PERFORMANCE
MADE
SMARTER

Product Manual
5725
Programmable frequency indicator



TEMPERATURE | I.S. INTERFACES | COMMUNICATION INTERFACES | MULTIFUNCTIONAL | ISOLATION | DISPLAY

No. 5725V103-UK
From serial no.: 181101000

PR electronics

6 Product Pillars
to meet your every need

Individually outstanding, unrivalled in combination

With our innovative, patented technologies, we make signal conditioning smarter and simpler. Our portfolio is composed of six product areas, where we offer a wide range of analog and digital devices covering over a thousand applications in industrial and factory automation. All our products comply with or surpass the highest industry standards, ensuring reliability in even the harshest of environments and have a 5-year warranty for greater peace of mind.



Temperature

Our range of temperature transmitters and sensors provides the highest level of signal integrity from the measurement point to your control system. You can convert industrial process temperature signals to analog, bus or digital communications using a highly reliable point-to-point solution with a fast response time, automatic self-calibration, sensor error detection, low drift, and top EMC performance in any environment.



I.S. Interface

We deliver the safest signals by validating our products against the toughest safety standards. Through our commitment to innovation, we have made pioneering achievements in developing I.S. interfaces with SIL 2 Full Assessment that are both efficient and cost-effective. Our comprehensive range of analog and digital intrinsically safe isolation barriers offers multifunctional inputs and outputs, making PR an easy-to-implement site standard. Our backplanes further simplify large installations and provide seamless integration to standard DCS systems.



Communication

We provide inexpensive, easy-to-use, future-ready communication interfaces that can access your PR installed base of products. The detachable 4501 Local Operator Interface (LOI) allows for local monitoring of process values, device configuration, error detection and signal simulation. The next generation, our 4511 Remote Operator Interface (ROI) does all that and more, adding remote digital communications via Modbus/RTU, while the analog output signals are still available for redundancy.
With the 4511 you can further expand connectivity with a PR gateway, which connects via industrial Ethernet, wirelessly through a Wi-Fi router or directly with the devices using our Portable Plant Supervisor (PPS) application. The PPS app is available for iOS, Android and Windows.



Multifunction

Our unique range of single devices covering multiple applications is easily deployable as your site standard. Having one variant that applies to a broad range of applications can reduce your installation time and training, and greatly simplify spare parts management at your facilities. Our devices are designed for long-term signal accuracy, low power consumption, immunity to electrical noise and simple programming.



Isolation

Our compact, fast, high-quality 6 mm isolators are based on microprocessor technology to provide exceptional performance and EMC-immunity for dedicated applications at a very low total cost of ownership. They can be stacked both vertically and horizontally with no air gap separation between units required.



Display

Our display range is characterized by its flexibility and stability. The devices meet nearly every demand for display readout of process signals, and have universal input and power supply capabilities. They provide a real-time measurement of your process value no matter the industry, and are engineered to provide a user-friendly and reliable relay of information, even in demanding environments.

Programmable frequency indicator

5725

Table of contents

Warning 4
Symbol identification 4
Safety instructions 4
Front and back layout 5
Application 6
Technical characteristics 6
Mounting / installation 6
Applications 7
Order 8
Accessories 8
Electrical specifications 8
Sensor error indication, inside and outside range 11
Connections 12
Block diagram 13
Configuration / operating the function keys 14
Additional features (from s/n > 121435001) 14
Additional features (from s/n > 181101000) 15
Routing diagram for 5725A 16
Routing diagram for 5725D 18
Help text overview 20
Graphic depiction of the relay function setpoint 22
Document history 23

Warning



GENERAL

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 guide 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 installation guide 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 and replacement of circuit breakers 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 trouble-shoot 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 and check whether the device type corresponds to the one ordered. The packing should always follow the device until this has been permanently mounted.

Environment

Avoid direct sun light, dust, high temperatures, mechanical vibrations and shock, and 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 2, 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

Mounting and connection of the device should comply with national legislation for mounting of electric materials, i.e. 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 indicating that it will switch off the voltage to the device.

Year of manufacture can be taken from the first two digits in the serial number.

UL installation requirements

For use on a flat surface of a type 1 enclosure.
Use 60/75°C copper conducters 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.

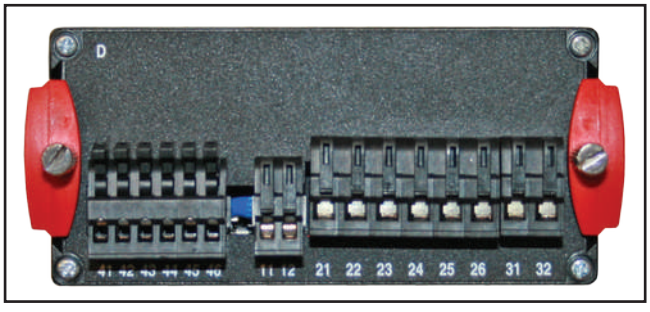
Liability

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.

Front and back layout



Picture 1: Front of 5725.



Picture 2: Back of 5725.

Programmable frequency indicator
5725

- Measures NPN, PNP, Contact, NAMUR, SO, Tacho and TTL sensors
- Programmable frequency input span of 0.001 Hz to 50 kHz
- The 5725D has two SPDT relays and one analog output
- Easy to read 4 digit, 14 segment LED display with scrolling help text
- Universally powered by 21.5...253 VAC or 19.2... 300 VDC

Application

- The 5725 measures, scales, and displays frequency signals found in many process speed and flow rate applications.
- The indicator can measure the period of the frequency, useful for displaying the elapsed time between events.
- The 5725D has two SPDT setpoint contacts and a 0/4...20 mA output for process control.
- The installed display provides IP65 environmental sealing, and additional protection is provided by the optional 8335 splash proof cover.

Technical characteristics

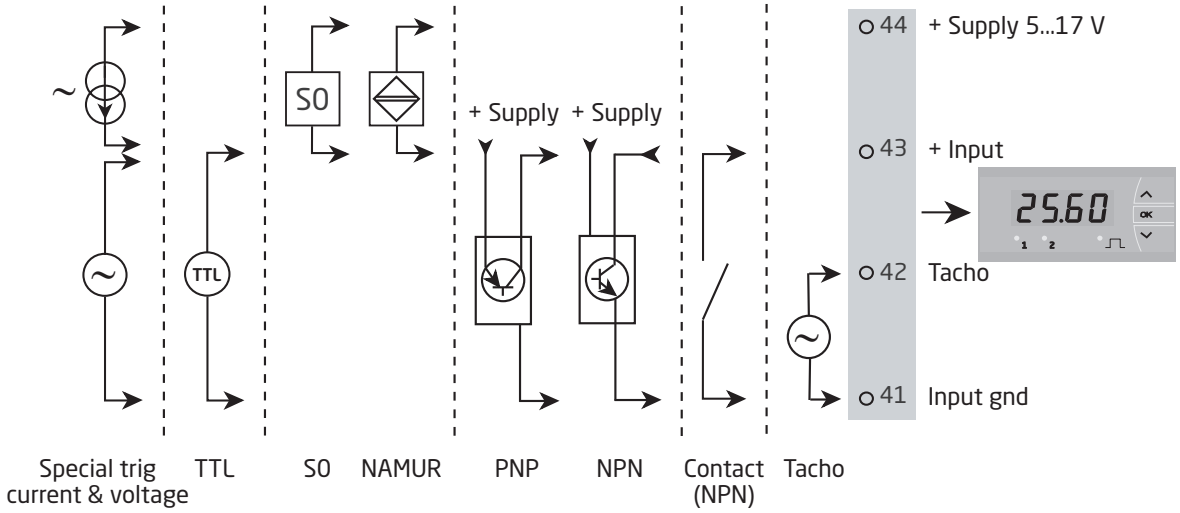
- 4 digit display w/13.8 mm high, 14 segment LED digits and adjustable decimal point.
- Indicator is scalable from -1999 to 9999
- Scrolling help text makes programming easy.
- Built-in excitation source for measuring NPN, PNP, NAMUR and SO sensors.
- Fast response time of 1 cycle + 100 ms, and excellent accuracy of better than 0.05% of selected range.
- The analog output current on the 5725D can be dampened from 0.1 to 60 seconds, and can handle up to 800 Ohms loop load.
- The 5725 meets NAMUR NE21 recommendations, for high performance in harsh EMC environments.
- High 2.3 kVAC galvanic isolation, and an excellent signal/noise ratio of > 60 dB.

Mounting / installation

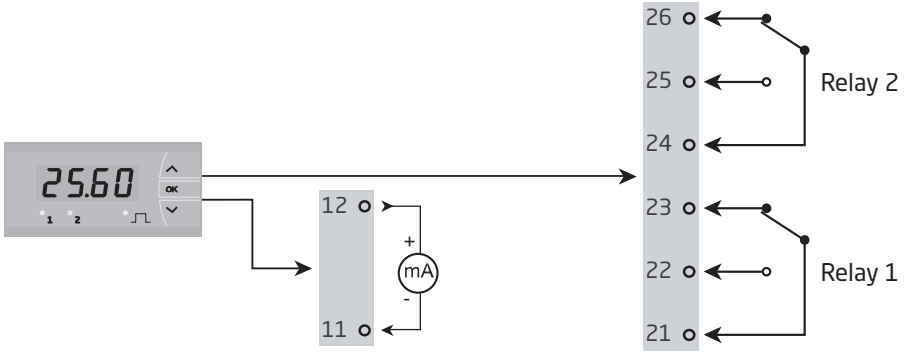
- Easy to mount 1/8 DIN (48 x 96 mm) panel meter with IP65, (type 4X) sealing.
- Approved for marine applications.
- Fully push-button programmable.
- Password protected.

Applications

Input signals:

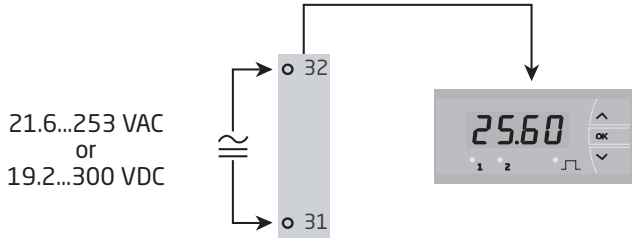


Output signals:



Analog, 0/4...20 mA

Supply:



Order

Type	Version	
5725	Standard	: A
	Analog output and 2 relays	: D

Accessories

8335 = Splash proof cover

Electrical specifications

Environmental conditions:

Operating temperature . . . . . -20°C to +60°C
Storage temperature . . . . . -40°C to +85°C
Calibration temperature . . . . . 20...28°C
Relative humidity . . . . . < 95% RH (non-cond.)
Protection degree IP20
Installation in . . . . . Pollution degree 2 & overvoltage category II.

Mechanical specifications:

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
Wire size, pin 11-12 & 41-44, max. . . . . 1 x 1.5 mm^2 / AWG 30...16 stranded wire
Wire size, others, max. . . . . 1 x 2.5 mm^2 / AWG 30...12 stranded wire
Terminal connection . . . . . Spring-cage
Vibration . . . . . IEC 60068-2-6
2...13.2 Hz . . . . . ±1 mm
13.2...100 Hz . . . . . ±0.7 g

Common electrical specifications:

Supply voltage, universal . . . . . 21.6...253 VAC, 50...60 Hz
or 19.2...300 VDC
Max. required power, 5725A / 5725D . . . . . 2.8 W / 3.6 W
Isolation voltage, test / operation . . . . . 2.3 kVAC / 250 VAC
Signal / noise ratio . . . . . > 60 dB

Input specifications:

Frequency range, **f/I conversion function** . . . . . 0.001 Hz to 50 kHz
Low cut off frequency (default value) . . . . . 0.0009 Hz
Low cut off frequency, (LCOF=YES) . . . . . 0.5 Hz (2 s)
Max. frequency, with input filter ON . . . . . 50 Hz
Time range, **period time function** . . . . . 999.9 s to 20 µs
Low cut off period time . . . . . 1111 s
Min. period time with input filter ON . . . . . 20 ms
Response time (0...90%, 100...10%) . . . . . < 1 period + 100 ms

Accuracy values		
Specification	Absolute accuracy	Temperature coefficient
Input to Display & Relays	≤ ±0.05%	≤ ±0.01% / °C
Input to Analog Output	≤ ±0.1%	

EMC - immunity influence . . . . . < ±0.5% of span
Extended EMC immunity:
NAMUR NE 21, A criterion, burst . . . . . < ±1% of span

Input types:

NAMUR input - acc. to EN 60947-5-6:

Trig-level LOW	≤ 1.2 mA
Trig-level HIGH	≥ 2.1 mA
Input impedance	1 kΩ / < 1.5 nF
Breakage detection	≤ 0.1 mA
Short-circuit detection	≥ 6.9 mA
Sensor supply - pin 44, fixed	8.3 V

Tacho input:

Trig-level LOW	≤ - 50 mV
Trig-level HIGH	≥ + 50 mV
Input impedance	≥ 100 kΩ / < 1.5 nF
Max. input voltage	80 VAC pp
Sensor supply - pin 44, programmable	5...17 V / 20 mA

NPN / PNP input:

Trig-level LOW	≤ 4.0 V
Trig-level HIGH	≥ 7.0 V
Input impedance	3.48 kΩ / < 1.5 nF
Sensor supply - pin 44, programmable	5...17 V / 20 mA

TTL input:

Trig-level LOW	≤ 0.8 VDC
Trig-level HIGH	≥ 2.0 VDC
Input impedance	≥ 100 kΩ / < 1.5 nF
Sensor supply - pin 44, programmable	5...17 V / 20 mA

S0 input acc. to DIN 43864:

Trig-level LOW	≤ 2.2 mA
Trig-level HIGH	≥ 9.0 mA
Input impedance	758 Ω / < 1.5 nF
Sensor supply - pin 44, fixed	17 V

Special voltage input:

User programmable trig-levels	-0.05...6.50 V
Hysteresis, min	50 mV
Input impedance, selectable:	
High Z	≥100 kΩ / < 1.5 nF
Pull up and pull down	3.48 kΩ / < 1.5 nF
Sensor supply - pin 44, programmable	5...17 V / 20 mA

Special current input:

User programmable trig-levels	0.0...10.0 mA
Hysteresis, min	0.2 mA
Input impedance	1 kΩ / < 1.5 nF
Sensor supply - pin 44, programmable	5...17 V / 20 mA

Output specifications:

Display:

