UNIVERSAL INDICATOR

LCD or LED display, 48 x 96 mm

Programmable via PC

Galvanic isolation, 3.75 kVAC

Trip amplifiers and analogue output

Universal voltage supply

Protection IP65

General:
The PReview indicator is configured to the present application by means of a PC using the installation program PReset 5000 with associated optical link for communication between indicator and a DOS-based PC.
Opto Link 5901 is a configuration kit containing an optical link, a PC cable and the program PReset 5000 for set up of the 5111 and the 5511.
The indicator is configured from factory according to specifications or the user can do the configuration himself by means of the PReset 5000 program.
The indicator input can be programmed as a TC, an RTD and a resistance input and a unipolar or bipolar mV, mA and voltage input. The output (option) can be a unipolar / bipolar current or voltage signal.
Furthermore it is possible to insert special linearisation algorithms e.g. in connection with measurement of non-linear signals. By the relay option it is possible to insert limit values and achieve digital on/off signals in connection with temperature sensors or current / voltage signals.

Input types:
Thermocouple input: (TC) with 15 bit bipolar resolution for standard thermocouples in the temperature ranges acc. to the IEC 584, the DIN 43710 or ASTM E988-90 standards. The CJC function is implemented with a Pt100 sensor in the terminal (option - type no. 5911), external Pt100 sensor or fixed CJC (thermostat box).
Sensor error detection available.
RTD input in ranges with 16 bit resolution for Pt100, Ni100 in temperature ranges acc. to the IEC 751/ DIN 43760 standards. Set-up of main type is possible in multipla (e.g. Pt50 and Ni1000).
Automatic cable compensation by 3- or 4-wire sensor connection. By 2-wire sensor connection it is possible to compensate cable resistance with the function keys directly from the front cover.
Sensor error detection available.
Resistance input in ranges with 16 bit resolution for resistance measurement. Max. range 5 k . Cable compensation by 3- or 4-wire connection. 0% and 100% process calibration is possible with the function keys directly from the front cover.
Cable breakage detection available.

Current input in ranges with a 15 bit bipolar resolution for DC current signals. 0% and 100% process calibration is possible with the function keys directly from the front cover.
Cable breakage detection available on 4...20 mA signals.

Voltage input in ranges with a 15 bit bipolar resolution for DC voltage signals, 3-wire potentiometer, load cells, pressure transducers etc. 0% and 100% process calibration is possible with the function keys directly from the front cover.

Auxiliary supplies:
(Selected by internal dipswitches).
Loop supply 20 VDC / 20 mA for supply of 2-wire transmitter.
Reference voltage 2.5 VDC, 15 mA as reference for 3-wire potentiometers e.g. as position indicator from analogue valves etc.
Excitation voltage 8 VDC, 25 mA for supply of load cells, pressure transducers etc.

Outputs: (option)
(Selected by internal dipswitches).
Current output with 13 bit bipolar resolution programmable in the range ±20 mA by a maximum offset of 75% of max. output value.
Voltage output with 13 bit bipolar resolution in the ranges ±1 VDC and ±10 VDC. Max. load 20 mA.
Relay output (relay 1 and 2) is selected as a make or break function. The relays can be used as trip amplifier or / and sensor / cable error alarm for a TC, an RTD, a resistance input and current input.

Display:
4½-digit LCD or LED display with 14 mm digit height. Max. display readout ±19999 with selectable decimal point, relay ON/OFF indication and tendency readout for the input signal.
From the function keys in the front it is possible to change the limit values and delay for relays, display updating time, display scaling, decimal point, resolution on the last digit, analogue output scaling and calibration of cable resistance.
Furthermore, the LCD display has bargraph indication and the light intensity of the LED display can be changed.

Special version - 5511WEIG:
A special version of the 5511 display can be ordered for applications demanding a faster response time and easy access to »0« point calibration, e.g weigh conveyors. 5511WEIG is suitable where the input signal is load cell, mV, V or mA.

