

# HOTSPOT

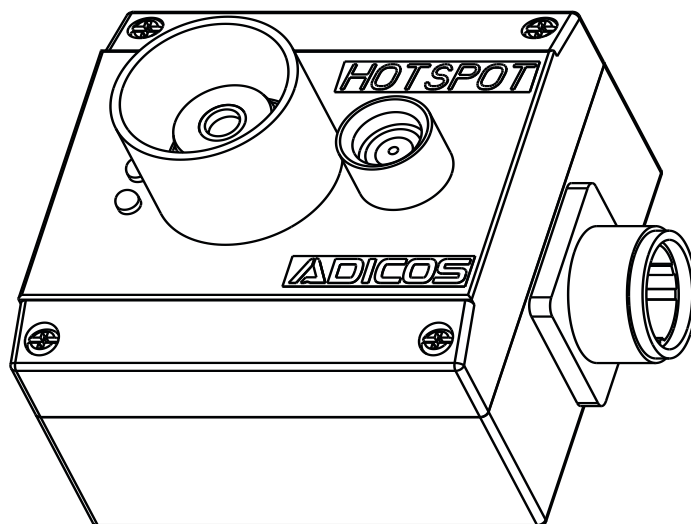
*Industrial-suited parametrizable  
Infrared heat detectors with  
integrated signal processing  
and evaluation*

## Characteristics

- *Sturdy design with aluminium diecast housing*
- *Extensive tolerance towards humidity and dust*
- *Detection of smoldering fires*
- *Fast reaction time*
- *Adjustable alarm thresholds for each pixel*
- *Detection not effected by airflow*
- *Fast and easy installation due to pre-wired cable for power-supply and data-signals*
- *Zentrale Datenerfassung und Visualisierung über PC-Software*
- *Central data archiving and visualization with service PC*
- *Interface-modules for common fire alarm systems such as BOSCH LSNi and SIEMENS FNet*
- *Suitable for process monitoring*

## Applications

- *Open or enclosed belt conveyors for dust-explosive bulk materials*
- *Storage facilities and bunkers for spontaneously inflammable material*
- *Drives, shredders, dryers, coolers, chutes and funnels*
- *Silos and mills*



ADICOS HOTSPOTs are intelligent thermographic cameras of the Advanced Discovery System („ADICOS“), which was specifically created to provide reliable early fire detection in industrial surroundings.