Display readout	-1999...9999 (4 digits)
Decimal point	Programmable
Digit height	13.8 mm
Display updating	2.2 times / s
Display response time, programmable	0.0...60.0 s
Input frequency outside range and NAMUR input sensor error is indicated by	Explanatory text

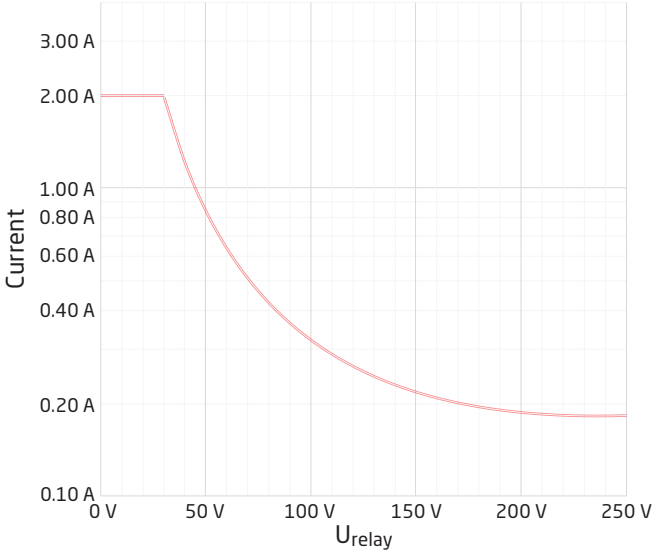
Current output (5725D):

Programmable signal ranges	0...20, 4...20 & 20...0, 20...4 mA
Load (max.)	≤ 800 Ω
Current limit	≤ 28 mA
Load stability	≤ 0.01% of span / 100 Ω
Programmable response time	0.1...60.0 s
Sensor error indication, at NAMUR input:	
selectable	0 / 3.5 / 23 mA / none
Output limitation at outside range:	
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

Relay outputs (5725D):

Relay function	Setpoint
Hysteresis, in % / display counts	0...100% / 0...9999
On and Off delay	0...3600 s
Power On delay	0.0...60.0 s
Sensor error action	Make / Break / Hold
Max. voltage	250 VAC / VDC
Max. AC current	2 A
Max. AC power	500 VA
Max. DC current, resistive load:	
@ U_{relay} ≤ 30 VDC	2 ADC
@ U_{relay} >30 VDC	[1380 x U_{relay}^{-2} x $1.0085^{U_{relay}}$] ADC

Graphic depiction of [1380 x U_{relay}^{-2} x $1.0085^{U_{relay}}$]



Observed authority requirements:

EMC	2014/30/EU
LVD	2014/35/EU
RoHS	2011/65/EU

Approvals:

DNV-GL, Ships & Offshore	Standard for Certification No. 2.4
EU RO Mutual Recognition Type Approval	MRA000000Z
c UL us, Standard for Safety	UL 508
EAC	TR-CU 020/2011

Sensor error indication, inside and outside range

Sensor error indication in 5725, only available for NAMUR input				
Condition	Out of range limit	Relay behaviour	Analog output value	Display redaout
Sensor input type = NAMUR and sensor error detection = ON	> 6.9 mA	Set to user defined value: HOLD. ACTIVE. DEACTIVE or NONE	Set to user-defined value (23, 0, 3.5 mA or NONE)	"SE.SH"
	< 0.1 mA			"SE.BR"

Input "out of range" indication		
Valid measurement range:	Out of range limit	Display readout
f to I function: 0.001 Hz to 50 kHz	< 0.0009 Hz (18 min. 31 sec.) or 0.5 Hz (2.0 s) if L.COF=YES (Low cut-off frequency)	If In.Lo is set to 0.000 Hz: "0.0" If In.Lo is set ≥ 0.001 Hz: "IN.LO" - flashing
	> 50.5 kHz	"IN.HI" - flashing
Period time function: 20 µs to 999.9 s	> 1111 s (18 min. 31 sec.) (Low cut off time)	"IN.HI" - flashing
	< 19.8 µs	"IN.LO" - flashing

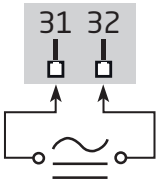
Display out of range Indication		
Valid display value range:	Out of range limit	Display readout
-1999 to 9999	< -1999	"-1.9.9.9." - flashing
	> 9999	"9.9.9.9." - flashing

Hardware error indication		
Error explanation	Error cause	Display readout
Error in internal communication (SPI etc.)	Permanent error in intercommunication between microcontrollers	"HW.ER" - flashing
Error in checksum test of the configuration in RAM	Error in RAM	"RA.ER"- flashing
Error in checksum test of the configuration in EEPROM	Error in EEPROM	"EE.ER"- flashing
Error in OK check or checksum test of the calibration data in FLASH	Error in FLASH or Calibration has not been performed or Calibration data in FLASH are corrupt	"NO.CA"- flashing

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

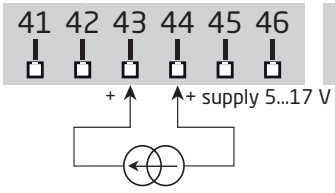
Connections

Supply:

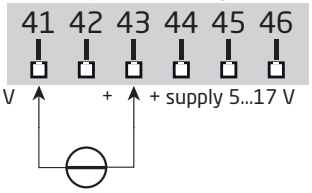


Input:

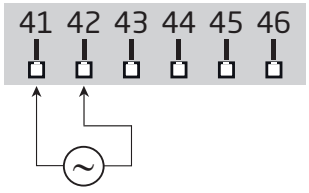
Special current



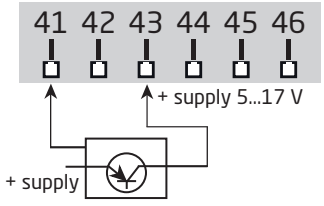
Special voltage



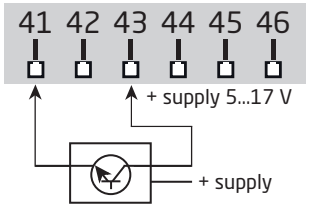
Tacho



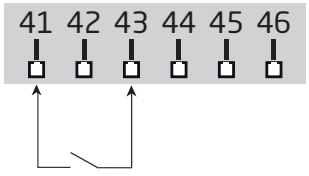
PNP



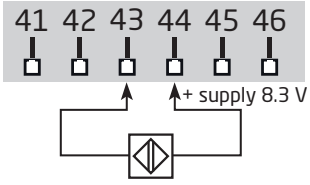
NPN



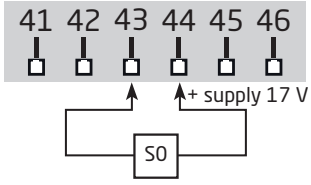
Contact (NPN)



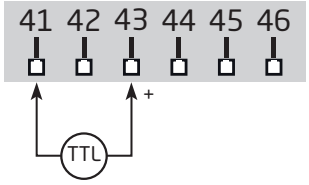
NAMUR



S0

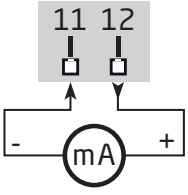


TTL

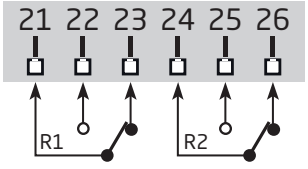


Output:

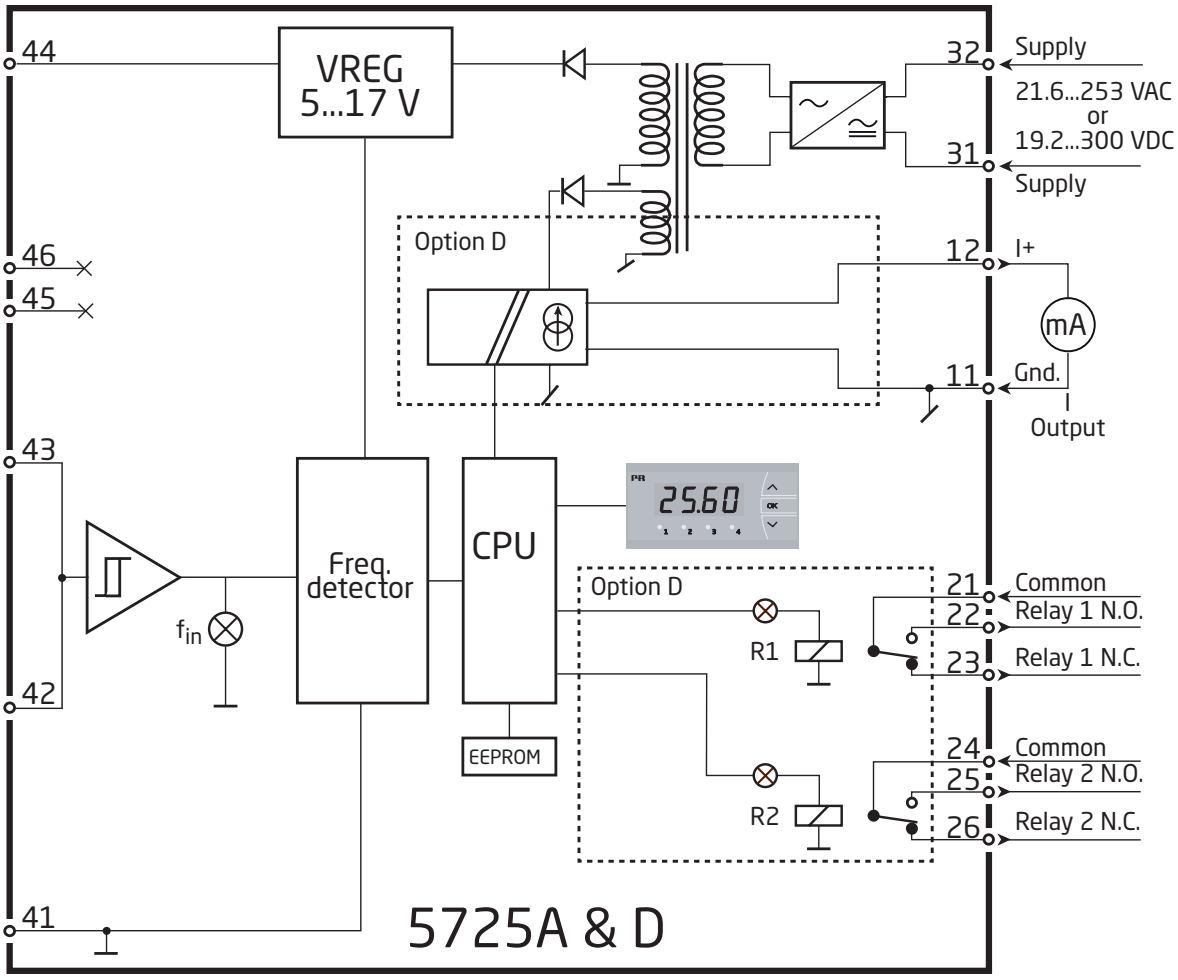
Current



Relays



Block diagram



Configuration / operating the function keys

Documentation for routing diagram.

In general

When configuring the 5725, you will be guided through all parameters and 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 if no key has been activated for appr. 5 seconds.

Configuration is carried out by use of 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 save the chosen value and proceed to the next menu

If a function does not exist in the hardware, all parametres belonging to that function will be skipped in order to make configuration as simple as possible. The configuration will not be saved until the end of the menu structure when the display shows - - - -.

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

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

Further explanations

Fast setpoint adjustment and relay test (only 5725D)

These menus are interactive and allow you to adjust the setpoints while the display is measuring the input signal. The front LEDs will then indicate when the relays change state, thus easing the setpoint adjustment in many situations. By activating ⌃ and ⌄ simultaneously, a relay test will be initiated and the relay will change state. The setpoint adjustment will be saved by a quick press of OK . Holding down OK for more that 0.5 seconds will return the display to the default state ("Monitor") without changing the setpoint.

Password protection

Using a password will block access to the menu and parameters.
Default password 2008 allows access to all configuration menus.

5725D only: There are two levels of password protection.
Passwords between 0000 and 4999 allow access to the fast setpoint adjustment and relay test menus (using this password blocks access to all other parts of the menu).
Passwords between 5000 and 9999 block access to all parts of the menu, fast setpoint and relay test (current setpoint is still shown).

Additional features (from s/n > 121435001)

Out of range indication at f/I function

Out of range min. limit is < 0.0009 Hz / (18 min. 31 sec.).
- if the In.Lo value is set to "0.0" Hz the display readout will be "0.0" when the "out of range" min. limit is reached.
- if the In.Lo value is set different from "0.0" Hz the display readout will be "In.Lo" - flashing - when the "out of range" min. limit is reached.

Low cut-off filter

The 5725 frequency indicator has a selectable low cut-off filter, which sets the display and output to 0% when the measured frequency is ≤ 0.5 Hz (2 s). This filter allows the display to ignore extremely low frequencies from flowmeters and encoders which are sometimes present when the process is at idle.

Faster analog output

The analog output response time can be adjusted to a fast 0.1 second, allowing the analog output to track faster changing input signals.

Additional features (from s/n > 181101000)

Programmable display response time

The response time of the 5725 display readout can be configured independently of the analog output response time. This feature ensures a stable and easy readout of unstable or jittering input signals.

