0.0.0

2   List of Parameters

No.	Device	Description	Attribute
0514	BT300	Limitation of the adjustment speed of the internal firing rate in relation to the firing rate setting [s]	
		Minimum running time of the firing rate from the ignition point to the maximum firing rate of the curve in s. Adjustment of the minimum runtime of the electronic ratio control in s. This parameter is used to specifically slow down the time for starting up or shutting down the burner between base fire and high fire.	Group: 60 Min.: 10 Max.: 999 Default: 10 Write: 2 Version: 1.0.0.0
0515	BT300	Channels used for overshoot	
		Definition of the channels to calculate the overshoot. As the overshoot must always be run with TPS outputs, but not normally with continuous ones, continuous channels must not be selected. Also actuators with horizontal curves over long distances should be excluded from the overshoot.	Group: 60 Min.: 0 Max.: 15 Default: 0 Write: 2 Version: 1.0.0.0
0516	BT300	Overshoot: minimum value [digit]	
		Define the minimum value to run the actuator in a higher position than during overshoot. Every channel must run this minimum distance to end the overshoot. Overshoot will end as soon as every overshoot-channel meets the conditions to finish the overshoot!	Group: 60 Min.: 0 Max.: 999 Default: 0 Write: 2 Version: 1.0.0.0
0517	BT300	Overshoot: maximum value [digit]	
		Maximum overshoot value in digit, related to the internal firing rate. Define the maximum value which the internal firing rate is allowed to run higher than it's regular value. As soon as this value is reached, the overshoot is terminated.	Group: 60 Min.: 5 Max.: 250 Default: 5 Write: 2 Version: 1.0.0.0
0518	BT300	Value of the internal firing rate in the operation modes OFF and FAULT	
		Value of the internal firing rate in the operation modes OFF and FAULT value 0 = firing rate follows the external specifications Enter the value which the output 'Internal firing rate' must provide when the CMS is in OFF mode. Default = 200 = 4 mA	Group: 60 Min.: 0 Max.: 999 Default: 0 Write: 2 Version: 1.0.0.0

2   List of Parameters

No.	Device	Description	Attribute
0519	BT300	Dead band of the firing rate without changing the direction of the firing rate.	
		Dead band definition ± beyond this value firing rate changes do not effect Dead band of the firing rate Low byte = dead band of the firing rate, if the direction of the firing rate does not change High byte = dead band of the firing rate after changing the direction of the firing rate Dead band of the firing rate without changing the direction of the firing rate = 5 digit Dead band of the firing rate with changing the direction of the firing rate = 10 digit This parameter defines the dead band of the firing rate input. Firing rate changes within this entered range are ignored and do not lead to an adjustment of the electronic ratio control. If the dead band of the firing rate is selected for too small, the electronic ratio control runs very unevenly, as even the smallest firing rate changes are compensated. Due to the additional routines, such as air lead in case of firing rate change and overshoot (starting the actuators from one side), this leads to unnecessary disturbance. If the firing rate signal fluctuates slightly or is disturbed, the actuators are constantly in motion. If the firing rate dead band is too large, the power requirements of the firing rate controller will not be extended or only if the setpoint/actual value deviation becomes more significant then the change will take place in one step. This can cause the actual value of the controlled system (steam pressure or supply temperature) to fluctuate too much. The optimum for this parameter must be determined at the plant. The parameter content should only be set below 3 digits in exceptional cases so that at least the signal fluctuations on the firing rate input do not lead to an adjustment of the electronic ratio control.	Group: 60 Min.: 0 Max.: 65535 Default: 2565 Write: 1 Version: 1.0.0.0
0525	BT300	Setting of number of stages for staged operation in oil mode	
		Setting of number of stages for staged operation in oil mode 0 = 1 stage = modulated operation 1 = 2 stages 2 = 3 stages	Group: 60 Min.: 0 Max.: 2 Default: 0 Write: 2 Version: 1.0.0.0
0526	BT300	Minimum time, which the fuel/air ratio control system needs to change from one stage to another [s]	
			Group: 60 Min.: 0 Max.: 999 Default: 10 Write: 2 Version: 1.0.0.0
0527	BT300	Position of the air damper, at which the valve is opened for the second stage.	
		This value affects the position of the air damper at which the second oil valve is opened, i.e. when switched from stage 1 to stage 2. This parameter must be set to a value higher than P 528. If it is not set higher than P 528, the valve for the 2nd stage is switched ON and OFF in the range between P 527 and P 528 in SETTING mode.	Group: 60 Min.: 0 Max.: 999 Default: 0 Write: 1/UI Version: 1.0.0.0