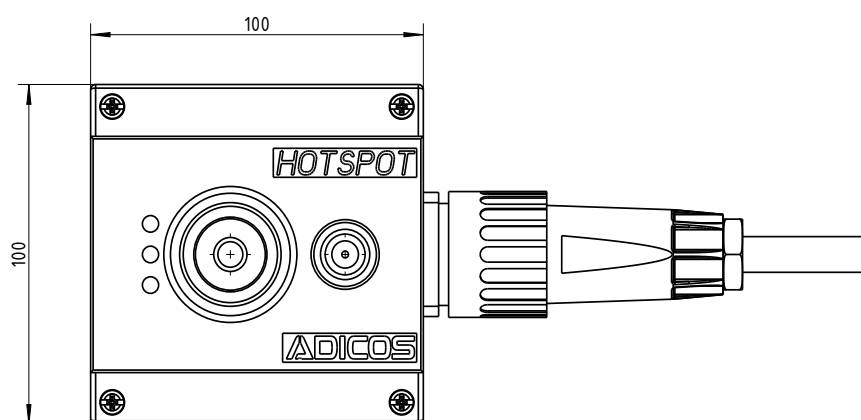
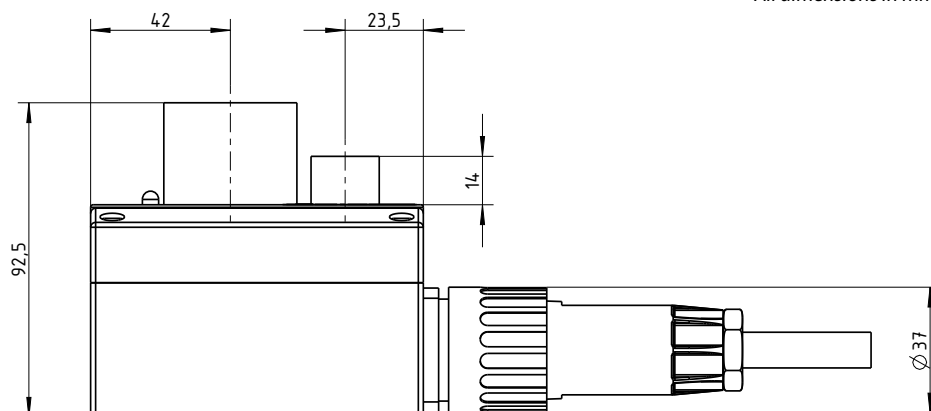
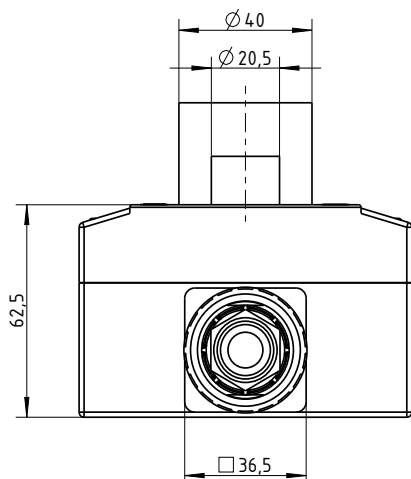
HOTSPOTs are parametrizable compact infrared camera systems with integrated signal processing and evaluation. Their sturdy design protects them against surrounding dust and humidity, which enables them to operate in rough industrial surroundings. Typical applications for HOTSPOTs are for example the detection of overheating drives or bearings of conveyor systems and the monitoring of spontaneously inflammable bulk materials on conveyor belts or in storage facilities.

Power-supply and data communication for the detectors are provided over the ADICOS M-Bus. A simple wiring concept with prewired ADICOS system cables and specially designed connection boxes keeps installation simple and fast. A service PC with the ADICOS Manager connected to an ADICOS M-Busmaster or the ADICOS fire alarm panel BMZ-30 can address each detector individually for advanced data-logging and parametrization features. In this way alarm thresholds can be adapted perfectly to the atmosphere around each detector. Displaying and analysing temperature curves is also a key feature of the software.

# HOTSPOT - Specification

## Mechanical dimensions

All dimensions in mm.



Connection cable  $\varnothing 11$

## Mechanical characteristics

Enclosure	Coated aluminium diecast (corrosion-resistant)
Weight	0,6 kg (without connection cable)
Protection class	IP 64

## 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	2 x 375 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 $\Omega$ , 20 mA max. (Alarm N/O relay)
Limit contact error relay	0 $\Omega$ , 40 V / 20 mA max. (Error N/C relay)

