

# PR



## 5714

**Programmable  
LED Indicator**

No. 5714V103-UK  
From serial number:  
121496001 (A+B)  
131077001 (C+D)



**SIGNALS THE BEST**

- DK** ▶ PR electronics A/S tilbyder et bredt program af analoge og digitale signalbehandlingsmoduler til industriel automation. Programmet består af Isolatorer, Displays, Ex-barrierer, Temperaturtransmittere, Universaltransmittere mfl. Vi har modulerne, du kan stole på i selv barske miljøer med elektrisk støj, vibrationer og temperaturudsving, og alle produkter opfylder de strengeste internationale standarder. Vores motto »Signals the Best« er indbegrebet af denne filosofi – og din garanti for kvalitet.
- UK** ▶ PR electronics A/S offers a wide range of analogue and digital signal conditioning devices for industrial automation. The product range includes Isolators, Displays, Ex Interfaces, Temperature Transmitters, and Universal Devices. You can trust our products in the most extreme environments with electrical noise, vibrations and temperature fluctuations, and all products comply with the most exacting international standards. »Signals the Best« is the epitome of our philosophy – and your guarantee for quality.
- FR** ▶ PR electronics A/S offre une large gamme de produits pour le traitement des signaux analogiques et numériques dans tous les domaines industriels. La gamme de produits s'étend des transmetteurs de température aux afficheurs, des isolateurs aux interfaces SI, jusqu'aux modules universels. Vous pouvez compter sur nos produits même dans les conditions d'utilisation sévères, p.ex. bruit électrique, vibrations et fluctuations de température. Tous nos produits sont conformes aux normes internationales les plus strictes. Notre devise »SIGNALS the BEST« c'est notre ligne de conduite - et pour vous l'assurance de la meilleure qualité.
- DE** ▶ PR electronics A/S verfügt über ein breites Produktprogramm an analogen und digitalen Signalverarbeitungsgeräte für die industrielle Automatisierung. Dieses Programm umfasst Displays, Temperaturtransmitter, Ex- und galvanische Signaltrenner, und Universalgeräte. Sie können unsere Geräte auch unter extremen Einsatzbedingungen wie elektrisches Rauschen, Erschütterungen und Temperaturschwingungen vertrauen, und alle Produkte von PR electronics werden in Übereinstimmung mit den strengsten internationalen Normen produziert. »Signals the Best« ist Ihre Garantie für Qualität!

# PROGRAMMABLE LED INDICATOR PREVIEW 5714

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**GENERAL**

## **WARNING!**

This device is designed for connection to hazardous electric voltages. Ignoring this warning can result in severe personal injury or mechanical damage. To avoid the risk of electric shock and fire, the safety instructions of this manual must be observed and the guidelines followed. The specifications must not be exceeded, and the device must only be applied as described in the following. Prior to the commissioning of the device, this manual must be examined carefully. Only qualified personnel (technicians) should install this device.

If the equipment is used in a manner not specified by the manufacturer, the protection provided by the equipment may be impaired.



**HAZARD-  
OUS  
VOLTAGE**



## **WARNING!**

Until the device is fixed, do not connect hazardous voltages to the device.

The following operations should only be carried out on a disconnected device and under ESD safe conditions:

Troubleshooting the device.

**Repair of the device must be done by PR electronics A/S only.**

## **SYMBOL IDENTIFICATION**



**Triangle with an exclamation mark:** Warning / demand.  
Potentially lethal situations.



**The CE mark** proves the compliance of the device with the essential requirements of the directives.

# SAFETY INSTRUCTIONS

## **DEFINITIONS:**

Hazardous voltages have been defined as the ranges: 75 to 1500 Volt DC, and 50 to 1000 Volt AC.

Technicians are qualified persons educated or trained to mount, operate, and also troubleshoot technically correct and in accordance with safety regulations. Operators, being familiar with the contents of this manual, adjust and operate the knobs or potentiometers during normal operation.

## **RECEIPT AND UNPACKING:**

Unpack the device without damaging it. The packing should always follow the device until this has been permanently mounted. Check at the receipt of the device whether the type corresponds to the one ordered.

## **ENVIRONMENT:**

Avoid direct sunlight, dust, high temperatures, mechanical vibrations and shock, as well as rain and heavy moisture. If necessary, heating in excess of the stated limits for ambient temperatures should be avoided by way of ventilation.

All devices fall under Installation Category II, Pollution Degree 1, and Insulation Class II.

## **MOUNTING:**

Only technicians who are familiar with the technical terms, warnings, and instructions in the manual and who are able to follow these should connect the device.

Should there be any doubt as to the correct handling of the device, please contact your local distributor or, alternatively,

**PR electronics A/S**  
**[www.prelectronics.com](http://www.prelectronics.com)**

Mounting and connection of the device should comply with national legislation for mounting of electric materials, i.a. wire cross section, protective fuse, and location. Descriptions of Input / Output and supply connections are shown in the block diagram and side label.

The following apply to fixed hazardous voltages-connected devices:

The max. size of the protective fuse is 10 A and, together with a power switch, it should be easily accessible and close to the device. The power switch should be marked with a label telling it will switch off the voltage to the device.