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No.	Device	Description	Attribute
0528	BT300	Position of the air damper at which the valve for the second stage is switched OFF.	
		This value affects the position of the air damper at which the second oil valve is closed, i.e. when switched from stage 2 to stage 1. This parameter must be set to a value lower than P 527. If it is not set lower than P 527, the valve for the 2nd stage is switched ON and OFF in the range between P 527 and P 528 in SETTING mode.	Group: 60 Min.: 0 Max.: 999 Default: 0 Write: 1/UI Version: 1.0.0.0
0529	BT300	Position of the air damper, at which the valve for the third stage is opened.	
		This value affects the position of the air damper at which the third oil valve is opened, i.e. when switched from stage 2 to stage 3. This parameter must be set to a value higher than P 530. If it is not set higher than P 530, the valve for the 2nd stage is switched ON and OFF in the range between P 529 and P 530 in SETTING mode.	Group: 60 Min.: 0 Max.: 999 Default: 0 Write: 1/UI Version: 1.0.0.0
0530	BT300	Position of the air damper, at which the valve for the third stage is switched OFF.	
		This value affects the position of the air damper at which the third oil valve is closed, i.e. when switched from stage 3 to stage 2. This parameter must be set to a value lower than P 529. If it is not set lower than P 529, the valve for the 2nd stage is switched ON and OFF in the range between P 529 and P 530 in SETTING mode.	Group: 60 Min.: 0 Max.: 999 Default: 0 Write: 1/UI Version: 1.0.0.0
0531	BT300	Firing rate threshold, at which the changing process for switching from stage 1 into stage 2 starts.	
		If the firing rate threshold will be undershot, the actuators run from the 2nd stage into the position of the 1st stage. If the air damper undershot the adjusted position (set in P 528), the valve of stage 2 will be switched OFF. This parameter is only required if an 'analogue firing rate signal' is present, e.g. when using the LCM100 or analogue firing rate specification by 4 ... 20 mA signal.	Group: 60 Min.: 0 Max.: 999 Default: 0 Write: 1/UI Version: 1.0.0.0
0532	BT300	Firing rate threshold, at which the changing process for switching from stage 1 into stage 2 starts.	
		If the firing rate threshold will be exceed, the actuators run from the 1st stage into the position of the 2nd stage. If the air damper exceed the adjusted position (set in P 528), the valve of stage 2 will be switched ON.This parameter is only required if an 'analogue firing rate signal' is present, e.g. when using the LCM100 or analogue firing rate specification by 4 ... 20 mA signal.	Group: 60 Min.: 0 Max.: 999 Default: 0 Write: 1/UI Version: 1.0.0.0
0533	BT300	Firing rate threshold, at which the changing process for switching from stage 3 into stage 2 starts.	
		If the firing rate threshold will be undershot, the actuators run from the 3rd stage into the position of the 2nd stage. If the air damper undershot the adjusted position (set in P 528), the valve of stage 3 will be switched OFF.This parameter is only required if an 'analogue firing rate signal' is present, e.g. when using the LCM100 or analogue firing rate specification by 4 ... 20 mA signal.	Group: 60 Min.: 0 Max.: 999 Default: 0 Write: 1/UI Version: 1.0.0.0

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No.	Device	Description	Attribute
0534	BT300	Firing rate threshold, at which the changing process for switching from stage 2 into stage 3 starts.	
		If the firing rate threshold will be exceed, the actuators run from the 2nd stage into the position of the 3rd stage. If the air damper exceed the adjusted position (set in P 528), the valve of stage 3 will be switched ON. This parameter is only required if an 'analogue firing rate signal' is present, e.g. when using the LCM100 or analogue firing rate specification by 4 ... 20 mA signal.	Group: 60 Min.: 0 Max.: 999 Default: 0 Write: 1/UI Version: 1.0.0.0
0537	BT300	Minimum approached firing rate in control mode	
		Minimum approached firing rate in control mode 0 = limit value is not active > 0 = parameter is active Default values of 0 result in the firing rate not being limited.	Group: 60 Min.: 0 Max.: 999 Default: 0 Write: 1 Version: 1.1.0.0
0538	BT300	Maximum approached firing rate in control mode	
		Maximum approached firing rate in control mode 0 = limit value is not active > 0 = parameter is active Default values of 0 result in the firing rate not being limited.	Group: 60 Min.: 0 Max.: 999 Default: 999 Write: 1 Version: 1.1.0.0
0539	BT300	Position of the recirculation channel in post-purge	
		Position of the recirculation channel in post-purge 0 = recirculation channel is closed in post-purge 1 = recirculation channel is opened in post-purge	Group: 40 Min.: 0 Max.: 1 Default: 0 Write: 2 Version: 3.7.0.0

