Comparison sheet

BurnerTronic BT300 BT320 BT341... /ETAMATIC OEM

LAMTEC

Sensors and systems for combustion engineering

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Comparison sheet BMS Systems.

	Controller type	BurnerTronic 320	BurnerTronic 330	BurnerTronic 331	BurnerTronic 340	BurnerTronic 341	ETAMATIC OEM
	Manufacturer	LAMTEC	LAMTEC	LAMTEC	LAMTEC	LAMTEC	LAMTEC
Features							
		FM for gas or oil operation 2 servomotors max. special servomotors with optical feedback gas: modulating (electronic or pneumatic) oil: modulating or up to 3 stages intermittant operation integrated flame scanner for ionisation and optic flame sensors firing rate controller, O_2, CO and fan speed control available optionally	FM for gas or oil operation 3 servomotors max. special servomotors with optical feedback gas: modulating (electronic or pneumatic) oil: modulating or up to 3 stages continuous operation integrated flame scanner for ionisation and optic flame sensors firing rate controller, O_2, CO and fan speed control available optionally	FM for gas or oil operation 3 servomotors max. special servomotors with optical feedback gas: modulating (electronic or pneumatic) oil: modulating or up to 3 stages continuous operation SIL3 integrated flame scanner for ionisation and optic flame sensors firing rate controller, O_2, CO and fan speed control available optionally	FM for gas, oil or dual fuel operation 3 servomotors max. special servomotors with optical feedback gas: modulating (electronic or pneumatic) oil: modulating or up to 3 stages continuous operation integrated flame scanner for ionisation and optic flame sensors firing rate controller, O_2, CO and fan speed control available optionally	FM for gas, oil or dual fuel operation 3 servomotors max. special servomotors with optical feedback gas: modulating (electronic or pneumatic) oil: modulating or up to 3 stages continuous operation SIL3 integrated flame scanner for ionisation and optic flame sensors firing rate controller, O_2, CO and fan speed control available optionally	FM for gas, oil or dual fuel operation 4 servomotors max. 230 VAC servomotors with potentiometer feedback, gas: modulating (electronic or pneumatic) oil: modulating 2 x gas; 2 x oil opionnally continuous operation SIL3 integrated flame scanner for optic flame sensors available optionally firing rate controller integrated, O_2, CO and fan speed control available optionally
Application/Function							
Continuous operation available acc. EN298 (former TRD)		-	x Optical only with external flame scanner	x Optical only with external flame scanner	x Optical only with external flame scanner	x Optical only with external flame scanner	X
SIL Approval		-	-	3	-	3	3
Combustibles	Gas only	X	X	X	X	X	X
	Oil only	X	X	X	X	X	X
	Dual fuel	-	-	-	With LCM / LEM and DFM	With LCM / LEM and DFM	X
	Number of possible curves per channel	1	1	1	2	2	2
Burner sequences	Gas with pilot burner, pilot gas upstream main	since R3.2	since R3.2	since R3.2	since R3.2	since R3.2	X
	Gas with pilot burner, pilot gas in gas train	X	X	X	X	X	X
	Gas with pilot burner, pilot gas upstream main, sep. flame scanner	since R3.2	since R3.2	since R3.2	since R3.2	since R3.2	x (ext. floating contact)
	Gas with pilot burner, pilot gas in gastrain, sep. flame scanner	X	X	X	X	X	x (ext. floating contact)
	Gas with pilot burner, pilot gas in gastrain, sep. flame scanner	X	X	X	X	X	x (ext. floating contact)
	Gas without pilot burner	X	X	X	X	X	X
	Oil without pilot gas burner	X	X	X	X	X	X
	Oil with pilot gas burner	X	X	X	X	X	X
	Oil with pilot gas burner, sep. flame scanner	X	X	X	X	X	x (ext. floating contact)
Number of active channels	Servomotors	2	3	3	3	3	4
	Servomotors + frequecy control	3	4	-	-	-	4

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	Manufacturer	LAMTEC	LAMTEC	LAMTEC	LAMTEC	LAMTEC	LAMTEC
Application/Function							
Firing rate control	2 Stages gas	-	-	-	-	-	X
	3 Stages gas	-	-	-	-	-	X
	2 Stages oil	X	X	X	X	X	X
	3 Stages oil	x (no pilot burner)	x (no pilot burner)	x (no pilot burner)	x (no pilot burner)	x (no pilot burner)	X
	Modulating gas, pneumatic	X	X	X	X	X	X
	Modulating gas, electronic	X	X	X	X	X	X
	Modulating oil, electronic	X	X	X	X	X	X
	Modulating electronic (comb.1); 2/3 stage (comb.2)	-	-	-	x (3 stage no pilot burner)	x (3 stage no pilot burner)	X
	Modulating pneumatic (comb.1); 2/3 stage (comb.2)	-	-	-	x (3 stage no pilot burner)	x (3 stage no pilot burner)	X
	Modulating electronic oil or gas (dual fuel)	-	-	-	X	X	-
Valve leakage test	Adjustable (on/off; pre and post operation)	X	X	X	X	X	X
	Integrated by gas > min pressure guard	X	X	X	X	X	X
	Seperate gas pressure min. and LT pressure switch	-	-	-	-	-	-
Flame monitoring							
Ionisation flame monitoring possible		Intermittent operation	Continous operation	Continous operation	Continous operation	continous operation	(ext. floating contact)
Available optical flame sensors for intermittend operation only	Type UV	QRA2 / KLC1000	QRA2 / KLC1000	QRA2 / KLC1000	QRA2 / KLC1000	QRA2 / KLC1000	-
	Type IR	KLC2002	KLC2002	KLC2002	KLC2002	KLC2002	-
	Type visible light	QRB	QRB	QRB	QRB	QRB	-
	External flame scanner with floating contact	X	X	X	X	X	X
Available optical flame sensors for continuous operation	Type UV	-	-	-	-	-	FFS05/06 UV
	Type IR	-	-	-	-	-	FFS05/06 IR
	External flame scanner with floating contact	-	X	X	X	X	X
Firing rate system							
Firing rate controller input	0-10 V	with LCM100	with LCM100	with LCM100	with LCM100	with LCM100	X
	4-20 mA	with LCM100	with LCM100	with LCM100	with LCM100	with LCM100	X
	230 V 3 steps	X	X	X	X	X	-
	Floating contact 3 steps	with LCM100	with LCM100	with LCM100	with LCM100	with LCM100	X
	Potentiometer	with LCM100	with LCM100	with LCM100	with LCM100	with LCM100	X
	System integrated PID firing rate controller	with LCM100	with LCM100	with LCM100	with LCM100	with LCM100	X
Environmental conditions							
Ambient temperature max.	During operation	60 °C	60 °C	60 °C	60 °C	60 °C	60 °C
	During storage	70 °C	70 °C	70 °C	70 °C	70 °C	70 °C
Power loss	Represented power consumption max. or measured values	30 VA	30 VA	30 VA	30 VA	30 VA	50 VA
Power supply	230 V/50 Hz	X	X	X	X	X	X
	230 V/60 Hz	X	X	X	X	X	X
	115 V/50 Hz	Variante	Variante	Variante	Variante	Variante	X
	115 V/60 Hz	Variante	Variante	Variante	Variante	Variante	X

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	Manufacturer	LAMTEC	LAMTEC	LAMTEC	LAMTEC	LAMTEC	LAMTEC
Servomotors							
Types of servomotors		Stepper	Stepper	Stepper	Stepper	Stepper	Synchron 2 limit switches
Torque of servomotors Nm		0,8/1,2/3,0/9,0	0,8/1,2/3,0/9,0	0,8/1,2/3,0/9,0	0,8/1,2/3,0/9,0	0,8/1,2/3,0/9,0	Imax = 50 mA (40 Nm)
Supply of servomotors		24 VDC	24 VDC	24 VDC	24 VDC	24 VDC	230 VAC
Control of servomotors		electronic	electronic	electronic	electronic	electronic	3 point step 230 VAC
Feedback of servomotor pos.		optical/dig.	optical/dig.	optical/dig.	optical/dig.	optical/dig.	potentiometer
Servomotor operation		left or right	left or right	left or right	left or right	left or right	on order left or right
Electrical Data							
Plug system for wiring	Boiler side 230 VAC	RAST5	RAST5	RAST5	RAST5	RAST5	COMBICON 7,62
	Boiler side 24 VDC	Screw Terminals (LCM)	Screw Terminals (LCM)	Screw Terminals (LCM)	Screw Terminals (LCM)	Screw Terminals (LCM)	COMBICON 3,81
	Burner side 230 VAC	RAST5	RAST5	RAST5	RAST5	RAST5	COMBICON 7,62
	Burner side 24 VDC	-	-	-	-	-	COMBICON 3,81
Cross section of wires to be wired		2,5 mm² (RAST5 screw) 1,5 mm² (RAST5 IDT)	2,5 mm² (RAST5 screw) 1,5 mm² (RAST5 IDT)	2,5 mm² (RAST5 screw) 1,5 mm² (RAST5 IDT)	2,5 mm² (RAST5 screw) 1,5mm² (RAST5 IDT)	2,5 mm² (RAST5 screw) 1,5 mm² (RAST5 IDT)"	2,50 mm² 1,50 mm²
Type of input signals	Input for the signal of external devices	230 VAC	230 VAC	230 VAC	230 VAC	230 VAC	floating 24 VDC
Type of output signals	230 VAC, 24 VDC, floating (24 VDC)	230 VAC	230 VAC	230 VAC	230 VAC	230 VAC	230 VAC
24 VDC supply of sensor transmitter integrated	Standard PID	with LCM100	with LCM100	with LCM100	with LCM100	with LCM100	x
MMI							
	One device	x	x	x	x	x	-
	Separate devices for customer and commisioning	-	-	-	-	-	x
	Adjustments with icons	x	x	x	x	x	
	Languages available	-	-	-	-	-	DE, F,R EN, ES, IT, NL, TR, RU, ZH,
	Faults coded	x	x	x	x	x	x
	Faults clear text	-	-	-	-	-	x
Additonal Values							
Available additional features	MMI necessary for operation	-	-	-	-	-	x
	FC control	optional	optional	optional	optional	optional	optional
	O_2 control	optional	optional	optional	optional	optional	optional
	CO control	optional	optional	optional	optional	optional	optional
	Combustible counter	optional	optional	optional	optional	optional	optional
	ModBus	optional	optional	optional	optional	optional	optional
	PROFIBUS	optional	optional	optional	optional	optional	optional
	Ethernet	optional	optional	optional	optional	optional	optional
	eBus	-	-	-	-	-	-
Function testing	by MMI	-	-	-	-	-	x
	by PC access	x	x	x	x	x	x
Commisioning	Pre commisioning possible	x	x	x	x	x	x
	by PC access + MMI	x	x	x	x	x	x
	by MMI access only	for final adjustments on side	for final adjustments on side	for final adjustments on side	for final adjustments on side	for final adjustments on side	x

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