CCD 573X

Smoke, heat and CO detector

The multiple sensor detector CCD 573X is an individually addressed, combined automatic detector for smoke, heat and carbon monoxide.

The CCD 573X meets the specifications of the SecuriLine eXtended for operation on the addressable loop of the SecuriFire fire alarm system.

Fig. 1 CCD 573X

Operation/use

The multiple sensor detector CCD 573X is a combined smoke-, heat- and carbon monoxide detector. It detects smouldering fires and open fires early on by detecting and evaluating the fire characteristics smoke, heat and carbon monoxide (CO). Smoke is detected using the Tyndall principle (scattered light), heat is detected using the NTC sensor principle, and an electrochemical sensor is used for detecting CO gases. If the signal values preset in the detector are exceeded, the relevant message is sent to the control panel.

The CCD 573X has a short-circuit disconnecter that can isolate a short-circuit on the installation.

The CCD 573X can generate the following messages:
- Smoke fire alarm (EN 54-7)
- Smoke pre-signal:
  PS1 at 50%, PS2 at 75% of the alarm threshold
- Smoke maintenance alarm
- Smoke soiling: Levels 1 and 2

- Temperature fire alarm (EN 54-5)
- Temperature pre-signal
- Temperature maintenance alarm

- CO gas fire alarm (EN 54-26/EN 54-30)
- CO gas pre-signal
- Technical CO gas alarm (EN 50291-1)
- Technical CO gas pre-signal adjustable in the range of 20 to 320 ppm (does not correspond to any standard)
- CO gas maintenance alarm

- Fault messages: Ageing, optical fault, voltage supply fault, NTC short-circuit and interruption, CO gas sensor fault, EEPROM memory fault, overtemperature

Key features of the CCD 573X are:
- Digital signal processing
- Alarm threshold tracking
- Temperature-compensated smoke element
- Signature alarm for smoke, heat and CO
- Temperature-supported smoke evaluation (CUBUS levelling)
- Temperature- and CO-supported smoke evaluation (CUBUS+ levelling)
- Multi-standard use on 3 parallel channels (smoke, heat, CO) compliant with EN 54-5, -7 as well as prEN 54-26, -29 and -30
- Multi-dimensional event memory with real-time information
- Fewer false alarms thanks to alarm filters, the use of multi-sensors, and new signal algorithms
- Alarm output voltage 5 V
- Alarm output for external alarm display, can be programmed irrespective of its own alarm LED as output.
- Alarm output power limitation programmable for 0.1 mA, 1 mA, 5 mA
- Continuous monitoring of the CO gas sensor
- Automatic self-test of all sensors
- "Overtemperature" fault
- Autonomous short-circuit detection at startup
- Works with up to 3.5 km line length (at 25°C ambient temperature)

The CCD 573X can be system-specifically programmed and adjusted to its area of application. The most important setting options are:
- Selection of fire characteristics smoke, heat and CO gas compliant with standards EN 54-5, -7 as well as prEN 54-26, 54-29 and 54-30
- Up to three standards-compliant, parallel modes of operation selectable
- Selection of heat class compliant with EN 54-5; Class A1, A2, B including Index R (for unheated rooms) and Index S (for kitchens) for all 3 heat classes.
- Signalling of a technical CO gas alarm based on EN50291-1
- Technical CO gas pre-alarm, adjustable from 20 to 320 ppm
- Blinking at function (activatable)

Data Sheet

Planning

The country-specific directives apply when planning and installing automatic fire detector systems.
For combined fire detectors (CCD 573X) additional directives may apply if one of the detection properties is continuously or temporarily deactivated.

The following table shows all of the possibilities for combining the modes of operation and the recommended planning directive.

Mode of operation			Planning compliant with
Smoke	Heat	CO	
EN 54-7 CUBUS			EN 54-7
EN 54-7 CUBUS	EN 54-5		EN 54-7
EN 54-7 CUBUS	EN 54-5	EN 54-26	EN 54-7
EN 54-7 CUBUS		EN 54-26	EN 54-7
EN 54-7 CUBUS	EN 54-30		EN 54-7
EN 54-7 CUBUS+			EN 54-7
EN 54-7 CUBUS+	EN 54-5		EN 54-7
EN 54-29			EN 54-7
EN 54-29	EN 54-5		EN 54-7
EN 54-29		EN 54-26	EN 54-7
EN 54-29	EN 54-30		EN 54-7
EN 54-29	EN 54-30	EN 54-26	EN 54-7
	EN 54-5		EN 54-5
	EN 54-5	EN 54-26	EN 54-5
	EN 54-30		EN 54-5
		EN 54-26	No recommendation

⚠ Under normal ambient conditions an operating time of up to 7 years is possible; however, it is absolutely necessary that the detector is commissioned no later than 7 months after the production date (see product identification).

⚠ It is imperative that the maximum permitted ambient temperature is observed; if not, the CO cell may be destroyed.

☞ Increased concentrations of hydrogen or alcohol in the ambient air may cause CO false alarms.