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2.17.1 Monitoring Bands

No.	Device	Description	Attribute
0600	BT300	no function	
		no function	Group: 65 Min.: 0 Max.: 999 Default: 20 Write: 2 Version: 1.0.0.0
0601	BT300	Switch-off time for 1st monitoring band: channel 1 [s]	
		Monitoring band-1 tolerance time There you set the time for the 1st monitoring band. It must be slightly shorter than the monitoring time of the dead band in order to enable a differentiated switch-off between the monitoring band and the dead band. As a result for plant with TRD-regulations - 28 seconds. This time may be increased for deviations, for non-safety-relevant actuators and for special installations.	Group: 65 Min.: 0 Max.: 99 Default: 28 Write: 4 Version: 1.0.0.0
0602	BT300	Switch-off time for 1st monitoring band: channel 2 [s]	
		see P 601	Group: 65 Min.: 0 Max.: 99 Default: 28 Write: 4 Version: 1.0.0.0
0603	BT300	Switch-off time for 1st monitoring band: channel 3 [s]	
		see P 601	Group: 65 Min.: 0 Max.: 99 Default: 28 Write: 4 Version: 1.0.0.0
0604	BT300	Switch-off time for 1st monitoring band: channel 4 [s]	
		see P601	Group: 65 Min.: 0 Max.: 99 Default: 28 Write: 4 Version: 1.0.0.0

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No.	Device	Description	Attribute
0606	BT300	1st monitoring band negative: channel 1 [digit]	
		Monitoring band-1 negative direction Monitoring band in negative direction for each channel. As larger the monitoring band as larger the scope for adjustment of the fuel/ratio control. As smaller the monitoring band as more often the fuel/air ratio control is stopped during adjustment. Outside the monitoring band the actuator is run by permanent signal. Inside the monitoring band it is pulsed in dead band direction. Continuous channels don't have a dead band. Thus the first monitoring band marks the shut-down threshold. At TPS (three-point step) dead band is ruling the shut-down threshold.	Group: 65 Min.: 0 Max.: 100 Default: 15 Write: 4 Version: 1.0.0.0
0607	BT300	1st monitoring band negative: channel 2 [digit]	
		see P 606	Group: 65 Min.: 0 Max.: 100 Default: 15 Write: 4 Version: 1.0.0.0
0608	BT300	1st monitoring band negative: channel 3 [digit]	
		see P 606	Group: 65 Min.: 0 Max.: 100 Default: 15 Write: 4 Version: 1.0.0.0
0609	BT300	1st monitoring band negative: channel 4 [digit]	
		see P 606	Group: 65 Min.: 0 Max.: 100 Default: 30 Write: 2 Version: 1.0.0.0
0611	BT300	1st monitoring band positive: channel 1 [digit]	
		Monitoring band-1 positive direction As larger the monitoring band is as larger the scope for adjustment of the fuel/ratio control. As smaller the monitoring band is as more often the fuel/air ratio control is stopped during adjustment. Outside the monitoring band the actuator is run by permanent signal. Inside the monitoring band it is pulsed in dead band direction. Continuous channels don't have a dead band. Thus the first monitoring band marks the shut-down threshold. At TPS (three-point step) dead band is ruling the shut-down threshold.	Group: 65 Min.: 0 Max.: 100 Default: 15 Write: 4 Version: 1.0.0.0

2   List of Parameters

No.	Device	Description	Attribute
0612	BT300	1st monitoring band positive: channel 2 [digit]	
		see P 611	Group: 65 Min.: 0 Max.: 100 Default: 15 Write: 4 Version: 1.0.0.0
0613	BT300	1st monitoring band positive: channel 3 [digit]	
		see P 611	Group: 65 Min.: 0 Max.: 100 Default: 15 Write: 4 Version: 1.0.0.0
0614	BT300	1st monitoring band positive: channel 4 [digit]	
		see P 611	Group: 65 Min.: 0 Max.: 100 Default: 30 Write: 2 Version: 1.0.0.0
0616	BT300	Switch-off time for 2nd monitoring band [s]	
		Monitoring band-2 tolerance time There you set the switch-off time of the second monitoring band. The second monitoring band is used to cause a quick shut down in case of large deviations between actual and setpoint value.	Group: 65 Min.: 0 Max.: 10 Default: 2 Write: 4 Version: 1.0.0.0
0617	BT300	2nd monitoring band negative: channel 1 [digit]	
		Monitoring band-2 negative direction 2nd monitoring band in negative direction. This monitoring band is used for fast shut-down in case of extreme control deviations. It should be set generously. The parameterised value is added to the first monitoring band.	Group: 65 Min.: 0 Max.: 100 Default: 40 Write: 4 Version: 1.0.0.0
0618	BT300	2nd monitoring band negative: channel 2 [digit]	
		see P 617	Group: 65 Min.: 0 Max.: 100 Default: 40 Write: 4 Version: 1.0.0.0