#### **UL INSTALLATION REQUIREMENTS:**

For use on a flat surface of a type 1 enclosure

Use 60/75°C copper conductors only

Enclosure rating (face only)..... Type 4X, UL50E

Max. ambient temperature..... 60°C

Max. wire size, pins 41...46..... AWG 30-16

Max. wire size, others ..... AWG 30-12

UL file number..... E248256

#### **CALIBRATION AND ADJUSTMENT:**

During calibration and adjustment, the measuring and connection of external voltages must be carried out according to the specifications of this manual. The technician must use tools and instruments that are safe to use.

#### **NORMAL OPERATION:**

Operators are only allowed to adjust and operate devices that are safely fixed in panels, etc., thus avoiding the danger of personal injury and damage. This means there is no electrical shock hazard, and the device is easily accessible.

#### **CLEANING:**

When disconnected, the device may be cleaned with a cloth moistened with distilled water.

#### **LIABILITY:**

To the extent the instructions in this manual are not strictly observed, the customer cannot advance a demand against PR electronics A/S that would otherwise exist according to the concluded sales agreement.

# DECLARATION OF CONFORMITY

As manufacturer

**PR electronics A/S**  
**Lerbakken 10**  
**DK-8410 Rønde**

hereby declares that the following product:

**Type: 5714**  
**Name: Programmable LED indicator**

is in conformity with the following directives and standards:

The EMC Directive 2004/108/EC and later amendments

**EN 61326-1**

For specification of the acceptable EMC performance level, refer to the electrical specifications for the device.

The Low Voltage Directive 2006/95/EC and later amendments

**EN 61010-1**

Rønde, 22 December 2009

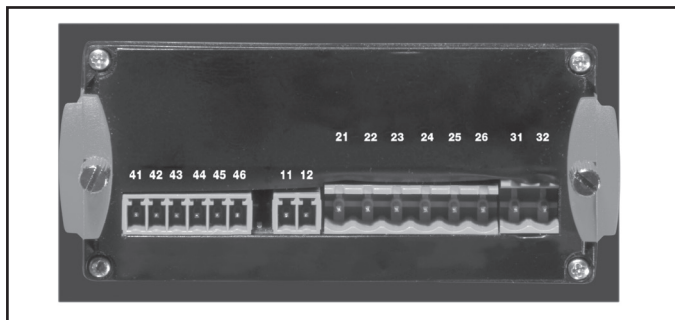


Kim Rasmussen  
Manufacturer's signature

## FRONT AND BACK LAYOUT



**Picture 1:** Front of PReview 5714.



**Picture 2:** Back of PReview 5714.



# PROGRAMMABLE LED INDICATOR

## PREVIEW 5714

- *4-digit 14-segment LED indicator*
- *Input for mA, V, potentiometer, Ohm, RTD and TC*
- *2 relays and analogue output*
- *Universal voltage supply*
- *Front key programmable*

### **Application:**

- Display for digital readout of current, voltage, resistance, temperature or potentiometer signals.
- Process control with 2 pairs of potential-free relays and / or analogue output.
- For local readout in extremely wet atmospheres with a specially designed splash-proof cover.

### **Technical characteristics:**

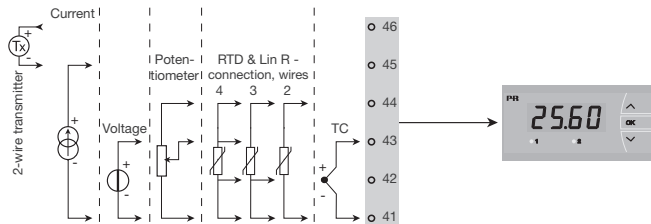
- 4-digit LED indicator with 13.8 mm 14-segment characters. Max. display readout -1999...9999 with programmable decimal point, relay ON / OFF indication.
- All operational parameters can be adjusted to any application by use of the front keys.
- PReview 5714 is available fully-configured acc. to specifications ready for process control and visualisation.
- Help texts in eight languages can be selected via a menu item.
- In versions with relay outputs the user can minimise the installation test time by activating / deactivating each relay independently of the input signal.

### **Mounting:**

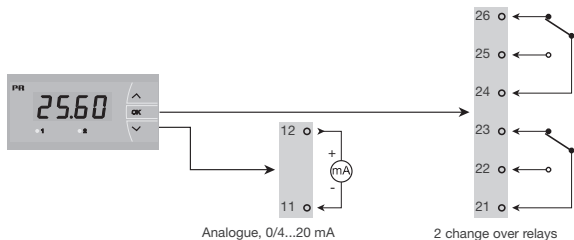
- To be mounted in front panel. The included rubber packing must be mounted between the panel cutout hole and the display front to obtain a protection degree of IP65 (type 4X). For extra protection in extreme environments, PReview 5714 can be delivered with a specially designed splash-proof cover as accessory.

# Applications

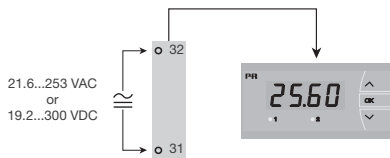
## Input signals:



## Output signals:



## Supply:



Order: 5714

Type	Version
5714	Standard.....: A
	2 relays.....: B
	Analogue output.....: C
	Analogue output and 2 relays...: D

NB! Please order the splash-proof cover separately. Order No. 8335.