Mounting/installation

Mounting and installation of the CCD 573X is accomplished with the assembly base series USB 502.
- USB 502-1 Standard base for surface mounting
- USB 502-2 Base for flush mounting in dropped ceilings
- USB 502-3 Base for damp rooms
- USB 502-4 Base for flush mounting in concrete
- USB 502-6 Standard base surface mounting without loop contact
- USB 502-20 Standard base with illuminated ring without loop contact

The specifications in the data sheets shall apply for installation; detector base series USB 502.

Connection

⚠ The maximum number of detectors on an addressable loop has to be calculated. It must take into account power consumption, the installation, other line participants and the applicable directives and regulations.

The electrical connection in the USB 502 base is with terminal strips. The electrical connection between detector and base is by means of a 5-pin plug connector.

Terminal	Signal	SecuriFire
1	GND	C1/C2
2	DATA A	L1
3	DATA B	L2
4	GND Alarm output	
5	+ Alarm output	
6	Support point (screening)	Screen

⚠ Terminal 5 (alarm output) may be loaded a maximum of 5 mA, 1 mA or 0.1 mA.

The connections of the USB 502 base are designed so that when the CCD 573X is removed the SecuriLine eXtended is closed.
The USB502-6/USB502-6MC und USB502-20 bases do not have a loop contact. When removing the detector from these bases, the SecuriLine eXtended is therefore not closed!
A short-circuit disconnecter in the CCD 573X ensures that a short-circuit in the installation (loop) is isolated in the area of the damage. This allows the detectors to continue functioning unimpeded.

Exception:
Under the following conditions it may occur that detectors are no longer recognised on the SecuriLine eXtended:
- Detector defect (short-circuit or interruption)
- More than one short-circuit or interruption before and after the detector
- Short-circuit or interruption in stub line
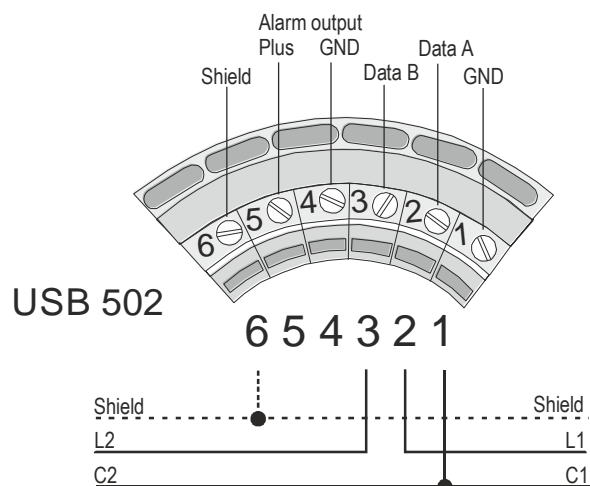
SecuriFire connection

Fig. 2 CCD 573X connection
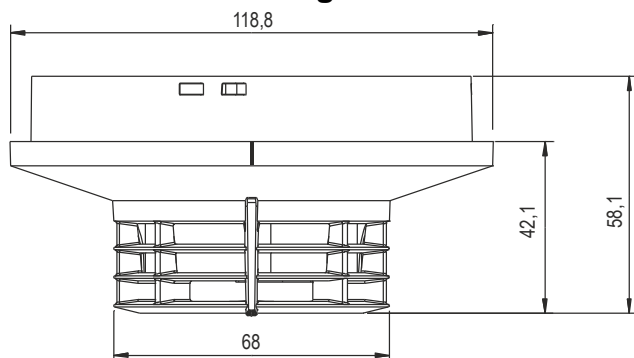
Dimensioned drawing

Fig. 3 CCD 573X dimensioned drawing

Revision

The CCD 573X can be tested with the combination Testifire 2001 testing device or the extended FDT 533 CO Set testing device.

Testifire 2001: the smoke/heat/CO sensor can be tested individually or sequentially using an exchangeable CO cartridge integrated in the testing device.

FDT 533 CO Set: the smoke/heat sensor technology can be checked individually or sequentially with the Securiton test gas 918/5 and the CO sensor technology with the Solo C3 test gas.

Before carrying out a test, the relevant group on the FAS must be switched to maintenance.

> To avoid false alarms, only the above mentioned test devices with their corresponding cartridges and test gases are permitted to be used for testing!

> Triggering a genuine smoke sensor alarm with the 918/5 test gas may be performed only with Signature. The continuous spraying of the detector with the test gas must be avoided!

Signature tests

A real alarm can also be triggered by a signature test. The following table shows the possible signature tests, depending on the activated detection according to the respective standard.

Standard	Signature type
EN54-5	Heat signature or CO signature
EN54-7	Smoke signature
EN54-26	CO signature
EN54-29	Smoke signature
EN54-30	CO signature

Detailed information on carrying out the signature test can be found in the FDT 533 data sheet (T800 928).

Maintenance

Maintenance and inspection work on danger detection systems are always subject to the provisions of the country in which the system is operated. For example:

- In GERMANY the DIN VDE 0833 Parts 1 + 2 and DIN 14675
- In SWITZERLAND the VKF (Cantonal Fire Insurance Union) directive and the technical guidelines of the SES (TR SES)

These national provisions refer in part to the equipment manufacturer's specifications with regard to inspection intervals.

Securiton fire detectors are equipped with a detector self-test that automatically subjects the detectors to an extensive electronic function check. They are also equipped with automatic soiling compensation.

It is nevertheless necessary that all active sensors of the detector undergo a physical and functional check on site for their set modes of operation at regular intervals.

Securiton recommends the following:

- Maintenance and inspection work should be carried out at regular intervals and by trained and qualified personnel only (qualified electrician).
- At least once a year a functional and visual check in accordance with Securiton maintenance instructions should be carried out.

Test	Multiple sensor detector
Visual inspection of the detector fastening (base)	X
Visual inspection of the detector (damage)	X
Visual inspection of the detector labelling	X
Check of the detector area (open space around the detector not restricted)	X
Triggering of a maintenance alarm via smoke sensor with Testifire 2001 or test gas	X
Triggering of a maintenance alarm via CO sensor with Testifire 2001 or test gas	X
Triggering of a maintenance alarm via heat sensor with Testifire 2001 or test gas	X
Alarm LED check	X
Check of the proper functioning of the alarm transmission path in the detector to the control panel	X

> This product fulfils the requirements of the 2002/95/EG RoHS directive.

Article numbers / spare parts

Short designation	Swiss art. no.	Art. no.
CCD 573X	988.976067	30-5000006-02-02
CCD 573X MC (with specification acc. to RAL scale)	988.975850	30-5000006-92-02
Accessories		
USB 502-1 standard base	123.265244	30-4100005-01-01
USB 502-1 MC (multicolour)	123.985295	30-4100005-91-01
USB 502-2 base for false ceilings	123.265246	30-4100005-02-01
USB 502-3 base for wet rooms	123.265248	30-4100005-03-01
USB 502-4 base for mounting in concrete	123.265250	30-4100005-04-01
USB 502-5 base for raised floors	123.265252	30-4100005-05-01
USB 502-6 standard base without loop contact	123.265254	30-4100005-06-01
USB 502-6 MC (multicolour) without loop contact	123.985297	30-4100005-96-01
USB 502-20 standard base with illuminated ring without loop contact	123.249467	20-2100019-01-01

Data Sheet

Technical data

Operating principle	Combined smoke/heat/CO detector (Tyndall effect, NTC sensor, electro-chemical CO sensor)
Monitoring area, monitoring height	Dependent on the active detection setting (smoke/heat/CO)[1]
Permissible air velocity	Max. 20 m/s
Smoke detector sensitivity	
Response threshold compliant with EN 54-7	100% sensitivity
Response threshold compliant with EN 54-7, **not** VdS tested	80% sensitivity
Response threshold **not** compliant with EN 54-7	120% sensitivity
Heat detector sensitivity compliant with EN 54-5	Class A1 (factory setting and after reset) Class A2, Class B (Index S and R)
CO gas sensitivity compliant with prEN 54-26	40 ppm CO gas
Adjustable modes of operation	
Heat detector	Compliant with EN 54-5
CUBUS smoke detector	Compliant with EN 54-7
CUBUS+ smoke detector	Compliant with EN 54-7
CO gas detector	Compliant with prEN 54-26
Multi-sensor (heat and smoke combined)	Compliant with prEN 54-29
Multi-sensor (CO and heat combined)	Compliant with prEN 54-30
Signal transmission	Serial bi-phase data transmission, 2-conductor technology
Operating voltage range (incl. modulation amplitude)	7 to 31 VDC
Power consumption	
When quiescent	Typically 150 µA; max. 190 µA
When alarm	Max. 20 mA (pulsed)
Alarm LED active	Max. 2.5 mA
Alarm output active 5 mA (1 mA, 0.1 mA)	Max. 7.5 mA (2.1 mA, 0.7 mA)
Alarm output[2][3]	
Output voltage	+5.0 VDC (+1 V, -0.3 V)
Output voltage short-circuit-proof	Min. 5 mA (min. 1.0 mA, min. 0.1 mA)
Line isolator:	
Rated direct current	Max. 160 mA
Rated switching current	Max. 300 mA
Leakage current	Max. 0.1 mA
Switching impedance	Max. 0.5 Ω
Protection type in connection with USB 502 base	IP 40
Approval by VdS G212183	Compliant with CEA 4021 4.1 b) and c) EN 54 Part 7, 5 and 17 prEN 54 Part 26, 29 and 30
Declaration of performance	CPR-30-13-300-de-en
Ambient temperature range (continual)	-20 ... +50 °C
Recommended storage temperature	0 ... +20 °C
Humidity ambient condition (continuous, without condensation) when ≤ 34°C	10 ... 95% rel. humidity
Humidity ambient condition (continuous, without condensation) when > 34°C	Max. 35 g/m³ Min. 10% rel. humidity
Dimensions without base Ø x H	See dimensioned drawing
Housing colour	White (similar to RAL 9003)
Housing material	ABS/PC
Weight	125 g

