TL-2624
USER`S MANUAL

TL elektronic
Airport, Building 125, Hradec Kralove
503 41, Czech Republic

Producer's address:
TL elektronic Inc.
Airport, Building 125,
503 41 Hradec Kralove, Czech Republic
Fax: +420 49 548 23 94 E-mail: info@tl-elektronic.com
Website Address: www.tl-elektronic.com

***Please, send your e-mail address to customer@tl-elektronic.com
to receive the latest information about the software upgrade.***

*Send your ideas to innovation@tl-elektronic.com.
We will evaluate your suggestion and provide an update.*

Record of revision

Revision	Revision date	Description	ECO#	Insertion date	By
A	1/6/03	Initial Release	---		
B	1/7/04	Language correction	0001		
C	1/7/05	Inst. / Sens. accuracy added	0002		
D	1/11/05	Function update	0003		

TABLE OF CONTENTS

1. GENERAL DESCRIPTION

1.1. INTRODUCTION

The TL-2624 is complete management for measuring temperature and pressure in any engine.

1.2. INSTRUMENT DESCRIPTION

The TL-2624 enables the connection of a choke servo and, thus, to regulate automatically the engine choke according to the EGT or CHT. In this way, the problems with the installation of Bowden cables or pull bars are avoided and the reliability is increased.

The TL-2624_SAS incorporates, in addition, an internal indicator of altitude, which can be used for regulating the richness of the fuel mixture in those engines not provided with an automatic regulator.

The TL-2624 checks all measured values at two levels - for a warning and an alarm limit signalization. When the alarm warning has been activated, the instrument will display a Service message after the next turn-on to inform the user on the exceeded temperature or pressure.

The TL-2624 incorporates a 2,000-line long-term memory and SchecK memory (see page 7-1) for storing the measured values at 0.1 to 60 second sample rate.

The User button can be programmed in the main set-up for the quick display of the maximum temperature. It is possible to download the measured values from the instrument via the serial cable RS-232c into your PC.

1.3. TECHNICAL SPECIFICATIONS

The producer guarantees all stated technical parameters only when the instrument is installed by an authorized service or an aircraft manufacturer.

1.3.1 Physical Characteristics

Width	71mm (2.795 inches)
Height	67mm (2.637 inches)
Depth	92mm (3.622 inches) including connectors with cover
Panel hole	57mm (2.244 inches) diameter
TL-2624 Weight	0.25 kg (0.55 lbs) / version SAS 0.30 kg (0.66 lbs)
TL-2624 Harness	0.05 kg (0.11 lbs)

1.3.2 General Specifications

Operating Temperature Range	**-20°C to +70°C**
Humidity	**95% non-condensing**
Altitude Range	**4600 meters max.**
Power Range	**10.0 to 32.0 Volts**
Max. Signalization	**30 Volts, 1 Ampere**
Power Consumption	**0.15 Ampere @ 14 VDC**
Backlight Consumption	**0.08 Ampere max when ext. power is used**
Measuring accuracy	**±1% @ 25°C**
Vibration	**5 to 500 Hz**
Show Rate (LCD Refresh)	**1 second**

1.3.3 Long-term Memory and Communication

Storing Rate	**1 to 60 seconds user selectable**
Memory Capacity	**Scheck® method**
Stored Values	**temperatures, oil pressure**
Data Saved Endurance	**30 years**
Rolling Memory life-time	**150 000 hours @ 1 second storing rate**
Communication	**RS-232c**
Communication Speed	**38400 bps**

1.3.4 Sensor Parameters / Measured Range / Accuracy / Resolution

2624-01 - EGT Temperature	**thermocouple K -35 °C to +1200 °C / ±5°C / 1°C**
2624-13 - EGT probe (Rotax)	**thermocouple K -35 °C to +1150 °C / ±5°C / 1°C**
2624-02 - CHT Temperature	**thermocouple J -35 °C to +900 °C / ±2°C / 1°C**
2624-04 - W/O sens. (Rotax)	**VDO black/yelow isolator 0 to +160 °C / ±3°C / 1°C**
2624-10 - W/O sens. (Jabiru)	**VDO gray isolator 0 to +160 °C / ±3°C / 1°C**
2624-03 - Oil (Rotax 2-stroke)	**399S thermistor 0 to 110 °C / ±4°C / 1°C**
2624-11 - W/O probe (Rotax)	**PT-100 -20 to +240 °C / ±2°C / 1°C**
2624-05 - Pressure (Rotax)	**VDO 29/12 0 to 10 bars /±0.2 Bars / 0.1 Bars**
2624-12 - Pressure sens. (Jabiru)	**ELT 0 to 5 bars / ±0.2 Bars / 0.1 Bars**
2624-06 - Pressure sensor	**Honeywell 0 to 10 bars /±0.1 Bars / 0.1 Bars**

1.4. LIMITED CONDITIONS

1.5. LIMITED WARRANTY

The TL elektronic company warrants this product to be free from defects in materials and manufacture for three years from the date of purchase. TL elektronic will, at its sole option, repair or replace any components that fail in normal use. Such repairs or replacement will be made at no charge to the customer for parts or labour. The customer is, however, responsible for any transportation costs. This warranty does not cover failures due to abuse, misuse, accident or unauthorized alteration or repairs.

THE WARRANTIES AND REMEDIES CONTAINED HEREIN ARE EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES EXPRESS OR IMPLIED OR STATUTORY, INCLUDING ANY LIABILITY ARISING UNDER ANY WARRANTY OF ENCHANT ABILITY OR FITNESS FOR A PARTICULAR PURPOSE, STATUTORY OR OTHERWISE. THIS WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS, WHICH MAY VARY FROM STATE TO STATE.

IN NO EVENT SHALL TL ELEKTRONIC BE LIABLE FOR ANY INCIDENTAL, SPECIAL, INDIRECT OR CONSEQUENTIAL DAMAGES, WHETHER RESULTING FROM THE USE, MISUSE, OR INABILITY TO USE THIS PRODUCT OR FROM DEFECTS IN THE PRODUCT. SOME STATES DO NOT ALLOW THE EXCLUSION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATIONS MAY NOT APPLY TO YOU.

To obtain warranty service, call the TL elektronic Customer Service (+420 49 548 23 92) for a returned merchandise tracking number. The unit should be securely packaged with the tracking number clearly marked on the outside of the package and sent freight prepaid and insured to a TL elektronic warranty service station. A copy of the original sales receipt is required as the proof of purchase for warranty repairs. TL elektronic retains the exclusive right to repair or replace the unit or software or offer a full refund of the purchase price at its sole discretion.

