GB OPERATING INSTRUCTIONS

LEISTER Temperature controller ▣
CSS

Please read operating instructions carefully before use and keep for further reference.

SOFTWARE-VERSION **2.0x**
Code **803326D**

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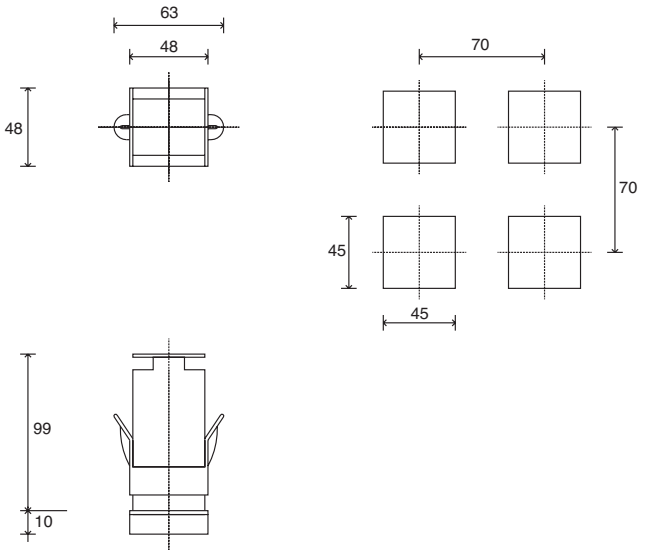
WARNING

Danger! When opening up the tool, live components and connections are exposed. The mains plug must be removed from the main socket before opening up the tool. **Caution separate source voltage.**

1 • INSTALLATION

• Dimensions and cut-out; panel mounting



For correct and safe installation, follow the instructions and observe the warnings contained in this manual.

Panel mounting:

To fix the unit, insert the brackets provided into the seats on either side of the case. To mount two or more units side by side, respect the cut-out dimensions shown in the drawing.

CE MARKING: EMC conformity (electromagnetic compatibility) with EEC Directive 89/336/CEE with reference to the generic Standard CEI- EN61000-6-2 (immunity in industrial environments) and EN50081-1 (emission in residential environments). BT (low voltage) conformity respecting the Directive 73/23/CEE modified by the Directive 93/68.

MAINTENANCE: Repairs must be done only by trained and specialized personnel. Cut power to the device before accessing internal parts.

Do not clean the case with hydrocarbon-based solvents (Petrol, Trichlorethylene, etc.). Use of these solvents can reduce the mechanical reliability of the device. Use a cloth dampened in ethyl alcohol or water to clean the external plastic case.

SERVICE: LEISTER has a service department. The warranty excludes defects caused by any use not conforming to these instructions.