[1] Values dependent on the roof design (height, pitch), compliant with country-specific planning directives
[2] The actuation of the alarm output is permitted only when the alarm display is connected.
[3] Only the following external indicator lamps are permitted: RAL 720X, RAL 721, RAL 722, USB502-20

USB502 detector base series
Universal base for SecuriStar fire detectors

USB502-5   USB502-6   USB502-1   USB502-20
USB502-8Ex-i

USB502-4   USB502-2   USB502-3   USB502-7 Ex-i

Fig. 1   USB 502 detector base series

Description

The USB 502 detector base series is used for connecting and mounting the SecuriStar detector family and is completely compatible with the USB 501 detector base series, although this series has a larger connection compartment inside the base.

A 6-pin terminal block is present in the interior of the USB 502 for connecting the base to the fire detectors.

If necessary, an additional 4-pin terminal block can be fit-ted in the corresponding snap-in holder to create support points.

The detector is fixed in the USB 502 by means of a bayo-net connection.

The base is provided with elastic inserts for entry of the in-stallation cables.

USB 502 variants

Variant	Properties, application
USB 502-1	Standard base, surface mounting, with loop contact (green terminal)
USB 502-2	Base for false ceilings, flush mounting, with loop contact (green terminal)
USB 502-3	Base for wet rooms, surface mounting, with loop contact (green terminal)
USB 502-4	Base for mounting in concrete, flush mounting, with loop contact (green terminal)
USB 502-5	Base for raised floors with pipe clamp, with loop contact (green terminal)
USB 502-6	Standard base, surface mounting, without loop contact (black terminal)
USB 502-7 Ex-i	Base for Ex zones with cable screw union, without loop contact (black terminal)
USB 502-8 Ex-i	Standard base for Ex zones, surface mounting, without loop contact (black terminal)
USB 502-20	Base with illuminated ring, surface mounting, without loop contact (black terminal)

Loop contact

The USB 502-1 to 502-5 base variants (green terminal block) are equipped with a loop contact. This means terminals 2 and 3 are connected and are opened automatically when the detector is inserted. On the 573 and MMD detector series, the connection (and thus also the ring) is closed again when the detector is removed. On the 563 detector series, the connection remains open and the control panel signals a fault.

The USB 502-6, USB 502-7 Ex-i, USB 502-8 Ex-i and USB 502-20 base variants have no loop contact (black terminal block). Terminals 2 and 3 are not connected and the connection remains open when the detector is removed.

Planning

> The country-specific guidelines for planning and installing automatic fire detection and fire alarm systems apply when planning.

A tool is available for calculating the maximum possible loop length and the maximum number of participants.

An optical light-guide bar is integrated in the shadow gap area on the USB 502-20, which allows for an extra optical display in addition to the alarm LED on the attached detector.

The LED flashes red in the event of an alarm and is visible from all sides (360°). The triggering and power supply are made via the alarm output of the detector. The alarm output of the detector can also be triggered by an alarm on another detector in the same SecuriFire SCP. The parameters are assigned via SecuriFire Studio. The maximum number of optical displays triggered at the same time in the USB 502-20 base depends on the total number of connected detectors and modules, the line length and the wire cross-section on the addressable loop.

The USB 502-20 base is supported as of SecuriFire Studio R2.0. The USB 502-20 does **not** comply to EN 54-23!

Application overview for detector type and base variants

Detector type	Detector category	USB 502 variant		
		-1/-2/-3/-4/-5/-6	-7 Ex-i/ -8 Ex-i	-20
SSD531, UTD531, STD531, SCD573, TCD573, MCD573 MCD573X, CCD573X, MCD573X-S, MCD573X-SCT, MCD573X-SP, MCD573X-SPCT	Addressable loop	✔	✘	✔
MMD140, MMD150	Modernisation	✔	✘	✘
SSD521, UTD521, SCD563, TCD563	Collective line	✔	✘	✘
MMD130 Ex-i	Ex-i detector	✘	✔	✘

Mounting / installation

The USB 502 base must be permanently mounted by means of two screws (flat or oval-head screws Ø 3.5 to 4 mm / min. head diameter 6.9 mm) to withstand movement due to pressure, tension and torsion.

For this purpose, the elastic insert **A** (slots) in the bottom of the base should be broken through. Depending on the type of cable entry, the installation cables may have to be pulled through the openings **B** in the bottom of the base before the base is fastened.
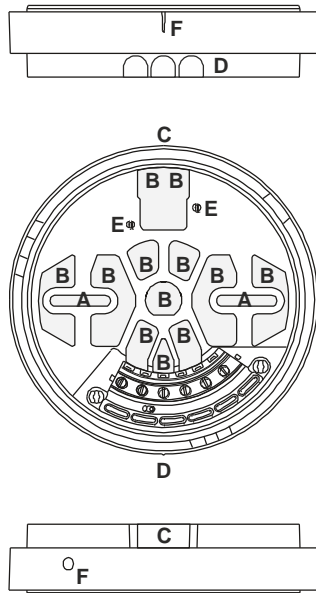
Fig. 2 Mounting aids

A   Elastic insert for fastening the base
B   Elastic insert for cable entry, flush mounting
C+D Insert on the inner circumference (not for USB 502-20)
Cable entry from direction "C" not possible with an auxiliary terminal fitted.
E   Fastening for auxiliary terminals (not for USB 502-20)
F   Marking for LED adjustment and the correct stop position with inserted detector
G   A screw can be inserted in the pre-punched indent on the outside of the base for securing the inserted detector against removal.

Depending on the location of the cable entry, break through the corresponding insert. The installation cable must enter in such a way that neither dust nor moisture can penetrate into the base.

If a risk of water penetrating the base through the supply line is anticipated, then the cable must be fitted with a drip nose before it reaches the base. This applies in particular to flush mounting installations in wet rooms (garages etc.). In such applications, the bases must be mounted next to the flush mounting concrete box and openings **C** or **D** must be used for inserting the cable (see Fig. 4). The base has no strain relief. The cable entry can be made either from the rear through the bottom of the base (opening B) or from the side on the inner circumference (opening **C** or **D**) (see Figs. 2, 3 and 4).
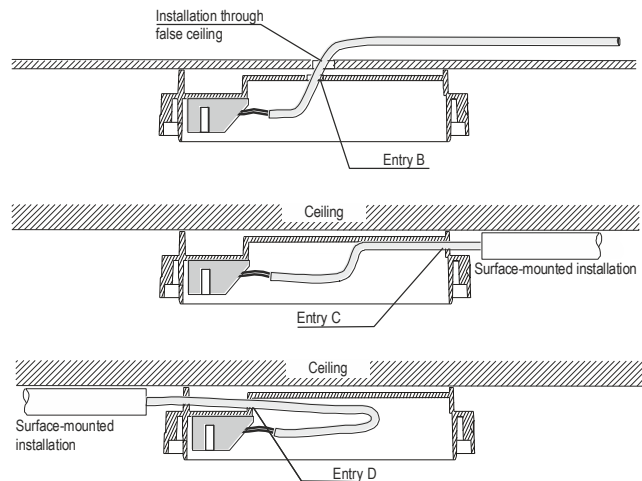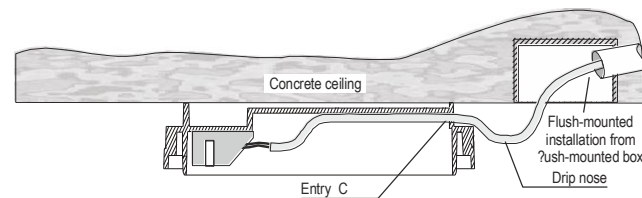
Fig. 3 Cable entry

Fig. 4 Cable entry in wet rooms

With surface mounting, the base must be fastened on a smooth, clean surface. To prevent the base from deforming, there must be no unevenness on the surface when fastening to concrete ceilings.

STOP	The bases may not be positioned directly above cable ducts, water pipes, etc. A lateral distance of at least 0.5 metres from lamps, walls, ceiling joists, etc. must be maintained.

Since the alarm indicator lamp on the SecuriStar fire detector can be seen around 360°, the exact mounting direction of the base is not important (though LED orientation towards the room or sector entrance is recommended).

☞	When several detectors are mounted in large rooms or corridors, it is recommended to mount all bases in the same direction for visual reasons (e.g. by positioning the fixing holes of all bases parallel to the wall).

Cable specification

For the electrical installation, cable types with specifications according to the "Application Information SecuriFire-AI04" document must be used.
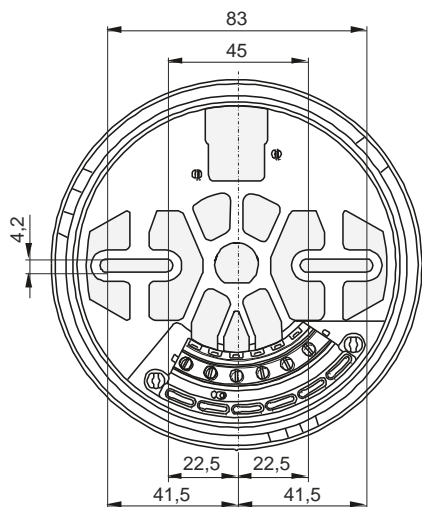

Fig. 5 Dimensioned drawing, slots

Installation notes for USB 502-2

The USB 502-2 base variant can be installed in any standard-compliant false ceiling and consists of:
*   Mounting ring with sleeve and claw fittings
*   USB 502-1 standard base
*   158 mm protective ring for covering the sleeve of the mounting ring (a 177 mm ring is also available as an optional accessory for additional coverage)
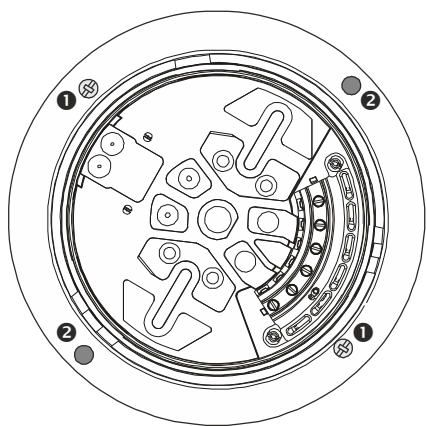
Fig. 6 Plan view of USB 502-2 base with sleeve (false ceiling, flush mounting)

Insert the mounting ring from below in the prepared ceiling cut-out and fasten to the ceiling with the integrated claw fittings ❶ or using two screws ❷ (fastening holes).
Insert the protective ring (covers the screws) afterwards together with the detector.
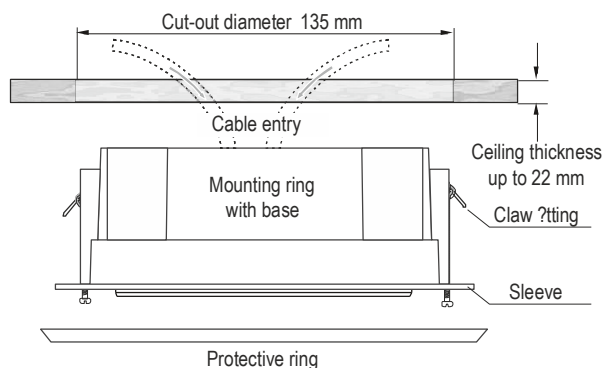
Fig. 6 USB 502-2 installation

Installation notes for USB 502-3

The USB 502-3 base variant is specially designed for use in wet rooms and consists of:
*   Mounting box with four cable inserts PG 13.5 and stopper plugs
*   USB 502-1 standard base
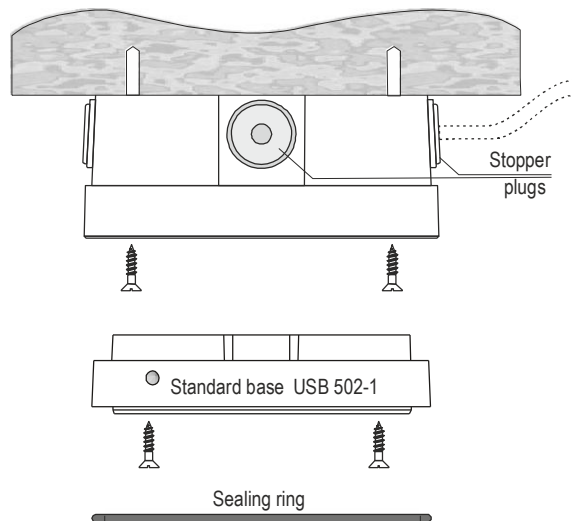*   Sealing ring made of cellular rubber

Fig. 6 USB 502-3 installation (wet rooms)

Fasten the mounting box to the ceiling with the two screws. Break through the stopper plugs, insert the cable and screw the standard base onto the box. Insert the sealing ring afterwards together with the detector. If needed, the stopper plugs can be replaced with PG 13.5 cable screw unions.

Data sheet

Installation notes for USB 502-4

The USB 502-4 base variant is mounted on the formwork and then set in concrete, and consists of:
- Concrete box, mounting ring with sleeve and sealing insert
- USB 502-1 standard base
- 158 mm protective ring for covering the sleeve (a 177 mm ring is also available as an optional accessory for additional coverage)
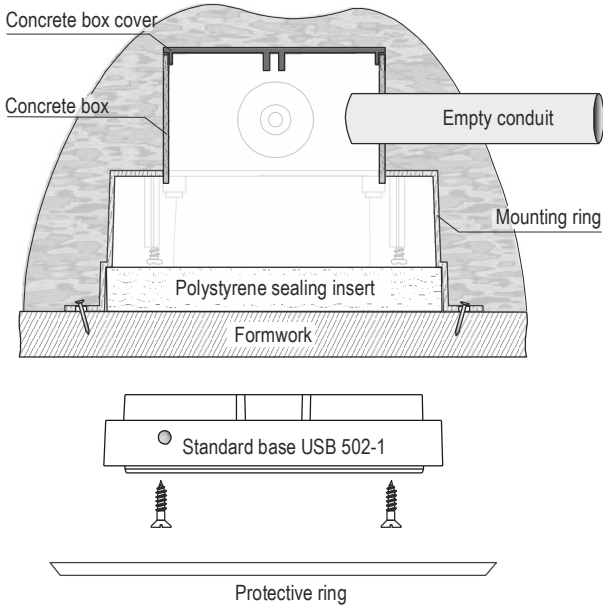
Fig. 6 USB 502-4 installation (mounting in concrete, flush mounting)

The installation cable is inserted through the concrete box. Fasten the mounting ring with nails so it is immovable and tightly sealed on the formwork. After the concrete is poured and the box installed, mount the standard base in the mounting ring using the screws provided. Insert the protective ring afterwards together with the detector.

Installation notes for USB 502-5

The USB 502-5 base variant is installed in cable shafts and raised floors. It is equipped with a pipe clamp that can be used for fastening the base to pipes, struts or similar. The base can be rotated for aligning the detector.

Installation notes for USB 502-7 Ex-i and USB 502-8 Ex-i

The USB 502-7 Ex-i and USB 502-8 Ex-i base variants are permitted for use in Ex zones in combination with the MMD 130 Ex-i multi-criteria detector.
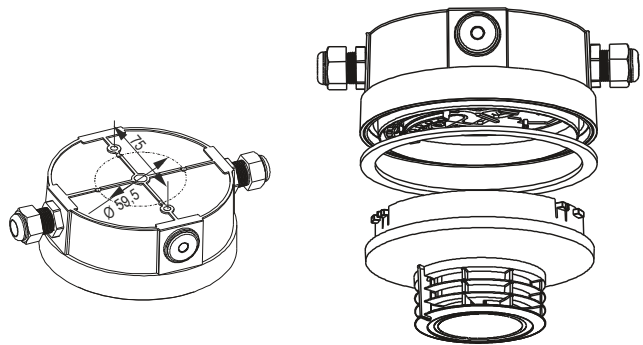
> ⚠ The MMD 130 Ex-i fire detector may only be operated with the USB 502 / USB502 and using a Z787 / Z787F or GTW 01/02.

> ⚠ The safety barrier and GTW must be installed in the safe area.

The fire detector base is intended for surface mounting. The Ex-i detector is secured in the base with a bayonet connection. Ensure that the sealing ring (O-ring) is used when installing the detector.

Fig. 7 USB 502-7 Ex-i installation

The USB 502-8 Ex-i fire detector base can be used for surface mounting without additional strain relief or cable sealing.

In the last base of a fire detection zone, terminals 3 and 4 must be terminated with a termination resistance. The correct resistance value can be seen in data sheet MMD130Ex-i T811045. The supply line must be connected to terminals 1 and 2.

Branch sockets in an Ex-i installation must meet the following requirements:
- Min. protection class IP 42
- Min. creepage distance of 3 mm between the terminals

> ⚠ The distributor sockets must be equipped with blue cable screw unions for visual identification of the Ex-i circuit.

Terminal assignment

Terminal	Signal
1	GND line (in and out)
2	Plus line (in or out, data)
3	Plus line (in or out, data)
4	GND alarm output
5	Plus alarm output
6	Support point (screening)

⚠️ USB 502-20:
The terminals 4 and 5 (alarm output) are used for triggering the illuminated ring. Additional use is not permitted!

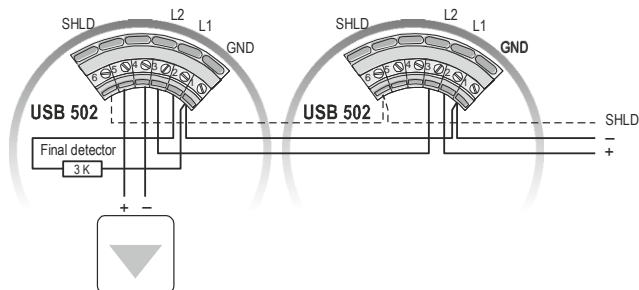The data sheet of the respective detector must be observed during connection.

Connection examples

Fig. 8 USB 502 connection with line technology
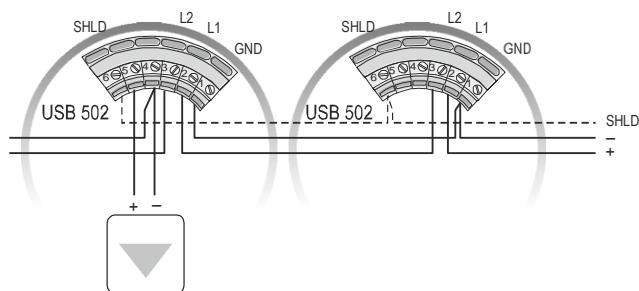
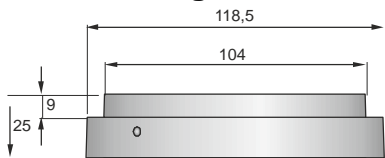**Fig. 9 USB 502 connection with addressable loop technology**

Dimensioned drawings
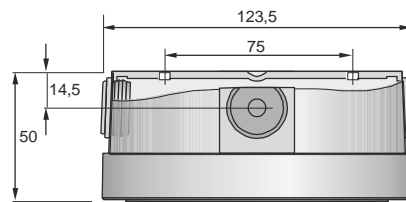

Fig. 10 USB 502-1, USB 502-6, USB 502-8 Ex-i
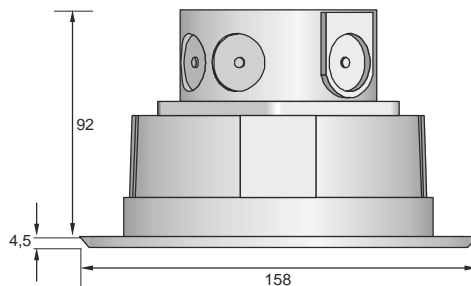

Fig. 11 USB 502-2

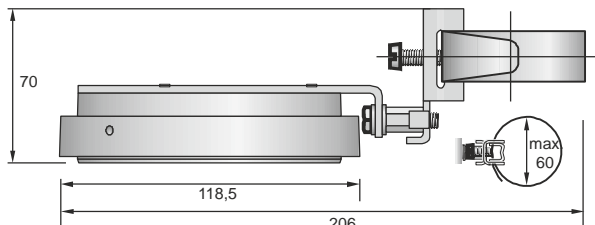**Fig. 12 USB 502-3**
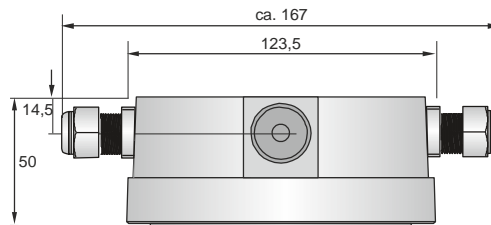

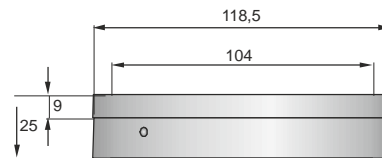**Fig. 13 USB 502-4**

Fig. 14 USB 502-5
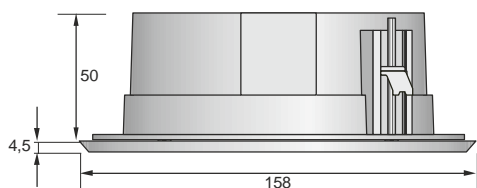

Fig. 15 USB 502-7 Ex-i

Fig. 16 USB 502-20

Data sheet

Article numbers / spare parts

Short designation	Swiss art. no.	Art. no.
USB 502-1 standard base	123.265244	30-4100005-01-01
USB 502-1 MC (multicolour)	123.985295	30-4100005-91-01
USB 502-2 base for false ceilings	123.265246	30-4100005-02-01
USB 502-3 base for wet rooms	123.265248	30-4100005-03-01
USB 502-4 base for mounting in concrete	123.265250	30-4100005-04-01
USB 502-5 base for raised floors	123.265252	30-4100005-05-01
USB 502-6 standard base	123.265254	30-4100005-06-01
USB 502-6 MC (multicolour)	123.985297	30-4100005-96-01
USB 502-7 Ex-i base for Ex zones	123.265256	30-4100005-07-01
USB 502-8 Ex-i standard base for Ex zones	123.265301	30-4100005-08-01
USB 502-20 standard base with illuminated ring	123.249467	20-2100019-01-01
USB 502 support point terminal	322.265240	31-3100002-01-01
177 mm protective ring	123.231835	3110470
158 mm protective ring MC (multicolour)	988.943584	3110464
DNP 502 (detector number plate)	322.265242	31-3100001-01-01
DNP 521/531 detector number plate (optional)	322.215880	3110320
Replacement sealing ring for USB 502-3	---	3210296

Technical data

Power consumption	(only USB 502-20)	Typically 0.9 mA
Illuminated ring	(only USB 502-20)	
Colour		Red (on alarm transmission)
Visibility		360°
Flashing	frequency	1.2 to 3 Hz
Light intensity		approx. 1 cd
Area of application		Dry and wet rooms (see section "Mounting / installation")
Protection type (with inserted detector)		See detector data sheet
Ambient temperature		-25 … +70 °C
		USB 502-20: -25 … +60 °C
Ambient humidity (continuous, without condensation) when ≤ 34 °C		10 ... 95 % rel. humidity
Ambient humidity (continuous, without condensation) when > 34 °C		max. 35 g/m³
		min. 10 % rel. humidity
Installation type (depending on variant)		Surface mounting/flush mounting
Dimensions		See dimensioned drawing
Housing material		PC-ABS, TPE
Housing colour		Electric white (similar to RAL 9003)
Connection		Screw terminals, max. 2.5 mm²
Weight (gross, including packaging)		
USB 502-1, USB 502-6 and USB 502-8 Ex-i		approx. 90 g
USB 502-2		approx. 210 g
USB 502-3		approx. 189 g
USB 502-4		approx. 179 g
USB 502-5		approx. 229 g
USB 502-7 Ex-i		approx. 200 g
USB 502-20		approx. 100 g
VdS approval		Included with detectors
		(except USB 502-5, -7 Ex-i, -8 Ex-i)