SUCH REMEDY SHALL BE YOUR SOLE AND EXCLUSIVE REMEDY FOR ANY BREACH OF WARRANTY.

1.6. LIMITED OPERATION

> **This product is not TSO approved as a flight instrument, therefore, the manufacturer will not be held responsible for any damage caused by its use.**
> **The TL elektronic company is not responsible for any possible damage of an engine or its destruction caused by default measurement of the instrument.**

2. INSTALLATION

2.1 INTRODUCTION

Careful planning and consideration of the suggestions in this section are required to achieve the desired performance and reliability from the TL-2624.

2.2 RACK CONSIDERATION

Plan a location that gives the pilot complete and comfortable access to the entire keypad and that is plainly visible from the pilot's perspective. Check that there is adequate depth for the rack in the instrument panel. A place away from heating vents or other sources of heat generation is optimal.

2.3 INSTALLATION INTO PANEL

⚠️ **Connect the cables into the connector and use the connector cover. Secure the incoming leads to prevent their effect on the connector in the vertical direction.**

⚠️ **Connect the static pressure hose into the fitting in the SAS version. Secure the incoming lead to prevent its effect on the hose in the vertical and horizontal direction.**

2.4 INSTALLATION OF CHOKE SERVO

Install the servo in the engine compartment, preferably direct on the carburetor. Make sure that placing the servo on the carburetor will not influence the carburetor's functionality and that the weight of the servo and the fixing parts will not damage the carburetor or other parts of the engine. With use of a pull bar, connect the servo with the regulation part of the carburetor in the way that the complete rotation range of the choke regulator corresponds with the rotation range of the servo.

⚠ **Make sure that the temperature in the place where the servo is put does not exceed the operational temperature stated in the technical parameters of the servo. Furthermore, make sure that the servo is charged with stabilized voltage according to the technical parameters.**

2.5 INSTALLATION OF SERVO FOR REGULATING FUEL MIXTURE RICHNESS (ONLY SAS VERSION)

If you have the SAS version for regulating the richness of the fuel mixture, install the servo in the engine compartment, preferably direct on the carburetor. Make sure that placing the servo on the carburetor will not influence the carburetor's functionality and that the weight of the servo for regulating the richness of the fuel mixture and the fixing parts will not damage the carburetor or other parts of the engine. With use of a pull bar, connect the servo with the regulation part of the carburetor in the way that the complete rotation range of the fuel mixture richness regulator corresponds with the rotation range of the servo.

⚠ **Make sure that the temperature in the place where the servo is put does not exceed the operational temperature stated in the technical parameters of the servo. Furthermore, make sure that the servo is charged with stabilized voltage according to the technical parameters.**

Mounting Rack Dimension
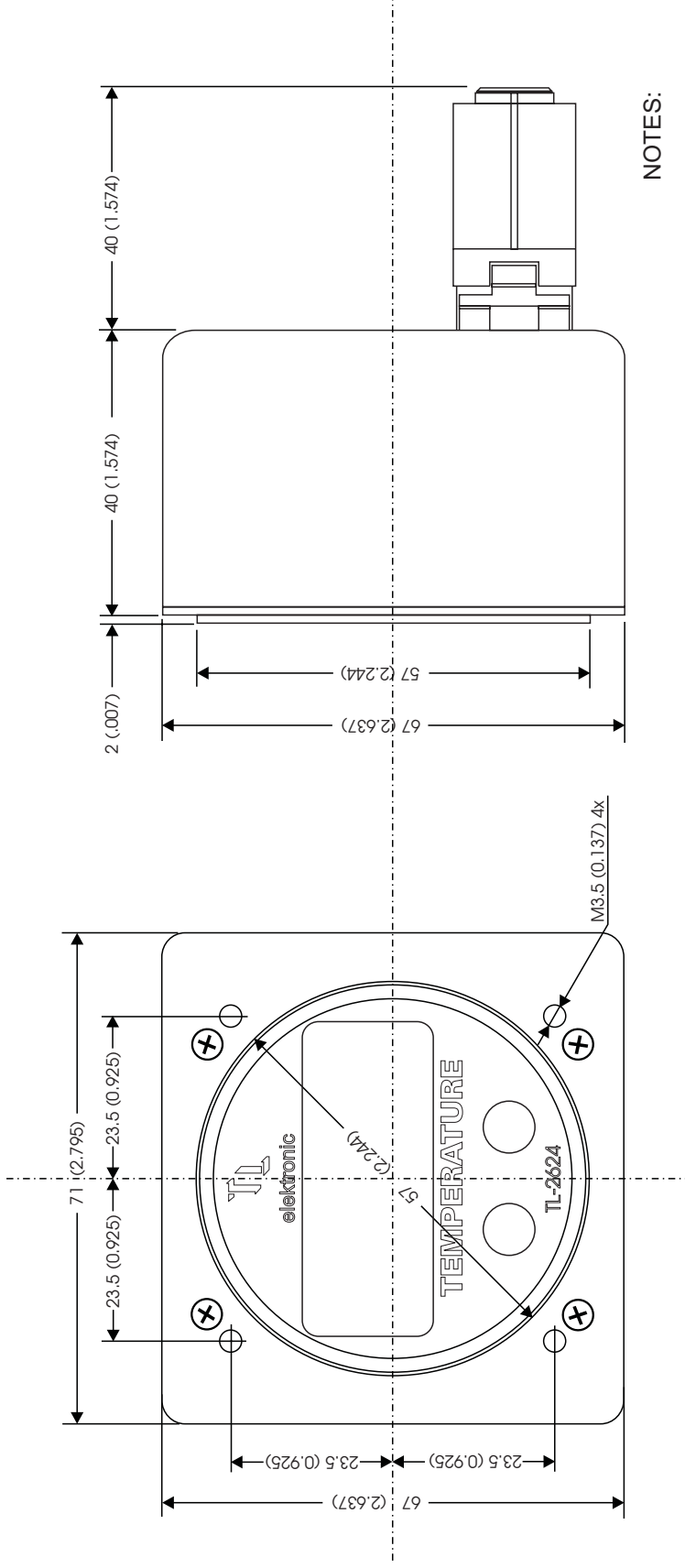
NOTES:

