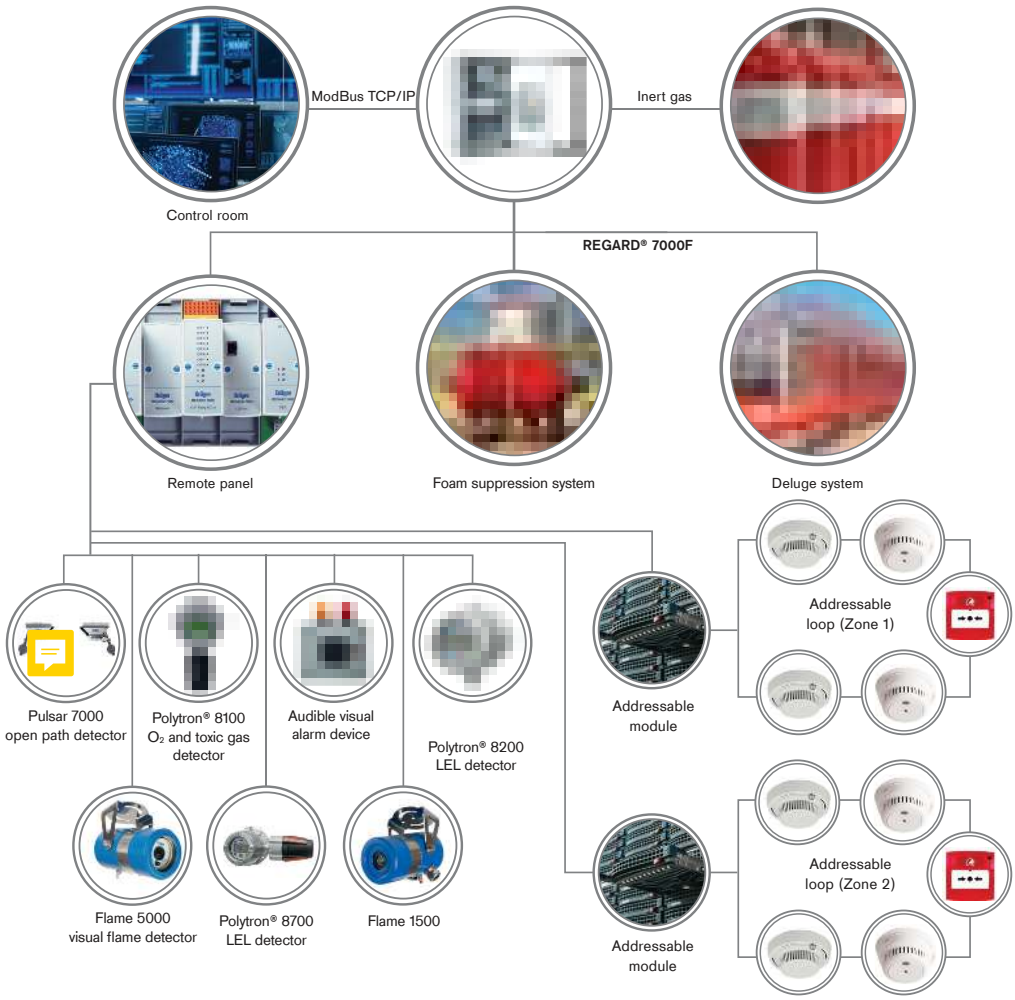
Dräger Regard® 7000F
Industrial Fire and Gas Controller

The Regard 7000F is an ANSI/UL864* performance-approved combination fire and gas system with the functions of a traditional NFPA 72 fire panel and a process safety system in a single platform. Multi-tasking and flexible, the menu-driven REGARD 7000F is an easily configurable solution that can be customized for all industrial fire and gas applications.



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Dräger. Technology for Life®

Benefits

A Single Platform Combination System

The Draeger Regard 7000F is approved as a “Combination system” on a single platform by UL to the American National Standard, ANSI/UL 864-2020. This performance approval enables the functionality of Process Safety and Fire Signaling on a single platform. The approval includes UL 864 10th edition, including revisions through May 7, 2020 and most recent 2019 version of the National Fire Alarm and Signaling Code, NFPA 72.

The system is based on our flagship REGARD 7000 modular controller for process safety applications, resulting in a single platform fire & gas system with both ICSS/SIS functionality and protected premises (PP) fire signaling functionality.

The system can process digital and analog signals from gas detectors, flame detectors, addressable heat and smoke detectors and manual call points – while supporting remote access via HART® and Modbus digital loops for compatible Dräger detectors and maintaining compliance with applicable NFPA codes and UL 864 performance criteria. Its flexible interface and communication options enable efficient visualization, notification and seamless interoperability for critical process safety and fire protection systems.

The Regard 7000F can handle complex cause and effect scenarios to suit site-specific requirements, and its supervised circuits can be configured to trigger suppression and mitigation systems and/or activate or shut down various process control equipment such as HVAC fans and louver systems. The modular architecture makes it possible to configure multiple remote I/O panels to cover individual process units for diverse requirements throughout the entire facility.