2 • TECHNICAL SPECIFICATIONS

Display	2 x 4 digits, green, height 10 and 7mm
Keys	4 mechanical keys (Man/Aut, INC, DEC, F)
Accuracy	0.2% full scale ± 1 digit at 25°C room temperature
Main input (settable digital filter)	TC, RTD, PTC, NTC 60mV, 1V Ri≥1MΩ; 5V, 10V Ri≥10kΩ; 20mA Ri=50Ω Sampling time 120 msec.
Type TC Thermocouples (ITS90)	Type TC Thermocouples : J,K,R,S,T (IEC 584-1, CEI EN 60584-1, 60584-2) ; custom linearization is available / types B,E,N,L GOST,U,G,D,C are available by using the custom linearization.
Cold junction error	0,1° / °C
RTD type (scale configurable within indicated range, with or without decimal point) (ITS90) *Max line resistance for RTD*	DIN 43760 (Pt100), JPT100 20Ω
PTC type / NTC Type	990Ω 25°C / 1KΩ 25°C
Safety	detection of short-circuit or opening of probes, LBA alarm, HB alarm
C° / F° selection	configurabile da tastieraconfigurable from faceplate
Linear scale ranges	-1999 to 9999 with configurable decimal point position
Controls	PID, Self-tuning, on-off
pb - dt - it	0,0...999,9 % - 0,00...99,99 min - 0,00...99,99 min
Action	Heat
Control outputs	on / off, continuous
Maximum power limit heat	0,0...100,0 %
Cycle time	0...200 s
Main output type	relay, logic, continuous (0....10V / 4...20mA)
Softstart	0,0...500,0 min
Fault power setting	-100,0...100,0 %
Automatic blanking	Displays PV value, optional exclusion
2 Configurable alarms	Up to 2 alarm functions assignable to an output, configurable as: maximum, minimum, symmetrical, absolute/deviation, LBA, HB
Alarm masking	- exclusion during warm up - latching reset from faceplate or external contact
Type of relay contact	NO (NC), 5A, 250V/30Vdc cosφ=1
Logic output for static relays	24V ±10% (10V min zu 20mA)
Transmitter power supply	15 / 24Vdc, max 30mA short-circuit protection
Analogue retransmission signal	10V/20mA Rload max 500Ω resolution 12 bit
Power supply (switching type)	(std) 100 ... 240Vac ±10% (opt.) 20...27Vac/dc ±10%; 50/60Hz, 8VA ma
Faceplate protection	IP65
Working / Storage temperature range	0...50°C / -20...70°C
Relative humidity	20 ... 85% non-condensing
Environmental conditions of use	for internal use only, altitude up to 2000m
Installation	Panel, plug-in from front
Weight	160g for the complete version

EMC conformity has been tested with the following connections

FUNCTION	CABLE TYPE	LENGTH
Power supply cable	1 mm²	1 m
Relay output cable	1 mm²	3,5 m
TC input	0,8 mm² compensated	5 m
Pt100 input	1 mm²	3 m

3 • DESCRIPTION OF FACEPLATE

Function indicators
Indicates modes of operation

MAN/AUTO = OFF (automatic control)
ON (manual control)
SETPONT1/2 = OFF (IN1 = OFF - local Setpoint 1)
ON (IN1 = ON - local Setpoint 2)
SELFTUNING = ON (enabled Self)
OFF (disabled Self)

Automatic/Manual adjustment selection
Active only when PV display visualises the process variable

"Inc" and "Dec" key
Press to increment (decrement) any numerical parameter •• Increment (decrement) speed is proportional to time key stays pressed •• The operation is not cyclic: once the maximum (minimum) value of a field is reached, the value will not change even if the key remains pressed.

Indication of output states
OUT 1 (AL1); OUT 2 (Main); OUT 3 (HB); OUT 4 (HB)

PV Display: Indication of process variable
Error Indication: LO, HI, Sbr, Err
LO= the value of process variable is < di LO_S
HI= the value of process variable is > di HI_S
Sbr= faulty sensor or input values higher than max. limits
Err= PT100 third wire opened for PT100, PTC or input values lower than min. limits (i.e.: TC wrong connection)

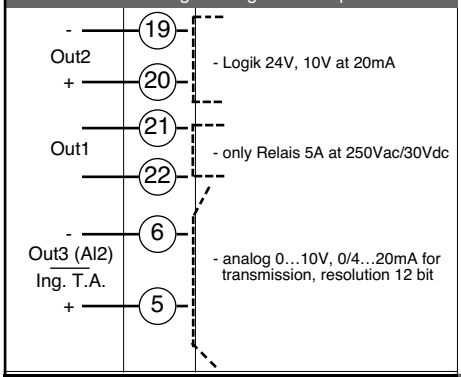
SV display: Indication of setpoint

Function key
Gives access to the various configuration phases •• Confirms change of set parameters and browses next or previous parameter (if Auto/Man key is pressed)