1. Dimension: mm (INCH)
2. Unit weight: 0.25 kg (0.55 lbs)
3. Mounting Rack & Hardware
   weight: 0.05 kg (0.11 lbs)

Figure 1. Rack Dimension

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Mounting Rack Dimension - Version SAS with internal Altitude Sensor
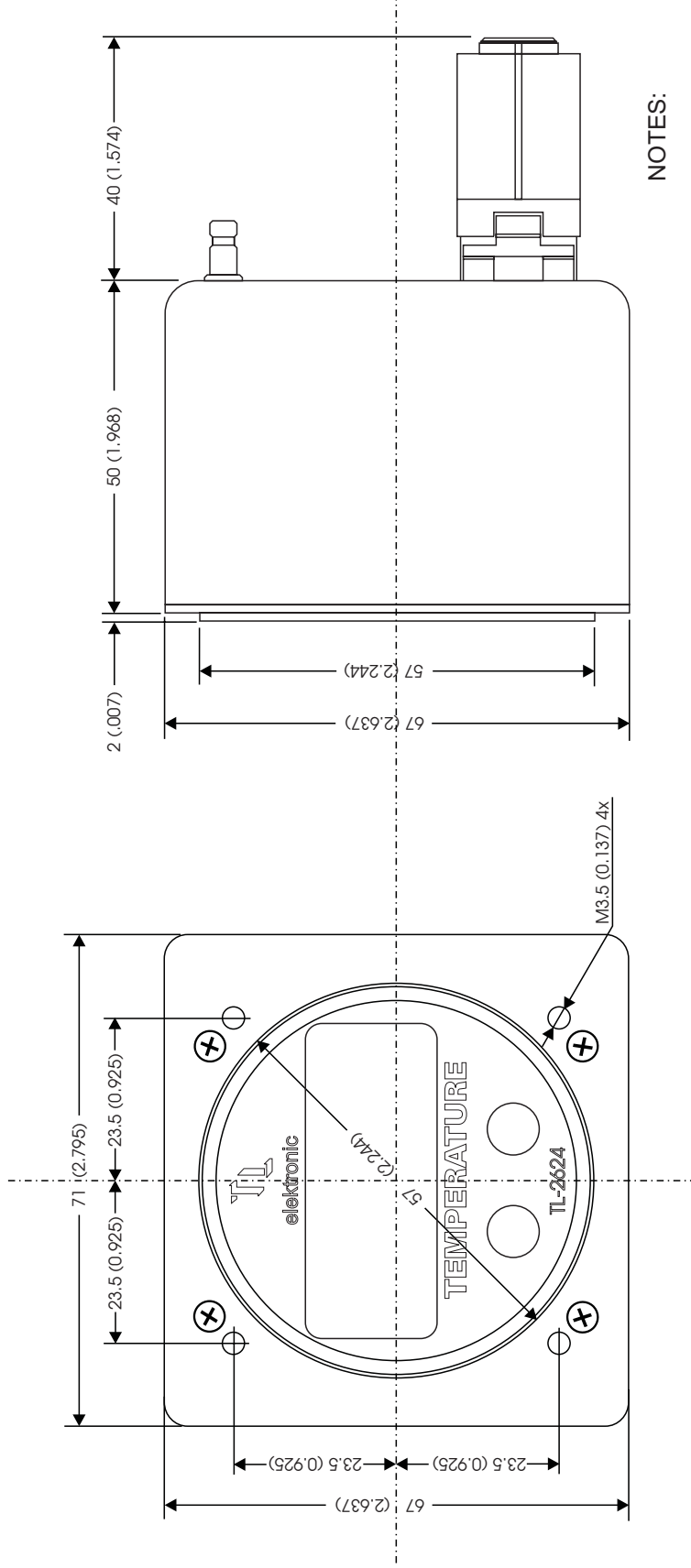
NOTES:

1. Dimension: mm (INCH)
2. Unit weight: 0.3 kg (0.66 lbs)
3. Mounting Rack & Hardware
   weight: 0.05 kg (0.11 lbs)

40 (1.574)

50 (1.968)

2 (.007)

57 (2.244)

67 (2.637)

M3.5 (0.137) 4x

71 (2.795)

23.5 (0.925)

23.5 (0.925)

23.5 (0.925)

23.5 (0.925)

67 (2.637)

67 (2.637)

57 (2.244)

elektronic

TEMPERATURE

TL-2624

Figure 2. Rack Dimension

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3.1 PIN FUNCTION LIST

Pin	Pin Name	I/O
1	Temperature input No.1 - Thermocouple input (positive)	In
2	Temperature input No.1 - Thermocouple input (negative)	In
3	Output for servo	Out
4	Potencial grounding for servo	- -
5	Temperature input No.2 - Thermocouple input (positive)	In
6	Temperature input No.2 - Thermocouple input (negative)	In
7	Aircraft power	In
8	Aircraft ground	- -
9	Temperature input No.3 - Oil, IAT or OAT temperature	In
10	Temperature input No.3 - Ground for Oil, IAT or OAT temperature	- -
11	Input for backlight	In
12	Internal source for backlight	Out
13	Temperature input No.4 - Water, OAT or IAT temperature	In
14	Temperature input No.4 - Ground for Water, OAT or IAT temperature	- -
15	Input for User button	In
16	Ground for User button input	- -
17	Pressure input No.5 - Oil pressure	In
18	Pressure input No.5 - Ground for Oil pressure	- -
19	iFamily® communication ISCL	I/O
20	iFamily® communication ISDA	I/O
21	Signalization unit	Out
22	Ground for PC communication (RS-232)	- -
23	RXD from PC (RS-232)	In
24	TXD to PC (RS-232)	Out

Accessories Interconnect

NOTES:

