

# HOTSPOT-1000

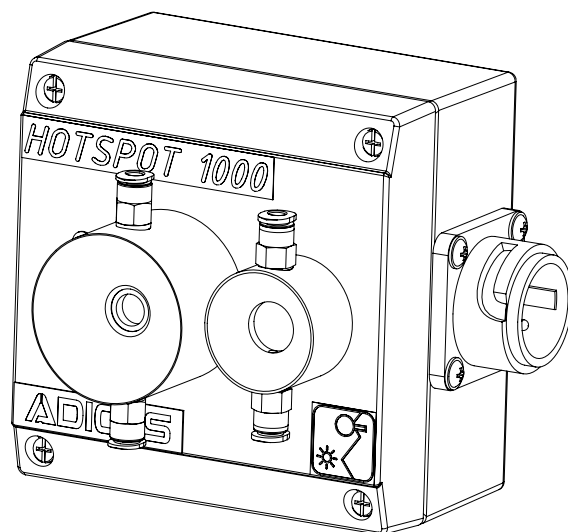
*Infrared heat detector with programmable internal signal evaluation for the detection of hot surfaces, flames and moving ember - suitable for industrial applications*

## Characteristics

- Robust design with aluminum die cast housing
- Purge air adapter with 4-mm quick connectors
- Integrated detector heating
- Extensive tolerance towards humidity and dust
- Fast response time
- Adjustable alarm thresholds for each pixel
- Detection is not affected by air flow
- Fast and simple wiring with aid of bayonet connector
- Central data archiving and visualization with service PC
- Interface for the connection to common fire alarm systems

## Applications

- Detection of hot surfaces, flames and moving ember and hot spots
- Monitoring of machinery and equipment
- Conveyor systems for coal, biomass, wood, paper, plastics and refused derived fuel (RDF)
- Storage facilities and bunkers for spontaneously inflammable material, silos and mills
- Drives, shredders, dryers, coolers, chutes and funnels
- Available for ATEX zones 20/21 and 22 (HOTSPOT-X20, HOTSPOT-X22)



ADICOS HOTSPOT detectors are infrared thermographic detectors of the Advanced Discovery System ("ADICOS"), which were especially designed for reliable early fire detection in industrial surroundings.

The HOTSPOT-1000 is used for contact-free early temperature monitoring and detection of moving ember. It has an integrated thermal camera with 1000 heat sensitive pixels, which is capable of receiving individual parameters. The robust design protects the devices against impairments by dust and humidity, which enables them to operate in rough industrial surroundings.