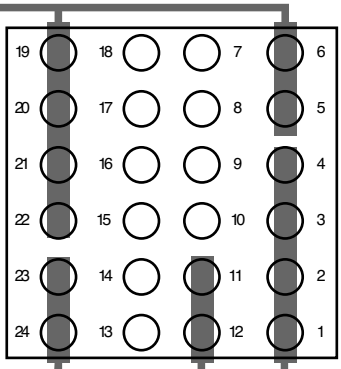
4 • CONNECTIONS

• Ammeter outputs/input

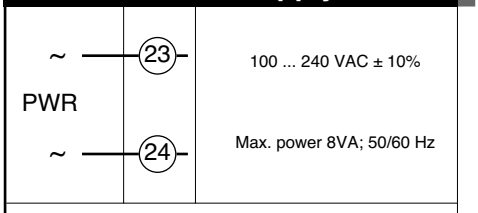
User configurable generic output



TOP



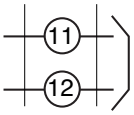
• Power Supply



• Output 4

Out 4

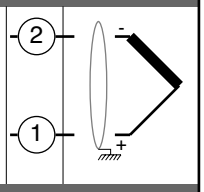
Relais 5A
at 250Vac/30Vdc



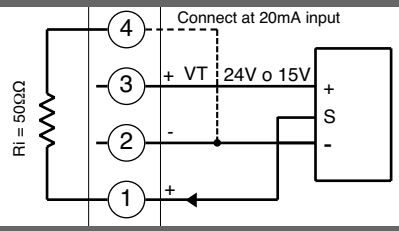
• Inputs

• TC

Available thermocouples:
J, K, R, S, T
(B, E, N, L, U, G, D, C custom linearization is available)
- Observe polarities
- For extensions, use the correct compensating cable for the type of TC used

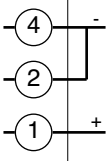


• Linear input with 3-wire transmitter

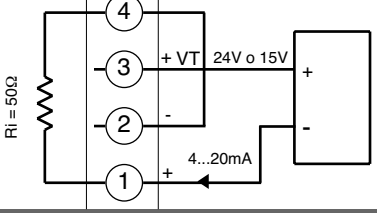


• Linear input (I)

Linear input in dc current
20mA, Ri = 50Ω

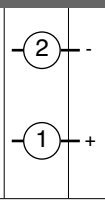


• Input 1 linear with transmitter 2 wires



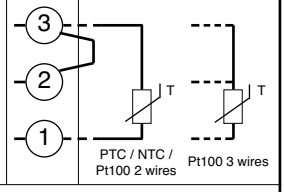
• Lnear input (V)

Linear input in dc voltage
60mV, 1V
Ri > 1MΩ
5V, 10V
Ri > 10KΩ



• Pt100 / PTC / NTC

Use wires of adequate diameter (min. 1mm²)
PT100, JPT100, PTC, NTC



5 • "EASY" PROGRAMMING and CONFIGURATION

THE EASY CONFIGURATION IS SUITABLE FOR VERSIONS WITH TWO OUTPUTS (OUT1, OUT2). TO ACCESS THE OTHER PARAMETERS, ADD 128 TO THE **Pro** VALUE.

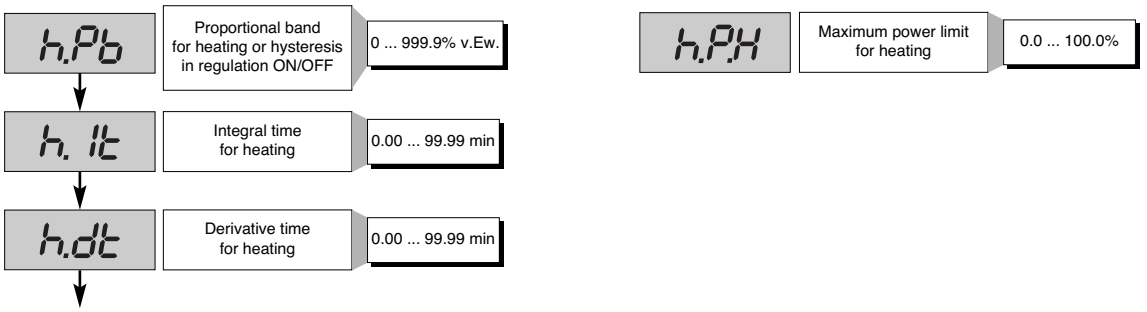
LEVEL 1 MENU

P.V. / S.V.	P.V. / S.V. Process variable (PV display) Work Setpoint (SV display) or control output value with controller in manual
AL.1	Alarm point 1 (scale points)

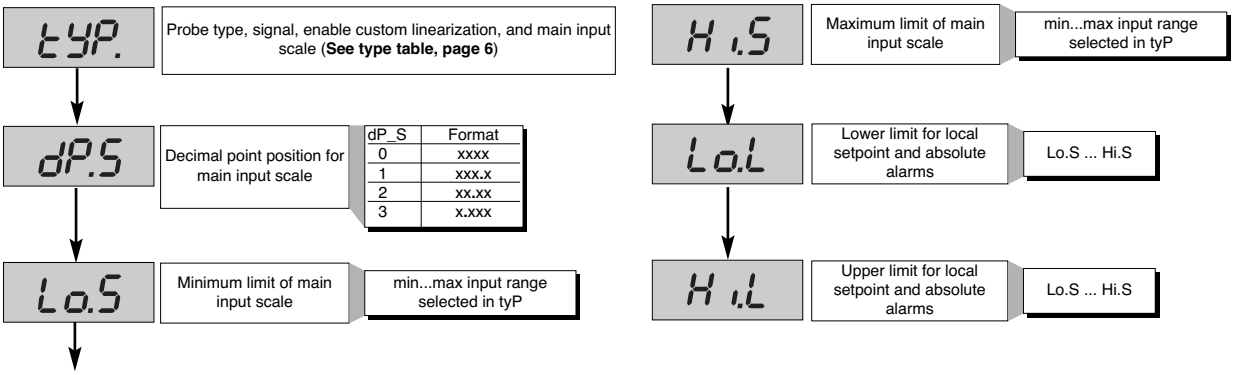
S4 Jumper (CPU) ON

CFG	Custom menu
InP	Input settings
Out	Output settings
PAS	Password
PAS = 99	
Pro	Protection code

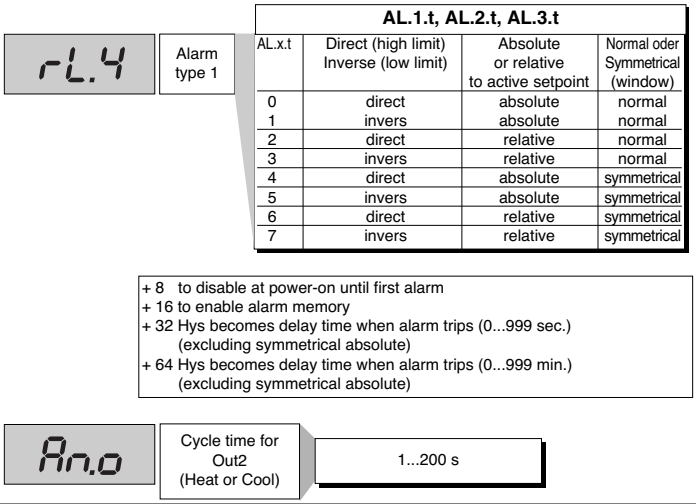
5.1 · CFG Menu



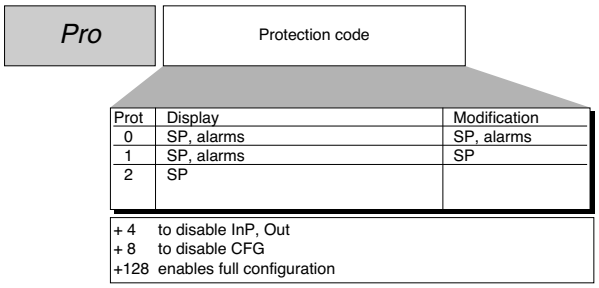
5.2 · InP Menu



5.3 · Out Menu



5.4 · Prot Menu



GUARANTEE AND LIABILITY

- Guarantee and liability are in accordance with the guarantee certificate as well as with the currently valid general business and sales conditions.
- Leister Process Technologies rejects any guarantee claims for tools which are not in their original condition. The tools must never be altered or changed.

Technical data and specifications are subject to change without prior notice.

Your authorized Service Centre is: