Material selections switch
VK 30.03

Ident.-No.: 109 8756 12/2018

Contents

1 Miscellaneous

1.1 Information about this manual

The Operating Manual shall enable the user to install the material selection switch and those accessories, which are necessary.

Before starting installation, be sure to read and understand this entire manual, in particular the chapter on safety! The instructions contained in this manual, especially those concerning safety, as well as site-specific regulations for accident prevention must be complied with at all times!

1.2 Explanation of the symbols

Important safety-related references in this manual are marked with a symbol. It is imperative that you observe the safety precautions or instructions indicated by these symbols. Failure to do so might result in accidents involving physical injury and/or material damage

CAUTION!

This symbol indicates important information which, if neglected, might result in material selection switch damage, malfunction or breakdown.

PLEASE NOTE!

This symbol points out guidelines which should be heeded for efficient and trouble-free operation.

1.3 Liability and Warranty

All information compiled in this manual is in accordance with applicable regulations. The statements made are based on state-of-the-art technology and reflect our extensive knowledge and many years of experience.

PEASE NOTE!

Always carefully read this Operating Manual before beginning any work on or with the instrument, especially prior to installation and initial setup! The Manufacturer shall not be held liable for any damages or malfunctions arising from a disregard of the warnings and instructions contained herein.

This Operating Manual must be retained for future use. Please ensure that all persons who wish to operate the instrument have access to this manual.

1.4 Copyright

This Operating Manual should be treated as confidential. It is solely intended for use by persons involved with the instrument. This manual may not be made available to a third party without prior Manufacturer's consent. Please contact the Manufacturer if the need should arise.

☞ PLEASE NOTE!

The data, texts, charts, drawings, images or other representations contained in this manual are copyright-protected and furthermore, subject to intellectual property rights. Violators will be prosecuted. Unauthorised use and copyright infringement will be subject to penalty by law.

Reproductions of any kind, in whole or in part, as well as the exploitation or disclosure of this manual's content without the explicit written approval of the Manufacturer are expressly prohibited by law. Violations shall be subject to compensation claims by the Manufacturer. The right to claim additional indemnities remains reserved.

2 Safety

This chapter outlines all important safety aspects to be considered for optimum employee protection and to ensure safe and reliable operations.

2.1 Intendend use

The pyrometer is solely intended for non-contact measurement of temperatures as described in this manual. Any other use is not intended. Operational safety can only be ensured when the instrument is used for its intended purpose

CAUTION!

It is prohibited to use the pyrometer for any other purpose beyond what is specified in this manual. Using the instrument in any other manner will be considered as improper.

The Manufacturer/Authorised Agent shall not be held liable for any damages or loss resulting from such unintended or improper use; in this case the risk is solely borne by the user.

2.2 User's responsibility

The material selection switch may only be used when it is in perfect working condition.

2.3 Safety requirements

The instrument works with an operating voltage of 24 VDC. The voltage required for operation must be supplied by a separate power supply. This power supply unit must conform to directive IEC 61010.

2.4 Radio interference suppression / EMV

The instrument complies with the requirements of EC Directive 89/336/EEC changed by 91/263/EEC; 92/31/EEC; 93/68/EEC relating to radio interference suppression and electromagnetic compatibility.

European certification: CE

EN 61000 - 6 - 4
EN 61000 - 6 - 2
EN 55011

When connecting a power supply unit, make sure that is also conforms to these standards. Radio interference may arise if the pyrometer is interconnected with such peripheral devices which have not been properly interference-suppressed. This may necessitate additional interference suppression measures.

2.5 Quality Management Certification

The KELLER HCW Quality Management System meets the DIN EN ISO 9001 standards for design, production, repairs and service for non-contact infrared temperature measuring equipment.

2.6 Environmental Management

Sustainable economic management is more important than ever.
KELLER HCW's corporate environmental management system complies with DIN EN 14001/50001 standards.

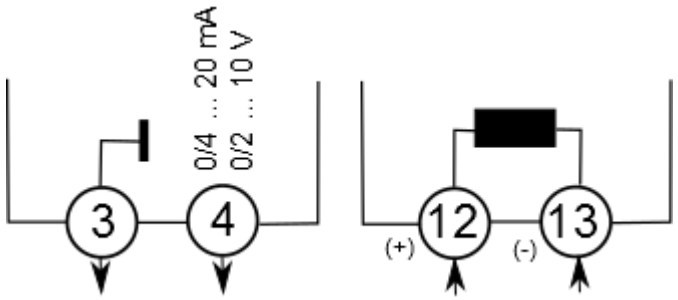
3 General

The material selections switch allows the external correction of the emissivity or emissivity ratio of the PA pyrometer.

4 Connection

4.1 Connection plan

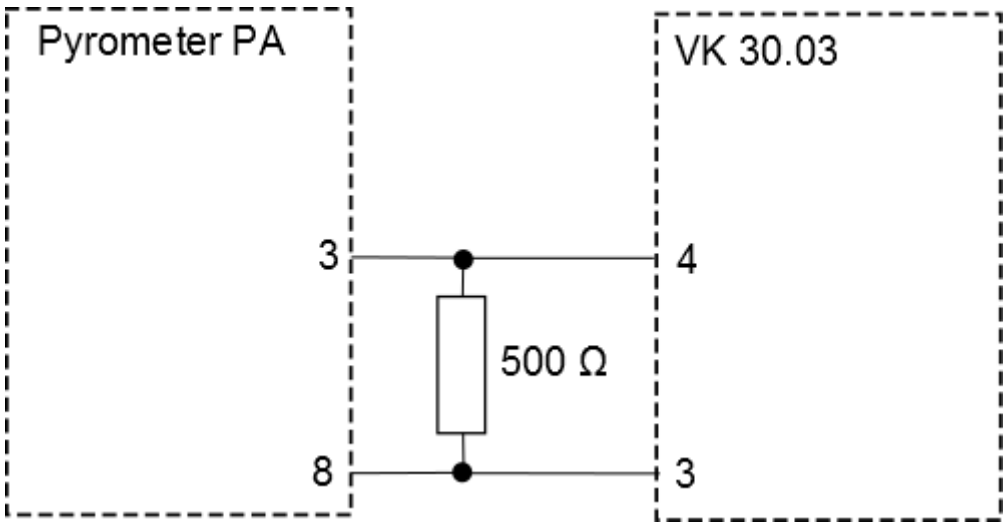
The material selections switch works with an operating voltage of 24 V DC. The voltage required for operation must be supplied by a separate power supply. This power supply unit must conform to directive DIN IEC 61010.



3	GND current output
4	0/4 … 20 mA
12	Power supply + 24 DC
13	Power supply GND

4.2 Current output 4 – 20 mA

The material selections switch VK 30.03 has an active linear current output. For the connection to the PA pyrometer a 500 Ω resistor (not included in the delivery) must be installed between the analogue input of the PA pyrometer and ground.



Pyrometer PA		
PIN 3	GN (green)	Analogue output 2 /analogue input
PIN 8	RD (red)	L- (GND)

VK 30.03	
Clamp 4	Current output
Clamp 3	L – (GND)

4.3 Parameterization VK 30.03

In the following example, the material selector switch for external emissivity ratio adjustment is configured with a value range from 100.0 to 110.0.

Key	Display	Description
to be operated for 2 s	100.0	Current set point value. To change the values, use the arrow keys ▲ and ▼
↓	4- 20 A0	Configuration of the analogue output Use the keys ▲ and ▼ to select 4 – 20 mA.
↓	rEStor P0	Set point for power on rEStor = SEt Point value remains valid in case of power failure Selection with the keys ▲ and ▼
↓	0. F0	Number of decimal digits Use the keys ▲ and ▼ and 0.
↓	100.0 St	Start value for the display range of the set point value. Use the keys ▲ and ▼ to select 100.0.
	110.0 En	End value for the display range of the set point value. Use the keys ▲ and ▼ to select 110.0.
		Press the key until the current set point value is shown.

5 Parameterization pyrometer PA

The current output 2 of the pyrometer is deactivated by default. In order to use the VK 30.03, you must parameterize the analogue output 2 as voltage input and assign it to the emissivity or emissivity ratio.
In the following configuration example, the voltage input is used for the external adjustment of the emissivity ratio.

5.1 Configuration I/O (configuration layer: c 0 10)

Parameter	Function	Explanation
Ao2.	Analogue output 2	oFF off
A .Fn	Analogue input function	EPS.9 emissivity ratio
A .U 1	Ain Scaling	Define lower limit of voltage for input voltage **(2 V)**
A .U2	Ain Scaling	Define upper limit of voltage for input voltage **(10 V)**
A .u 1	Ain Scaling	Input of lower voltage value (example **100%** emissivity ratio)
A .u2	Ain Scaling	Input of upper voltage value (example **110%** emissivity ratio)
SAuE	Save	Save changes / exit menu

5.2 Display of internal measured values

According to standard the current temperature is shown in the display of the pyrometer. Should the current value at the voltage input is to be shown in the display, change to code page C020 and select parameter AIN.

Configuration layer: c 020

Parameter	Function	Explanation
A .n	Initial value at analogue input	Current value of analogue input

6 Shipping, Packaging and Disposal

6.1 Inspecting your shipment

Unpack and inspect the entire shipment immediately upon receipt to make sure it is complete and undamaged.

If the container/package shows visible signs of damage, please refuse the shipment. If this is not possible, accept the shipment on the condition that the freight carrier's delivery record is noted with the extent of the damage in order to file a claim.

Should you discover a concealed loss or damage, report it to KELLER HCW and to the freight carrier immediately. If the period for filing claims has expired, you will no longer be able to make any claims for compensation of damage or loss.

6.2 Packaging

The packages used by KELLER HCW are made of carefully selected, environmentally compatible materials and are thus recyclable. We suggest you retain the packaging for possible future use; otherwise please ensure that they are disposed of in an ecologically sound manner.

6.3 Disposal of used apparatus

Used electrical and electronic equipment often contain valuable components. The owner/user may either return such an instrument to the manufacturer for disposal, or he must dispose of it himself in a professional and nonpolluting manner.

KELLER HCW will not be held accountable for any inappropriate disposal carried out by the user/owner of KELLER HCW instruments.