**Electrical specifications:**

**Specifications range:**

-20°C to +60°C

**Common specifications:**

Supply voltage, universal ..... 21.6...253 VAC, 50...60 Hz or  
19.2...300 VDC

**Consumption**

Type	Internal consumption	Max. consumption
5714A	2.2 W	2.5 W
5714B/C	2.7 W	3.0 W
5714D	3.2 W	3.5W

Isolation voltage, test / operation ..... 2.3 kVAC / 250 VAC

Signal- / noise ratio..... Min. 60 dB (0...100 kHz)

Response time (0...90 %, 100...10 %), programmable:

Temperature input..... 1...60 s

Current / voltage input..... 0.4...60 s

Calibration temperature..... 20...28°C

**Accuracy, the greater of general and basic values:**

General values		
Input type	Absolute accuracy	Temperature coefficient
All	≤ ±0.1% of reading	≤ ±0.01% of reading / °C

Basic values		
Input type	Basic accuracy	Temperature coefficient
mA	$\leq \pm 4 \mu\text{A}$	$\leq \pm 0.4 \mu\text{A} / ^\circ\text{C}$
Volt	$\leq \pm 20 \mu\text{V}$	$\leq \pm 2 \mu\text{V} / ^\circ\text{C}$
Pt100	$\leq \pm 0.2^\circ\text{C}$	$\leq \pm 0.01^\circ\text{C} / ^\circ\text{C}$
Linear resistance	$\leq \pm 0.1 \Omega$	$\leq \pm 0.01 \Omega / ^\circ\text{C}$
Potentiometer	$\leq \pm 0.1 \Omega$	$\leq \pm 0.01 \Omega / ^\circ\text{C}$
TC type: E, J, K, L, N, T, U	$\leq \pm 1^\circ\text{C}$	$\leq \pm 0.05^\circ\text{C} / ^\circ\text{C}$
TC type: R, S, W3, W5, LR	$\leq \pm 2^\circ\text{C}$	$\leq \pm 0.2^\circ\text{C} / ^\circ\text{C}$
TC type: B 160...400 $^\circ\text{C}$	$\leq \pm 4.5^\circ\text{C}$	$\leq \pm 0.45^\circ\text{C} / ^\circ\text{C}$
TC type: B 400...1820 $^\circ\text{C}$	$\leq \pm 2^\circ\text{C}$	$\leq \pm 0.2^\circ\text{C} / ^\circ\text{C}$

EMC immunity influence .....	$< \pm 0.5\%$ of readout
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#### Auxiliary supplies:

2 wire supply (pin 46...45) .....	25...15 VDC / 0...20 mA
Wire size, pin 41...46 (max.) .....	1 x 1.5 mm <sup>2</sup> stranded wire
Wire size, others (max.) .....	1 x 2.5 mm <sup>2</sup> stranded wire
Relative humidity .....	$< 95\%$ RH (non cond.)
Dimensions (HxWxD) .....	48 x 96 x 120 mm
Cutout dimensions .....	44.5 x 91.5 mm
Protection degree (mounted in panel) .....	IP65 / Type 4X, UL50E
Weight .....	230 g

#### RTD, linear resistance and potentiometer input:

Input type	Min. value	Max. value	Standard
Pt10...Pt1000	-200 $^\circ\text{C}$	+850 $^\circ\text{C}$	IEC 60751
Ni50...Ni1000	-60 $^\circ\text{C}$	+250 $^\circ\text{C}$	DIN 43760
Cu10...Cu100	-200 $^\circ\text{C}$	+260 $^\circ\text{C}$	$\alpha = 0.00427$
Lin. R	0 $\Omega$	10000 $\Omega$	-
Potentiometer	10 $\Omega$	100 k $\Omega$	-

#### Input for RTD types:

Pt10, Pt20, Pt50, Pt100, Pt200, PT250, Pt300, Pt400, Pt500, Pt1000  
Ni50, Ni100, Ni120, Ni1000, Cu10, Cu20, Cu50, Cu100

Cable resistance pr. wire, RTD (max.)..... 50 Ω  
 Sensor current, RTD..... Nom. 0.2 mA  
 Effect of sensor cable resistance  
 (3- / 4-wire), RTD..... < 0.002 Ω / Ω  
 Sensor error detection, RTD ..... Yes  
 Short circuit detection, RTD..... < 15 Ω

**TC input:**

Type	Min. value	Max. value	Standard
B	0°C	+1820°C	IEC 60584-1
E	-100°C	+1000°C	IEC 60584-1
J	-100°C	+1200°C	IEC 60584-1
K	-180°C	+1372°C	IEC 60584-1
L	-200°C	+900°C	DIN 43710
N	-180°C	+1300°C	IEC 60584-1
R	-50°C	+1760°C	IEC 60584-1
S	-50°C	+1760°C	IEC 60584-1
T	-200°C	+400°C	IEC 60584-1
U	-200°C	+600°C	DIN 43710
W3	0°C	+2300°C	ASTM E988-90
W5	0°C	+2300°C	ASTM E988-90
LR	-200°C	+800°C	GOST 3044-84

**Cold junction compensation (CJC)**

via internal sensor .....  $\pm(2.0^{\circ}\text{C} + 0.4^{\circ}\text{C} * \Delta t)$

$\Delta t$  = internal temperature - ambient temperature

Sensor error detection, all TC types ..... Yes

Sensor error detection ..... Yes

**Sensor error current:**

when detecting ..... Nom. 2 μA

else ..... 0 μA

**Current input:**

Measurement range ..... 0...20 mA

Programmable measurement ranges ..... 0...20 and 4...20 mA

Input resistance ..... Nom. 20 Ω + PTC 25 Ω

**Sensor error detection:**

loop break 4...20 mA ..... Yes

**Voltage input:**

Measurement range ..... 0...12 VDC

Programmable measurement ranges ..... 0...1 / 0.2...1 /  
 0...10 / 2...10 VDC

Input resistance ..... Nom. 10 MΩ

## Outputs:

### Display:

Display readout .....	-1999...9999 (4 digits)
Decimal point .....	Programmable
Digit height .....	13.8 mm
Display updating .....	2.2 times / s
Input outside input range is indicated by.....	Explanatory text

### Current output:

Signal range (span).....	0...20 mA	
Programmable signal ranges .....	0...20 / 4...20 / 20...0 / 20...4 mA	
Load (max.).....	20 mA / 800 $\Omega$ / 16 VDC	
Load stability .....	$\leq 0.01\%$ of span / 100 $\Omega$	
Sensor error detection .....	0 / 3.5 / 23 mA / none & NAMUR NE 43 up / downscale .....	23 mA / 3.5 mA
Output limitation:		
on 4...20 and 20...4 mA signals.....	3,8...20.5 mA	
on 0...20 and 20...0 mA signals.....	0...20.5 mA	
Current limit.....	$\leq 28$ mA	

### Relay outputs:

Relay function.....	Setpoint
Hysteresis.....	0...100%
On and Off delay .....	0...3600 s
Sensor error detection .....	Make / Break / Hold
Max. voltage.....	250 VRMS
Max. current .....	2 A / AC
Max. AC power .....	500 VA
Max. current at 24 VDC.....	1 A

### Marine approval:

Det Norske Veritas, Ships & Offshore .....	Standard for Certification No. 2.4
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### GOST R approval:

VNIIM, Cert. no.....	See <a href="http://www.prelectronics.com">www.prelectronics.com</a>
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### Observed authority requirements:

EMC 2004/108/EC .....	EN 61326-1
LVD 2006/95/EC.....	EN 61010-1
UL, Standard for Safety .....	UL 508

## Sensor error detection / sensor error detection outside range:

Sensor error check in 5714 variants		
Variant:	Configuration	Sensor error detection:
5714A	Always:	ON
5714B	ERR1=NONE, ERR2=NONE:	OFF
	else:	ON
5714C	O.ERR=NONE:	OFF
	else:	ON
5714D	ERR1=NONE, ERR2=NONE, O.ERR=NONE:	OFF
	else:	ON

Outside range readout (IN.LO, IN.HI): If the valid range of the A/D converter or the polynomial is exceeded			
Input	Range	Readout	Limit
VOLT	0...1 V / 0,2...1 V	IN.LO	< -25 mV
		IN.HI	> 1,2 V
	0...10 V / 2...10 V	IN.LO	< -25 mV
		IN.HI	> 12 V
CURR	0...20 mA / 4...20 mA	IN.LO	< -1,05 mA
		IN.HI	> 25,05 mA
POTM	-	IN.LO	< -0,5%
		IN.HI	> 100,5%
TEMP	TC / RTD	IN.LO	< temperature range -2°C
		IN.HI	> temperature range +2°C
LIN R	0...800 ohm	IN.LO	< 0 ohm
		IN.HI	> 1 kohm
	0...10 kohm	IN.LO	< 0 ohm
		IN.HI	> 15 kohm

Sensor error detection (SE.BR, SE.SH):			
Input	Range	Readout	Limit
CURR	Loop break (4...20mA)	SE.BR	<= 3,6 mA; > = 21 mA
TEMP	TC RTD, 2-, 3- & 4-wire No SE.SH for Cuxx, Pt10, Pt20 & Pt50	SE.BR	> ca. 750 kohm / (1,25 V)
		SE.BR	> 12 kohm
		SE.SH	< 15 ohm
LIN R	0...800 ohm	SE.BR	> 875 ohm
	0...10 kohm	SE.BR	> 12 kohm

Display readout below min. / above max. (-1.9.9.9, 9.9.9.9):			
Input	Range	Readout	Limit
CURR VOLT	All	-1.9.9.9	Display readout <-1999
		9.9.9.9	Display readout >9999
LIN R	All	-1.9.9.9	Display readout <-1999
		9.9.9.9	Display readout >9999
POTM	-	-1.9.9.9	Display readout <-1999
		9.9.9.9	Display readout >9999

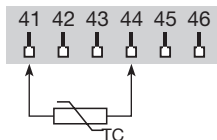
Readout at hardware error		
Error search	Readout	Error cause
Test of internal communication uC / ADC	HW.ER	Permanent error in ADC
Test of internal CJC sensor	CJ.ER	CJC sensor defect
Check-sum test of the configuration in RAM	RA.ER	Error in RAM
Check-sum test of the configuration in EEPROM	EE.ER	Error in EEPROM

! Error indications in the display blink once a second. The help text explains the error.

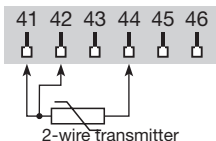
## CONNECTIONS

### Inputs:

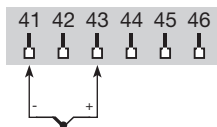
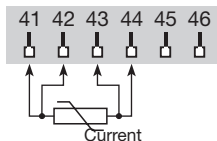
RTD & Lin R, 2-wire



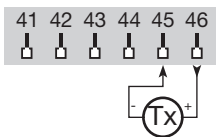
RTD & Lin R, 3-wire



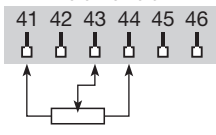
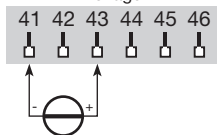
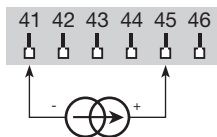
RTD & Lin R, 4-wire



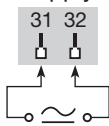
Voltage



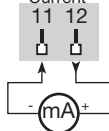
Potentiometer



### Supply:

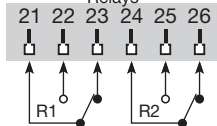


### Current



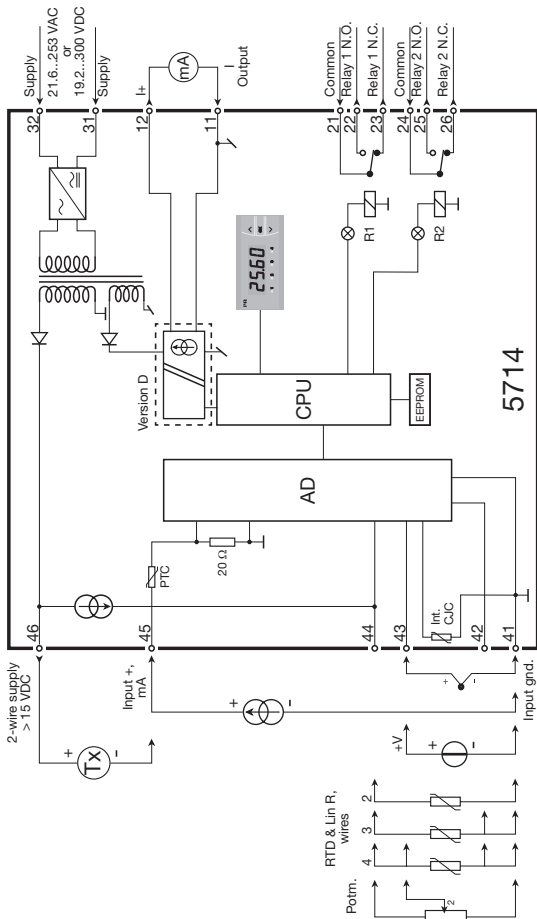
### Output:

#### Relays

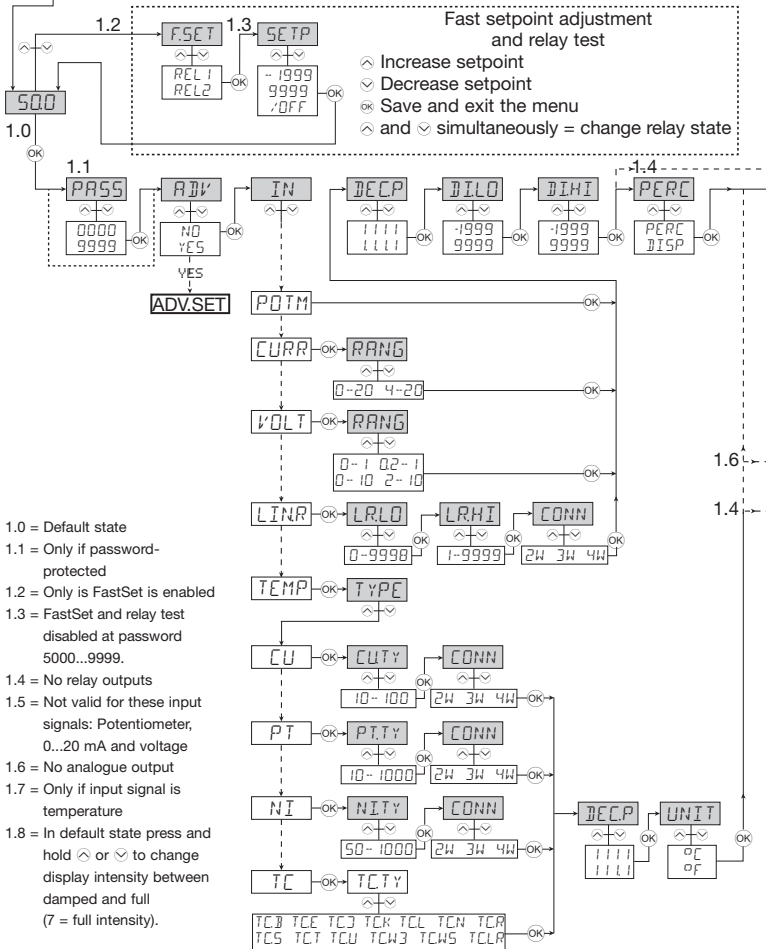




# BLOCK DIAGRAM



Power up



# ROUTING DIAGRAM

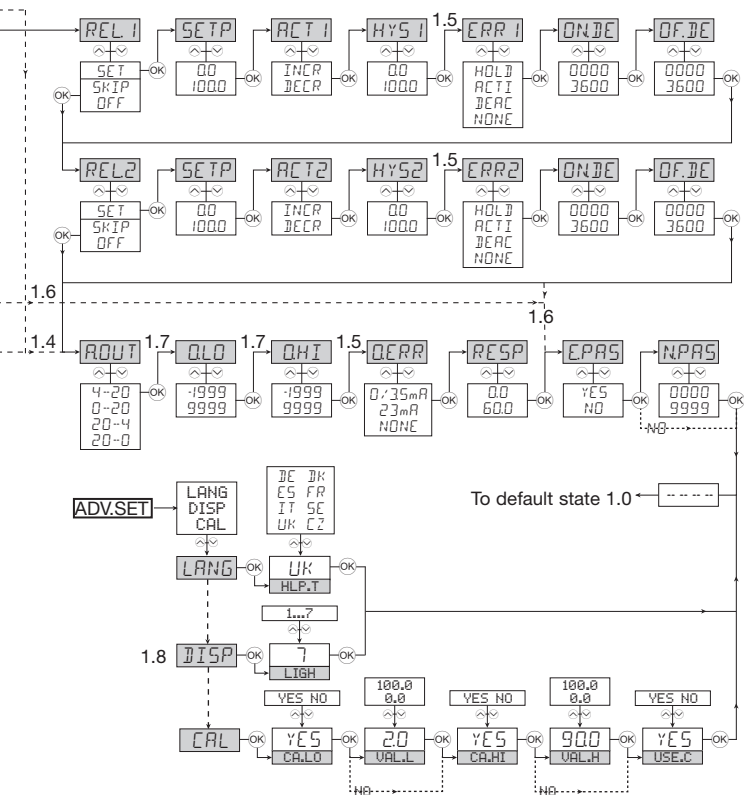
If no keys are activated for 2 minutes the display returns to default state 1.0 without saving configuration changes..

⬆ Increase value / choose next parameter

⬇ Decrease value / choose previous parameter

⊗ Accept the chosen parameter and go to the next menu

Hold ⊗ Back to previous menu / return to menu 1.0 without saving



# SCROLLING HELP TEXT

## Display in default state xxxx, hardware error:

**SE.BR** --> SENSOR WIRE BREAKAGE  
**SE.SH** --> SENSOR SHORT CIRCUIT  
**IN.HI** --> INPUT OVERRANGE  
**IN.LO** --> INPUT UNDERANGE  
**9.9.9.9** --> DISPLAY OVERRANGE  
**-1.9.9.9** --> DISPLAY UNDERANGE  
**HW.ER** --> HARDWARE ERROR  
**EE.ER** --> EEPROM ERROR -  
CHECK CONFIGURATION  
**RA.ER** --> RAM MEMORY ERROR  
**CJ.ER** --> CJC SENSOR ERROR

## Fastset (Enabled):

**F.SET**  
**REL1** --> FAST SET MENU -  
**REL2** --> SELECT RELAY

## SETP

xxxx --> RELAY SETPOINT - PRESS OK TO SAVE

## Fastset (Disabled):

**SETP**  
xxxx --> RELAY SETPOINT - READ ONLY

## Configuration menus:

**ADV**  
**YES** --> ENTER ADVANCED SETUP MENU?  
**NO**

## PASS

xxxx --> SET CORRECT PASSWORD

## IN

**C.LIN\*** --> TEXT ENTERED BY USER IN PRESET  
**CURR** --> CURRENT INPUT  
**VOLT** --> VOLTAGE INPUT  
**POTM** --> POTENTIOMETER INPUT  
**LIN.R** --> LINEAR RESISTANCE INPUT  
**TEMP** --> TEMPERATURE SENSOR INPUT

## RANG When current selected:

0-20 --> INPUT RANGE IN mA  
4-20 --> INPUT RANGE IN mA

## RANG When voltage selected:

0-10 --> INPUT RANGE IN VOLT  
2-10 --> INPUT RANGE IN VOLT  
0.0-1 --> INPUT RANGE IN VOLT  
0.2-1 --> INPUT RANGE IN VOLT

## DEC.P

1111 --> DECIMAL POINT POSITION  
111.1 --> DECIMAL POINT POSITION  
11.11 --> DECIMAL POINT POSITION  
1.111 --> DECIMAL POINT POSITION

## LR.LO

xxxx --> SET RESISTANCE VALUE LOW

## LR.HI

xxxx --> SET RESISTANCE VALUE HIGH

## DI.LO

xxxx --> DISPLAY READOUT LOW

## DI.HI

xxxx --> DISPLAY READOUT HIGH

## REL.U

**PERC** --> SET RELAY IN PERCENTAGE  
**DISP** --> SET RELAY IN DISPLAY UNITS

## TYPE

**CU** --> SELECT CU SENSOR TYPE  
**PT** --> SELECT PT SENSOR TYPE  
**NI** --> SELECT NI SENSOR TYPE  
**TC** --> SELECT TC SENSOR TYPE

## CU.TY

10 --> SELECT CU SENSOR TYPE  
20 --> SELECT CU SENSOR TYPE  
50 --> SELECT CU SENSOR TYPE  
100 --> SELECT CU SENSOR TYPE

## PT.TY

10 --> SELECT PT SENSOR TYPE  
20 --> SELECT PT SENSOR TYPE  
50 --> SELECT PT SENSOR TYPE  
100 --> SELECT PT SENSOR TYPE  
200 --> SELECT PT SENSOR TYPE  
250 --> SELECT PT SENSOR TYPE  
300 --> SELECT PT SENSOR TYPE  
400 --> SELECT PT SENSOR TYPE  
500 --> SELECT PT SENSOR TYPE  
1000 --> SELECT PT SENSOR TYPE

