

Technical Data ETAMATIC OEM / ETAMATIC S OEM



Fig. 1 ETAMATIC OEM / ETAMATIC S OEM

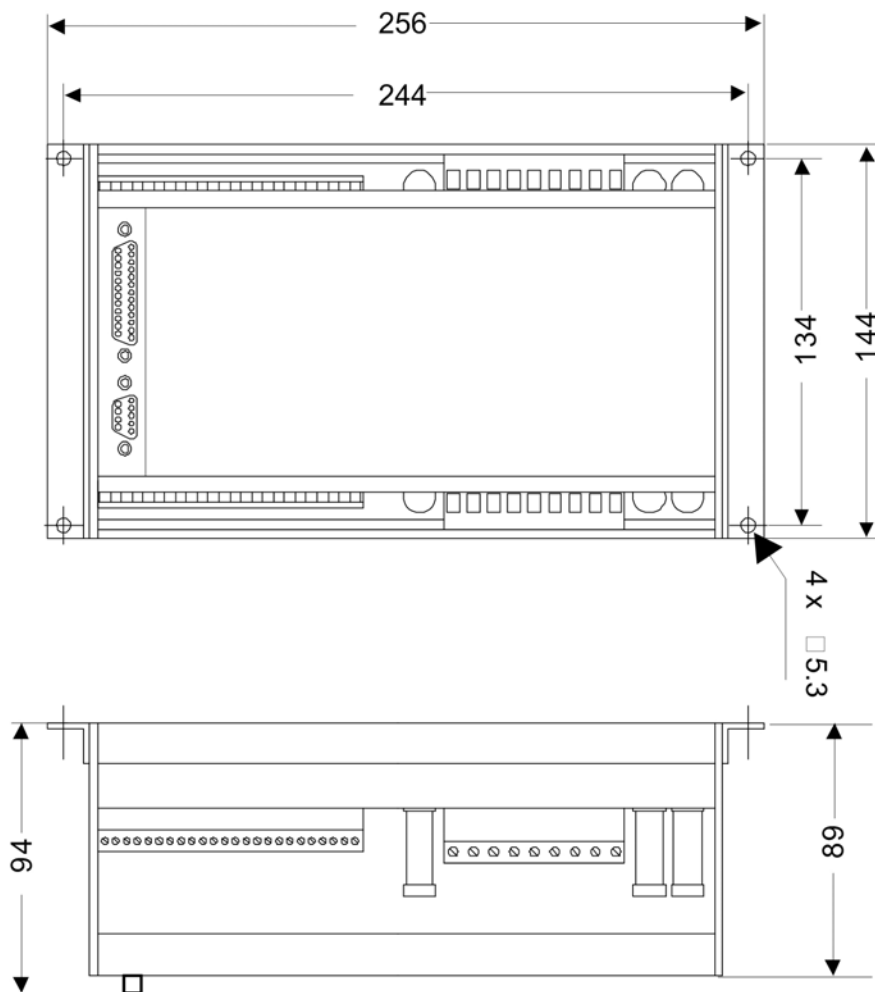


Fig. 2 Dimensional drawing ETAMATIC OEM / ETAMATIC S OEM

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Fig. 3 Customer interface ETAMATIC OEM / ETAMATIC S OEM

