



ADW 535

 **SECURITON**

For your safety

Content

- **Principle of Operation**
- **Portfolio**
- **Strength**
- **Engineering**
- **Programming**
- **Remote Control & Visualization**
- **Networking**
- **Specifications**
- **Success Stories**

Hollow Metallic Tube

- Pneumatic
- Only air

Test Pump

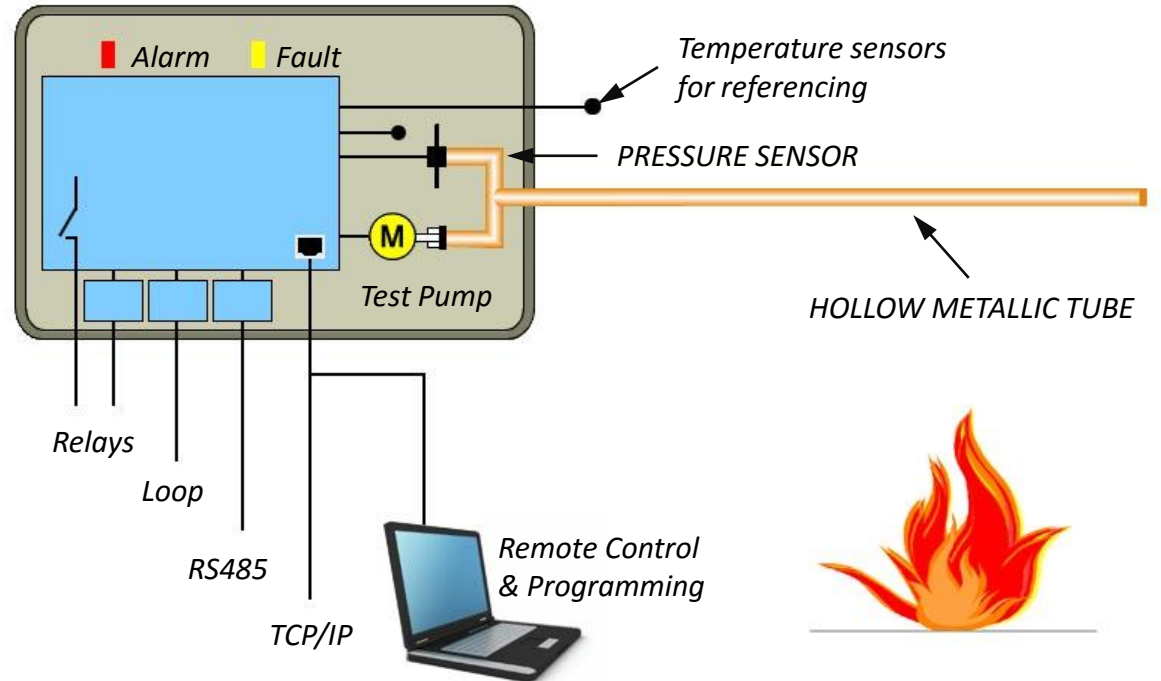
- Detects leakage
- Detects squeezes

Temperature Referencing

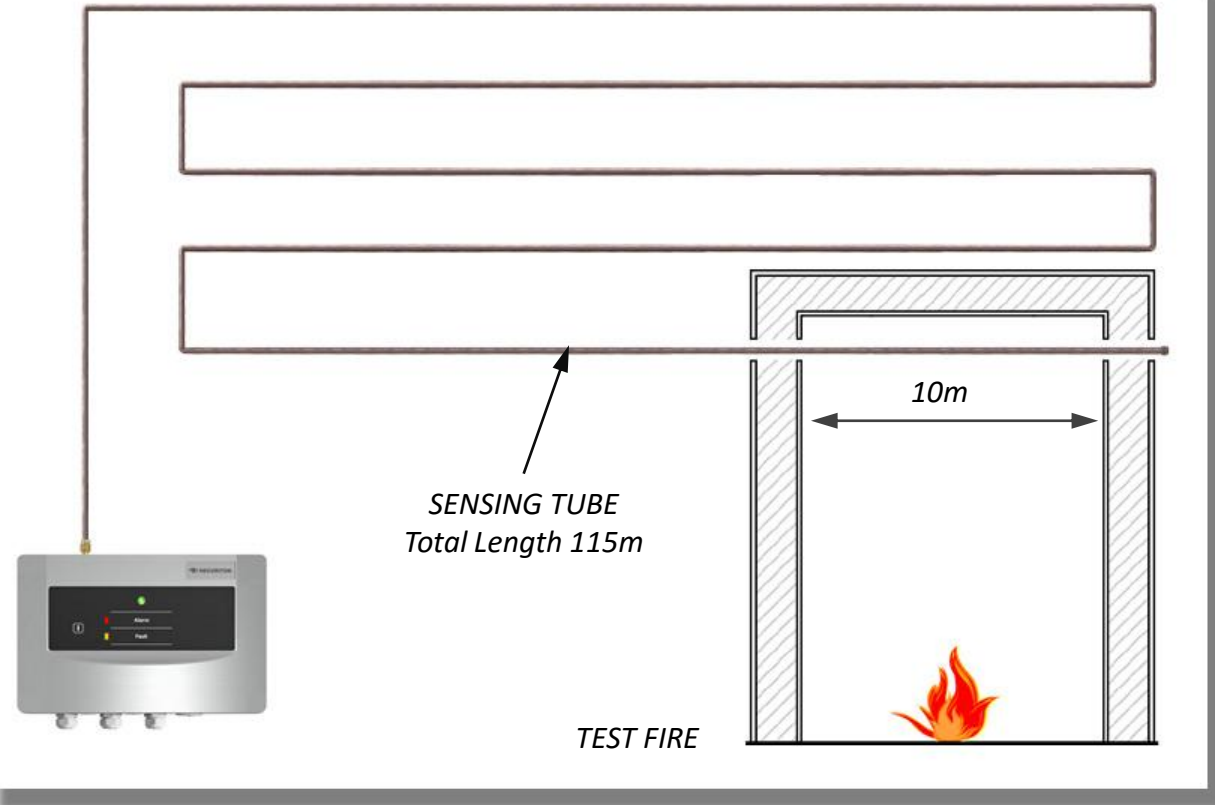
- At commissioning
- At regular intervals
- Corrects pressure drift

Interfacing

- Relays } Fire Alarms
- Loop } Fire Alarms
- RS485 } Networking
- TCP/IP } Networking



- Certified to **EN 54-22**
- Specified response characteristics are at 9% heat exposure of the tube
- **The larger the exposed part the faster the response**
- Minimum tube length is 10m



Two Units

- 1 or 2 Detectors



ADW 535-1

- 1 Detector
- 2 Relays (Alarm & Fault)



