



# METRO

**How many people are depending on you for safety – every single day?**

The metro system is the blood stream of any large city - an exciting and vital part of the infrastructure. It is of great importance that we keep the metro up and running - without any unnecessary shut-downs - at all times.

The metro system is also exposed to threats against public security. Solid procedures and observant passengers is key to avoiding such crises, but should the unthinkable happen, it is critical to have a solid evacuation and emergency management system at hand.

Large open spaces, a wide network of tunnels, and thousands of people unfamiliar with the evacuation routines make the metro a challenging place to protect.

Luckily, we love a challenge.



**Top system**

AutroMaster top system monitor is placed in the control room, providing full control of the station, or all metro stations in the city. AutroMaster simplifies and reduces cost of maintenance. Manual controls are carried out using a tablet PC, and you can generate reports based on the result. You can also monitor elevators and other system from here.

In the Decision Support System you can add your own procedures and practice these.



**Voice alarm system**

The central is placed in the control room, ensuring efficient and safe evacuation in case of an emergency. Can be used as a PA system for announcements, giving either pre-recorded or direct messages.

**Why choose fire safety from us:**



**Technical department**

Responsible for ensuring that all persons present in the station are safe, in that the system is working correctly at all times.

Spends less time on daily operations:

- Easy enabling/disabling during maintenance
- Automatic logging of events
- Mobile operation
- Top system connecting all fire safety systems.

**City officials**

Primarily responsible for ensuring the everyday operations run smoothly, without interruption, and at a budgeted cost.

- Smart technology reduces the scope of manual control while increasing safety and doubling the detector lifetime
- Daily self tests ensure any malfunctioning detectors are discovered immediately

## Fire detection system

AutroSafe is a distributed fire detection system for medium to large sized installations. It is designed for the toughest requirements. For more than 10 years we have provided a IEC61508 SIL 2 approved system - the standard in the offshore industry today.

Redundant solutions bring a new dimension into fire detection system design and make it possible to increase the level of fire protection. If a panel is disabled due to an incident, another panel in the system will take control of the loop, ensuring continuous fire detection.

The main panel is placed in a cabinet in the control room. Fire brigade panels are located near all entrances. Our loop powered panels communicate and are powered through the detection loop.

AutroSafe supports a wide range of Autronica and third-party detection devices, allowing flexibility and accuracy. The fire detection system can control all fans through dedicated loop units.

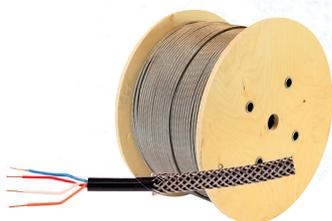
## Smart technology

Our fire detection systems monitor their own panels and cabling. Additionally, our SelfVerify technology perform a check of every single detector, every day. The system is tested all the way from the detector chamber to the alarm output, without disrupting daily operations. The system verifies the sensitivity of every detector with a calibrated signal.

You no longer need to perform manual testing with test gas, which in itself deteriorates the detectors, a visual check is enough. SelfVerify means fewer interruptions, extended equipment life cycle, more precise detection - logged.

Additionally, all our detectors are equipped with DYFI+ filters providing better and faster detection with fewer unwanted alarms.

Our smoke, heat and multisensors covers most needs for fire detection. We also provide alarm indicators powered from the detection loop, drastically reducing cabling needs.



**Linear heat detector**

Linear heat detector cables are covering every tunnel in the metro system. The detector is signalling an alarm when detecting significant rises in temperature.



**Flame detector**

Our flame detector is ideal for the protection of façades, and garbage storage areas. It is also a preferred protection method in kitchens, if there are restaurants on the premises.



**Beam detector**

Beam detectors are ideal in large, open spaces, such as entrance halls and on platforms, as smoke interrupting the IR beam causes alarm.

### Fire department

Responsible for fire fighting, lifesaving and salvaging remaining value. Short response time is essential to minimize damage to life, environment, and property, and to ensure minimal downtime.

Benefits from early detection and precise warning, few unwanted alarms

- Smart technology detects fire faster and eliminates unwanted alarms
- Hand-held/tablet AutroMaster shows fire progress and indicates precise location

### Metro staff

Responsible for action in an evacuation. Must be up to date on evacuation procedures at all times.

Get easy, clear information in an emergency situation:

- See where the alarm originates on fire alarm panel or top system
- Faster handling of the situation
- Better and safer evacuation with voice alarm system
- Can rehearse different scenarios without disturbing the everyday operations

### Passengers

Get where they need to go on time, with a minimum of interruptions. They're avoiding unnecessary, frightening situations, and get a better customer experience.



**AUTRONICA**

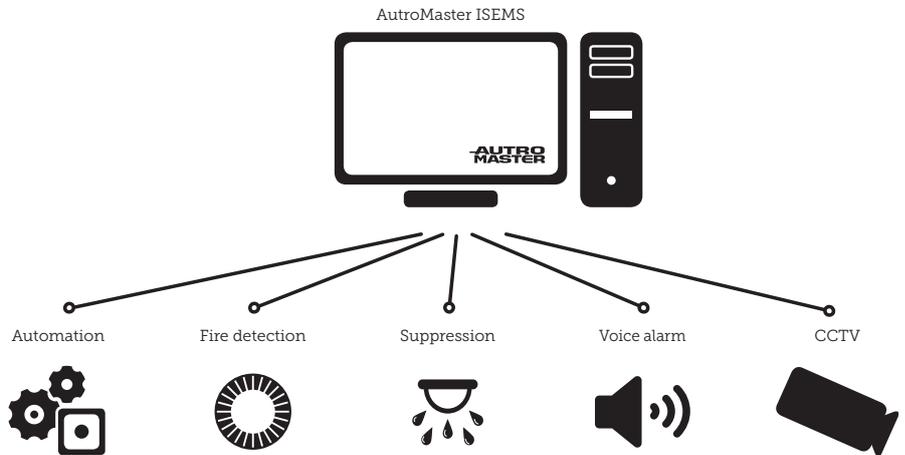
**One supplier  
– total fire safety**

To claim that we save the world would be an exaggeration. However, we do contribute to making it a safer place.

Fire safety is increasingly prioritized in large parts of the world, and we are happy to be part of that development. We make everyday life safer for factory workers in Brazil, hospital patients in The Netherlands and people shopping for groceries at the mall in Malaysia.

Our products are flexible and easily adaptable to local conditions in different parts of the world. This makes it safe to choose our solutions – no matter where in the world you are.

Autronica Fire and Security  
[www.autronicafire.com](http://www.autronicafire.com)



**Service and maintenance**

Service and maintenance must be performed in accordance with local/national requirements. We recommend an annual service and control of the total system.

For information on service and maintenance of the fire detection system and other equipment, refer to relevant procedures included in the installation and commissioning handbooks from Autronica.

We recommend that you let us or one of our certified partners take care of the service. Then you lay your trust in the hands of people with training on and experience with our systems. This will ensure a longer life span of your system and increase the safety, thus reducing the life-cycle cost.

**Standards**

Local/national standards apply.

**Approvals**

All our fire safety products are approved according to EN 54.

For certificates, go to [www.autronicafire.com](http://www.autronicafire.com).

**Chosen references**

- Doha Metro, Qatar - 14 stations
- Rome Metro, Italy - Line C/approx. 20 stations
- Milan Metro, Italy - 3 lines/approx. 70 stations