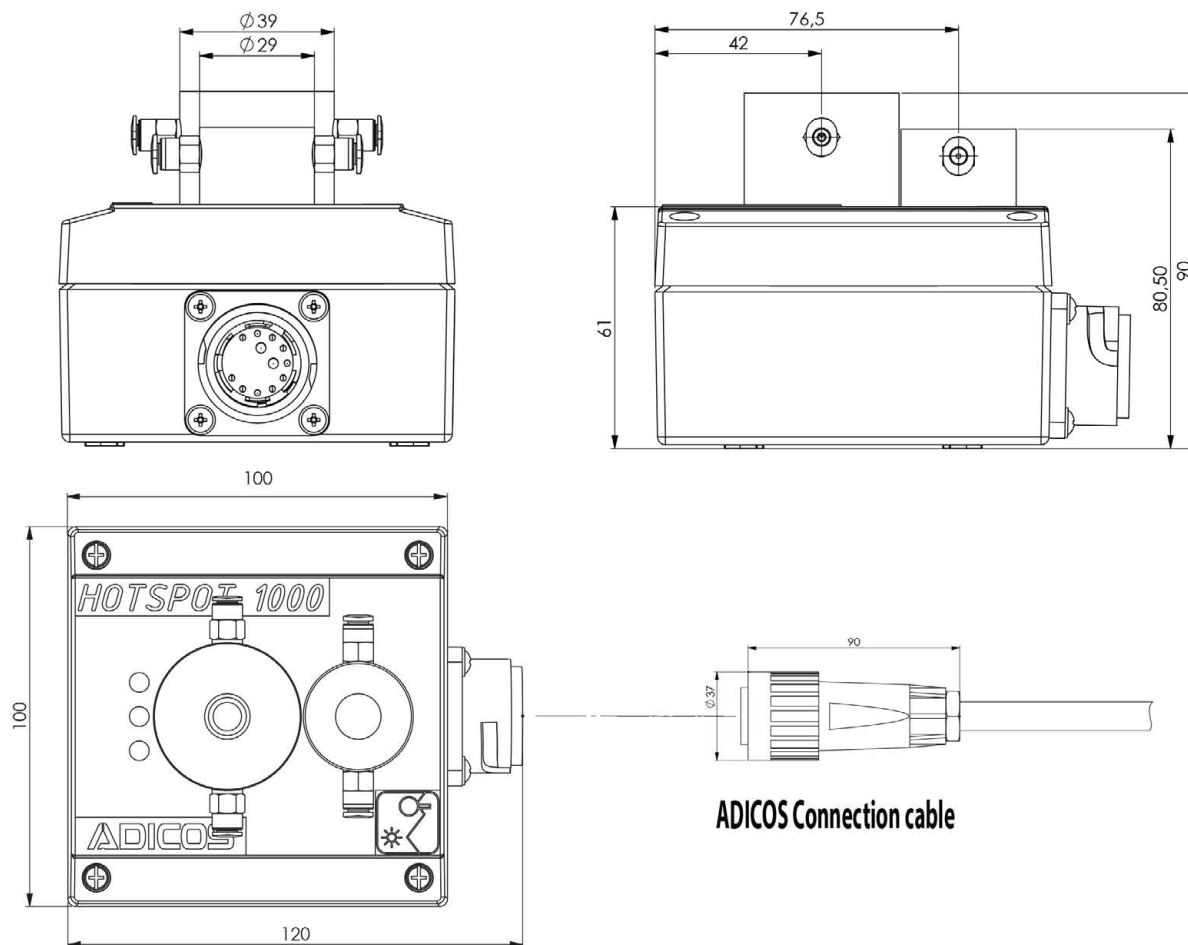
ADICOS HOTSPOT-1000 is especially suitable for process and storage monitoring, in applications with spontaneously inflammable bulk material as well as the surveillance of conveyor systems. Bulk material and equipment in danger of overheating can be observed at the same time.

A decentralized power supply unit is required to power the HOTSPOT-1000 detectors. The ADICOS M-BUSMASTER or the ADICOS fire panel manage the communication between the elements of the system. The ADICOS Central Software displays the detector status and temperature curves and images and allows to set individual sensitivities and thresholds of any connected detector. The HOTSPOT also includes a conventional fixed-image camera, which makes commissioning considerably easier.

# HOTSPOT - Specification

## Mechanical dimensions

All dimensions in mm



### Mechanical characteristics

Enclosure	Coated aluminium diecast (corrosion-resistant)
Weight	0,6 kg
Protection class	IP 64
Dimensions (h x w x l)	90 x 100 x 100 mm

### Thermal characteristics

Relative humidity	0 ... 99 % (non-condensing) In case of continual condensation, use internal heating
Temperature range	-10 ... +50 °C

### Electrical characteristics

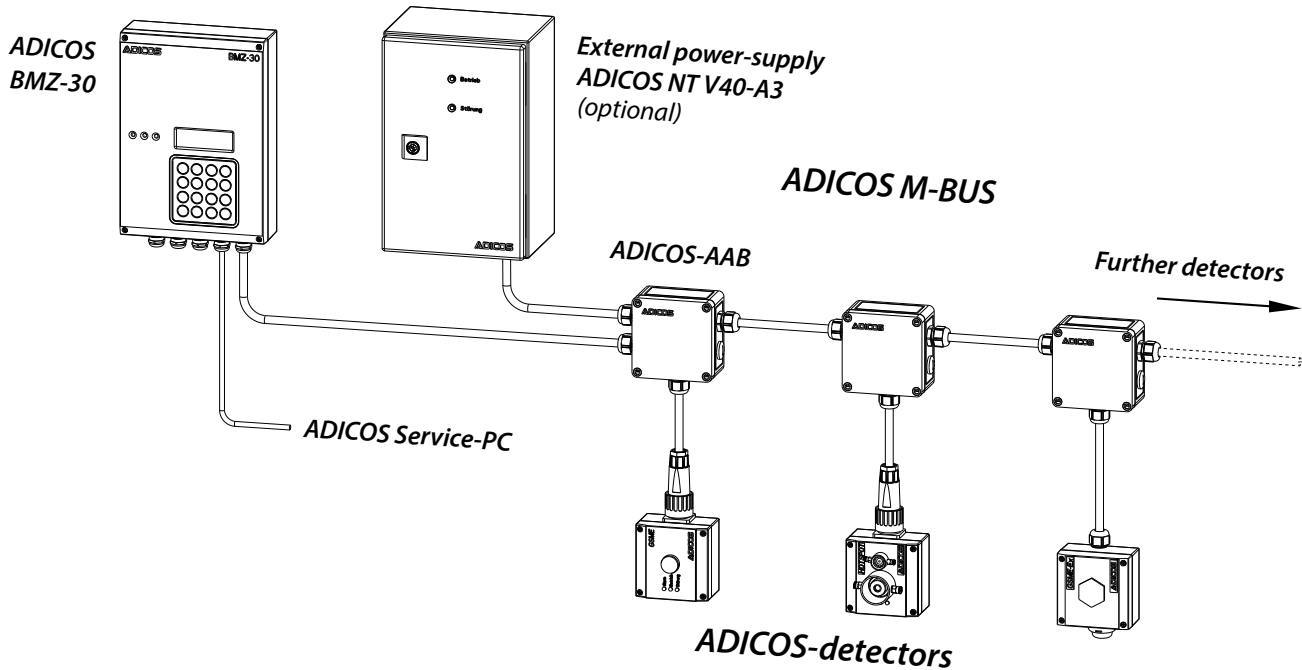
Supply voltage	24 ... 40 V DC (Error-status at 20 V or less)
Power consumption (without internal heating)	1 VA
Power consumption (with internal heating)	10 VA
Internal fusing	750 mA
M-Bus max. line length	≈ 2 km
M-Bus max. line capacity	≈ 200 nF
M-Bus baudrate	4800 baud
Limit contact alarm relay	680 Ω, 20 mA max. (Alarm (NO) relay), further configurations on request
Limit contact error relay	0 Ω, 40 V bzw. 20 mA max. (Failure (NC) relay), further configurations on request