## NI.TY

50 --> SELECT NI SENSOR TYPE  
100 --> SELECT NI SENSOR TYPE  
120 --> SELECT NI SENSOR TYPE  
1000 --> SELECT NI SENSOR TYPE

## CONN

**When Cu, Pt and Ni sensor is selected**  
**2W** --> SELECT 2-WIRE SENSOR CONNECTION  
**3W** --> SELECT 3-WIRE SENSOR CONNECTION  
**4W** --> SELECT 4-WIRE SENSOR CONNECTION

## TC.TY

**TC. B** --> SELECT TC SENSOR TYPE  
**TC. E** --> SELECT TC SENSOR TYPE  
**TC. J** --> SELECT TC SENSOR TYPE  
**TC. K** --> SELECT TC SENSOR TYPE  
**TC. L** --> SELECT TC SENSOR TYPE  
**TC. N** --> SELECT TC SENSOR TYPE  
**TC. R** --> SELECT TC SENSOR TYPE  
**TC. S** --> SELECT TC SENSOR TYPE  
**TC. T** --> SELECT TC SENSOR TYPE  
**TC. U** --> SELECT TC SENSOR TYPE  
**TC.W3** --> SELECT TC SENSOR TYPE  
**TC.W5** --> SELECT TC SENSOR TYPE  
**TC.LR** --> SELECT TC SENSOR TYPE

## DEC.P

**When temperature selected**  
**1111** --> DECIMAL POINT POSITION  
**111.1** --> DECIMAL POINT POSITION

## UNIT

**°C** --> DISPLAY AND RELAY SETUP IN CELSIUS  
**°F** --> DISPLAY AND RELAY SETUP IN FAHRENHEIT

**REL1**  
 SET --> ENTER RELAY 1 SETUP  
 SKIP --> SKIP RELAY 1 SETUP  
 OFF --> RELAY 1 DISABLED

**SETP**  
 xxxx --> RELAY SETPOINT

**ACT1**  
 INCR --> ACTIVATE AT INCREASING SIGNAL  
 DECR --> ACTIVATE AT DECREASING SIGNAL

**HYS1**  
 xxxx --> RELAY HYSTERESIS

**ERR1**  
 HOLD --> HOLD RELAY AT ERROR  
 ACTI --> ACTIVATE RELAY AT ERROR  
 DEAC --> DEACTIVATE RELAY AT ERROR  
 NONE --> UNDEFINED STATUS AT ERROR

**ON.DE**  
 xxxx --> RELAY ON-DELAY IN SECONDS

**OF.DE**  
 xxxx --> RELAY OFF-DELAY IN SECONDS

**REL2**  
 SET --> ENTER RELAY 2 SETUP  
 SKIP --> SKIP RELAY 2 SETUP  
 OFF --> RELAY 2 DISABLED

**SETP**  
 xxxx --> RELAY SETPOINT

**ACT2**  
 INCR --> ACTIVATE AT INCREASING SIGNAL  
 DECR --> ACTIVATE AT DECREASING SIGNAL

**HYS2**  
 xxxx --> RELAY HYSTERESIS

**ERR2**  
 HOLD --> HOLD RELAY AT ERROR  
 ACTI --> ACTIVATE RELAY AT ERROR  
 DEAC --> DEACTIVATE RELAY AT ERROR  
 NONE --> UNDEFINED STATUS AT ERROR

**ON.DE**  
 xxxx --> RELAY ON-DELAY IN SECONDS

**OF.DE**  
 xxxx --> RELAY OFF-DELAY IN SECONDS

**A.OUT**  
 0-20 --> OUTPUT RANGE IN mA  
 4-20 --> OUTPUT RANGE IN mA  
 20-0 --> OUTPUT RANGE IN mA  
 20-4 --> OUTPUT RANGE IN mA

**O.LO**  
 xxxx --> DISPLAY VALUE FOR OUTPUT LOW

**O.HI**  
 xxxx --> DISPLAY VALUE FOR OUTPUT HIGH

**O.ERR**  
 23 mA --> NAMUR NE43 UPSCALE AT ERROR  
 3,5 mA --> NAMUR NE43 DOWNSCALE AT ERROR  
 0mA --> DOWNSCALE AT ERROR  
 NONE --> UNDEFINED OUTPUT AT ERROR

**RESP**  
 xxx.x --> ANALOGUE OUTPUT RESPONSE TIME  
 IN SECONDS

**E.PAS**  
 NO --> ENABLE PASSWORD PROTECTION  
 YES

**N.PAS**  
 xxxx --> SELECT NEW PASSWORD

**ADV MENU:**  
 LANG --> ENTER LANGUAGE SETUP  
 DISP --> ENTER DISPLAY SETUP  
 CAL --> PERFORM PROCESS CALIBRATION

**HLPT**  
 DE --> DE - WAEHLE DEUTSCHEN HILFETEXT  
 DK --> DK - VÆLG DANSK HJÆLPETEKST  
 ES --> ES - SELECCIONAR TEXTO DE  
 AYUDA EN ESPANOL  
 FR --> FR - SELECTION TEXTE D'AIDE  
 EN FRANCAIS  
 IT --> IT - SELEZIONARE TESTI DI  
 AIUTO ITALIANI  
 SE --> SE - VALJ SVENSK HJALPTEXT  
 UK --> UK - SELECT ENGLISH HELPTXT  
 CZ --> CZ - VYBER CESKOU NAPOVEDU

**LIGH**  
 xxxx --> ADJUST DISPLAY LIGHT INTENSITY

**CA.LO**  
 YES --> CALIBRATE INPUT LOW TO PROCESS  
 VALUE?  
 NO

**CA.HI**  
 YES --> CALIBRATE INPUT HIGH TO PROCESS  
 VALUE?  
 NO

**VAL.L**  
 xxxx --> SET VALUE FOR LOW CALIBRATION  
 POINT

**VAL.H**  
 xxxx --> SET VALUE FOR HIGH CALIBRATION  
 POINT

**USE.C**  
 YES --> USE PROCESS CALIBRATED VALUES?  
 NO

# CONFIGURATION / OPERATING THE FUNCTION KEYS

Documentation for routing diagram.