Routing diagram for 5725A

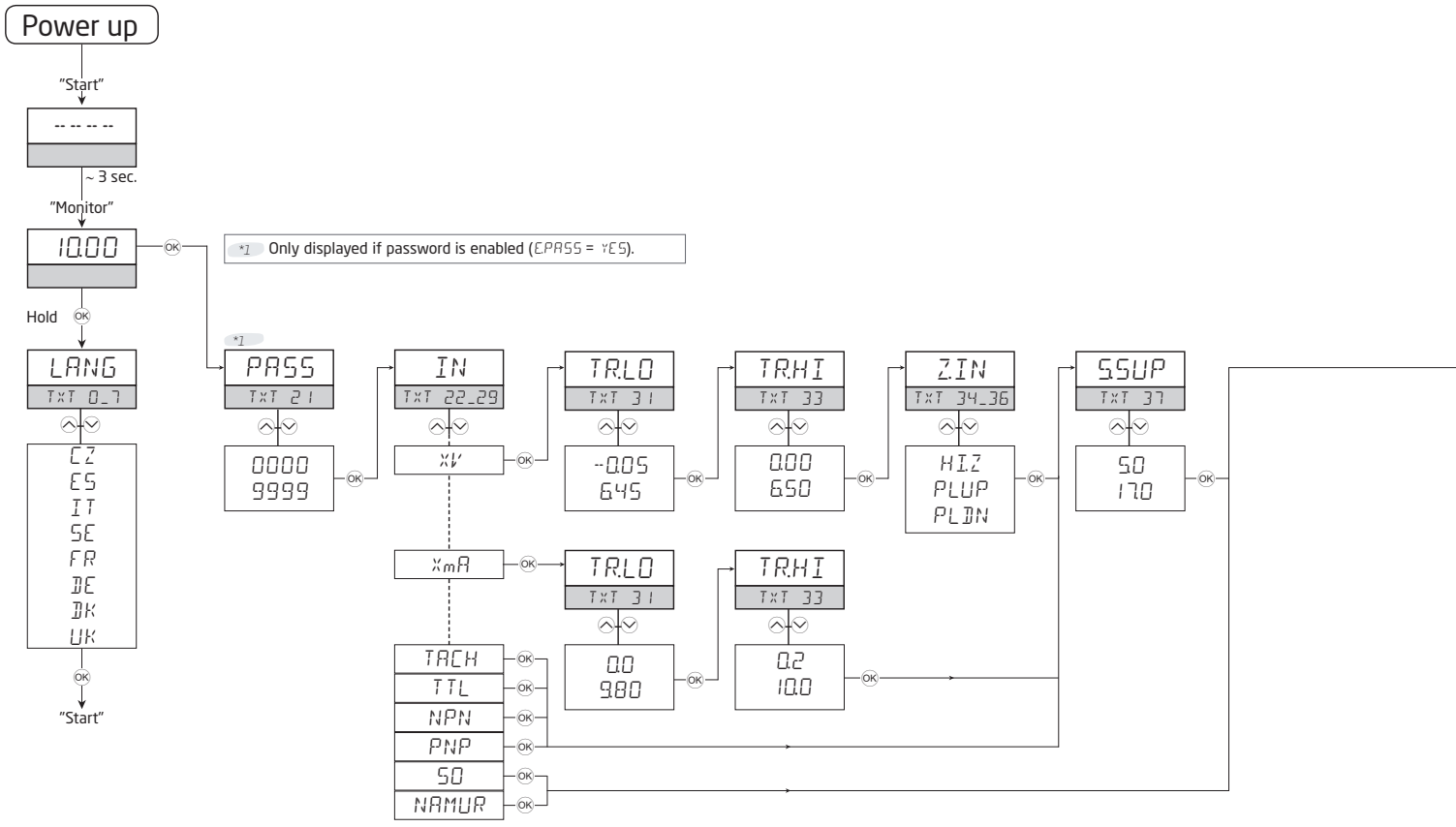
If no key is activated for 2 minutes, the display will return to the default state "Monitor" without saving configuration changes.

▲ Increase value / choose next parameter

▼ Decrease value / choose previous parameter

OK Save the chosen value and proceed to the next menu

Hold OK Back to previous menu / return to default state "Monitor" without saving.



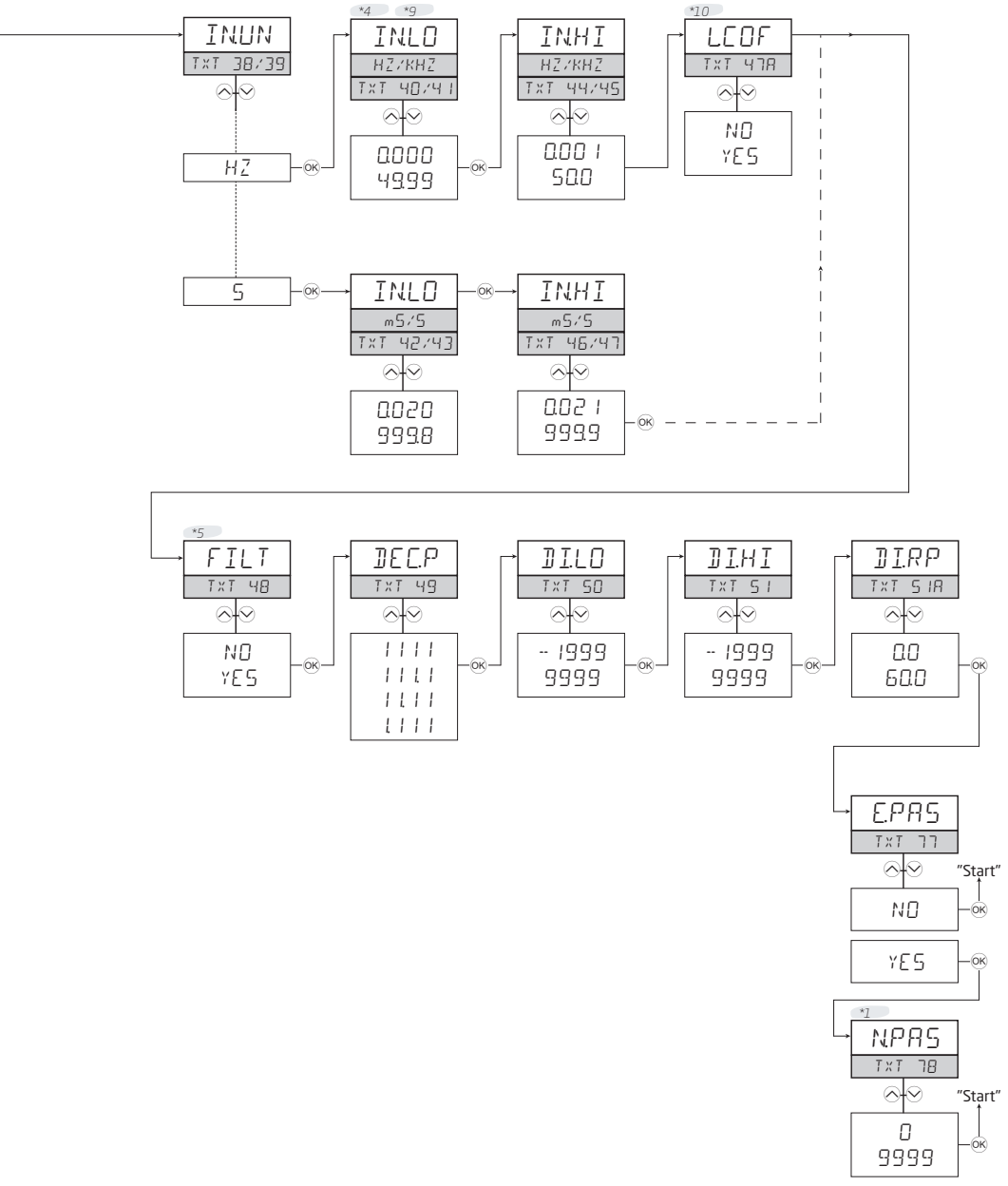
*1 Only displayed if password is enabled (EPASS = YES).

*4 Displays either Hz/kHz or s/ms for 1 sec. before actual value is displayed.
When value hits digit-limit while scrolling, either Hz/kHz or s/ms is displayed again for 1 sec. to show the user that the new range is active.

*5 Only visible if max. (INLO,INHI) value is ≤ 50 Hz (f/l) or ≥ 20 ms (period time) Default if visible = YES, else deactivated.

*9 Minimum INHI value is automatically limited to 1 display count above INLO.

*10 Out of range limit is < 0.0009 Hz (18 min. 31 sec.) when LCOF = NO.
Out of range limit is 0.5 Hz (2 sec.) when LCOF = YES.

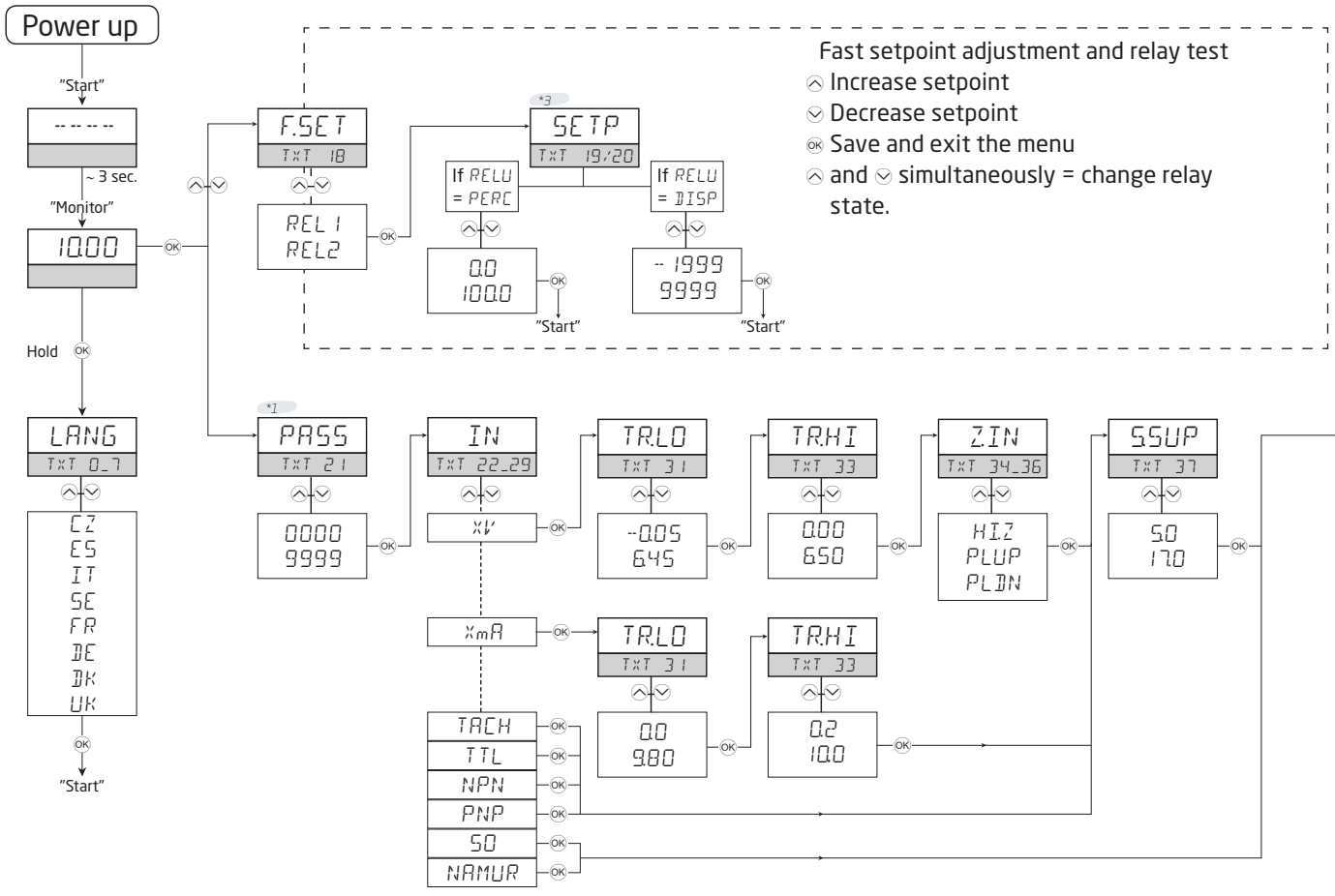


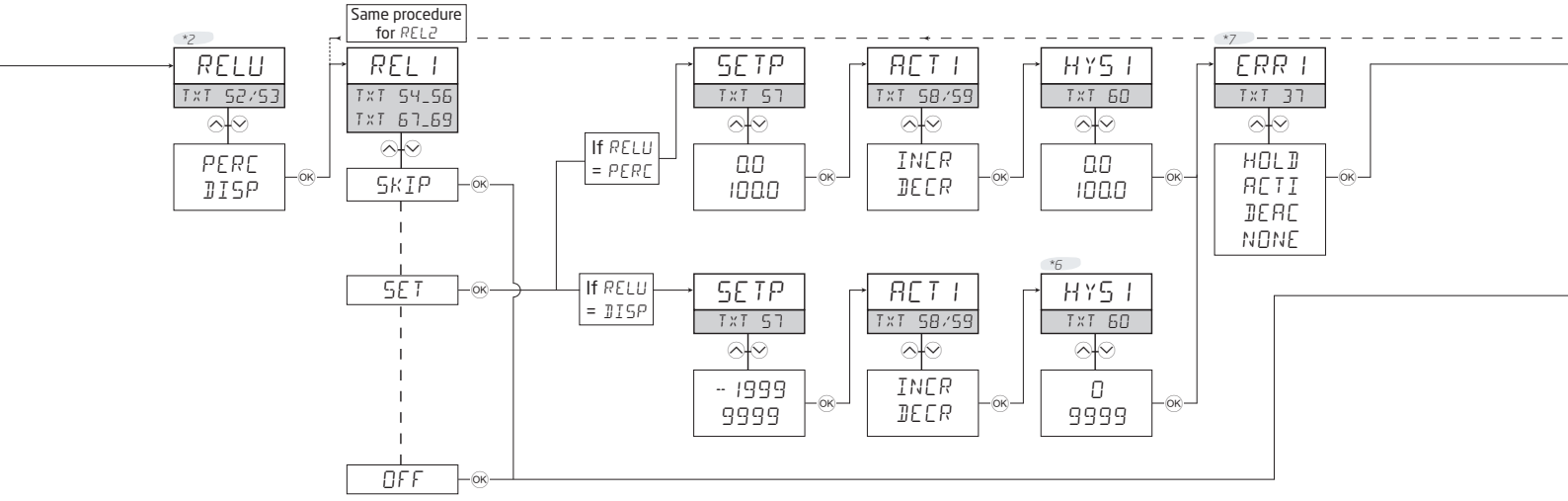
Routing diagram for 5725D

If no key is activated for 2 minutes, the display will return to the default state "Monitor" without saving configuration changes.

- ⌃ Increase value / choose next parameter
- ⌄ Decrease value / choose previous parameter
- OK Save the chosen value and proceed to the next menu

Hold OK Back to previous menu / return to default state "Monitor" without saving.





*1 Only displayed if password is enabled (EPASS = YES).

*2 5725D only.

*3 Password 5000...9999:
FastSet and Relay Test features disabled.
(FastSet menus show the actual setpoints).

*4 Displays either Hz/kHz or s/ms for 1 sec. before actual value is displayed.
When value hits digit-limit while scrolling, either Hz/kHz or s/ms is displayed again for 1 sec. to show the user that the new range is active.