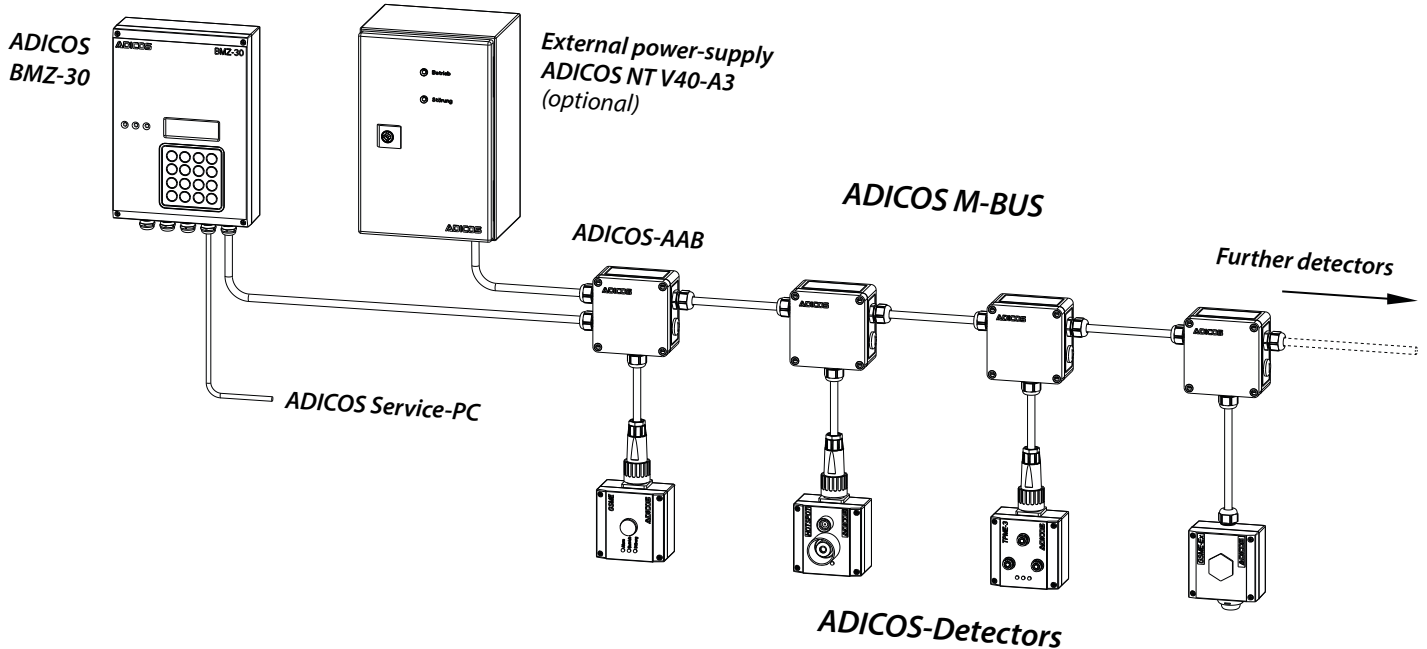
Technical changes reserved!

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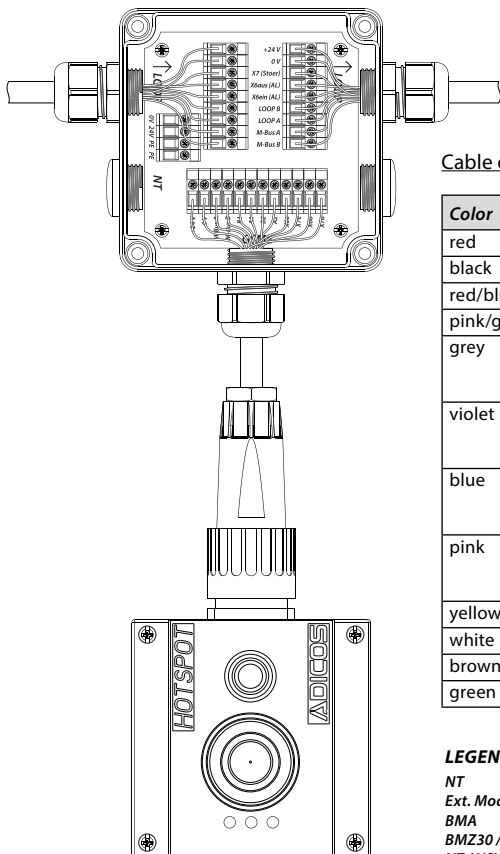
# HOTSPOT-X22 - Specifications

Detector characteristics	HOTSPOT-16/-C	HOTSPOT-64	HOTSPOT-256	HOTSPOT-256T	HOTSPOT-1000
Sensor resolution	4 x 4	16 x 4	16 x 16	16 x 16	32 x 31 pixels
Optical angle	41° x 32°	52° x 14°	52° x 53°	26° x 27°	52° x 53°
Reaction time	≤ 1200 ms				
Temporal resolution	100 ms / 1000 ms (depends on configuration)				