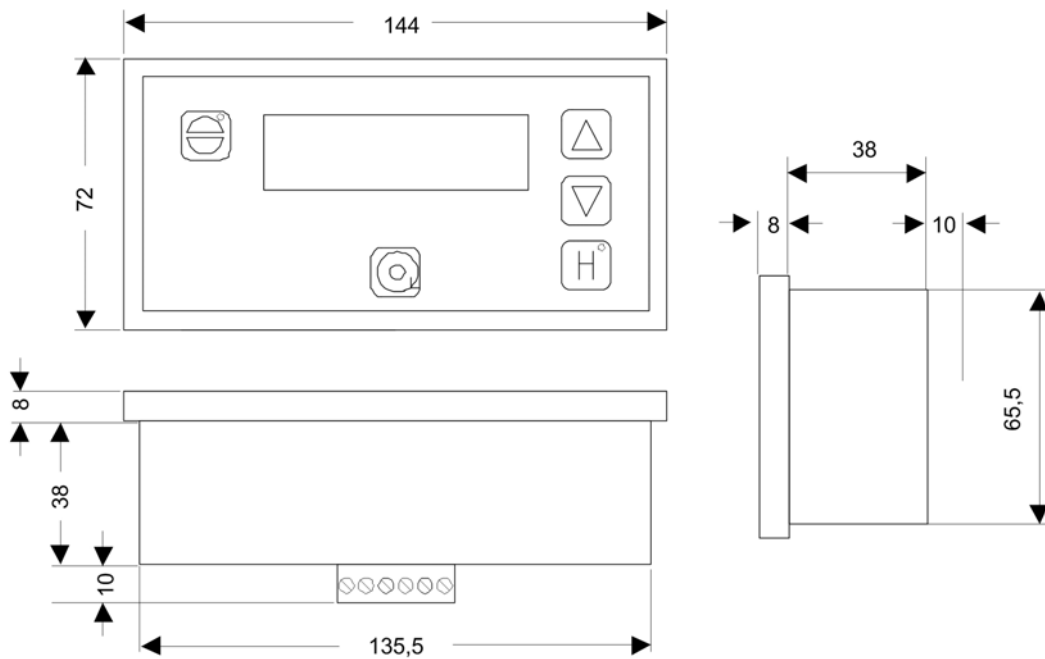


Fig. 4 Dimensional drawing customer interface ETAMATIC OEM / ETAMATIC S OEM

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Dimensions

Dimensions (HxWxD)	94x256x144 mm / 3.70"x10.08"x5.67" in
Weight	3.5 kg / 7.7 lb

Input data

Power supply	from 115 V -15 % up to 230 V +10 % 50 or 60 Hz To be used only in a grounded power line network!
Power Consumption	approx. 50 VA

Analogue outputs

Analogue outputs	16 analogue outputs 230 V 1 analogue output (ETAMATIC S)
Control outputs	4
Continuous output	Load: 4 ... 20 mA < 600 Ω

Analogue inputs

Analogue inputs	3 analogue inputs (all non-floating)
Load	100 Ω
Feedback inputs	Feedback TPS (tree point step) potentiometer 5 kΩ or current signal 0/4 ... 20 mA (ETAMATIC S channel 1). Option: Direct switching of NAMUR transmitter (ETAMATIC S)
Resolution each analogue input	999 digit, 10 bit
Three-point-step	Running time of the actuating drives: minimum 30 s Possible servomotors: 6 Nm 60 sec. running time to 90° Type: 662R2127 20 Nm 60 sec. running time to 90° Type: 662R2111 30 Nm 60 sec. running time to 90° Type: 662R2112 40 Nm 60 sec. running time to 90° Type: 662R2121 Other servomotors only after approval by LAMTEC. Current consumption max. 50 mA continuous current/starting current

Digital outputs

Digital outputs	Main gas 1, main gas 2, oil valve, ignition valve, ignition transformer, fan, oil pump, fault
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Digital inputs

Digital inputs	14 digital inputs 24 V
Digital signal inputs	The parasitic capacitance of the lead connected to the digital inputs may not exceed 2.2 μF as a result of the ETAMATIC self-tests. The cable length is limited to: 100 m for ETAMATIC and 10 m for ETAMATIC OEM Since the digital inputs are operated with 24 VDC, suitable contacts for that voltage should be used (hard silver or gold-plated).

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Characteristics

Display	Customer display via LSB
Regular Firing Rate Input	<ul style="list-style-type: none"> via internal burner-firing-rate controller actual value manual operating is possible via three-point step signal external burner-firing-rate controller (0/4 ... 20 mA)
Storage of setpoint value and variable data	in EEPROM typically 20 digit, usually 11 with linear interpolation
Number of curve sets	2 (e.g. for oil/gas-combination burner)
Number of program cycles	unlimited
Specification of operating status	via internal control signal

Interfaces

Interfaces	<ul style="list-style-type: none"> 1 serial interface on 25-pole Sub-D-connector, addressable via LAMTEC adapter only (Dongle 663P0600)(RS 232) 1 interface on 9-pole Sub-D-connector LAMTEC SYSTEM BUS
Bus-connection	via 9-pole Sub-D-connectorBUS card optional for the following systems: <ul style="list-style-type: none"> Interbus (Phoenix) PROFIBUS DP PROFINET Modbus RTU Ethernet