Process Safety

The performance approved Dräger REGARD 7000F Series controllers can handle process safety and fire signaling functionality on a single platform in an open architecture so you can configure the system with any NRTL performance-approved devices and accessories that meet their applicable regulatory codes. The REGARD 7000F uses its native 'masterless' system architecture to prevent the entire system from failing if a single module fails (no single point of failure). This concept of individual smart modules also makes it easy to configure each module as an independent subsystem for AIDCs (Analog Initiating Device Circuits) or DIDCs (Digital Initiating Device Circuits) using various 3-wire analog, discrete (contact closure) or digital devices (i.e. Modbus RTU) and conventional or addressable loop modules based on the requirements of the process area application. The individual docking stations and DIN rails can then be configured for protected premises fire protection applications only, flame and gas with annunciation, process safety applications (including gas detectors, variable power relay output modules, pressure and temperature transmitters, or any combination of these devices) into one REGARD 7000F system.

With a capacity for over 600 devices and a flexibility to use multiple main and remote panels, the system is designed to cover the majority of mid- to large-sized process facilities.

Benefits

Fire Signaling

The Dräger REGARD 7000F is a complete fire and gas detection solution designed and supported by the Dräger engineering team at our Houston System Center to provide 100% compliance with our ANSI/UL 864 approval and the 2019 version of the National Fire Alarm Code, NFPA 72.

This Protected Premises (PP) system has passed the industry-preferred, most rigorous performance approval standard for fire signaling and accessories control systems, ANSI/UL 864-2020. This approval includes by reference many of the National Fire Protection Association's most recent codes and standards, such as:

Carbon Dioxide Extinguishing Systems, NFPA 12;
Halon 1301 Fire Extinguishing Systems, NFPA 12A;
Installation of Sprinkler Systems, NFPA 13;
Water Spray Fixed Systems for Fire Protection, NFPA 15;
Installation of Foam-Water Sprinkler and Foam-Water Spray Systems, NFPA 16;
Dry Chemical Extinguishing Systems, NFPA 17;
Wet Chemical Extinguishing Systems, NFPA 17A;
National Electrical Code, NFPA 70;
National Fire Alarm Code, NFPA 72;
Standard for Smoke Control Systems, NFPA 92;
Standard for Water Mist Fire Protection Systems, NFPA 750;
Clean Agent Fire Extinguishing Systems, NFPA 2001; and
Standard for Fixed Aerosol Fire Extinguishing Systems, NFPA 2010.

Dräger's expertise and support extends beyond the hardware and software components of the REGARD 7000F. A complete NFPA 72v2019 system solution requires much more than just the controller and devices. Today, the Dräger engineers who design each fire and gas system can provide documentation to support the system's performance design. Dräger's system documentation would include, where required, the prescriptive designs historically utilized for the traditional fire gas detectors and devices (e.g., smoke, heat, CO_2 detectors and annunciation), as well as additional recommendations per our team's combined experience and expertise in the design of fire and gas systems. These code-compliant, inspection-ready packages can bring peace of mind and confidence in a project review by the authority having jurisdiction, whenever such an audit or approval may be required.

Local Expertise

The economical solution for process safety and fire signaling on a single platform, Regard 7000F is designed and manufactured in our UL508A Houston System Center. Post installation, the system and devices can be serviced by Draeger Certified NICET field service engineers. All spare parts and replacement components of the system are available directly from your local Dräger representative, with a quick delivery from our dedicated warehouse in Memphis, TN.

Benefits

Training

Introductory end-user training is available at your facility. Our experienced trainers offer formal training courses at the Dräger Academy at the Dräger System Center in Houston, Texas.

Technical Data

Environmental conditions	Dräger REGARD® 7000
Temperature	0 to 55 °C / 32 to 131 °F (during operation)
	-40 to +65 °C / -40 to 149 °F (in storage)
Humidity	5 to 95% RH, non-condensing
Pressure	700 to 1,300 hPa
Height	Max. 2,000 m (6,561 ft) above sea level (only applies to Relay Module 240 V AC)

Notification time of response
Transmission of measurement values and status information in Dräger REGARD® 7000F < 10 seconds

Time to measurement readiness	
After switching on the Dräger REGARD® 7000F	< 30 s

Dräger REGARD® 7000 Docking Station 8-slot	
Terminal clamps	Plug-in contacts for wire cross sections of 0.08 to 2.5 mm2
Operating voltage	24 V (18 to 30 V) DC
Current draw	Max. 22 A (independent of the number of installed modules and connected transmitters)
Power loss	Max. 15 W at 24 V
SFR output	Min. 3.3 V, 10 mA, max. 30 V, 2 A switching capacity; the SFR output must be protected against overload
SSR output	Min. 3.3 V, 10 mA, max. 30 V, 2 A switching capacity; the SSR output must be protected against overload
Number of modules per docking station	Max. 8
Dimensions	184 x 400 x 78 mm / 7.24 x 15.75 x 3.07" (H x W x D) Weight 2,600 g / 5.73 lbs

Dräger REGARD® 7000 4-20 mA Input Module c/w HART®	
Number of input channels	Max. 8
Operating voltage	24 V (18 to 30 V) through docking station
Transmitter supply voltage	Typically 24 V, depending on the supply voltage of the docking station
Transmitter supply current	Max. 500 mA per channel, with max. 4 inputs occupied Max. 250 mA per channel, with 4 to 8 inputs occupied Total transmitter supply current max. 2 A
Voltage range for signal input	0 to 24 mA (short-circuit detection at 38 mA)
Measurement precision	± 0.05 mA ± 0.002 mAIK (0 to 4 mA) ± 1.25% ± 0.05%IK (4 to 24 mA)
Current draw	Max. 2.1 A
Power loss	Max. 5 W at 24 V
Terminal block	24-pin, DC
Dimensions	110 x 46 x 130 mm / 4.33 x 1.81 x 5.12" (H x W x D)
Weight	265 g / 0.58 lbs

Dräger REGARD® 7000 Digital Input Module	
Number of input channels	Max. 8
Operating voltage	24 V (18 to 30 V) through docking station,
Channel output voltage	Typically 24 V, depending on the supply voltage of the docking station

Technical Data

Supply current of the connected input elements	Max. 400 mA per channel, with max. 4 inputs occupied Max. 250 mA per channel, with 4 to 8 inputs occupied Total supply current max. 2 A
Standby current through EOL resistance	Configurable to 0 mA (line break detection switched off) and in the range of 5 to 400 mA
Switching threshold	Configurable in the range of 3 to 400 mA
Current draw	Max. 2.1 A
Power loss	Max. 5 W at 24 V
Terminal block	16-pin, DC
Dimensions	110 x 46 x 130 mm / 4.33 x 1.81 x 5.12" (H x W x D)
Weight	265 g / 0.58 lbs

Dräger REGARD® 7000 Gateway Module

Number of channels	1 channel, bidirectional; One gateway module always occupies one port in the overall system
Modbus RTU gateway and gateway module supply voltage	24 V (18 to 30 V) DC
Gateway module current draw	Typ. 160 mA at 24 V
Gateway module power loss	Max. 4 W at 24 V
Modbus RTU gateway current draw	Typ. 80 mA at 24 V
Modbus RTU gateway power loss	Max. 2.5 W at 24 V
Transmission rate	Adjustable 9,600 to 921,600 baud
Cable length between Dräger REGARD® 7000 Gateway OIP and Dräger REGARD® 7000 Modbus RTU Gateway	Max. 5 m
Cable type	STP (shielded twisted pair), e.g. LAPP Unitronic® Bus LD Cable
length RS-485 side	<57,600 baud max. 1,200 m / 3937 ft <230,400 baud max. 500 m / 4921 ft <921,600 baud max. 120 m / 423 ft
Terminal block	2-pin
Dimensions	110 x 46 x 130 mm / 4.33 x 1.81 x 5.12" (H x W x D)
Weight	265 g / 0.58 lbs
Galvanic isolation between Dräger REGARD® 7000 and field-bus side through Modbus RTU Gateway	

Dräger REGARD® 7000 Modbus RTU Gateway

Dimensions	116 x 23 x 115 mm / 4.57 x 0.91 x 4.53" (H x W x D)
Weight	130 g / 0.29 lbs

Drager REGARD® 7000 Relay Module 24 V DC/24 V DC complex

Number of output relays	8, each with one switch contact
Switching voltage	3.3 to 24 V DC
Switching current	10 mA to 2 A
Power consumption	Max. 100 mA (no relays activated) Max. 200 mA (8 relays activated)
Power loss	5 W at 24 V
Update rate of switch outputs	0.5 s
Terminal block	24-pin, 24 V
Dimensions	110 x 46 x 130 mm / 4.33 x 1.81 x 5.12" (H x W x D)
Weight	340 g / 0.75 lbs

Dräger REGARD® 7000 Slotcover

Dimensions	69 x 44 x 44 mm / 2.72 x 1.73 x 1.73" (H x W x D)
Weight	53 g / 0.12 lbs

Technical Data

Dräger REGARD ® 7000 Terminal Block	
Dimensions	110 x 46 x 85 mm / 4.33 x 1.81 x 3.35" (H x W x D)
Weight	115 g / 0.25 lbs
Approvals	
UL864	NFPA 72 Compliant UL864* (*Pending) ATEX Directive (2014/34/EU) Electromagnetic Compatibility (2014/30/EU) Low Voltage Directive
HART ® is a registered trademark of the HART ® Communication Foundation	(2014/35/EU)

Ordering Information

Please contact your local Draeger Representative for more information.	* UL864 approval pending