1. Signalization is connected to the aircraft ground when active.
2. Jumper for the backlight. For the backlight control install a resistor between the pins 11 and 12.
3. Use the shade cable only and connect it according to the connection scheme delivered with the sensor.
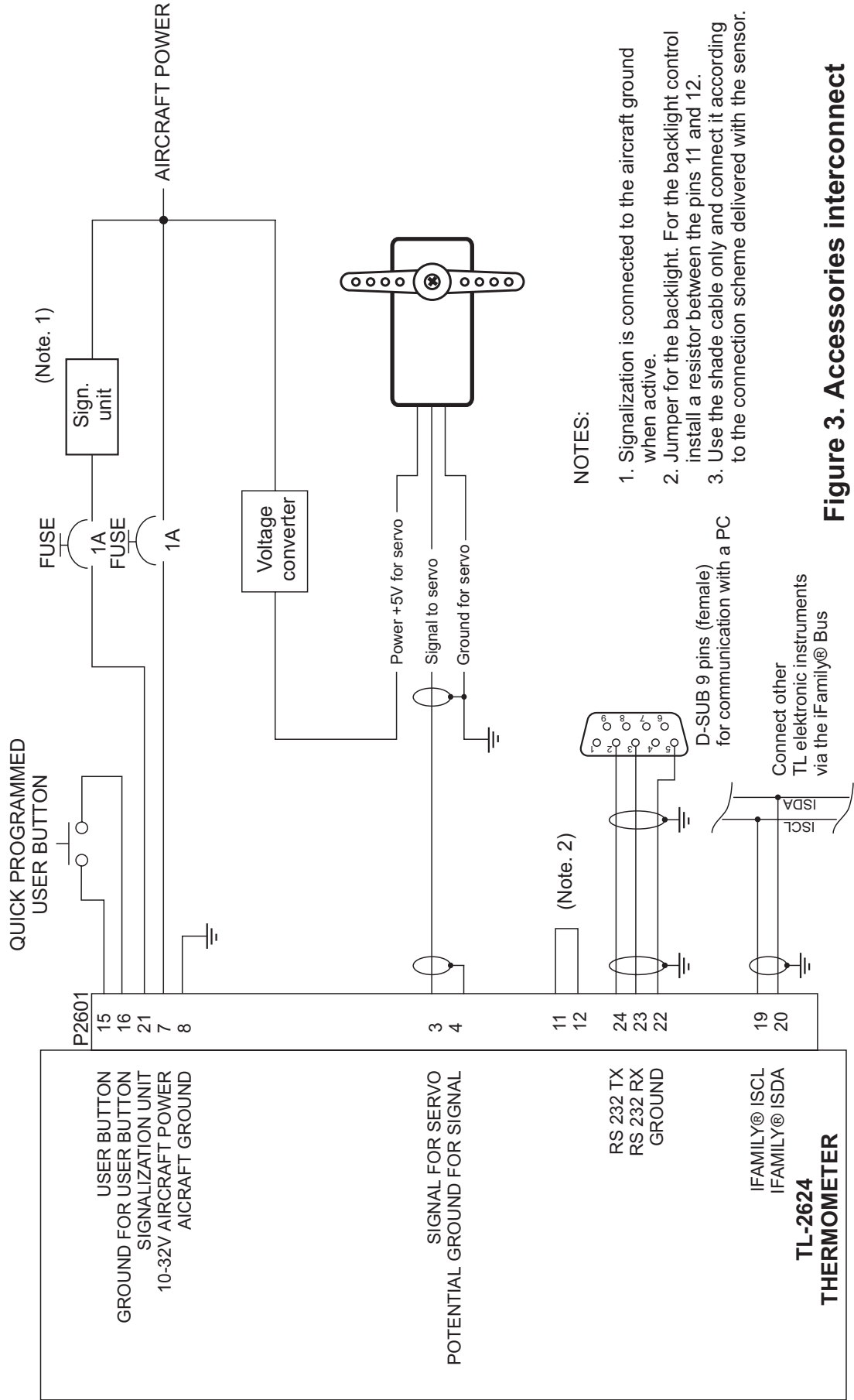
Figure 3. Accessories interconnect

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Accessories Interconnect - Sensors

P2601

Pin	Label
1	THERMOCOUPLE SENSOR (+)
2	THERMOCOUPLE SENSOR (-)
5	THERMOCOUPLE SENSOR (+)
6	THERMOCOUPLE SENSOR (-)
9	OIL, IAT (OAT) TEMP. SENSOR
10	GROUND FOR OIL, IAT (OAT) SENSOR
13	WATER, OAT (IAT) TEMP. SENSOR
14	GROUND FOR WATER, OAT (IAT) SENS.
17	PRESSURE SENSOR
18	GROUND FOR PRESSURE SENSOR
7	AIRCRAFT POWER
17	OIL PRESSURE SENSOR
18	GROUND FOR OIL PRESS. SENSOR

TL-2624 THERMOMETER

EGT / CHT No.1

EGT / CHT No.2

PASSIVE TWO-WIRE PRESSURE SENSOR

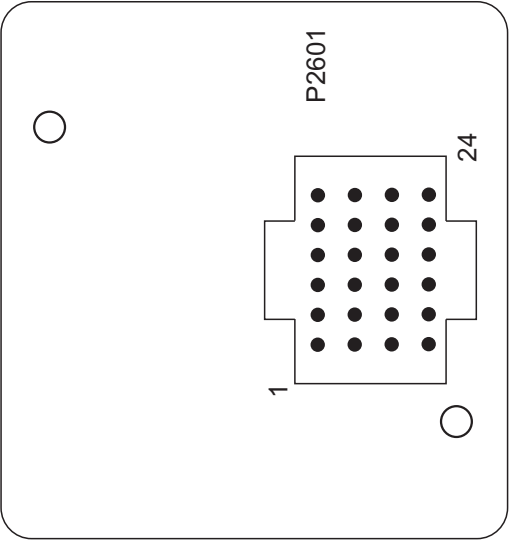ACTIVE THREE-WIRE PRESSURE SENSOR

POWER
OUT
GND

(Note. 1)

NOTES:

1. Use the shade cable only and connect it according to the connection scheme delivered with the sensor.

Figure 4. Accessories interconnect

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Rear view of connector plate

P2601

24

1
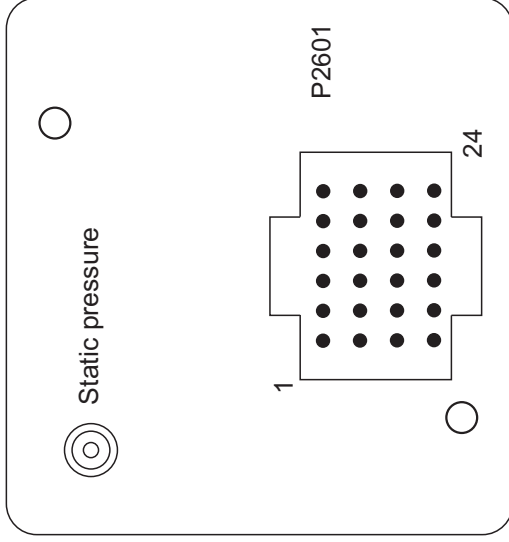
NOTES:

1. Secure the incoming leads to prevent their effect on the connector in the vertical direction.

Figure 5. Connectors locate

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Rear view of connector plate and pressure fitting - version SAS with Altitude Sensor

Static pressure

P2601

1

24

NOTES:

1. Secure the incoming leads to prevent their effect on the connector in the vertical direction.
2. Secure all leads of the static or the complete (pitot) pressure. Any leakage or untightness could cause incorrect indications of other instruments.
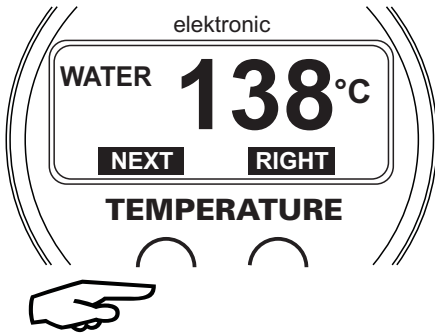
Figure 6. Connectors locate

TL-2624 USER'S MANUAL
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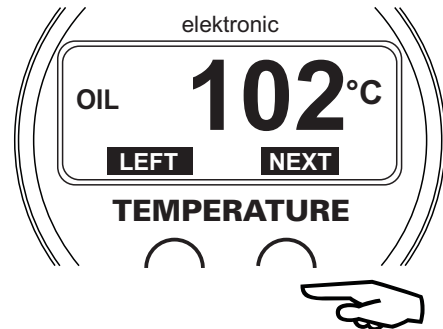
4. NAV-MENU DESCRIPTION

4.1 How to Control Instrument via NAV-MENU

There are black labels on the display. Each is affiliated to the left and the right button. Before pressing a button, read the information on the label. Its functions are different in every menu.
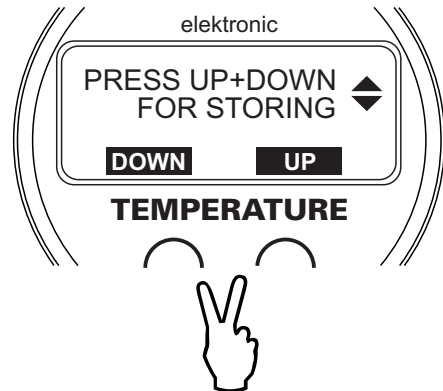
The left label is for the Left button.

The right label is for the Right button.

To store a value into the memory, press both buttons simultaneously. Release the buttons when the setting arrows vanish.

5. INSTRUMENT SETUP

5.1 First Instrument Turn-on
Before the Thermometer starts to indicate, you must do the basic setting of language, contrast, units, etc. After the first turn-on of the instrument, the „FIRST SETUP" message will show on the display. This set-up must be completed to continue.
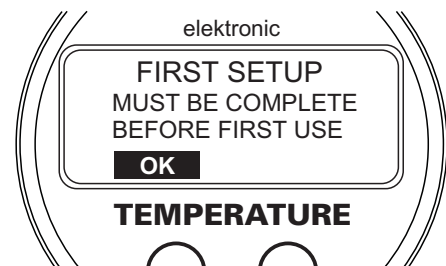
5.2 Main Setup Functions' Description

The table of the instrument configuration steps is shown below (Initial - firmware version 1.0).

0	LANGUAGE	Select your language for communication with the instrument.
1	DISPLAY CONTRAST	Select the contrast of the display.
2	PASSWORD	Select your password.
3	TEMPERATURE UNIT	Select your local unit for temperature.
4	PRESSURE UNIT	Select your local unit for oil pressure.
5	ALTITUDE UNIT (only the SAS version)	Select your local unit for altitude.
6	QUANTITIES SETUP	Select the quantities and sensors to be measured and displayed.
7	DISPLAY SETUP	Select which quantity is affiliated to which menu (left or right).
8	CHOKE SERVO SETUP (not for the SAS version)	Select the temperature to be used for regulating the choke and the temp. range for 0% -100% of the servo operational range.
9	FUEL MIX. RICH. SERVO (only the SAS version)	Select the altitude range for 0% - 100% of the servo operational range.
10	ALARM SETUP	Select the alarm limit for the max. and min. temp. and pressure.
11	WARNING SETUP	Select the warning limit for the max. and min. temp. and press.
12	USER BUTTON	Program your button for these functions: **SHOW MIN / MAX** = shows the minimum and the maximum of the currently shown quantity, **SHOW CHOKE POSITION** = shows in which position the choke is at the moment.
13	VOICE WARNING	Enable or disable voice warning into your headphones (only with use of our Intercom TL-2424 or Voice Module).
14	INST. ON-LINE	Check the connected instruments from the TL elektronic iFamily® that are On-Line.

⚠ **All information on this page is subject to change without prior notice. Download the latest version of the manual from www.tl-elektronic.com and compare it with your version of the firmware.**
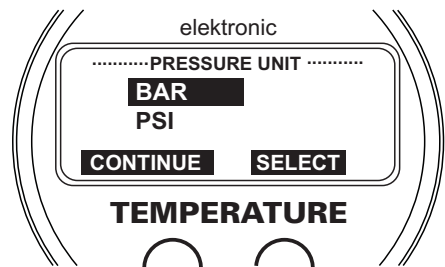
5.3 How to set Temperature Units

For selecting the temperature units, use the „Select" button in the Set-up menu. The selected unit is shown inversely on the black background. When the unit has been selected, press the „Continue" button for storing and step to the next configuration
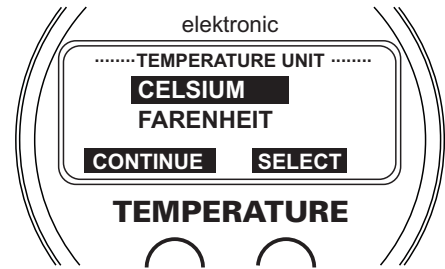

5.4 How to Set Pressure Units

For selecting the pressure units, use the „Select" button in the Set-up menu. The selected unit is shown inversely on the black background. When the unit has been selected, press the „Continue" button for storing and step to the next configuration


5.5 How to Set Altitude Units (SAS Version Only)

For selecting the altitude units, use the „Select" button in the Set-up menu. The selected unit is shown inversely on the black background. When the unit has been selected, press the „Continue" button for storing and step to the next configuration
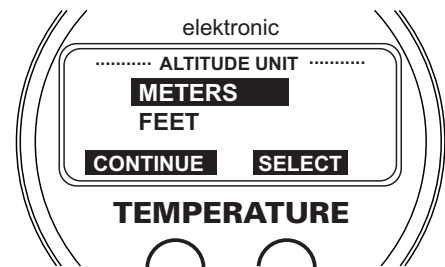