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Electrical specifications:

Specifications range:
(@: -20°C to +60°C)

Common specifications:

Supply voltage	24...230 VAC ±10% 24...250 VDC ±20%
Frequency	50...60 Hz
Internal consumption, LED / LCD	3 W / 2 W
Max. consumption, LED / LCD	4 W / 3 W
Fuse	400 mA SB / 250 VAC
Isolation, test / operation	3.75 kVAC / 250 VAC
Communications interface	Opto Link 5901
Signal / noise ratio, analogue output	Min. 60 dB
Signal dynamics, input	23 bit
Signal dynamics, output	16 bit
Response time (programmable)	
min.	Updating time x 2.5
max.	250 s
Updating time	250 ms
Calibration temperature	20...28°C
Temperature coefficient	< ±0.01% of span /°C
Linearity error	< 0.1% of span
Effect of supply voltage change	< 0.001% of span /%V

Auxiliary voltages:

Loop supply	20 VDC / 20 mA
Reference voltage	2.5 VDC ±0.5% / 15 mA
Excitation supply	8 VDC ±0.5% / 25 mA
EMC immunity influence	< ±0.5%
Wire square (max.)	1 x 2.5 mm^2
Screw terminal torsion	0.5 Nm
Humidity	< 95% RH (non-cond.)
Dimensions (HxWxD)	48 x 96 x 120 mm
Installation dimensions (HxW)	44.5 x 91.5 mm
Tightness (mounted in panel front)	IP65
Weight	300 g

Electrical specifications - input:
TC input:

Type	Min. temperature	Max. temperature	Min. span	Norm
B	+400°C	+1820°C	200°C	IEC584
E	-200°C	+1000°C	50°C	IEC584
J	-210°C	+1200°C	50°C	IEC584
K	-180°C	+1372°C	50°C	IEC584
L	-200°C	+900°C	50°C	DIN43710
N	-180°C	+1300°C	100°C	IEC584
R	-50°C	+1760°C	200°C	IEC584
S	-50°C	+1760°C	200°C	IEC584
T	-200°C	+400°C	50°C	IEC584
U	-200°C	+600°C	50°C	DIN43710
W3	0°C	+2300°C	200°C	ASTM E988-90
W5	0°C	+2300°C	200°C	ASTM E988-90

Max. offset	75% of selec. max. value
Sensor error current	Nom. 5 A
Updating time (int./ext. CJC/diff.)	250 ms
Basic accuracy:	
Type E,J,K,L,N,T,U	< ±0.5°C
Type B,R,S,W3,W5	< ±2°C
Cold junction compensation (CJC)	< ±0.5°C
Temperature coefficient	
Type E,J,K,L,N,T,U:	
span < 500°C	±0.05°C/°$C_{amb.}$
span > 500°C	±0.01% of span/°$C_{amb.}$
Type B,R,S,W3,W5	0.2°C/°$C_{amb.}$
Sensor error detection	Yes

RTD input:

RTD type	Min. temperature	Max. temperature	Min. span
Pt	-200°C	+850°C	25°C
Ni	-60°C	+250°C	25°C

Max. offset	75% of selec. max. value
Cable resistance per wire (max.)	50
Sensor current	Nom. 0.4 mA
Basic accuracy	±0.2°C
Temperature coefficient	
span < 100°C	±0.01°C/°$C_{amb.}$
span > 100°C	±0.01% of span/°$C_{amb.}$
Effect of sensor cable resistance	
3- / 4-wire	< 0.002
Sensor error detection	Yes

Linear resistance input:

Measurement range	0...5 k
Min. measurement range (span)	
2- / 4-wire	10
3-wire and difference	50
Max. offset	75% of selec. max. value
Max. cable resistance per wire	50
Sensor current	Nom. 0.4 mA
Effect of sensor cable resistance	
3- / 4-wire	< 0.002
Sensor error detection	Yes

Voltage input:

Measurement range	-240...+240 VDC
Min. measurement range (span)	20 mV
Max offset	75% of selec. max. value
Input resistance (Vin 2.4 V)	Nom. 10 M
(Vin > 2.4 V)	Nom. 5 M

Bridge input:

Measurement range	-70...+70 mV
Min. measurement range (span)	5 mV
Max. offset	75% of selec. max. value
Input resistance	Typ. 500 k