*5 Only visible if max. (INLO,INHI) value is ≤ 50 Hz (f/l) or ≥ 20 ms (period time) Default if visible = YES, else deactivated.

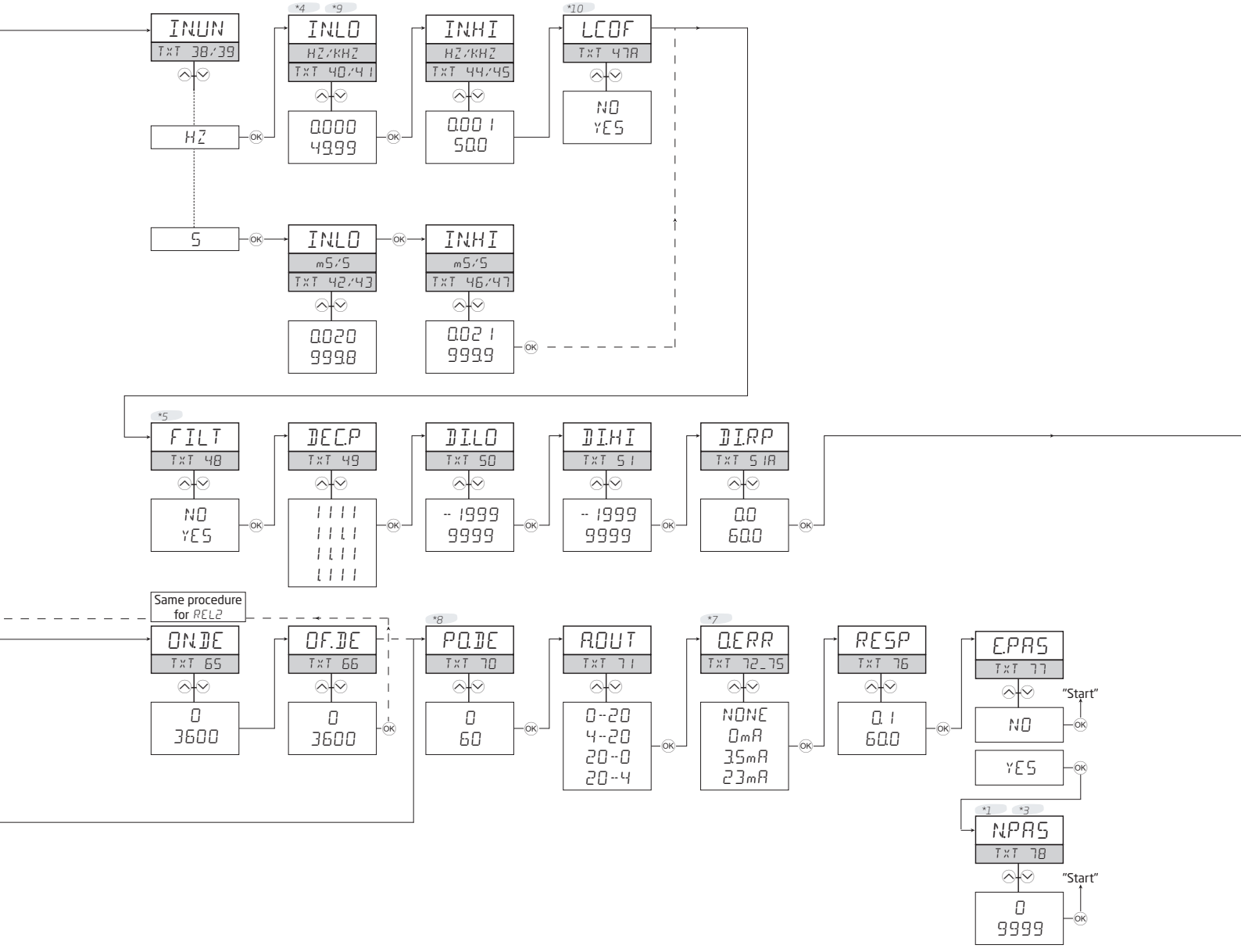
*6 Range depends on selected display scaling.

*7 Only visible for NAMUR input.
0mA only visible for ROUT = 0-20 or 20-0
3.5mA only visible for ROUT = 4-20 or 20-4

*8 Not visible if both relay functions are OFF.

*9 Minimum INHI value is automatically limited to 1 display count above INLO.

*10 Out of range limit is < 0.0009 Hz (18 min. 31 sec.) when LCOF = NO.
Out of range limit is 0.5 Hz (2 sec.) when LCOF = YES.



Help text overview

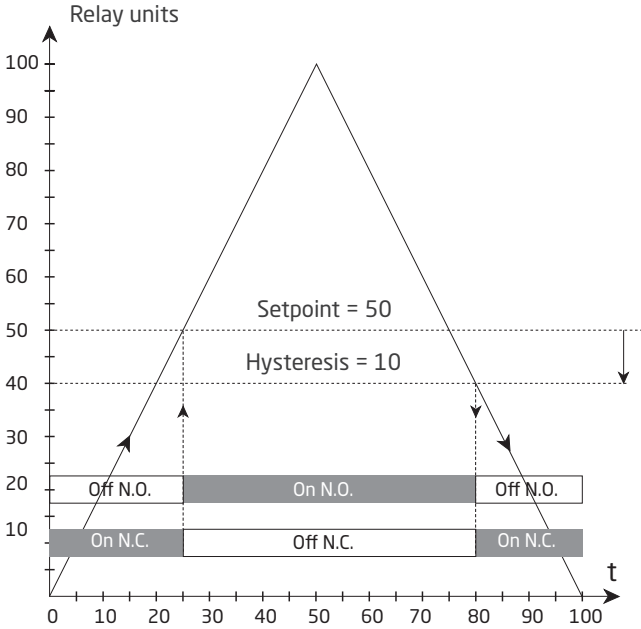
Top line	Scrolling text	TXT NO
Language menu		
UK	UK - SELECT ENGLISH HELP TEXT	0
DK	DK - VAELG DANSK HJAELPETEKST	1
DE	DE - WAEHLE DEUTSCHEN HILFETEXT	2
FR	FR - SELECTION TEXTE D'AIDE EN FRANCAIS	3
SE	SE - VALJ SVENSK HJALPTEXT	4
IT	IT - SELEZIONARE TESTI DI AIUTO ITALIANI	5
ES	ES - SELECCIONAR TEXTO DE AYUDA EN ESPANOL	6
CZ	CZ - VYBER CESKOU NAPOVEDU	7
Error indication (when active, labels are flashing @ appr. 1 Hz)		
SE.BR	SENSOR WIRE BREAKAGE	8
IN.HI	INPUT OVERRANGE	9
SE.SH	SENSOR SHORT CIRCUIT	10
IN.LO	INPUT UNDERRANGE	11
9.9.9.9.	DISPLAY OVERRANGE	12
-1.9.9.9.	DISPLAY UNDERRANGE	13
HW.ER	HARDWARE ERROR	14
EE.ER	EEPROM ERROR - CHECK CONFIGURATION	15
RA.ER	RAM MEMORY ERROR	16
NO.CA	DEVICE NOT CALIBRATED	17
FastSet menu		
F.SET		
REL1	FAST SET MENU - SELECT RELAY	18
REL2	FAST SET MENU - SELECT RELAY	18
SETP	(if fastset is enabled)	
xxxx	RELAY SETPOINT - PRESS OK TO SAVE	19
SETP	(if fastset is disabled)	
xxxx	RELAY SETPOINT - READ ONLY	20
Configuration setup		
PASS		
xxxx	SET CORRECT PASSWORD	21
IN		
PNP	PNP SENSOR INPUT	22
NPN	NPN SENSOR INPUT	23
TTL	TTL SENSOR INPUT	24
NAMU	NAMUR SENSOR INPUT	25
S0	S0 SENSOR INPUT	26
TACH	TACHO SENSOR INPUT	27