5.6 Quantities' Set-up

In this menu, you can select the quantities that are to be measured and shown on the display. In this menu, you can also set the sensors' parameters.
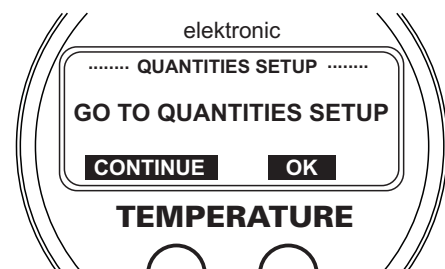
5.7 How to Configure Instrument for Measuring Temperature

In this menu, you can select the temperature or pressure you want to measure by the TL-2624. In addition, in the thermocouple inputs you can select the EGT (exhaust-gas temperature) or the CHT (cylinder head temperature) to be measured, see the table below. If you do not want to measure some quantities, e.g. the water temperature, then select "OFF". In the opposite case, the symbol [- - -] will show, which means that the sensor has not been connected.
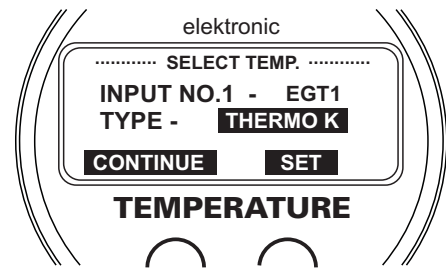
Input	Type of input	Quantities
Input no. 1	thermocouple input	EGT or CHT
Input no. 2	thermocouple input	EGT or CHT
Input no. 3	resistive input	Oil, IAT (OAT) temperature
Input no. 4	resistive input	Water, OAT (IAT) temperature
Input no. 5	resistive or voltage input	Oil pressure

5.8 How to Configure Display

In this menu, which you can enter via the „Display Setup" menu, you can set which displayed quantity will be affiliated to which button (either the left button for the left menu or the right button for the right menu). The order of the displayed quantities in the left and right menu is default and cannot be changed.

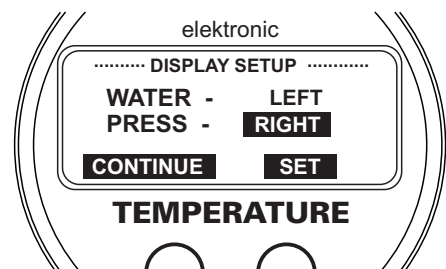## 5.7 How to Configure Instrument for Measuring Temperature

In this menu, you can select the temperature or pressure you want to measure by the TL-2624. In addition, in the thermocouple inputs you can select the EGT (exhaust-gas temperature) or the CHT (cylinder head temperature) to be measured, see the table below. If you do not want to measure some quantities, e.g. the water temperature, then select "OFF". In the opposite case, the symbol [- - -] will show, which means that the sensor has not been connected.
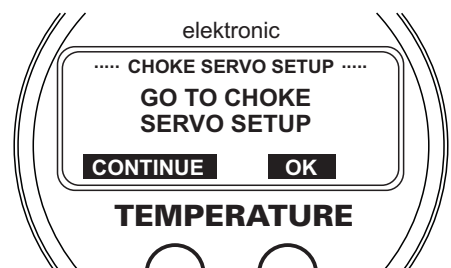
5.10 How to Set Choke Regulation Servo

In this menu, you can set the temperature range within which the servo regulates the choke. According to the selected sensor, set the temperature range for 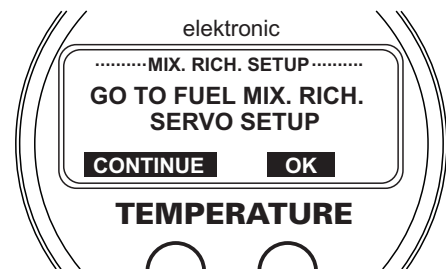the choke regulation from 0 to 100%. With 100%, set the temperature at which the choke should be fully open, i.e. 100%, and the temperature at which the engine is warmed-up enough and, thus, the choke should be closed, i.e. 0%.

```
            elektronic
  ·········· CHOKE SETUP ··········
  FULLY CLOSE:    35°C
  FULLY OPEN:    15°C
  CONTINUE        SET
        TEMPERATURE
```
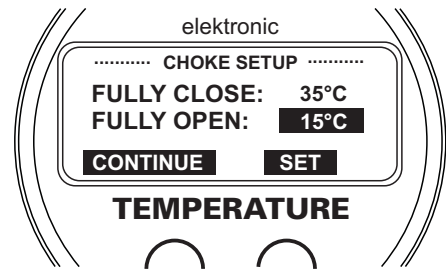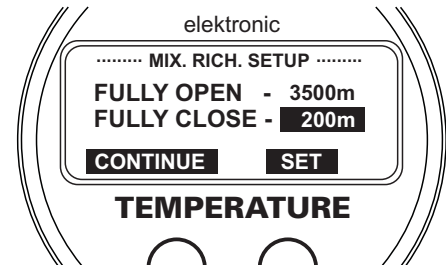
5.11 How to Regulate Richness of Fuel Mixture (only version SAS)

In this menu, you can perform the fuel mixture richness calibration according to altitude.

```
            elektronic
  ·········· MIX. RICH. SETUP ··········
  GO TO FUEL MIX. RICH.
       SERVO SETUP
  CONTINUE        OK
        TEMPERATURE
```
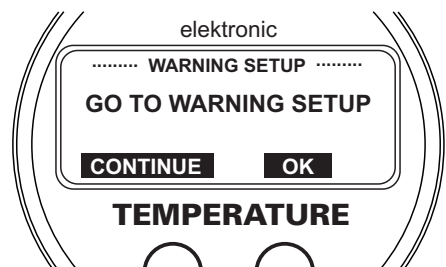
5.12 How to Set Fuel Mixture Richness Regulation Servo

In this menu, you can set the altitude range within which the servo regulates the richness of the fuel mixture. According to the selected sensor, set the altitude range for the regulation of the fuel mixture richness from 0 to 100%. With 100%, set the altitude above which you want the maximum richness of the fuel mixture. With 0%, set the altitude below which you want the minimum richness of the fuel mixture.

```
            elektronic
  ········· MIX. RICH. SETUP ·········
  FULLY OPEN  -  3500m
  FULLY CLOSE -  200m
  CONTINUE        SET
        TEMPERATURE
```

5.13 Warning and Alarm

The maximum and minimum limit values can be set at two levels in the Set-up menu. The „Warning" message informs about the first level exceeding. The „Alarm" message informs about exceeding the second limit and activates recording into the SchecK® drawer. You can download all exceeded values form the instrument and analyze them on your PC.

```
            elektronic
  ········· WARNING SETUP ·········
  GO TO WARNING SETUP
  CONTINUE        OK
        TEMPERATURE
```

5.14 How to Set Warning and Alarm Limits

As soon as the set-up table is displayed, press the button „SET"; then you will be able to set the required limit on the inversely displayed position.

```
        elektronic
···· WARNING EGT 3 ····
  MAXIMUM -    880
  MINIMUM -   OFF
  CONTINUE    SET
    TEMPERATURE
```
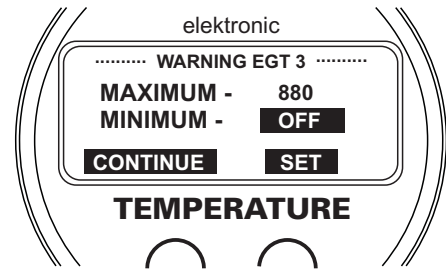
5.15 User Button

When pressed, the external User button offers you the possibility of programming to quick show or quick switch to the selected menu. After releasing the button, you will get back to the measured value indication.
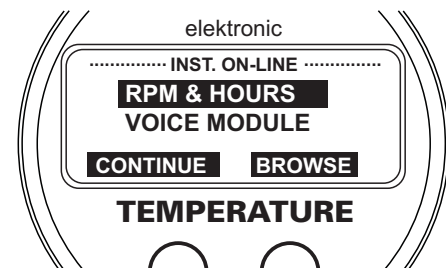For example - if you have set „SHOW CHOKE POSITION",
after pressing the button you can get the information about the position of the choke.

```
        elektronic
······ USER BUTTON ······
  SHOW MIN, MAX
  SHOW CHOKE POS.
  CONTINUE   SELECT
    TEMPERATURE
```
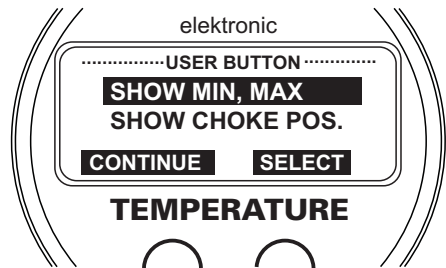
5.16 iFamily® and Other Connecting Devices

As the first of aircraft instruments, the TL-2624 enables you the connection with other instruments of the TL elektronic family in order to gain simultaneous recording of the measured values, the mass PC download of all connected instruments etc. via one cable.
If some other instruments or the GPS are connected to the reserved inputs, this menu shows each connected instrument. It also enables checking the connected instruments and devices.

```
        elektronic
······ INST. ON-LINE ······
  RPM & HOURS
  VOICE MODULE
  CONTINUE   BROWSE
    TEMPERATURE
```

6. OPERATIONAL MANUAL

6.1. Left Menu Description

The left main menu shows the information about the quantities and the maximum and minimum according to the table below.
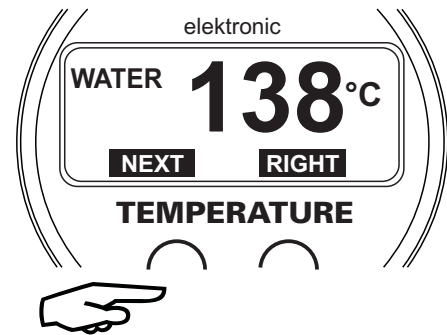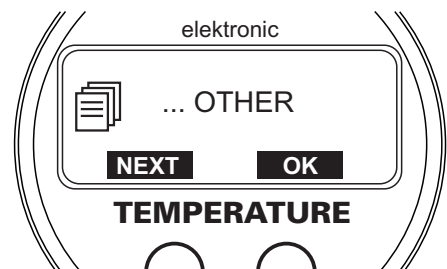
Left Menu (Initial firmware version 1.0)

First	Second	Description
CUSTOM		Temperature from input No.1 - showing can be enabled / disabled
CUSTOM		Temperature from input No.2 - showing can be enabled / disabled
CUSTOM		Temperature from input No.3 - showing can be enabled / disabled
CUSTOM		Temperature from input No.4 - showing can be enabled / disabled
CUSTOM		Oil Pressure from input No.5 - showing can be enabled / disabled
	MIN/MAX	Long-term memory of the minimum and maximum values
	DELETE	Delete the long-term memory of the minimum and maximum values
	EXIT	Exit from the second menu

⚠ **All information on this page is subject to change without prior notice. Download the latest version of the manual from www.tl-elektronic.com and compare it with your version of firmware.**

6.1.1 Second Menu

The „OTHER" dialog will show on the display after pressing the left button. If you press „YES" in this dialog, the instrument will go to the second menu where you can get the information about the minimum and maximum temperature or oil pressure.

6.2 Right Menu Description

The right menu shows the information about the quantities according to the table below.
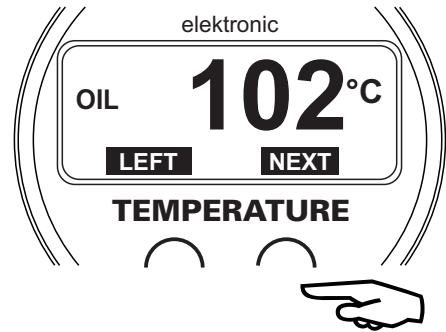
Right Menu (Initial firmware version 1.0)

First	Second	Description
CUSTOM		Temperature from input No.1 - showing can be enabled / disabled
CUSTOM		Temperature from input No.2 - showing can be enabled / disabled
CUSTOM		Temperature from input No.3 - showing can be enabled / disabled
CUSTOM		Temperature from input No.4 - showing can be enabled / disabled
CUSTOM		Oil Pressure from input No.5 - showing can be enabled / disabled

⚠ **All information on this page is subject to change without prior notice. Download the latest version of the manual from www.tl-elektronic.com and compare it with your version of firmware.**
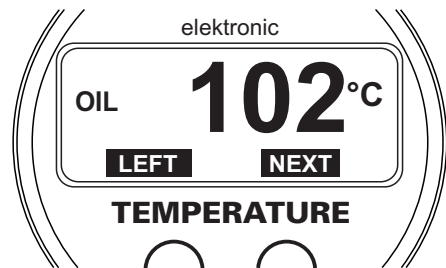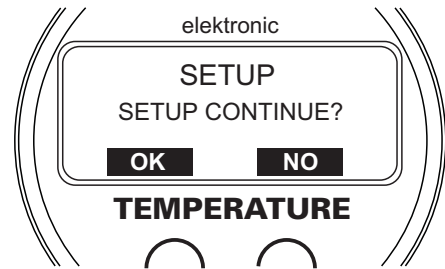
6.2.1 Exit from Right Menu

You can get back to the left menu by pressing the button „LEFT".