## In general:

When configuring the display you are guided through all parameters, you can choose the settings which fit the application. For each menu there is a scrolling help text which is automatically shown in the display, this starts after 5 seconds if no key has been activated.

Configuration is carried out by using the 3 function keys.

- ⬆ will increase the numerical value or choose the next parameter.
- ⬇ will decrease the numerical value or choose the previous parameter.
- OK will accept the chosen value and end the menu.

If a function does not exist in the display all parameters are skipped to make the configuration as simple as possible.

Once the configuration has been entered the display will show “----”.

Pressing and holding OK will return to the previous menu or return to the default state (1.0) without saving the changed values or parameters.

If no key is activated for 2 minutes, the display will return to the default state (1.0) without saving the changed values or parameters.

## Further explanations:

**Fast setpoint adjustment and relay test:** These menus allow you to change the set point quickly and to check the operation of the relays.

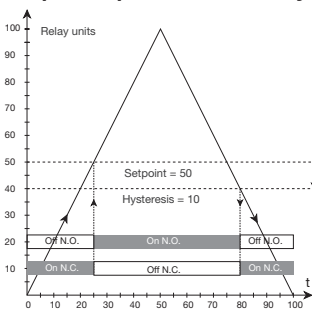
Pressing ⬆ and ⬇ at the same time will change the state of the relay – this change is indicated by the diodes on the display. Pressing OK will save the set point change.

Holding down OK for more than 0.5 seconds will return the unit to the default state without changing the set point.

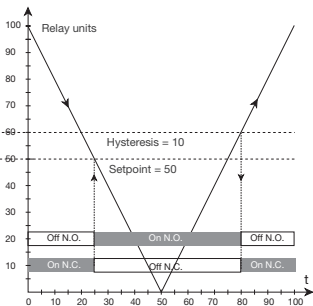
## Password protection:

Using a password will stop access to the menu and parameters. There are two levels of password protection. Passwords between 0000...4999 allow access to the fast set point adjustment and relay test. (Using this password stops access to all other parts of the menu). Passwords between 5000...9999 stop access to all parts of the menu, fast set point and relay test. (Current set point is still shown). By using the master password 2008, all configuration menus are available.

## Graphic depiction of the relay function setpoint:



Relay action: Increasing



Relay action: Decreasing



**Displays** Programmable displays with a wide selection of inputs and outputs for display of temperature, volume and weight, etc. Feature linearisation, scaling, and difference measurement functions for programming via PReset software.



**Ex interfaces** Interfaces for analogue and digital signals as well as HART® signals between sensors / I/P converters / frequency signals and control systems in Ex zone 0, 1 & 2 and for some devices in zone 20, 21 & 22.



**Isolation** Galvanic isolators for analogue and digital signals as well as HART® signals. A wide product range with both loop-powered and universal isolators featuring linearisation, inversion, and scaling of output signals.



**Temperature** A wide selection of transmitters for DIN form B mounting and DIN rail devices with analogue and digital bus communication ranging from application-specific to universal transmitters.



**Universal** PC or front programmable devices with universal options for input, output and supply. This range offers a number of advanced features such as process calibration, linearisation and auto-diagnosis.





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 [www.preelectronics.fr](http://www.preelectronics.fr)  
 [sales@preelectronics.fr](mailto:sales@preelectronics.fr)
- 
 [www.preelectronics.de](http://www.preelectronics.de)  
 [sales@preelectronics.de](mailto:sales@preelectronics.de)
- 
 [www.preelectronics.es](http://www.preelectronics.es)  
 [sales@preelectronics.es](mailto:sales@preelectronics.es)
- 
 [www.preelectronics.it](http://www.preelectronics.it)  
 [sales@preelectronics.it](mailto:sales@preelectronics.it)
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 [sales@preelectronics.se](mailto:sales@preelectronics.se)
- 
 [www.preelectronics.co.uk](http://www.preelectronics.co.uk)  
 [sales@preelectronics.co.uk](mailto:sales@preelectronics.co.uk)
- 
 [www.preelectronics.com](http://www.preelectronics.com)  
 [sales@preelectronics.com](mailto:sales@preelectronics.com)
- 
 [www.preelectronics.cn](http://www.preelectronics.cn)  
 [sales@preelectronics.cn](mailto:sales@preelectronics.cn)

### Head office

Denmark  
 PR electronics A/S  
 Lerbakken 10  
 DK-8410 Rønde

[www.preelectronics.com](http://www.preelectronics.com)  
[sales@preelectronics.dk](mailto:sales@preelectronics.dk)  
 tel. +45 86 37 26 77  
 fax +45 86 37 30 85



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 DS/EN ISO 9001  
 DS/EN ISO 14001