# HOTSPOT - 1000 Specifications

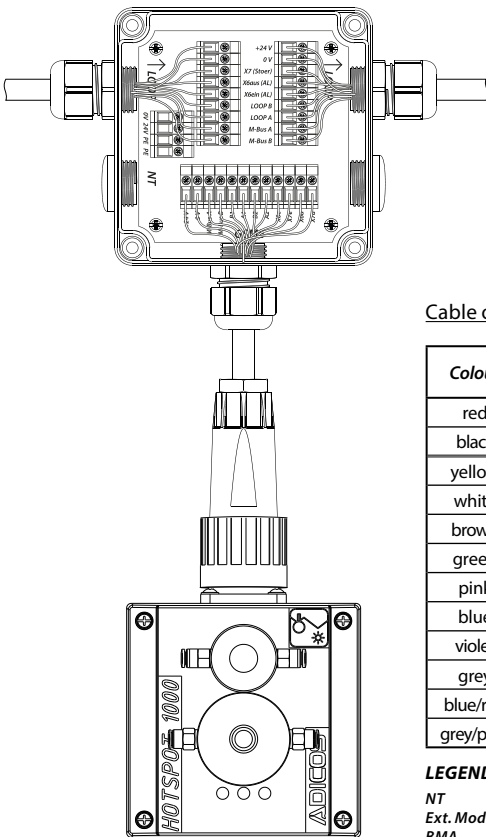
## Detector characteristics

Sensor resolution	32 x 31 pixels
Optical angle	53° x 52°
Reaction time	< 1 second
Temporal resolution	0,1 second or 1 second (depending on pre-set configuration)
Measuring range	0°C bis 100°C

## ADICOS topology concept



## Electrical connection

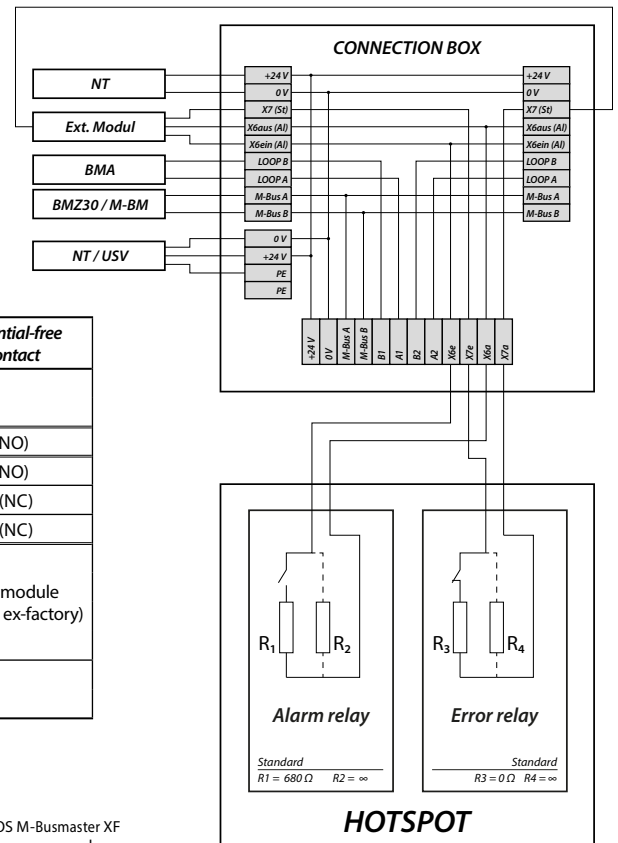


Cable occupation HOTSPOT-1000

Colour	Signal	Potential-free contact
red	Supply voltage	
black	24 ... 40 V DC (non-polarised)	
yellow	Relay output X6 e	Alarm (NO)
white	Relay output X6 a	Alarm (NO)
brown	Relay output X7 a	Failure (NC)
green	Relay output X7 e	Failure (NC)
pink	Fire panel interface B - in	add-on module (option, ex-factory)
blue	Fire panel interface A - in	
violet	Fire panel interface B - out	
grey	Fire panel interface A - out	
blue/red	M-Bus	
grey/pink	M-Bus	max. 40 V (non-polarized)

### LEGEND:

- NT : External power supply
- Ext. Modul : Connection-module for FDnet or LSNi
- BMA : Non-ADICOS fire alarm panel
- BMZ30 / M-BM : ADICOS fire alarm panel BMZ30 or ADICOS M-Busmaster XF
- NT / USV : External power supply / uninterruptible power supply