6.3 How to Change Configuration

If you want to change e.g. units or contrast, press and hold both buttons and turn the instrument on. The „Setup" message will show on the display. Press „OK" and go to the instrument set-up.

⚠ **Note, that any unauthorized change of values in the set-up can cause defect of the instrument. An incorrect change of the calibration could endanger your life and the lives of your passengers.**

6.4 Long-term Memory of Maximum Measured Values

The inverted symbol [M] (on the black background) shown on the right indicates that the maximum or minimum temperature or oil pressure from the long-term memory is displayed. Going through the maximum and minimum values in the particular inputs is possible after pressing the button „NEXT".
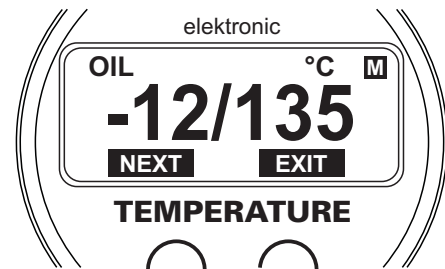
6.5 Delete Long-term Memory of Measured Values

The long-term memory of the minimum and maximum of measured values can be deleted in this menu.
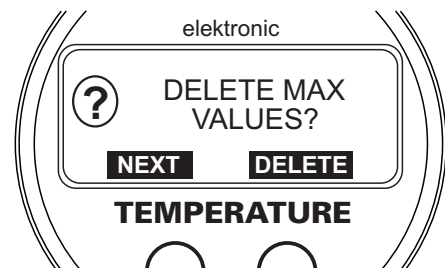
6.6 Measuring Quantities out of Range

When the measured quantity is out of range, the [----] message will show on the display.

6.7 Scan Function

If you enable the Scan function, the quantities set in the quantity set-up will alternate on the display.
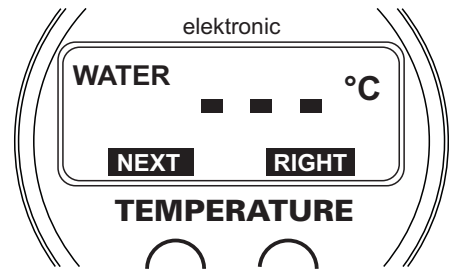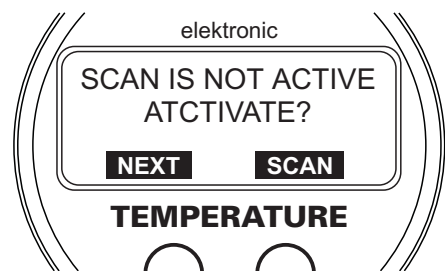You can disable the Scan function any time with the button „NO SCAN". You can enable the function in the second menu.

6.8 Measuring Limit-exceeding Values

This alarm informs you about the limit-exceeding values. If the measured value is higher (the Alarm Limit is exceeded), the alarm signalization will start blinking. The limit-exceeding value will also show on the display. If more values exceed the set limits at the same time, the symbol NEXT will show above the right button, and after pressing the button, you can browse through the quantities the values of which exceeded the limits. On the left part of the display, a warning triangle will show, and inside the triangle the number of these limit-exceeding values will show.
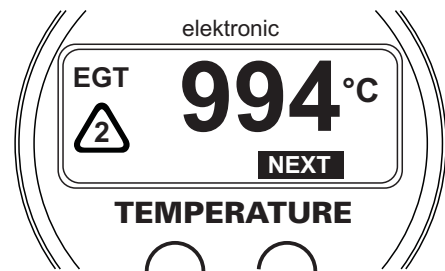
7.1 SchecK® Memory Description

The TL-2624 includes a 2,000 lines long-term memory and SchecK memory for storing measured values in the 0.1 to 60 second sample rate. You can download the measured data via standard PC serial cable RS-232 into Laptop or Personal Computer.

Rolling memory included

| 1 | 2 | 3 | X | X | X |

Exceeded place

Measured values

0.1 to 60 seconds samples rate

Rolling memory - last 2,000 lines with 0.1 to 60 second sample rate

Transfer a case

Each case (1 to 20) includes 60 lines memory space with 0.1 to 60 seconds samples rate of measured values

Begin

| 1 | 2 | 3 | X | X | X |

Case 1
Case 2
Case 3
⋮
Case 12
Case 13
Case 14

End

Rolling SchecK© memory - last 20 cases

Transfer a line

Each line (1 to 60) includes all highest measured values of SchecK© case

Begin

| 1 | 2 | 3 | X | X | X |

Line 1
Line 2
Line 3
⋮
Line 58
Line 59
Line 60

End

Rolling lines - last 60 lines

When any case is filled, this message will show after turning the instrument on.

elektronic

SERVICE MESSAGE
SOME MEASURED
VALUE EXCEEDED !
INFO   EXIT

TEMPERATURE

The user can delete this message.

elektronic

SERVICE
DELETED

TEMPERATURE

When all lines are filled, this message will show after turning the instrument on

elektronic

CONTACT SERVICE
SEE MANUAL FOR
MORE INFORMATION !
INFO   EXIT

TEMPERATURE

This message can be deleted only by using a special program, which is possed only by authorized engine dealers and when data are downloaded into a PC

Cases 1 to 20 include the record of limit-exceeding values and engine hours, date and time referring to the moment of limit exceeding. Each case includes 60 lines.

30 lines before limit exceeding

≈

30 lines after limit exceeding

Limit exceeding values
(centered in the middle position)
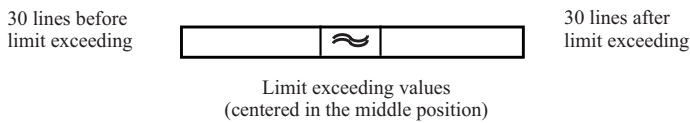
In this version it is possible to read the last 20 exceeded records at total operational time.

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