ADW 535-2

- 2 Detectors
- 4 Relays
 - Det. 1: Alarm and Fault
 - Det. 2: Alarm and Fault

- Relay Expansions
- Loop Connectivity
- Networking



RIM 36

- 5 Relays
- free programmable
- Max. 2 Boards per Unit



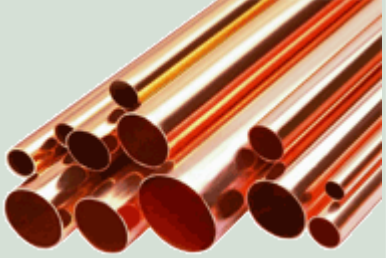



XLM 35

- Loop Interface
- SecurLine Extended
- Transmits fault and alarm messages



SIM 35

- RS485
- Max. 1'000m
- Max. 250 Units
- Fast Poll of 50 units/s
- Remote Configuration
- Event Display

Material	Description	Typical Application
TU 5/4 Cu	Copper Ø 5mm (outer) Ø 4mm (inner) in 5.5m rods or in rolls	High Temperature Application <ul style="list-style-type: none"> ● Room Monitoring ● Equipment Monitoring ● Vehicle Monitoring 
TU 5/4 SS	Stainless Steel Ø 5mm (outer) Ø 4mm (inner) in 6m rods	Aggressive Environment <ul style="list-style-type: none"> ● Food processing industry ● Petrochemical Industry ● Waste Water Treatment Plants 
TU 6/4 PTFE	Teflon (PTFE) Ø 6mm (outer) Ø 4mm (inner) in rolls	Aggressive Environment 
Installation	Various fixings in plastic, brass or steel 	

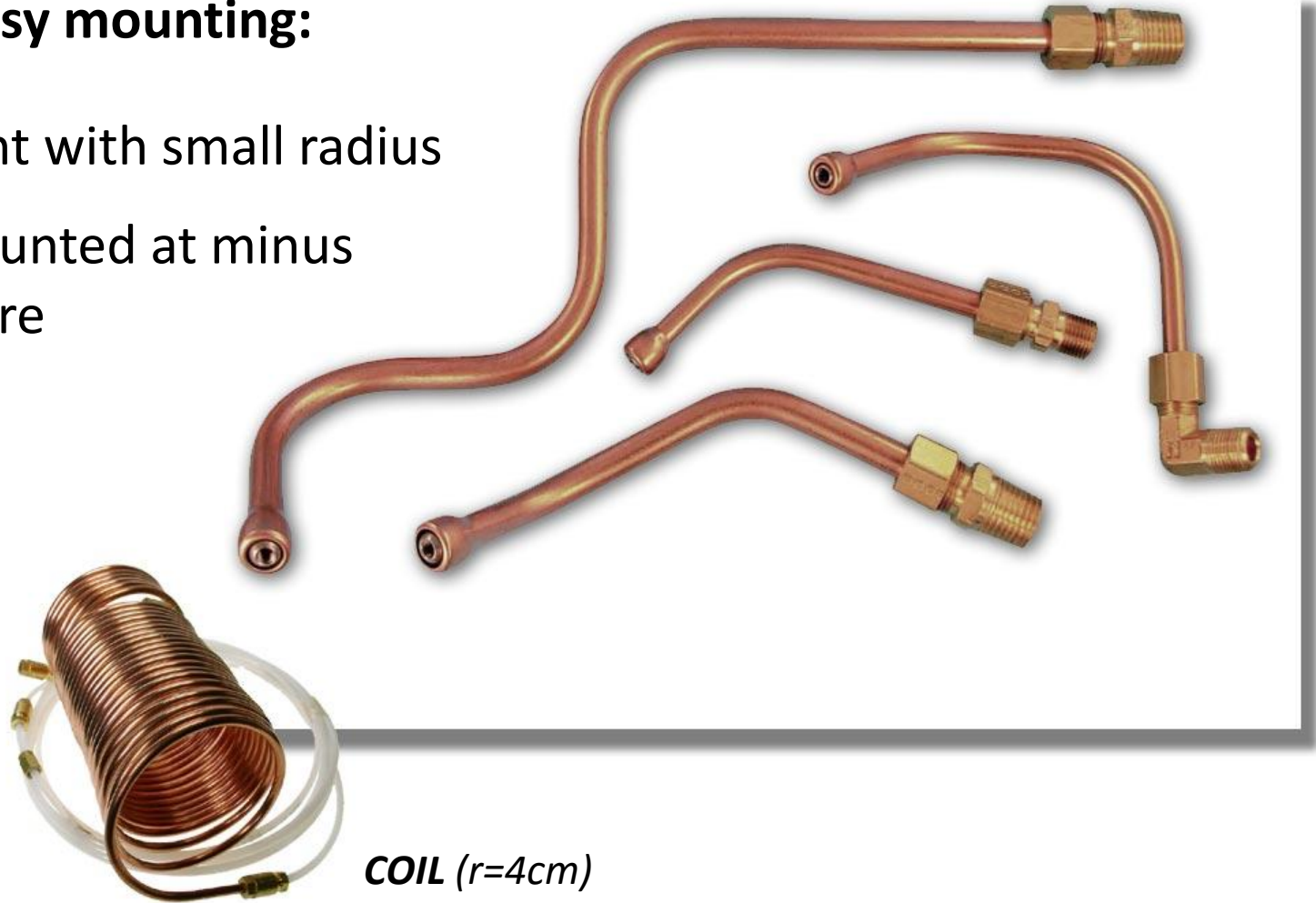
No active Components
Basically infinite lifetime

- ✓ Non-magnetic
- ✓ Non-rusting
- ✓ Non-altering
- ✓ Acid-proof
- ✓ Shock-proof
- ✓ Water-proof
- ✓ Heat-resistant
- ✓ Dirt-resistant



Flexible for easy mounting:

- ✓ Can be bent with small radius
- ✓ Can be mounted at minus temperature



Works in any environment:

- ✓ Aggressive
- ✓ Radioactive
- ✓ Gaseous
- ✓ Liquid
- ✓ Solid (powder etc.)



Ex Environment

Explosion hazards in large areas are asking for efficient and cost effective area coverage.

Strength

2 x 800m² coverage at a fraction of the costs for Ex / ATEX approved detectors.



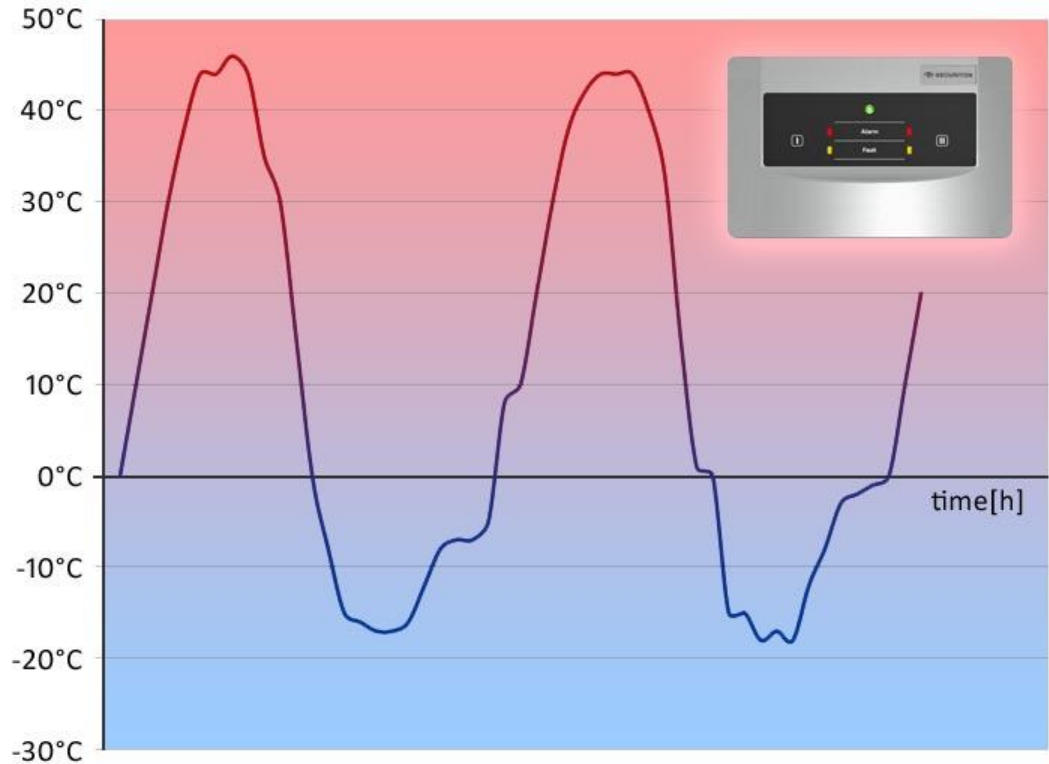
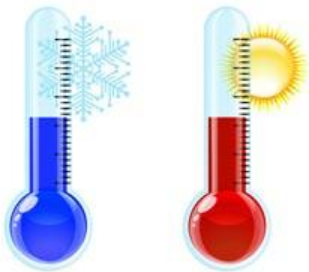
Measurement temperature range of the sensing tube:

-40 ... +180°C

Operating temperature range of the controller:

-30 ... +70°C

at full length of the sensor tube.



Response Classes

Response Class	Detection Range °C	Application
A1	54 - 65	Rooms up to 7.5m Height
A2	54 - 70	Rooms up to 6m Height
B	69 - 85	
C	84 - 100	
D	99 - 115	
E	114 - 130	
F	129 - 145	
G	144 - 160	

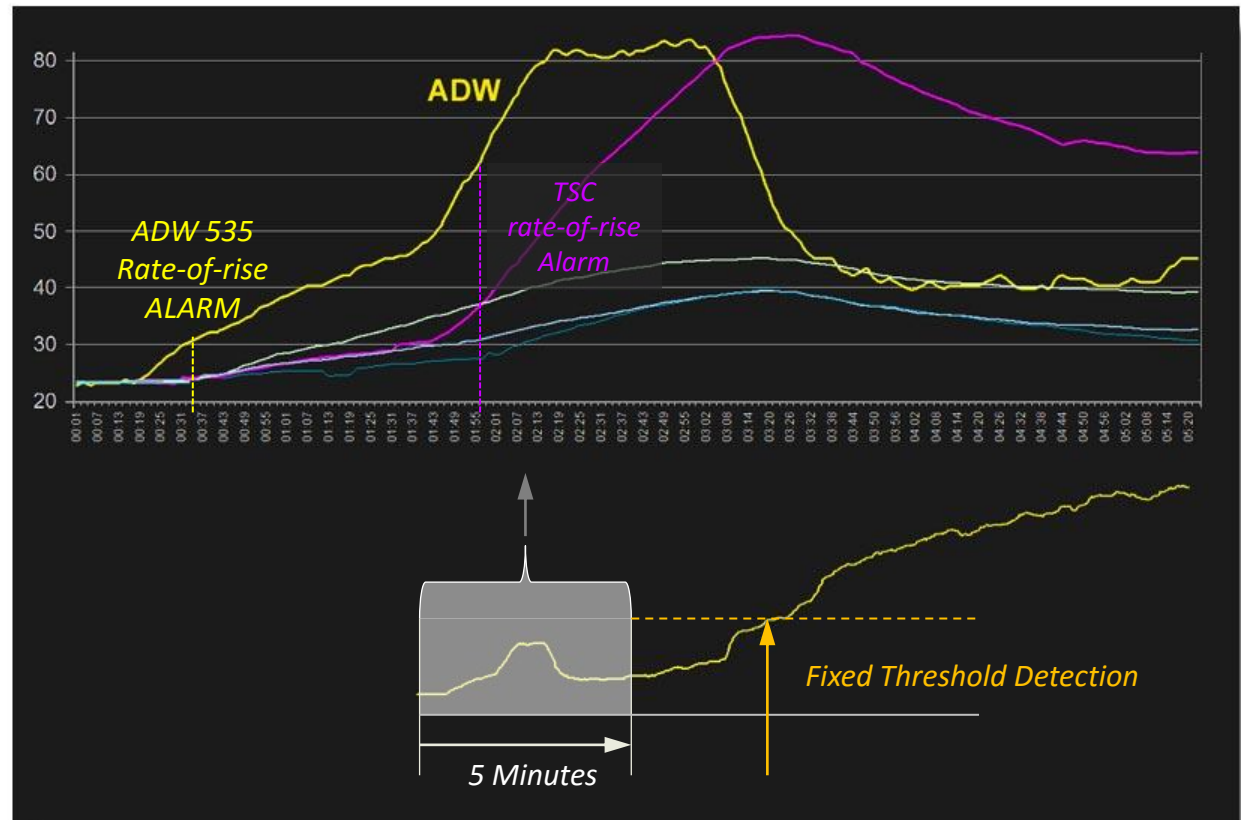
Environment Groups

Env. Group	Op. Temp. Range °C	Application
1	-5 - 40	Indoor / stable and clean conditions <ul style="list-style-type: none">● Commercial● Industrial
2	-10 - 55	Indoor / varying and polluted conditions <ul style="list-style-type: none">● Commercial● Industrial
3	-25 - 70	Outdoor / harsh conditions

ADW 535 is certified to comply with all EN54-22 Classes and Groups.

The ADW 535 is the fastest responding rate-of-rise heat detector.

Cumulative effects are even accelerating the response.

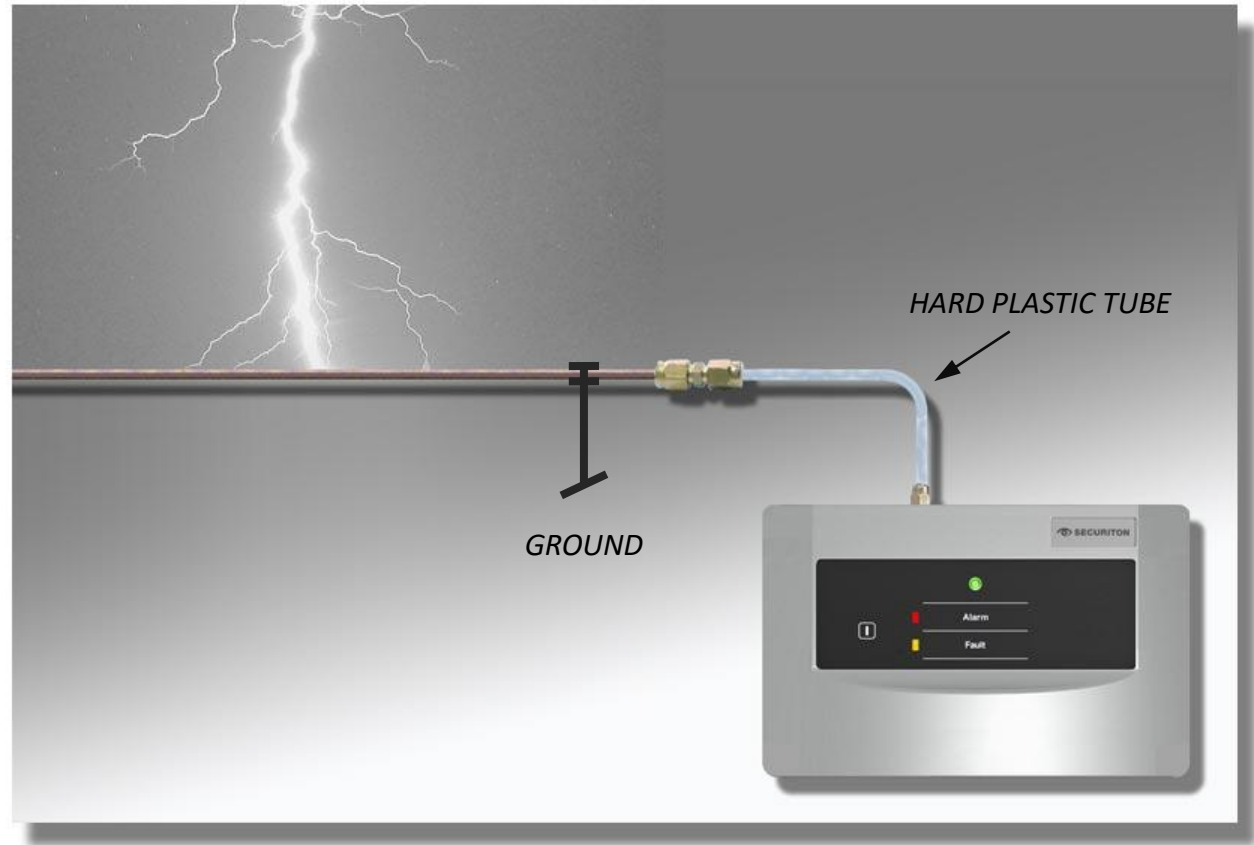


Indestructible Material

Sensor will not crackle or lower performance when exposed to intense sunlight.



Proper grounding is all you need for a perfect lightening protection.



Metal tubes are not subject to bite attacks.

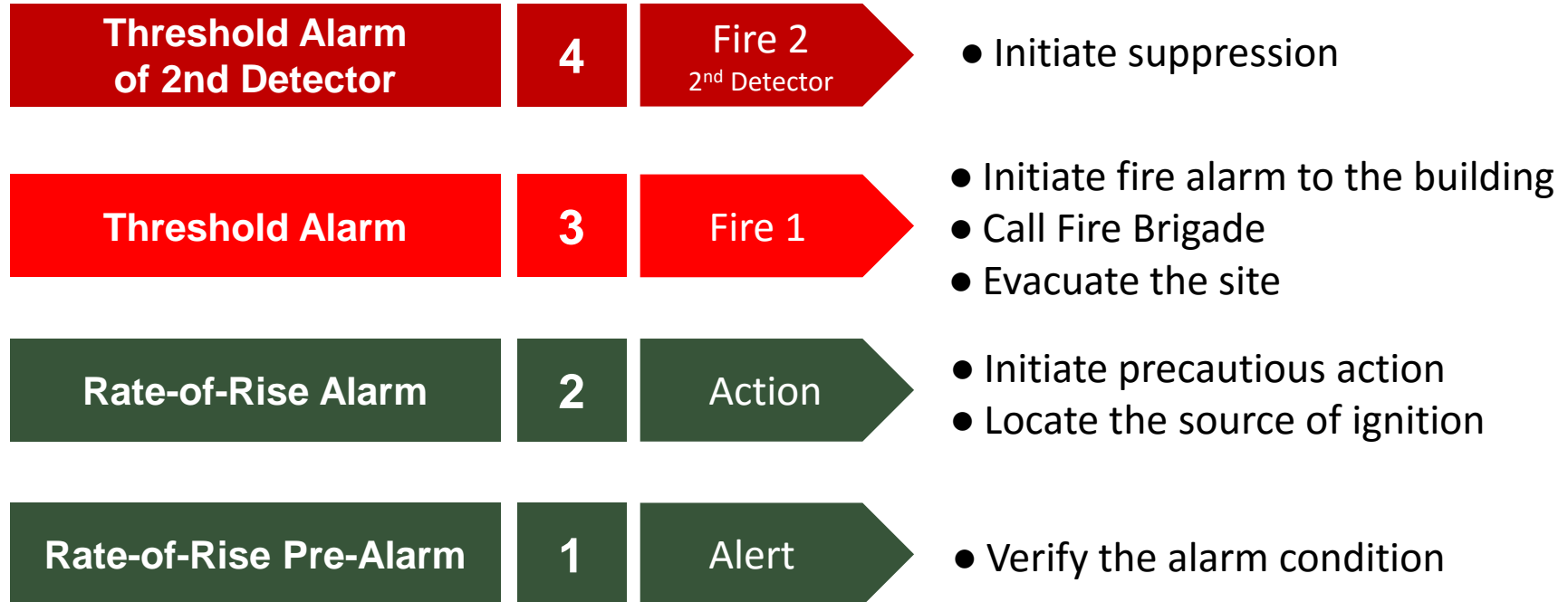


Heat resistant tubes and fittings are re-usable after short exposure to fire.



- Hygienic
- Easy to clean
- Acid proof





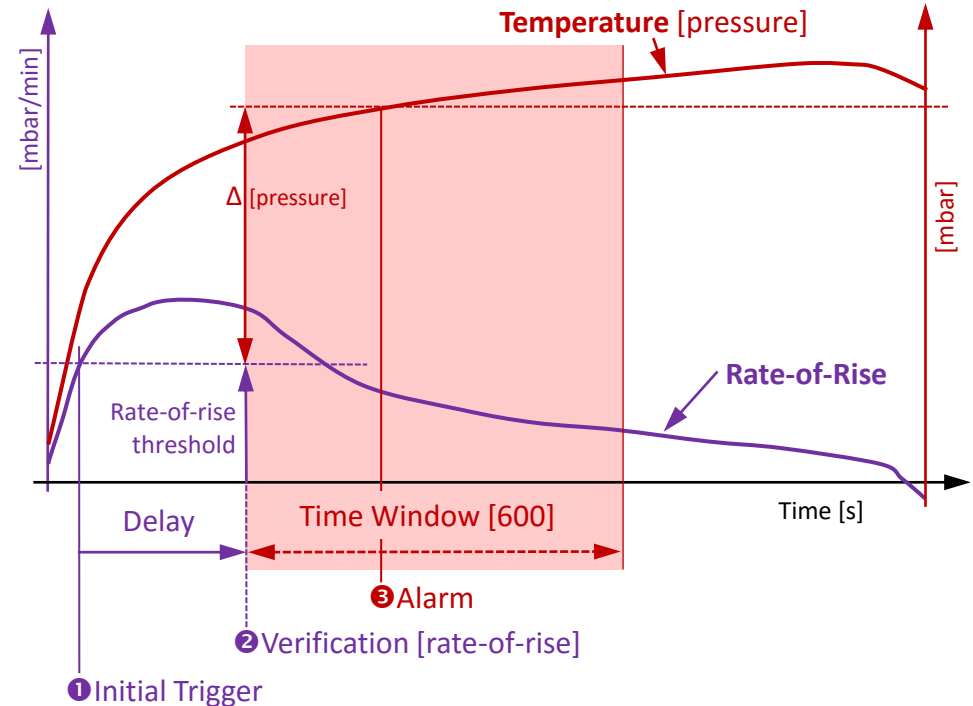
“Dynamic Heat Watch” for zero nuisance alarms

Procedure

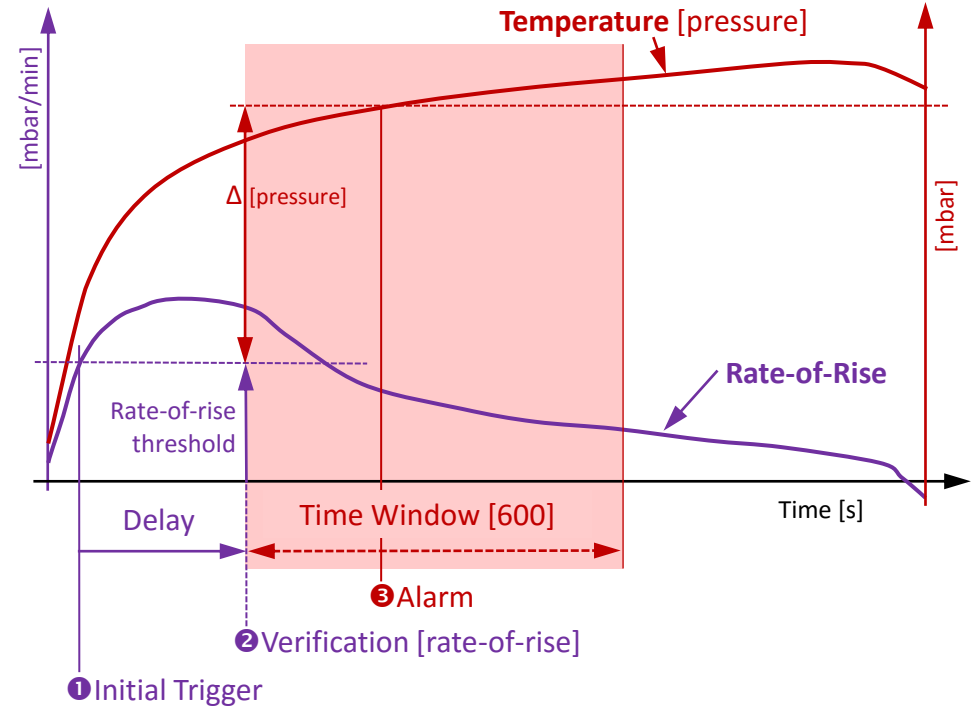
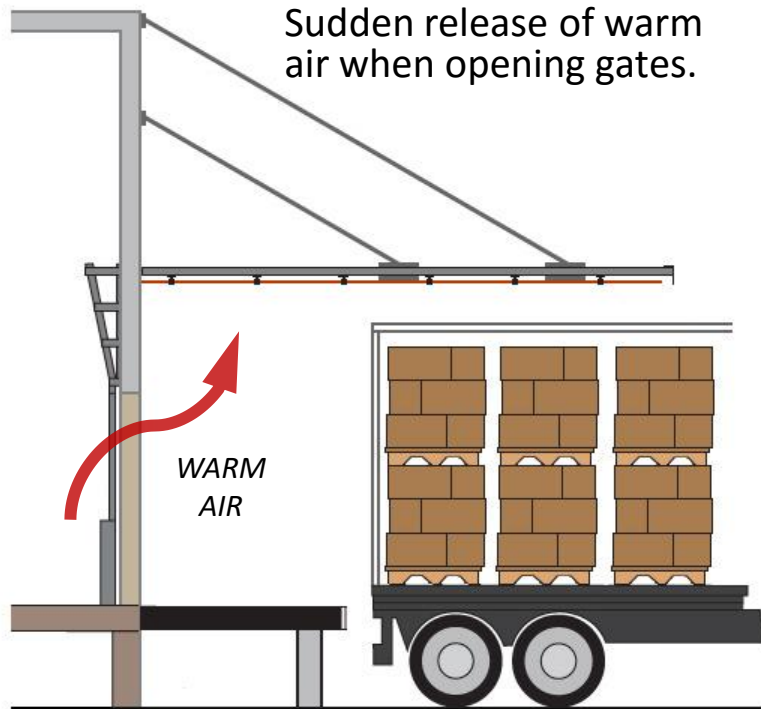
- Detect abnormal “rate-of-rise”
- Check persistence after 1st delay
- Check for high temperature after 2nd delay

Benefit

Reduce nuisance alarms due to changes of the environment temperature

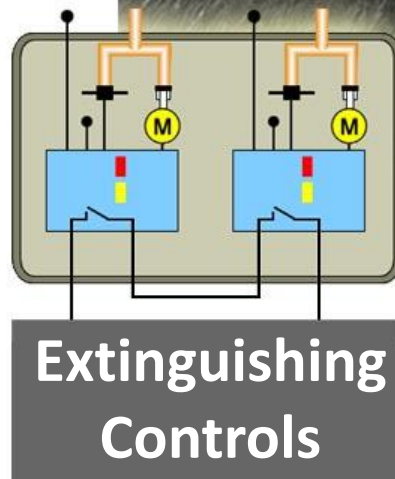


Sample Application: Loading Docks



Multi-Level Triggering
+
Dynamic Heat Watch
+
**2 Detector
Dependency**

= reliable triggering of
extinguishing controls



- **3D Drawing** of the tubes:
 - Tubes
 - fittings
 - Coils
- **Specification** of the wanted system performance
 - Max. Threshold
 - Verification Threshold
 - Rate-of-Rise
 - Delays
- **Calculation** of the system setup parameters:
- **Parameter Export** to ADWconfig
- **Reporting**
 - Parts List

The screenshot displays the Securiton software interface. The top menu bar includes 'Datei', 'Bearbeiten', 'Ansicht', 'Projekt', 'Bauteil / Ast', 'Rapport', 'Extras', and 'Hilfe'. The main window is divided into several sections:

- Material:** Lists components such as 'Fühlerrohr' (TU 5/4 Cu, TU 6/4 PTFE 25), 'Zuleitung' (FH 5/3 PA), and 'Zubehörmaterial' (TC 5/4 Cu 10).
- Ansprechverhalten:** A table for alarm parameters for two sensors.
- 3D Drawing:** A 3D model of a tube system with a central control unit and various fittings. Dimensions like 'L: 80' and 'L: 40' are visible.
- Table:** A parts list table for 'Detection Line A'.

1 - Detection Line A - Length: 1125							
Code	Key	Description	Length	LengthToRoot	Length*	Ø	Kommentar
A0			5	5	5		
A1	TU 5/4 Cu	Fühlerrohr Kupfer D=5/4mm	180	185	180		
A2	TU 5/4 Cu	Fühlerrohr Kupfer D=5/4mm	80	265	80		
A3	TU 5/4 Cu	Fühlerrohr Kupfer D=5/4mm	240	505	240		
A4	TU 5/4 Cu	Fühlerrohr Kupfer D=5/4mm	80	585	80		
A5	TU 5/4 Cu	Fühlerrohr Kupfer D=5/4mm	180	765	180		

Below the table, there is a section for '2 - Detection Line B - Length: 905'.

Configuration

- According to HEATcalc

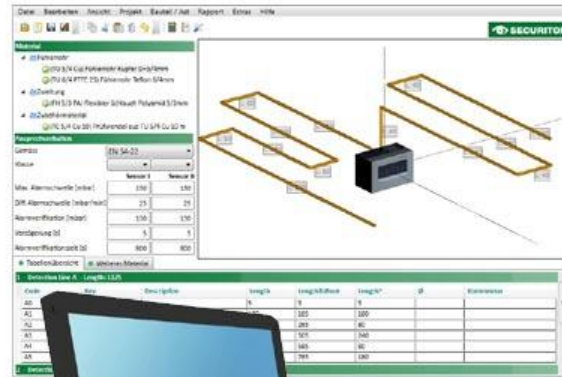
or individual by

- Delay Time
- Day / Night Setting
- DHW Setting
- ...

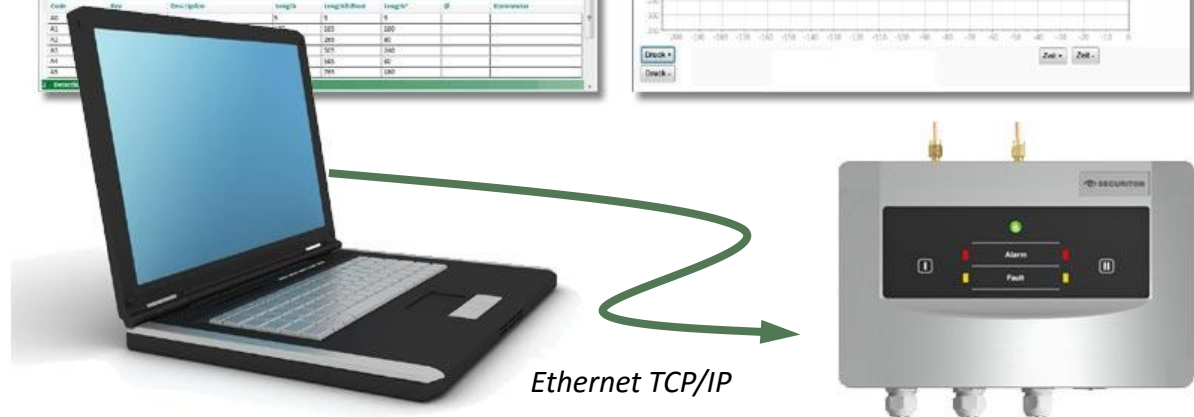
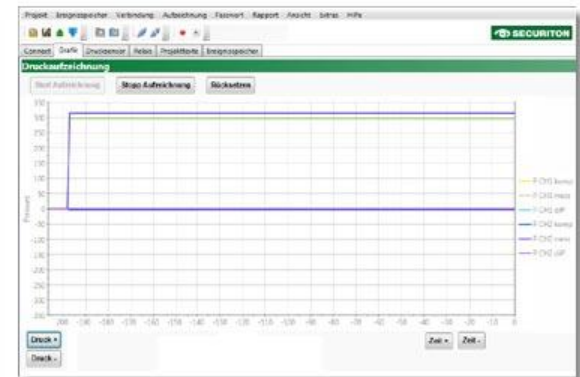
Three Simple Steps

1. ADW HEATcalc
2. ADWconfig
3. Download

ADW HEATcalc



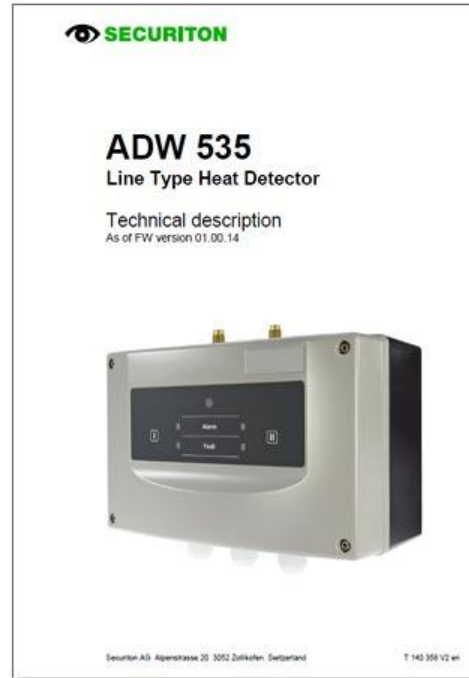
ADWconfig



On Board

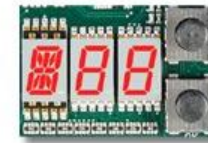
1. Tech. Description
2. Chose Code
3. Enter Code

TECHNICAL DESCRIPTION



Chose code from table

Alarm release compliant with EN 54-22:		Sensing tube monitoring:							Switch position
ⓐ corresponds to position	Remarks	Monitoring to EN 54-22	Cyclical Test	Sensitivity ⓐ	Interval	Repetition rate	Waiting time		
A11	A11 / A12	Normative	On	On	Medium	24 h	2 x until fault	30 min	W01
	A21	Normative	On	On	Low	24 h	4 x until fault	30 min	W02
	A22	Normative	On	Off	High	24 h	4 x until fault	30 min	W03
B1	B01 / B02	Not normative	Off	On	Low	8 h	2 x until fault	30 min	W04
	C01 / C02	Not normative	Off	On	Low	8 h	4 x until fault	30 min	W05
D1	D01 / D02	Not normative	Off	On	Medium	8 h	2 x until fault	30 min	W06
	E01 / E02	Not normative	Off	On	Medium	8 h	4 x until fault	30 min	W07
F1	F01 / F02	Not normative	Off	On	High	8 h	2 x until fault	30 min	W08
	G01 / G02	Not normative	Off	On	High	8 h	4 x until fault	30 min	W09



Enter Code



Configuration

- Import of HEATcalc files
- Parameter setting

Visualization

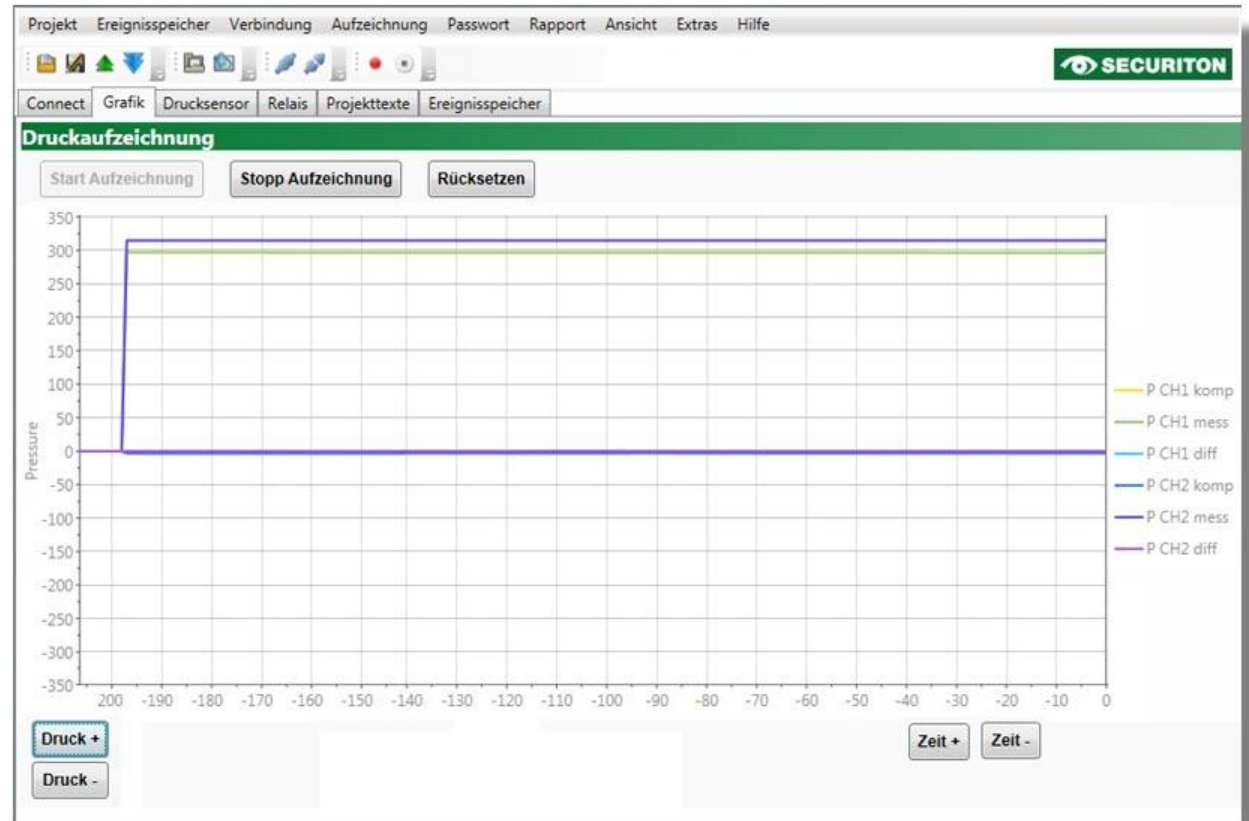
- Real-time charting of pressure values

Firmware Update

Upload of new firmware

Documenting

Printout of Parameter Setup



Long Distance

- Up to 1km
- Extendable by repeater

Full Control

- Remote configuration
- Remote monitoring of faults and alarms
- ADWconfig Software

Fast Scanning

50 Units in 1 second

Open Protocol

Disclosed under a license agreement.



Specifications

Unit

Dimension (w x h x d):	250 x 212 x 134 mm
Protection Class	IP 65
Operation Temperature Range:	-30 to +70 °C
Operating Voltage (EN / UL):	9 – 30 VDC / 10.6 – 27VDC
Number of Sensors:	1 or 2
Sensing Range	1'000mbar / 270K
EN Certification	EN54-22 (all heat classes A1 – G)
UL Certification (pending)	UL521 / ULC-5530 Heat Activation Device for special application

Sensor Tube

Measurement Temperature Range:	-40 to +180°C
Tube Diameter (inner/outer)	Metallic: 5/4mm PTFE: 6/4mm
Max. Tube Length (aggregated)	2 x 115m
Max. Area to cover:	2 x 800m ²
Engineering / Programming:	Pre-defined (EasyConfig) or «as needed» (HeatCalc)

Strength	Benefit	Proof
Extremely Solid	<ul style="list-style-type: none"> ● Indoor and outdoor application ● Low demand for maintenance ● Long life cycle 	<ul style="list-style-type: none"> ● Metallic or PTFE sensor tube ● IP65 enclosure ● Operating range -30°C to +70°C
Long Lasting	Low “Total Cost of Ownership” (TCO): Maintenance free and not needing any replacements – for decades.	<ul style="list-style-type: none"> ● Metallic tubes ● Automated integrity check ● IP 65
Extremely Resistant	Can be used in dangerous / aggressive environment.	<ul style="list-style-type: none"> ● Works in any medium (solid, liquid, gas) ● Measures from -40°C to +180°C
Extremely Flexible	Can be used in Ex Zones without need for barriers or Atex approval	<ul style="list-style-type: none"> ● Programmable response behavior ● Does Ex without Atex certification ● Measures from -40°C to +180°C
Serviceability	Maintenance can take place without need to access the detection area	<ul style="list-style-type: none"> ● Sensor tube is maintenance free
Extremely Fast	Buy extra time for securing the zone	Fastest heat sensing technology available
Engineering	Reliability at performance extremes	HeatCalc 3D design software

Can be exposed to the sun

- Cable does not get hard or brittle
- Response behavior remains stable

Sensing device without active components

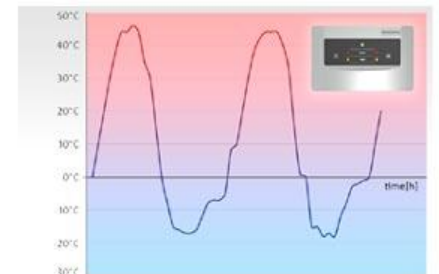
- Resists lightening
- Resists electrical interference

Will not be destroyed by rodents

- Hard to byte
- Odorless

No restrictions at extremely high or low temp.

- No reduced tube length
- No change of the response behavior



Can be used in food processing

- Resists solvents, steam, acids ...
- Easy to clean

Can be re-used after a fire incident

- Fires of limited size and duration will not destroy the tube
- Can be tested with real fire

Answers all sort of environmental challenges

- Acids, gases, powders, dust
- Heat, cold, rain, ...

Comes with two detectors

- Double knock without additional detector
- Simultaneous response to four different criteria





Allianz  Arena

Parking «Esplanade»

- Europe's largest Parking
- 4 Levels
- 11'000 Cars
 - 9'800 Public
 - 1'800 VIP



Dozens of road tunnels worldwide.



2.5km Bypass Tunnel

Ligerz, Switzerland



Large Distillery in Italy with many Ex zones.



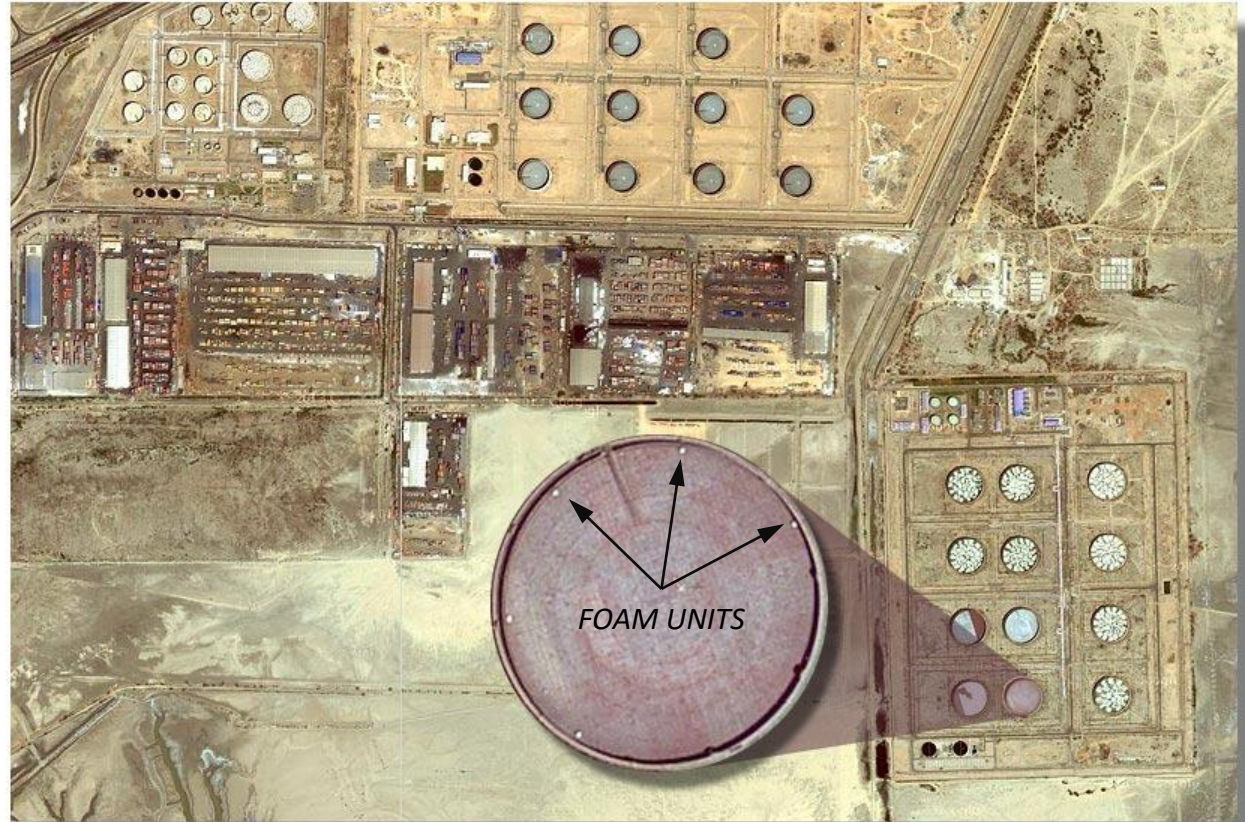


**VILSA Brunnen,
Bremen, Germany**





Hundreds of Floating Roof Tanks all over India.



TANK FARM at MUNDRA PORT Gujarat, India



KLAIPĖDOS NAFTA
AKCINĖ BENDROVĖ

Specialty: Covered
Floating Roof Tanks



TANK FARM at Klaipeda, Lithuania

Bridge “Büren an der Aare”

- ADW sensor below floor for detecting fire attack by boat
- ADW sensor below roof tiles
- Fake point detectors on the beams below the roof containing just a switch for indicating tampering



WOODBIDGE Büren an der Aare, Switzerland



The **T O W E R**



"Chuderhüsi" Tower, Switzerland

Thank you for your attention!



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