Operating Condition

Permissible Ambient Humidity	Class F, DIN 40 040
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Environmental Conditions

Operation	permissible temperature range	0 ... +60 °C / +32 ... 140° F (condensation is prohibited)
Transport	permissible temperature range	-25 ... +60 °C / -13 ... +140 °F (condensation is prohibited)
Storage	permissible temperature range	-25 ... +60 °C / -13 ... +140 °F (condensation is prohibited)
Degree of protection	according to DIN EN 60529	IP40

Further Technical Data

ETAMATIC OEM with internal flame monitor	Connectable flame sensors type: <ul style="list-style-type: none"> FFS07 IR (successor type for FFS05) FFS08 IR (successor type for FFS06) FFS07 UV (successor type for FFS05 UV) FFS08 UV (successor type for FFS06 UV)
230 V supply	All consumers connected to the control unit are supplied via this terminal. The customer must fit a 6 A max. slow-acting fuse.
Maingas 1 term. 68	Contact for actuation of the main gas valve on the gas line side max. 1 A*, cos φ = 0,4 ... 1
Maingas 2 term. 67	Contact for actuation of the main gas valve on the burner side max. 1 A*, cos φ = 0,4 ... 1

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Oil term. 66	Contact for actuation of both oil valves max. 1 A*, cos φ = 0,4 ... 1
Ignition valve term. 65	Contact for actuation of the ignition valves max. 1 A*, cos φ = 0,4 ... 1
Ignition transformer term. 64	Contact for actuation of the ignition transformer max. 1 A*, cos φ = max. 0,2 ... 1
Fan (burner start) term. 63	Contact for actuation of the fan motor and all other components that have to be activated when starting max. 1 A*, cos φ = 0,8 ... 1
Fault term. 61	Contact for signalling a fault condition max. 0,5 A*, cos φ = 0,8 ... 1
Times	Pre-purge time of 1 - 999 s Safety time in operation: 1 s 1. safety time: Oil 4 s** 1. safety time: Gas 3 s 2. safety time: Oil 4 s*** (when starting without pilot burner = safety time) 2. safety time: Gas 3 s (when starting without pilot burner = safety time)

* Several contacts are fed through one fuse. The sum of all the currents must not exceed the fuse's rating.

** The applicable standards must be taken into account, as well as the reaction time of the flame guard = 1 s.
This time must be deducted from the requirements of the standard.

*** The applicable standards must be taken into consideration when setting the unit.
If there is no pilot burner used, this parameter contains the safety time.

NOTICE

Up to 9 mA test current is discharged through the outputs by a cyclic self-test. This self-test requires the consumers to be connected directly to the outputs. If this cannot be assured, the output must be connected to a test firing rate with the burner stationary; the firing rate can be (e.g.) a 0.15 μ F capacitor with 0,15 μ F / 220 Ω



WARNING!

Only passive or non-reactive equipment may be connected to the 230 V-outputs of the ETAMATIC OEM. Any 230 V supply feed to the unit via these terminals in the event of a fault must be excluded. Connect only equipment which can not be activated by the test current.

NOTICE

The limits of the technical data must be strictly adhered to.

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Order Information

66301-	A 10 FLAME MONITORING	A 20 "CONTROL BY ATMOSPHERIC CONDI- TION / STANDBY-OPERATION	A 30 CONTROL OUTPUTS / POSITION FEEDBACK	A 40 CUSTOMER LOGO
	A 50 CONNECTOR SET	A 60 OUTPUT FAULT RELAY	A 70 OPTIONS	A 80 SPECIAL CONFIGURATION

A 10 – FLAME MONITORING	Selection
EXTERNAL FLAME MONITORING VIA DIGITAL INPUT	0
INTEGRATED FLAME MONITORING for mains frequency 50 Hz Additional required: Flame sensor FFS07 order no. 659D21 or Flame sensor FFS08 order no. 659D31, as well as corresponding bracket	1
INTEGRATED FLAME MONITORING for mains frequency 60 Hz Additional required: Flame sensor FFS07 order no. 659D21 or Flame sensor FFS08 order no. 659D31, as well as corresponding bracket	2
A 20 – CONTROL BY ATMOSPHERIC CONDITION / STANDBY-OPERATION	Selection
WITHOUT CONTROL BY ATMOSPHERIC CONDITION / STANDBY-OPERATION	0*
CONTROLLED BY ATMOSPHERIC CONDITION PCU CURRENT 4 ... 20 mA PASSIVE	1
CONTROLLED BY ATMOSPHERIC CONDITION PCU PT100 UP 320 °C / 608 °F	2
CONTROLLED BY ATMOSPHERIC CONDITION PCU POTENTIOMETER 5 kΩ	3
2 nd CORRECTION INPUT "CURRENT"	4
STANDBY-OPERATION IF LOAD CONTROLLER INTEGRATED	5
STANDBY-OPERATION, ACTIVATION VIA FIELD BUS	6
STANDBY-OPERATION, ACTIVATION VIA LSB Additional required: LSB module with 4 digital outputs, order no. 663R4028, LSB address "31" LSB connecting cable, order no. 663R0421N, please specify length when ordering	7
A 30 – CONTROL OUTPUTS / POSITION FEEDBACK	Selection
4 x THREE-POINT STEP CONTROL OUTPUT	000
3 x THREE-POINT STEP CONTROL OUTPUT and 1x CONTINUOUS OUTPUT 4 ... 20 mA, FEEDBACK 4 ... 20 mA	001
2 x THREE-POINT STEP CONTROL OUTPUT and 2x CONTINUOUS OUTPUT 4 ... 20 mA, FEEDBACK 4...20 mA Additional required: LSB module with 4 analogue outputs 0...20 mA, order no. 663R4029, LSB address "11" LSB connecting cable, order no. 663R0421N, please specify length when ordering Terminal with 120 Ω parallel resistor 663R1192 Can be used for position feedback at LAMTEC actuators with electronic control	004
4 x THREE-POINT STEP CONTROL OUTPUT and OUTPUT OF THE INTERNAL FIRING RATE	005
4 x THREE-POINT STEP and CUSTOMER SPECIFIC SWITCH-OVER CHANNEL 1 TO 0/4 ... 20 mA	010
2 x THREE-POINT STEP CONTROL OUTPUT and 2 x CONTINUOUS OUTPUT 4 ... 20 mA, FEEDBACK 4 ... 20 mA and CUSTOMER SPECIFIC SWITCH-OVER CHANNEL 1 TO 0/4 ... 20 mA Additional required: LSB module with 4 analogue outputs 0...20 mA, order no. 663R4029, LSB address "11" LSB connecting cable, order no. 663R0421N, please specify length when ordering Terminal with 120 Ω parallel resistor 663R1192	011
3 x THREE-POINT STEP CONTROL OUTPUT and 1 x CONTINUOUS OUTPUT 4 ... 20 mA FEEDBACK RPM, 2-WIRE SYSTEM NAMUR, RANGE 175 ... 4.200 IMP/MIN	021*
3x THREE-POINT STEP CONTROL OUTPUT and 1 x CONTINUOUS OUTPUT 4 ... 20 mA FEEDBACK RPM, 2-WIRE SYSTEM NAMUR, RANGE 355 ... 8.430 IMP/MIN	022

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A 30 – CONTROL OUTPUTS / POSITION FEEDBACK	Selection
3 x THREE-POINT STEP CONTROL OUTPUT and 1 x CONTINUOUS OUTPUT 4 ... 20 mA FEEDBACK RPM, 2-WIRE SYSTEM NAMUR, RANGE 15 ... 440 IMP/MIN	023
3 x THREE-POINT STEP CONTROL OUTPUT and 1 x CONTINUOUS OUTPUT 4 ... 20 mA FEEDBACK RPM, 2-WIRE SYSTEM NAMUR, RANGE 45 ... 1.320 IMP/MIN	024
3 x THREE-POINT STEP CONTROL OUTPUT and 1 x CONTINUOUS OUTPUT 4 ... 20 mA FEEDBACK RPM, 3-WIRE SYSTEM INDUCTIVE, RANGE 175 ... 4.200 IMP/MIN	21D
3 x THREE-POINT STEP CONTROL OUTPUT and 1 x CONTINUOUS OUTPUT 4 ... 20 mA FEEDBACK RPM, 3-WIRE-SYSTEM INDUCTIVE, RANGE 355 ... 8.430 IMP/MIN	22D
3 x THREE-POINT STEP CONTROL OUTPUT and 1 x CONTINUOUS OUTPUT 4 ... 20 mA FEEDBACK RPM, 3-WIRE-SYSTEM INDUCTIVE, RANGE 15 ... 440 IMP/MIN	23D
3 x THREE-POINT STEP CONTROL OUTPUT and 1 x CONTINUOUS OUTPUT 4 ... 20 mA FEEDBACK RPM, 3-WIRE SYSTEM INDUCTIVE, RANGE 45 ... 1.320 IMP/MIN	24D
2 x THREE-POINT STEP CONTROL OUTPUT and 2 x CONTINUOUS OUTPUT 4 ... 20 mA FEEDBACK FOR 1 st CONTINUOUS OUTPUT: RPM, 2-WIRE SYSTEM NAMUR, RANGE 175 ... 4.200 IMP/MIN Additional required: LSB module with 4 analogue outputs 0 ... 20 mA, order no. 663R4029, LSB address "11" LSB connecting cable, order no. 663R0421N, please specify length when ordering Terminal with 120 Ω parallel resistor 663R1192 Can be used for position feedback at LAMTEC actuators with electronic control.	031
2 x THREE-POINT STEP CONTROL OUTPUT and 2 x CONTINUOUS OUTPUT 4 ... 20 mA FEEDBACK FOR 1 st CONTINUOUS OUTPUT: RPM, 3-WIRE SYSTEM INDUCTIVE, RANGE 175 ... 4.200 IMP/MIN Additional required: LSB module with 4 analogue outputs 0 ... 20 mA, order no. 663R4029, LSB address "11" LSB connecting cable, order no. 663R0421N, please specify length when ordering Terminal with 120 Ω parallel resistor 663R1192 Can be used for position feedback at LAMTEC actuators with electronic control.	31D
A 40 – CUSTOMER LOGO	Selection
STANDARD	S*
A 50 – CONNECTOR SET	Selection
CONNECTOR SET "SCREWING TERMINALS" STANDARD Pluggable terminal, cable entry straight, screw 90° angled	S*
STECKERSATZ "SCREWING TERMINALS" INVERTED Pluggable terminal, cable entry 90° angled, screw straight	INV
STECKERSATZ "SCREWING TERMINALS" Pluggable terminal, cable entry and spring level straight	FED
WITHOUT CONNECTOR SET	0
A 60 – OUTPUT FAULT RELAY	Selection
OUTPUT RELAY FAULT NORMALLY OPEN	AP*
OUTPUT RELAY FAULT NORMALLY CLOSED	RP
A 70 – OPTIONS	Selection
WITHOUT OPTIONS	00*
CURVE SWITCHING UNDER OPERATION WITHIN A FUEL**	01

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A 80 – SPECIAL CONFIGURATION	Selection
WITHOUT SPECIAL CONFIGURATION	z0*
CONFIGURATION BY ORDER	01

* Default setting

** Only at ETAMATIC with curve set 2x oil or 2x gas

Accessory

Description	Order no.
Customer display, as external display, in panel mounting housing	663R0935
LSB-connecting cable, length 2 m	663R0421N – 2M
LSB-connecting cable, length 5 m	663R0421N – 5M
LSB-connecting cable, length 10 m	663R0421N – 10M
LSB-connecting cable, length 15 m	663R0421N – 15M
LSB-connecting cable, length 20 m	663R0421N – 20M
LSB-connecting cable, length 30 m	663R0421N – 30M
LSB-connecting cable, length 50 m	663R0421N – 50M
programming unit for operation and programming	663R0932
PC-Software for remote control and display, commissioning version Additional required: 1 piece Serial interface cable, length 10 m	663R9000
Serial interface cable with D-Sub 9-pins connectors, length 10 m	663R0100

Separate connector set (if attribute 50 "CONNECTOR SET" = Selection "0")

Description	Order no.
Connector set "SCREWING TERMINALS" standard Pluggable terminal blocks, cable entry straight, screw 90° angled	663R1180
Connector set "SCREWING TERMINALS" standard invers Pluggable terminal blocks, cable entry 90° angled, screw straight	663R1181
Connector set "SPRING TENSION TERMINALS" Pluggable terminal blocks, cable entry and spring lever straight	663R1182



The information in this publication is subject to technical changes.



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