Top line	Scrolling text	TXT NO
XmA	SPECIAL CURRENT SENSOR INPUT	28
XV	SPECIAL VOLTAGE SENSOR INPUT	29
TR.LO	(when special voltage input is selected)	
xxxx	SET LOW TRIGGER LEVEL IN VOLT	30
TR.LO	(when special current input is selected)	
xxxx	SET LOW TRIGGER LEVEL IN mA	31
TR.HI	(when special voltage input is selected)	
xxxx	SET HIGH TRIGGER LEVEL IN VOLT	32
TR.HI	(when special current input is selected)	
xxxx	SET HIGH TRIGGER LEVEL IN mA	33
Z.IN	(when special voltage input is selected)	
HI.Z	SET INPUT RESISTANCE HIGH	34
PL.UP	SET INPUT PULL UP	35
PL.DN	SET INPUT PULL DOWN	36
S.SUP	(not when NAMUR or S0 input is selected)	
xxxx	SET SENSOR SUPPLY VOLTAGE	37
IN.UN		
HZ	SET INPUT UNIT FOR FREQUENCY	38
S	SET INPUT UNIT FOR PERIOD TIME	39
IN.LO		
xxxx	SET INPUT RANGE LOW IN HZ	40
xxxx	SET INPUT RANGE LOW IN KHZ	41
xxxx	SET INPUT RANGE LOW IN S	42
xxxx	SET INPUT RANGE LOW IN mS	43
IN.HI		
xxxx	SET INPUT RANGE HIGH IN HZ	44
xxxx	SET INPUT RANGE HIGH IN KHZ	45
xxxx	SET INPUT RANGE HIGH IN S	46
xxxx	SET INPUT RANGE HIGH IN mS	47
L.COF		
NO	ENABLE LOW CUT OFF	47A
YES	ENABLE LOW CUT OFF	47A
FILT		
NO	ENABLE INPUT FILTER	48
YES	ENABLE INPUT FILTER	48

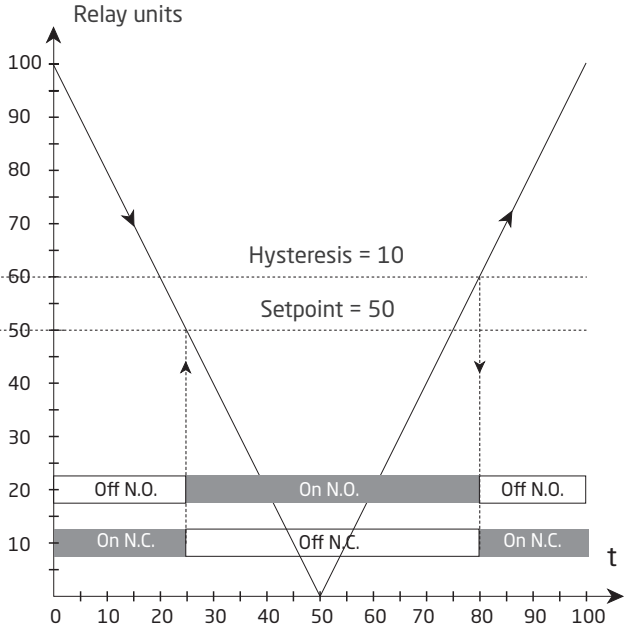
Top line	Scrolling text	TXT NO
DEC.P		
1111	DECIMAL POINT POSITION	49
111.1	DECIMAL POINT POSITION	49
11.11	DECIMAL POINT POSITION	49
1.111	DECIMAL POINT POSITION	49
DI.LO		
xxxx	DISPLAY READOUT LOW	50
DI.HI		
xxxx	DISPLAY READOUT HIGH	51
xxxx	DISPLAY RESPONSE TIME IN SECONDS	51A
REL.U		
PERC	SET RELAY IN PERCENTAGE	52
DISP	SET RELAY IN DISPLAY UNITS	53
REL1		
OFF	RELAY 1 DISABLED	54
SETP	ENTER RELAY 1 SETUP	55
SKIP	SKIP RELAY 1 SETUP	56
SETP		
xxxx	RELAY SETPOINT	57
ACT1		
INCR	ACTIVATE AT INCREASING SIGNAL	58
DECR	ACTIVATE AT DECREASING SIGNAL	59
HYS1		
xxxx	RELAY HYSTERESIS	60
ERR1		
HOLD	HOLD RELAY AT ERROR	61
ACTI	ACTIVATE RELAY AT ERROR	62
DEAC	DEACTIVATE RELAY AT ERROR	63
NONE	UNDEFINED STATUS AT ERROR	64
ON.DE		
xxxx	RELAY ON-DELAY IN SECONDS	65
OF.DE		
xxxx	RELAY OFF-DELAY IN SECONDS	66
REL2		
OFF	RELAY 2 DISABLED	67
SETP	ENTER RELAY 2 SETUP	68
SKIP	SKIP RELAY 2 SETUP	69

Top line	Scrolling text	TXT NO
SETP		
xxxx	RELAY SETPOINT	57
ACT2		
INCR	ACTIVATE AT INCREASING SIGNAL	58
DECR	ACTIVATE AT DECREASING SIGNAL	59
HYS2		
xxxx	RELAY HYSTERESIS	60
ERR2		
HOLD	HOLD RELAY AT ERROR	61
ACTI	ACTIVATE RELAY AT ERROR	62
DEAC	DEACTIVATE RELAY AT ERROR	63
NONE	UNDEFINED STATUS AT ERROR	64
ON.DE		
xxxx	RELAY ON-DELAY IN SECONDS	65
OF.DE		
xxxx	RELAY OFF-DELAY IN SECONDS	66
PO.DE		
xxxx	RELAY POWER ON DELAY IN SECONDS	70
A.OUT		
20-4	OUTPUT RANGE IN mA	71
20-0	OUTPUT RANGE IN mA	71
4-20	OUTPUT RANGE IN mA	71
0-20	OUTPUT RANGE IN mA	71
O.ERR		
23mA	NAMUR NE43 UPSCALE AT ERROR	72
3.5mA	NAMUR NE43 DOWNSCALE AT ERROR	73
0mA	DOWNSCALE AT ERROR	74
NONE	UNDEFINED OUTPUT AT ERROR	75
RESP		
xxxx	ANALOG OUTPUT RESPONSE TIME IN SECONDS	76
E.PAS		
NO	ENABLE PASSWORD PROTECTION	77
YES	ENABLE PASSWORD PROTECTION	77
N.PAS	(when password enabled)	
xxxx	SELECT NEW PASSWORD	78

Graphic depiction of the relay function setpoint



Relay action: Increasing



Relay action: Decreasing

Document history

The following list provides notes concerning revisions of this document.

Rev. ID	Date	Notes
103	1802	Relay data updated, graph with resistive loads inserted Menu updated with display response time EU RO approval added

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