FIRE PROTECTION AND CONTROL

MAXIMISING AIRCRAFT DISPATCHABILITY, WITHOUT COMPROMISING SAFETY

Meggitt's integrated fire protection and control systems can tell the difference between a true and false alarm, maximising aircraft dispatchability without compromising safety.

Over 90% of western commercial aircraft are equipped with Meggitt's failsafe, fit-and-forget fire and overheat detectors. Located on the engine and critical zones within the airframe, they are just one of several tried-and-tested Meggitt technologies underpinning our fire protection and control systems.

Our electronic control units—or control system algorithms depending on the solution requirement—optimise integration. Interfacing with an aircraft's real-time computer network, these systems interpret fire detection data precisely, issuing appropriate flight crew warnings and shutting off fuel and air supply lines and discharging engine, APU and cargo fire extinguishers in a wholly integrated and intelligent aircraft fire protection solution.

AEROSPACE
CAPABILITIES

- Wheels, brakes and brake control
- Thermal management and fluid control
- Ice protection
- Smart electronic control
- **Fire protection and control**
- Ignition
- Health monitoring
- Sensing and data acquisition
- Flight test
- Fluid gauging
- Air data measurement
- Flight displays
- Polymer solutions
- Fuel containment
- Countermeasure deployment
- Automatic ammunition-handling

MEGGITT
smart engineering for extreme environments

COMPLETE SOLUTIONS WITH ADVANCED, SMART CONTROL

Meggitt delivers highly reliable fire, overheat and smoke detectors and controllers or fully integrated fire protection systems for business jets, commercial airlines and military aircraft.

- Integrated detection and control systems
- Federated controller or control system algorithms within integrated avionics architectures
- Fire and overheat zone installation analysis
- Full lifecycle support from requirements definition, design, test and certification through flight operations and maintenance and overhaul services.

Our total system capability is based on the key detection technologies deployed on the aircraft engine and critical zones within the airframe.

Fire detection control unit

The heart of the fire detection and control system. Communicates with the converter modules or remote data concentrators, performing the fire indication or fault logic and interfacing with the flight warning computer, fire handle, extinguishing squibs, bottle pressure switches and the central maintenance computer.

Convertor module/remote data concentrator

Located near fire zones. Digitises analogue signals from detectors in a loop and, when commanded, serially transmits values through a digital data bus to the fire detection control unit.

Pneumatic fire and overheat detector

For engines, main landing gear bays and auxiliary power units. This hermetically-sealed gas pressure-sensitive pneumatic detector withstands very high operating temperatures—up to 427ºC and direct flame exposure of 1082ºC—and vibration levels of up to 45g. It is inherently immune to false alarms and needs no scheduled maintenance.

Thermistor fire and overheat detector

A rugged, semi-conductor cable that can stand repeated flame and mechanical stress and allow any installation configuration down to a half-inch bend radius. As the ambient temperature increases, the cable resistance decreases. When it drops to a pre-determined value, the control unit activates a cockpit alarm within five seconds of a fire condition.

Bleed air leak detection system

The revolutionary sensor network based on Meggitt's proprietary chemistry. Pinpoints catastrophic leaks in bleed air systems precisely, activating cockpit alarms and enabling mechanics to find affected areas fast. No maintenance needed before 10,000 flight hours. Functions despite extreme bending, crimping and denting.

Optical smoke detectors and integrated systems

Provides intelligent smoke and overheat detection for events in cargo, luggage and IFE and avionics bays, with unprecedented reliability and accuracy. High immunity to dust, insects, moisture and other effects common to cargo compartments. Through-the-lens testing. No scheduled maintenance needed.

Engine and APU fire extinguishing

High reliability, multi-shot extinguishing bottles, directional valves and distribution solutions, protecting threat zones instantly.

Cargo fire suppression

Knock-down and extended-range suppression bottles, regulation systems and distribution nozzles for full aircraft protection.

WHO WE WORK WITH

Alenia Aermacchi	Eurocopter
Antonov	Eurofighter Typhoon
ATR	Gulfstream
AgustaWestland	Hawker Beechcraft
BAE Systems	Honda
Bell Helicopter	Kawasaki
Bombardier	Lockheed Martin
Bombardier Learjet	Northrup Grumman
CASA	Pilatus
Cessna	Sukhoi
Embraer	Xian Aircraft

Meggitt has extensive experience developing fire protection systems for all aircraft types. Our fire detectors are installed on a large majority of commercial transports and we continue to win contracts for development programmes. Meggitt products are fitted on all Airbus aircraft and Boeing selected Meggitt products exclusively for the 737NG. We have worked with Dassault for over 25 years, which, like many others, have chosen Meggitt detectors for all its business and military aircraft.

No other company has more experience certifying fire protection systems than us.

CONTACT

US: gary.zamieroski@meggitt.com
Europe: timothy.figg@meggitt.com
www.meggitt.com

FIRE PROTECTION AND CONTROL
Just one of the Meggitt capabilities covered in Meggitt in a Minute, the group's new e-tour.

MEGGITT
smart engineering for extreme environments