2 List of Parameters

No.	Device	Description	Attribute
0619	BT300	2nd monitoring band negative: channel 3 [digit]	
		see P 617	Group: 65 Min.: 0 Max.: 100 Default: 40 Write: 4 Version: 1.0.0.0
0620	BT300	2nd monitoring band negative: channel 4 [digit]	
		see P 617	Group: 65 Min.: 0 Max.: 100 Default: 40 Write: 2 Version: 1.0.0.0
0622	BT300	2nd monitoring band positive: channel 1 [digit]	
		Monitoring band-2 positive direction 2nd monitoring band in positive direction. This monitoring band is used for fast shut-down in case of extreme control deviations. It should be set generously. The parameterised value is added to the first monitoring band.	Group: 65 Min.: 0 Max.: 100 Default: 40 Write: 4 Version: 1.0.0.0
0623	BT300	2nd monitoring band positive: channel 2 [digit]	
		see P 622	Group: 65 Min.: 0 Max.: 100 Default: 40 Write: 4 Version: 1.0.0.0
0624	BT300	2nd monitoring band positive: channel 3 [digit]	
		see P 622	Group: 65 Min.: 0 Max.: 100 Default: 40 Write: 4 Version: 1.0.0.0
0625	BT300	2nd monitoring band positive: channel 4 [digit]	
		see P 622	Group: 65 Min.: 0 Max.: 100 Default: 40 Write: 2 Version: 1.0.0.0

2 List of Parameters

2.18 Correction

No.	Device	Description	Attribute
0700	BT300	Correction mask	
		Choose the fuel/air ratio channels on which the correction affects. Each bit represents a channel.	Group: 75 Min.: 0 Max.: 999 Default: 0 Write:2/UI Version: 3.0.0.0

Channel 1	Channel 2	Channel 3	Channel 4	Value
1	0	0	0	1
0	1	0	0	2
1	1	0	0	3
0	0	1	0	4
1	0	1	0	5
0	1	1	0	6
1	1	1	0	7
0	0	0	1	8
1	0	0	1	9
0	1	0	1	10
1	1	0	1	11
0	0	1	1	12
1	0	1	1	13
0	1	1	1	14
1	1	1	1	15

1 = active
0 = inactive

No.	Device	Description	Attribute
0701	BT300	Spread factor	
		The spread factor defines, how much the correction affects at high fire. In low fire the range defined in the correction range affects. In high fire a range multiplied by the spread factor affects. The spread factor is set in 0.1 digit, i.e. a spread factor of 10 does not affect the correction rang. Spreading of the correction at high fire: value = 10 equates to a factor of 1 i.e. correction in high fire Spreading of the correction at low fire: value > 10 correction at high fire is higher than at low fire value < 0 correction at high fire is lower than at low fire up to version 3.3 – write: 2 from version 3.8 on – write: 1	Group: 75 Min.: 0 Max.: 50 Default: 10 Write:1/UI Version: 3.0.0.0
0702	BT300	Correction range O_2 trim [digit]	
		Correction range with active O_2 trim. It is identical for all fuel/air ratio control channels.	Group: 75 Min.: 0 Max.: 400 Default: 0 Write: 1/UI* Version: 3.0.0.0 * adjustable in BURNER OPERATION

2   List of Parameters

No.	Device	Description	Attribute
0703	BT300	Correction range CO-controller [digit]	
		Correction range with active CO-controller. It is identical for each fuel/air ratio control channels.	Group: 75 Min.: 0 Max.: 400 Default: 0 Write: 1/UI* Version: 3.0.0.0 * adjustable in BURNER OPERATION
0704	BT300	Bit pattern for correction of the air actuator without flue gas recirculation for curve set 1	
		Burners operated with flue gas recirculation start with the recirculation damper closed. This can lead to significant excess air. This parameter is used to specify on which channel (air actuator) the air correction from parameter 706-715 will affect. 1 = channel 1 2 = channel 2 3 = channel 3	Group: 75 Min.: 0 Max.: 7 Default: 0 Write: 2/UI Version: 3.9.0.0
0705	BT300	Bit pattern for correction of the air actuator without flue gas recirculation for curve set 2	
		Burners operated with flue gas recirculation start with the recirculation damper closed. This can lead to significant excess air. This parameter is used to specify on which channel (air actuator) the air correction from parameter 716-725 will affect. 1 = channel 1 2 = channel 2 3 = channel 3	Group: 75 Min.: 0 Max.: 7 Default: 0 Write: 2/UI Version: 3.9.0.0
0706	BT300	Curve set 1: air correction without flue gas recirculation for firing rate point 200 [0.1 %]	
			Group: 75 Min.: 0 Max.: 200 Default: 0 Write: 2/UI Version: 3.9.0.0
0707	BT300	Curve set 1: air correction without flue gas recirculation for firing rate point 250 [0.1 %]	
			Group: 75 Min.: 0 Max.: 200 Default: 0 Write: 2/UI Version: 3.9.0.0