## ADICOS topology concept



## Electrical connection

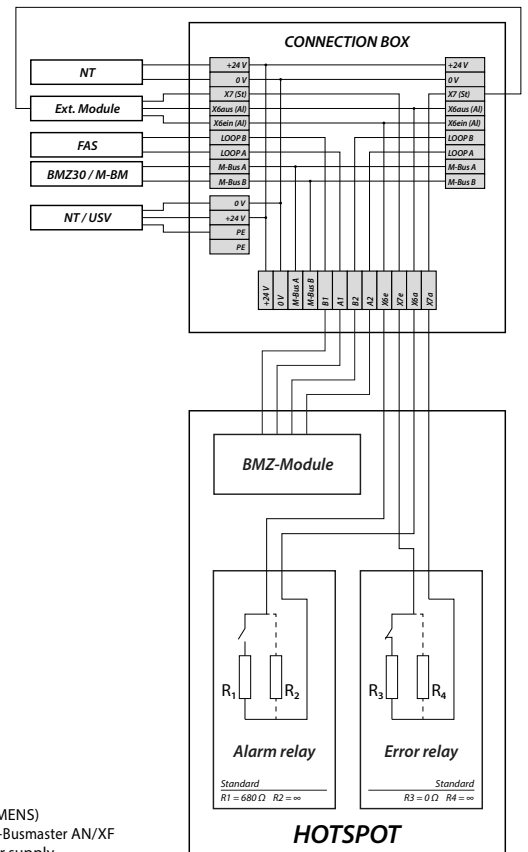


Cable occupation HOTSPOT

Color	Signal	
red	Supply voltage	
black	24 ... 40 V DC (non-polar)	
red/blue	M-Bus (non-polar)	
pink/grey		
grey	FDnet (+) LSN a out PMA in/out a	0 ... 5 V 0 ... 10 V Pre-alarm N/O
violet	FDnet-B (-) LSN b2 out WS out b	0 V 0 V Pre-alarm C
blue	FDnet (+) LSN a in PMA in/out a	4 ... 20 mA
pink	FDnet-A (-) LSN b1 in PMA in b	4 ... 20 mA Pre-alarm N/C
yellow	Relay output X6 e - Alarm N/O	
white	Relay output X6 a - Alarm N/O	
brown	Relay output X7 a - Error N/C	
green	Relay output X7 e - Error N/C	

### LEGEND:

- NT : External power supply
- Ext. Module : Connection-module for FDnet or LSNi
- BMA : Non-ADICOS fire alarm panel (e.g. BOSCH, SIEMENS)
- BMZ30 / M-BM : ADICOS fire alarm panel BMZ30 oder ADICOS M-Busmaster AN/XF
- NT / USV : External power supply / uninterruptible power supply



# HOTSPOT- Application

## Planning notes for ADICOS-Detectors

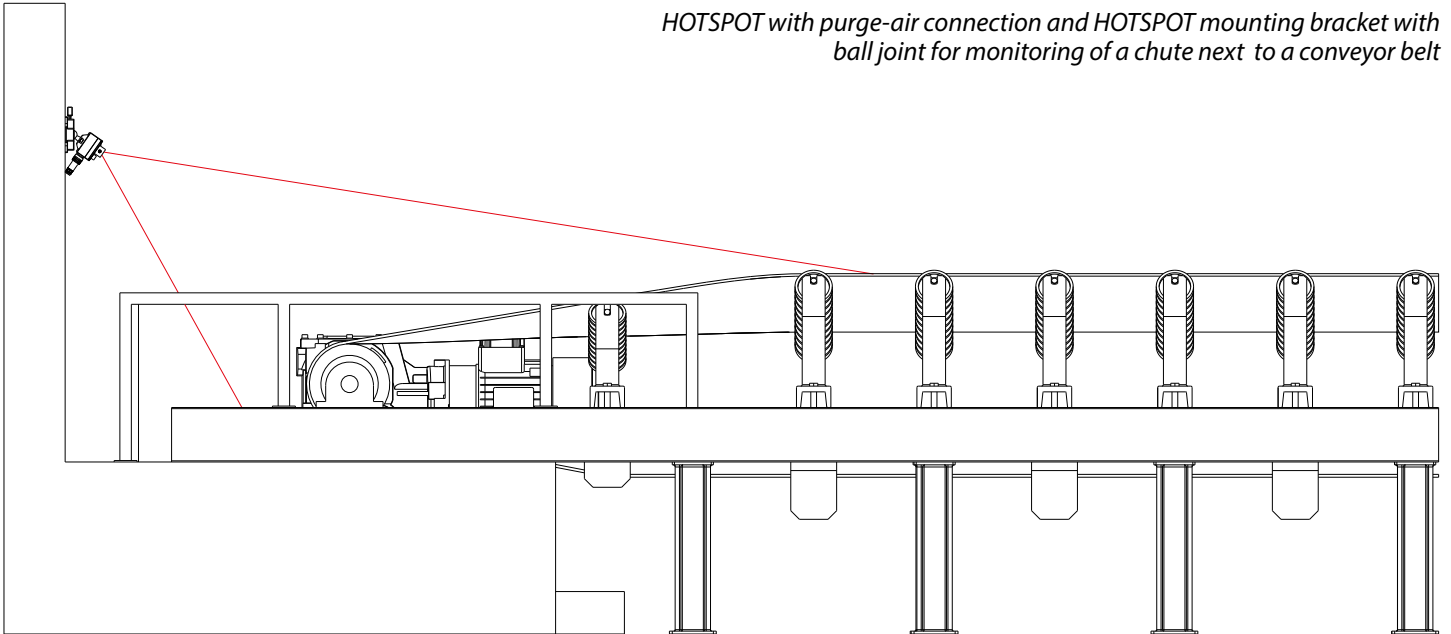


### ATTENTION!

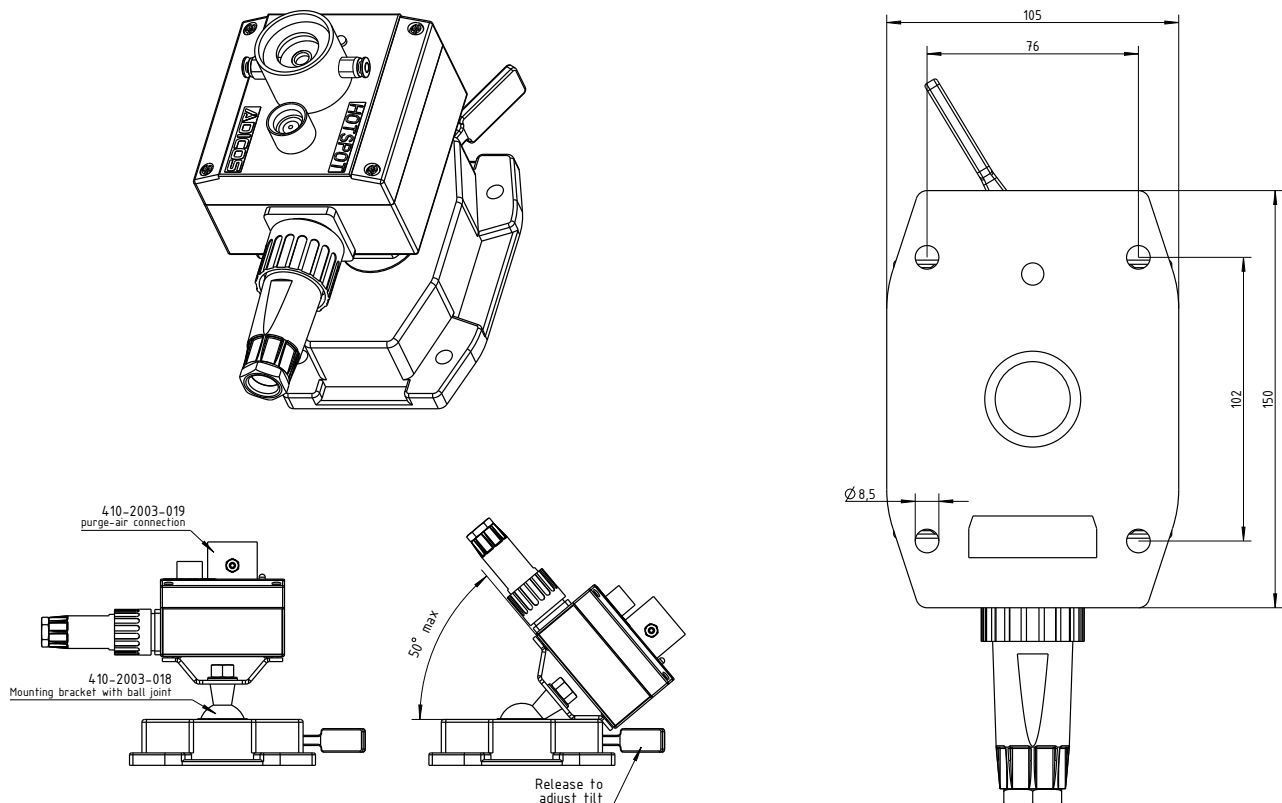
Planning of fire detection system for industrial surroundings requires special expertise.  
Placement and alignment of ADICOS-Detectors has to be done by specialist planners!

## 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 with ball joint




Technical changes reserved!

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## Order information

Detector	Description	Order-No.
ADICOS HOTSPOT-16	Standard version with M-Bus module & limit value output	410-2001-030
ADICOS HOTSPOT-256	Standard version with 256 pixels, M-Bus module & limit value output	410-2001-031
ADICOS HOTSPOT-256 T	Standard version with telephoto lens, M-Bus module & limit value output	410-2001-032
ADICOS HOTSPOT-1000	Standard version with 100 pixels, M-Bus module & limit value output	410-2001-033

Detector for  -Zone 22	Description	Order-No.
ADICOS HOTSPOT-X22	HOTSPOT-1000 for ATEX-Zone 22, prewired connection cable	410-2001-120

Detector accessories	Description	Order-No.
HOTSPOT purge-air connection	Connections for 2 compressed air plastic tubes Ø4	410-2003-019
ADICOS pre-alarm module	Internal extension module with pre-alarm relay	405-2002-023
ADICOS BMZ-Module LSNi	Internal extension module for BOSCH LSNi support	405-2002-021
ADICOS BMZ-Module FDnet	Internal extension module for SIEMENS FDnet support	405-2002-022

Mounting accessories	Description	Order-No.
HOTSPOT mounting bracket	Mounting bracket with ball joint for easy and stepless tilting of HOTPOTS	410-2003-018
ADICOS AAB	Connection and branching box for all detector types	405-2002-037
ADICOS mounting plate	Aluminium sheet with mounting holes for all detector types	405-2003-018
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

System components	Description	Order-No.
ADICOS BMZ-30	Compact fire alarm panel for administration of ADICOS detectors	425-2001-101
ADICOS BMZ-30 relay module 8	Internal extension module with 8 configurable output relays	425-2002-105
ADICOS BMZ-30 relay module 24	Internal extension module with 24 configurable output relays	425-2002-106
ADICOS ethernet module	Internal extension module for LAN support for BMZ-30 and M-Busmaster XF	425-2002-010
ADICOS M-Busmaster XF	Master unit for ADICOS M-Bus and PC connection // M-Bus Repeater	420-2001-040
ADICOS M-Busmaster AN	Master unit for ADICOS M-Bus and PC connection // M-Bus Repeater	420-2001-015
ADICOS NT-V40 A3	External power supply with 160 VA	430-2001-030

System software	Description	Order-No.
ADICOS central software	Software for parameterization and data-logging, for up to 5 detectors	405-2004-016
ADICOS central software	Software for parameterization and data-logging, for up to 20 detectors	405-2004-017
ADICOS central software	Software for parameterization and data-logging, for up to 50 detectors	405-2004-018
ADICOS central software	Software for parameterization and data-logging, for up to 100 detectors	405-2004-019
ADICOS central software	Software for parameterization and data-logging, unlimited detector support	405-2004-020

Maintenance accessories	Description	Order-No.
HOTSPOT-Tester HTL100	Portable device with regulated 100 °C heat-plate for ADICOS HOTSPOTS	410-2402-001
ADICOS M-Busmaster A3	Compact, portable M-Busmaster with RS-232 interface for maintenance	420-2001-006