Current input:

Measurement range	-100...+100 mA
Min. measurement range (span)	2 mA
Max. offset	75% of selec. max. value
Input resistance	Nom. 10 + PTC 10
Cable breakage detection (4...20 mA)	Yes

Electrical specifications - output:
Current output:

Signal range	-20...+20 mA
Min. signal range (span)	5 mA
Max. offset	75% of selec. max. value
Load (max.)	20 mA / 600 12 VDC
Load stability	< ±0.01% of span /100
Current limit	23.5 mA

Voltage output:

Signal range	-10...+10 VDC
Min. signal range (span)	0.25 VDC
Max. offset	75% of selec. max. value
Load (max.)	10 VDC / 20 mA
Current limit	40 mA
Voltage limit	11.5 VDC

Relay outputs:

Max. voltage	250 VRMS
Max. current	2 A / AC
Max. AC power	500 VA
Max. current at 24 VDC	1 A

Sensor/cable error indication:

Analogue output upscale	Max. value +10%
Analogue output downscale	Min. value -10%
Analogue output	Hold
Relay output	ON/OFF/Hold

Display:

Display readout	±19999 (4½-digit)
Min. display readout	1.0
Decimal point	Programmable
Digit height	14 mm

LED display:

Colour	Red with variable intensity
Tendency readout for measurement signal	2 green LEDs in the front
Relay ON/OFF indication	2 yellow LEDs

LCD display:

Bargraph resolution	2.5%
Tendency readout for measurement signal	In display
Relay ON/OFF indication	In display

Observed authority requirements:	**Standard:**
EMC 89/336/EEC, Emission	EN 50 081-1, EN 50 081-2
Immunity	EN 50 082-2, EN 50 082-1
Emission and immunity	EN 61 326
LVD 73/23/EEC	EN 61 010-1
PELV/SELV	IEC 364-4-41 and EN 60 742

Of span = Of the presently selected range

OPTIONS INDEX FOR THE 5511 PReview INDICATOR:

(Use this as a checklist when ordering configured units)

INPUT

RTD type:
Pt100 (DIN/IEC)
Pt n (100 x n)
(e.g. 10 = Pt1000)
Ni100
Ni n (100 x n)
(e.g. 5 = Ni500)

Specify range °C: ___

Thermocouple type:
Pt30%Rh-Pt6%Rh : type B
NiCr-CuNi : type E
Fe-CuNi : type J
NiCr-Ni : type K
Fe-CuNi : type L
NiCrSi-NiSi : type N
Pt13%Rh-Pt : type R
Pt10%Rh-Pt : type S
Cu-CuNi : type T
Cu-CuNi : type U
W3%Re/W25%Re : type W3
W5%Re/W26%Re : type W5

Specify range °C : ___

Linear resistance range:
(10 range 5000

Specify range : ___

Voltage range:
±20 mV range 240 VDC

* Voltage range includes bridge input for load cells (min. range ±5 mV) and 3-wire potentiometer input.

Specify range VDC: ____
Specify range mV: ___

mA range input:
±2 mA range 100 mA

Specify range mA:

Linearisation
Standard linearisation RTD, TC:

Linearisation
No linearisation
Customer linearisation (specify):

RTD options:
2-wire, fixed line resistance:
2-wire, external calibration:
3-wire compensation:
4-wire compensation:
Differential input:

TC options:
Internal CJC (Pt100):
External CJC (Pt100):
Fixed external CJC:
(specify °C)
Differential input:

Resistance options:
2-wire, fixed line resistance:
2-wire, external calibration:
3-wire compensation:
4-wire compensation:
Differential input:

Voltage options:
Vref.: 2.5 VDC
(e.g. potentiometer input as voltage divider)
Vexcitation: 8 VDC
(e.g. bridge input from load cells)

mA options:
Loop supply: 20 VDC

Process calibration:
0% calibration
0% and 100% calibration
No process calibration

OUTPUT

Voltage output:
0.25 VDC range ±1 VDC
2.5 VDC range ±10 VDC
Output voltage 0% (specify): ___
Output voltage 100% (specify): ___
Voltage limit value ±11.5 VDC:

mA output:
±5 mA range ±20 mA
Output current 0% (specify): ___
Output current 100% (specify): ___
Current limit value ±23.5 mA:

Response time:
625 ms response time 250 s

Relay 1 & 2 options:

Relay setpoint:
% of output span
Units of analogue input
Units of analogue output
Relay delay

Relay action:
Increase
Decrease
Sensor error
Off

Relay sensor error action:
High
Low
Hold
No sensor error

Relay contact function:
Contact N.O.
Contact N.C.