2   List of Parameters

No.	Device	Description	Attribute
0708	BT300	Curve set 1: air correction without flue gas recirculation for firing rate point 300 [0.1 %]	
			Group: 75 Min.: 0 Max.: 200 Default: 0 Write: 2/UI Version: 3.9.0.0
0709	BT300	Curve set 1: air correction without flue gas recirculation for firing rate point 400 [0.1 %]	
			Group: 75 Min.: 0 Max.: 200 Default: 0 Write: 2/UI Version: 3.9.0.0
0710	BT300	Curve set 1: air correction without flue gas recirculation for firing rate point 500 [0.1 %]	
			Group: 75 Min.: 0 Max.: 200 Default: 0 Write: 2/UI Version: 3.9.0.0
0711	BT300	Curve set 1: air correction without flue gas recirculation for firing rate point 600 [0.1 %]	
			Group: 75 Min.: 0 Max.: 200 Default: 0 Write: 2/UI Version: 3.9.0.0
0712	BT300	Curve set 1: air correction without flue gas recirculation for firing rate point 700 [0.1 %]	
			Group: 75 Min.: 0 Max.: 200 Default: 0 Write: 2/UI Version: 3.9.0.0
0713	BT300	Curve set 1: air correction without flue gas recirculation for firing rate point 800 [0.1 %]	
			Group: 75 Min.: 0 Max.: 200 Default: 0 Write: 2/UI Version: 3.9.0.0

No.	Device	Description	Attribute
0714	BT300	Curve set 1: air correction without flue gas recirculation for firing rate point 900 [0.1 %]	
			Group: 75 Min.: 0 Max.: 200 Default: 0 Write: 2/UI Version: 3.9.0.0
0715	BT300	Curve set 1: air correction without flue gas recirculation for firing rate point 999 [0.1 %]	
			Group: 75 Min.: 0 Max.: 200 Default: 0 Write: 2/UI Version: 3.9.0.0
0716	BT300	Curve set 2: air correction without flue gas recirculation for firing rate point 200 [0.1 %]	
			Group: 75 Min.: 0 Max.: 200 Default: 0 Write: 2/UI Version: 3.9.0.0
0717	BT300	Curve set 2: air correction without flue gas recirculation for firing rate point 250 [0.1 %]	
			Group: 75 Min.: 0 Max.: 200 Default: 0 Write: 2/UI Version: 3.9.0.0
0718	BT300	Curve set 2: air correction without flue gas recirculation for firing rate point 300 [0.1 %]	
			Group: 75 Min.: 0 Max.: 200 Default: 0 Write: 2/UI Version: 3.9.0.0
0719	BT300	Curve set 2: air correction without flue gas recirculation for firing rate point 400 [0.1 %]	
			Group: 75 Min.: 0 Max.: 200 Default: 0 Write: 2/UI Version: 3.9.0.0

2 List of Parameters

No.	Device	Description	Attribute
0720	BT300	Curve set 2: air correction without flue gas recirculation for firing rate point 500 [0.1 %]	
			Group: 75 Min.: 0 Max.: 200 Default: 0 Write: 2/UI Version: 3.9.0.0
0721	BT300	Curve set 2: air correction without flue gas recirculation for firing rate point 600 [0.1 %]	
			Group: 75 Min.: 0 Max.: 200 Default: 0 Write: 2/UI Version: 3.9.0.0
0722	BT300	Curve set 2: air correction without flue gas recirculation for firing rate point 700 [0.1 %]	
			Group: 75 Min.: 0 Max.: 200 Default: 0 Write: 2/UI Version: 3.9.0.0
0723	BT300	Curve set 2: air correction without flue gas recirculation for firing rate point 800 [0.1 %]	
			Group: 75 Min.: 0 Max.: 200 Default: 0 Write: 2/UI Version: 3.9.0.0
0724	BT300	Curve set 2: air correction without flue gas recirculation for firing rate point 900 [0.1 %]	
			Group: 75 Min.: 0 Max.: 200 Default: 0 Write: 2/UI Version: 3.9.0.0
0725	BT300	Curve set 2: air correction without flue gas recirculation for firing rate point 999 [0.1 %]	
			Group: 75 Min.: 0 Max.: 200 Default: 0 Write: 2/UI Version: 3.9.0.0

2 List of Parameters

No.	Device	Description	Attribute
0726	BT300	Delay time for reactivating the correction of the air channel after deactivating the recirculation release [s]	
			Group: 75 Min.: 0 Max.: 999 Default: 0 Write: 1/UI Version: 3.9.0.0
0727	BT300	Tolerance time for the correction after change-over of the recirculation correction [s]	
		This tolerance time defines the time which is available for the main processor to get the correction to a valid value after the recirculation correction has been switched to the air channel. Within this time, the correction calculated and applied by the main processor may be wrong, but it must move in the right direction. The value to be set depends on the actuators used and the longest distance that the air channel to be corrected has to move.	Group: 75 Min.: 0 Max.: 30 Default: 5 Write: 2/UI Version: 3.9.0.0

2 List of Parameters

2.19 LSB / Fieldbus

No.	Device	Description	Attribute
0750	BT300	LSB family (LAMTEC SYSTEM BUS)	
		You can use this family in the LSB system range. 0 = family 1 1 = family 1 2 = family 2 3 = family 3 4 = family 4	Group: 80 Min.: 0 Max.: 4 Default: 1 Write: 2 Version: 1.0.0.0

> **NOTICE**
>
> Changes to this parameter only affect after a reset of the device.

No.	Device	Description	Attribute
0751	BT300	LSB configuration (LAMTEC SYSTEM BUS)	
		not used	Group: 80 Min.: 0 Max.: 65535 Default: 0 Write: 2 Version: 1.0.0.0
0752	BT300	LSB device no. (LAMTEC SYSTEM BUS)	
		LAMTEC SYSTEM BUS group	Group: 80 Min.: 0 Max.: 65535 Default: 1 Write: 2 Version: 1.0.0.0
0753	BT300	Configuration of LSB analogue modules	
			Group: 80 Min.: 0 Max.: 65535 Default: 255 Write: 2 Version: 1.0.0.0
0754	BT300	LSB digital modules (firing rate thresholds)	
		not used	Group: 80 Min.: 0 Max.: 65535 Default: 255 Write: 2 Version: 1.0.0.0

2 List of Parameters

No.	Device	Description	Attribute
0755	BT300	Bus card parameter no. 1	
		Parameter of the BUS cards, only available for external connected devices. The values are forwarded only to these external devices. This parameters don't effect the BurnerTronic. Refer to the description of bus systems (default values of PROFI-BUS) Parameter of the bus-card (functionality depends on the configuration of the bus-card - refer to the documentation of the bus-card).	Group: 80 Min.: 0 Max.: 999 Default: 0 Write: 1 Version: 1.0.0.0
0756	BT300	Bus card parameter no. 2	
		see P 755	Group: 80 Min.: 0 Max.: 999 Default: 4 Write: 1 Version: 1.0.0.0
0757	BT300	Bus card parameter no. 3	
		see P 755	Group: 80 Min.: 0 Max.: 999 Default: 0 Write: 1 Version: 1.0.0.0
0758	BT300	Bus card parameter no. 4	
		see P 755	Group: 80 Min.: 0 Max.: 999 Default: 100 Write: 1 Version: 1.0.0.0
0759	BT300	Bus card parameter no. 5	
		see P 755	Group: 80 Min.: 0 Max.: 999 Default: 0 Write: 1 Version: 1.0.0.0
0760	BT300	Bus card parameter no. 6	
		see P 755	Group: 80 Min.: 0 Max.: 999 Default: 0 Write: 1 Version: 1.0.0.0

2   List of Parameters

No.	Device	Description	Attribute
0761	BT300	Bus card parameter no. 7	
		see P 755	Group: 80 Min.: 0 Max.: 999 Default: 0 Write: 1 Version: 1.0.0.0
0762	BT300	Bus card parameter no. 8	
		see P 755	Group: 80 Min.: 0 Max.: 999 Default: 0 Write: 1 Version: 1.0.0.0
0763	BT300	Bus card parameter no. 9	
		see P 755	Group: 80 Min.: 0 Max.: 999 Default: 0 Write: 1 Version: 1.0.0.0
0764	BT300	Bus card parameter no. 10	
		see P 755	Group: 80 Min.: 0 Max.: 999 Default: 0 Write: 1 Version: 1.0.0.0
0765	BT300	EBM: IP address digit 1 and 2	
		Digit 1 and 2 of the IP address, which the EBM100 uses for communication 1 = high byte 2 = low byte	Group: 80 Min.: 0 Max.: 65535 Default: 0 Write: 1 Version: 3.3
0766	BT300	EBM: IP address digit 3 and 4	
		Digit 3 and 4 of the IP address, which the EBM100 uses for communication 3 = low byte 4 = high byte	Group: 80 Min.: 0 Max.: 65535 Default: 0 Write: 1 Version: 3.3

2   List of Parameters

No.	Device	Description	Attribute
0767	BT300	Reserved for EBM, currently not used	
			Group: 80 Min.: 0 Max.: 65535 Default: 0 Write: 1 Version: 3.7.0.0
0768	BT300	Reserved for EBM, currently not used	
			Group: 80 Min.: 0 Max.: 65535 Default: 0 Write: 1 Version: 3.7.0.0

2 List of Parameters

2.20 Feature Parameter

No.	Device	Description	Attribute
0800	BT300	Using the integral flame scanner	

		Using the integral flame scanner
		
		0 = main flame: ionisation detector
		    pilot flame: none
		1 = main flame: ionisation detector
		    pilot flame: contact
		2 = main flame: ionisation detector
		    pilot flame: LDR photo resistance
		3 = main flame: contact
		    pilot flame: none
		4 = main flame: contact
		    pilot flame: ionisation detector
		5 = main flame: contact
		    pilot flame: LDR photo resistance
		6 = main flame: LDR photo resistance
		    pilot flame: none
		7 = main flame: LDR photo resistance
		    pilot flame: ionisation detector
		8 = main flame: LDR photo resistance
		    pilot flame: contact
			Group: 85
			Min.: 0
			Max.: 13
			Default: 0
			Write: 2
			Version: 1.0.0.0
			
			from version 3.7.0.0 on:
			Default: 2
			Write: 1

		9 = main flame: LDR photo resistance
		    pilot flame: UV tube
		10 = main flame: ionisation detector
		    pilot flame: UV tube
		11 = main flame: UV tube
		    pilot flame: none
		12 = main flame: UV tube
		    pilot flame: ionisation detector
		13 = main flame: UV tube
		    pilot flame: LDR photo resistance
			from version 3.3.0.0 on

		be considered ionisation detector: ionisation electrode, IRD1020 be considered UV tubes: QRA2... , QRA4..., QRA10... be considered LDR: QRB..., MZ770, IRD1010, KLC... be considered contact: F152, F200K, F300K	from version 1.0.0.0 on

2   List of Parameters

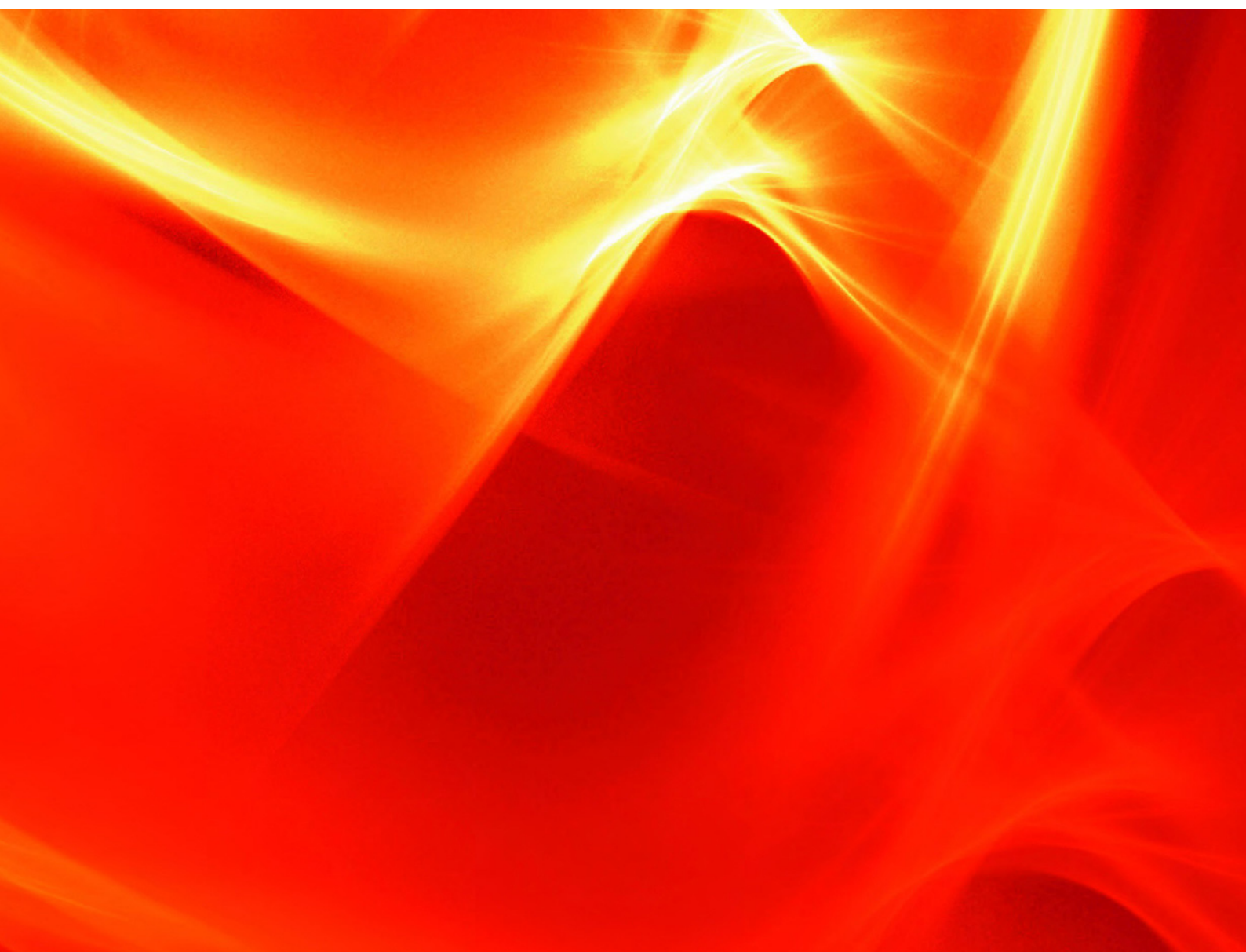| No.	Device	Description	Attribute
0801	BT300	Definition of terminal assignment	
		Definition of terminal assignment 0 = oil operation - two-stage or modulating 1 = oil operation - three-stage (pilot burner not available) 2 = gas operation - modulating X26 is process status signal (from version 3.7.0.0) 3 = dual fuel - oil operation - modulating or two-stage or gas operation - modulating pilot burner permitted (BT340 only) 4 = dual fuel - oil operation up to three stages (without pilot burner) and modulating gas operation (BT340 only)	Group: 85 Min.: 0 Max.: 65535 Default: 2 Write: 2 Version: 1.0.0.0
		5 = oil operation - two-stage or modulating X26 is process status signal, not oil pump 6 = oil operation - three-stage (pilot burner not available) X26 is process status signal, not oil pump 7 = two-stage oil operation - modulating or 2-stage or Gas operation - modulating, pilot burner permitted (BT340 only) X26 is process status signal, not oil pump 8 = two-stage oil operation up to three stages (without pilot burner) and gas operation modulating (BT340 only) X26 is process status signal, not oil pump 9 = output and input for BT335 two-stage operation (only possible with BT335)	from Version 3.7.0.0 on
		10 = Gas/gas programme, IOs, same as 2 (gas). Switchable via DFM into 2 gas trains.	from Version 3.9.0.0 on
0802	BT300	Running valve leakage test	
		Type of valve leakage test 0 = no valve leakage test 1 = valve leakage test starts together with pre-purge 2 = valve leakage test starts after pre-purge has finished (up to v3.5.0.0) valve leakage test starts when ignition position is reached (V3.6.0.0 and higher) This parameter determines whether the valve leakage test installed in the device is to be active or not (only effective if the device is also configured with an active control device).	Group: 85 Min.: 0 Max.: 2 Default: 1 Write: 1/UI Version: 1.0.0.0

> **NOTICE**
>
> If P 802 ≠ 0 than either P 312 should be ≠ 0 or P 315 should be ≠ 0.

No.	Device	Description	Attribute
0808	BT300	Curve set selection	
		Curve set selection is only analysed if P 812 = 0 Curve 0 = fuel oil (for oil/gas operation) Curve 1 = fuel gas	Group: 85 Min.: 0 Max.: 1 Default: 1 Write: 2 Version: 1.0.0.0

2   List of Parameters

No.	Device	Description	Attribute
0809	BT300	Setting of the output at terminal X24	

		Setting of the output at terminal X24
		
		Attention: the output at terminal X24 is not configured in a safety-related way. This output may only be used for display functions.
		
		0 = output without function, i.e. inactive
		1 = output indicates a failure
		    (terminal off: no failure, terminal on: failure)
		2 = output indicates the actual fuel (terminal off: oil, terminal on: gas)
		    (terminal off: curve set 1 (oil for oil/gas operation),
		     terminal on: curve set 2 (always gas))
		3 = output indicates static failures only. RESET is required to restart the device
		    (BT300 software version 3.3 or higher)
			Group: 85
			Min.: 0
			Max.: 3
			Default: 1
			Write: 2
			Version: 1.0.0.0

0812	BT300	Definition of source for curve set selection	
		Definition of source for curve set selection 0 = curve set selection with P 808 1 = curve set selection via terminal at Dual Fuel Module (DFM) 2 = curve set selection via LSB (p.ex. PBM)	Group: 85 Min.: 0 Max.: 3 Default: 0 Write: 2 Version: 1.0.0.0
		3 = using X21 for curve set selection (only possible for BT335; P 801 = 9)	Version: 3.7.0.0 Max.: 3
0813	BT300	Deactivation/activation and threshold voltage for power-failure detection	
		Deactivation/activation and threshold voltage for power-failure detection Bit 15 = Failure indication at power-failure $\geq$ 60ms $\rightarrow$ 0 = OFF; 1 = ON Bits 14 ... 8 = not used Bits 7 ... 0 = threshold voltage (unit: 1 V RMS)	Group: 85 Min.: 0 Max.: 33023 Default: * Write: 2 Version: 1.0.0.0 * for 230 V-devices = 32963 for 115 V-devices = 32864
0815	BT300	Curve Set Fuel Allocation Selection	
		Curve Set Fuel Allocation Selection 0 = curve set 1 = oil curve set 2 = gas 1 = both curve sets = gas	Group: 85 Min.: 0 Max.: 1 Default: 0 Write: 2 Version: 3.9.0.0