# HOTSPOT - Application

## Planning notes for ADICOS-Detectors

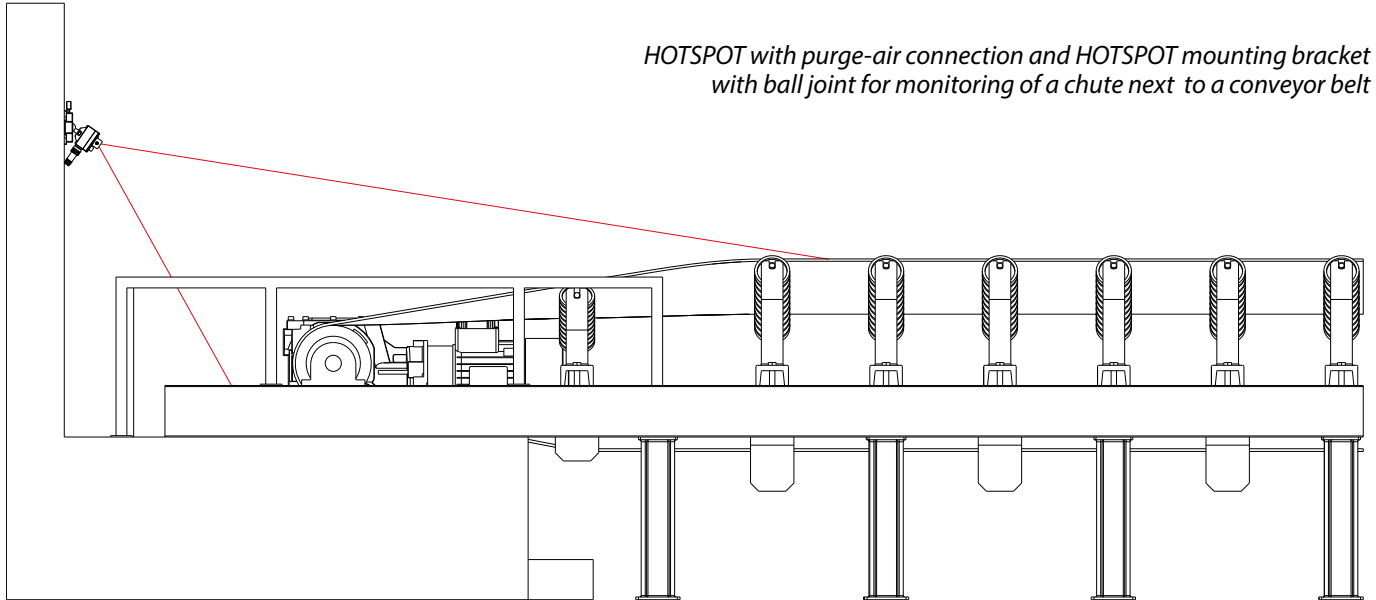


### ATTENTION!

Planning of fire detection systems for industrial surroundings requires special expertise.

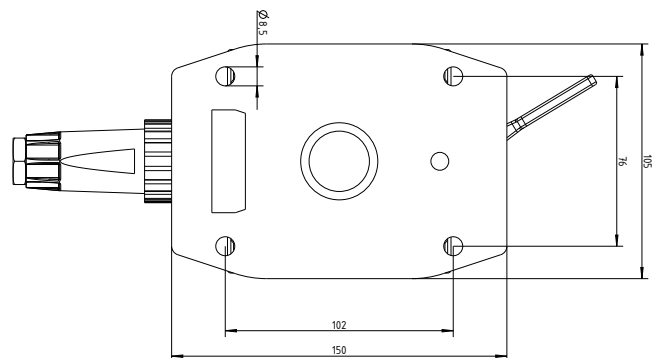
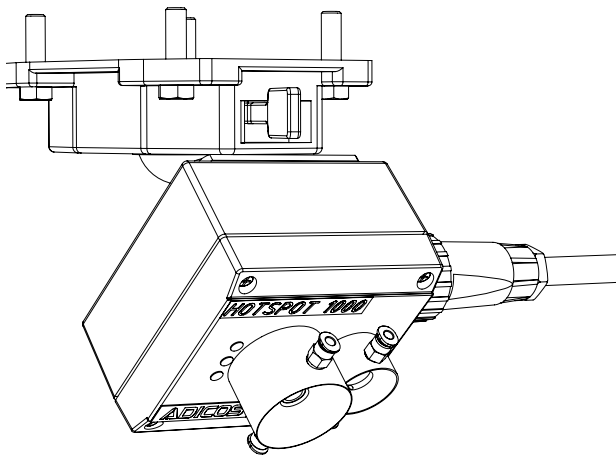
Placement and alignment of ADICOS-detectors has to be done by specialist planners!

## Application example

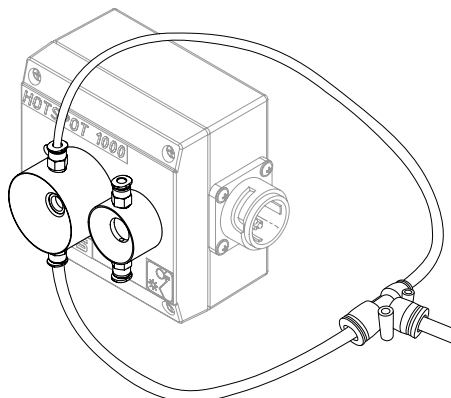


HOTSPOT with purge-air connection and HOTSPOT mounting bracket with ball joint for monitoring of a chute next to a conveyor belt

## HOTSPOT mounting bracket



## HOTSPOT-1000 purge air connection



### Required Purity level

Dust:	2
Humidity:	3 (-20°C dew point)
Oil:	2 (<0,1 mg/m <sup>3</sup> )

### Required airflow rate

Dust loaded:	2 l/min
Dust loaded streaming air:	3 l/min
In case of dust loaded air with a high velocity a test is recommended.	

## Bestellinformationen

<b>System components</b>	<b>Description</b>	<b>Order-No.</b>
ADICOS BMZ-30	Compact fire alarm panel for administration of ADICOS detectors	425-2001-101
ADICOS M-BUSMASTER XF	Master unit for ADICOS M-Bus and PC connection // M-Bus Repeater	420-2001-040
ADICOS Netzteil NT V40-A3	External power supply 40V, 3A	430-2001-030

<b>Mounting accessories</b>	<b>Description</b>	<b>Order-No.</b>
ADICOS AAB	Connection and branching box for all detector types	405-2002-037
HOTSPOT mounting bracket	mounting bracket with with ball joint and tension lock	410-2003-018
ADICOS connection cable 5 m	Pre-assembled with ADICOS bayonet-plug for all detector types (except Ex)	95-31-01688
ADICOS connection cable 10 m	Pre-assembled with ADICOS bayonet-plug for all detector types (except Ex)	95-31-02236
ADICOS connection cable 15 m	Pre-assembled with ADICOS bayonet-plug for all detector types (except Ex)	95-31-03001
ADICOS connection cable 20 m	Pre-assembled with ADICOS bayonet-plug for all detector types (except Ex)	95-31-02387
ADICOS connection cable 25 m	Pre-assembled with ADICOS bayonet-plug for all detector types (except Ex)	95-31-03586
ADICOS connection cable 30 m	Pre-assembled with ADICOS bayonet-plug for all detector types (except Ex)	95-31-03039
ADICOS connection cable 35 m	Pre-assembled with ADICOS bayonet-plug for all detector types (except Ex)	95-31-03675
ADICOS connection cable 40 m	Pre-assembled with ADICOS bayonet-plug for all detector types (except Ex)	95-31-03621

<b>System software</b>	<b>Description</b>	<b>BOrder-No.</b>
ADICOS central software	Software for parameterization and data-logging, unlimited detector support	405-2004-020

<b>Maintenance accessories</b>	<b>Description</b>	<b>Order-No.</b>
HOTSPOT-Tester HTL2	Easy to use test unit for ADICOS HOTSPOTS	410-2402-008
ADICOS M-BUSMASTER S	Compact portable M-BUSMASTER with USB interface	410-2001-045

Distributor:



FLAME MONITORING,  
FIRE & GAS DETECTION