Display options:
0% display value
100% display value
Display intensity 1...15 (default 10) (LED display only)
Decimal point XXXXX:
Decimal point XXXX,X:
Decimal point XXX,XX:
Decimal point XX,XXX:
Decimal point X,XXXX:
Display updating time (250 ms to 20 s in steps of 50 ms):
Full resolution last digit
Even resolution on last digit (0, 2, 4, 6, 8)
Half resolution on last digit (0, 5)
Last digit fixed zero:

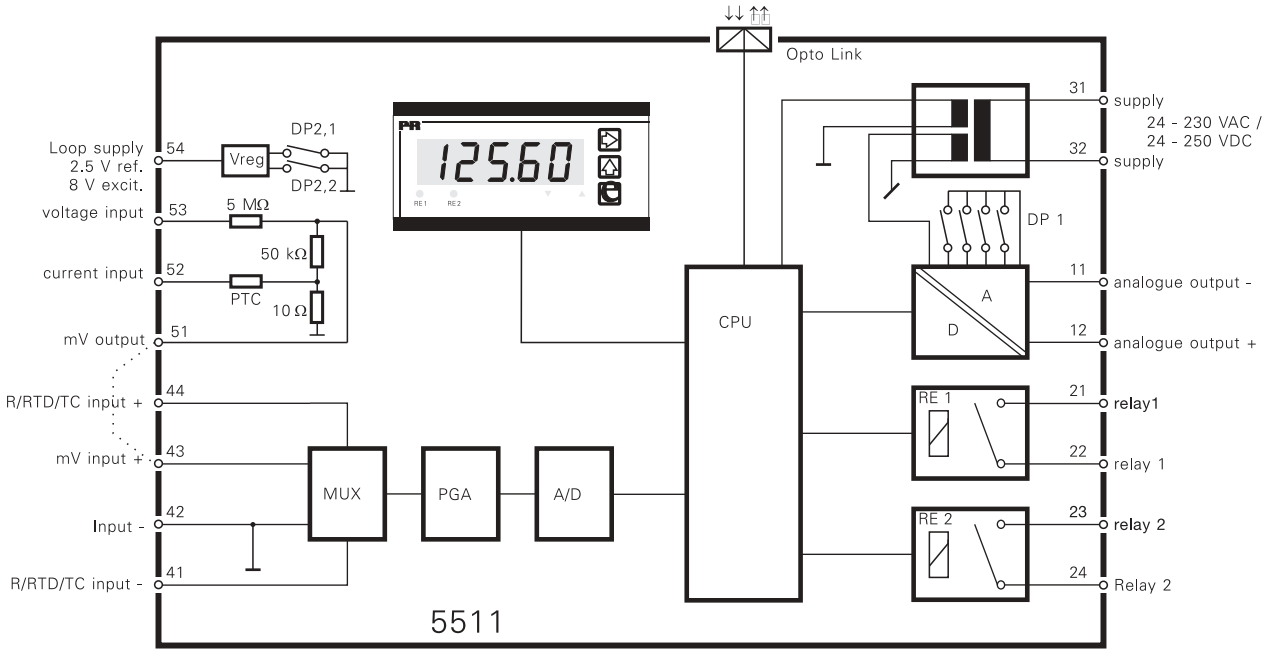
Order: 5511

Type	Version	Output option	Display option
5511	Standard version : A	No option : 1 Analogue output + 2 relays : 2	LED display : A LCD display : B

Note! For TC inputs with internal CJC, remember to order the CJC connector type 5911.

Order: 5511WEIG
(special version of the 5511A2A)

Block diagram:



Mechanical specifications: