

Refrigerant Transmitter HVAC Gas Detection

Reliably detect refrigerant gas leaks with the infrared sensor based Dräger Refrigerant Transmitter. Safely monitor occupational exposure limits for specific refrigerants with detection levels as low as 10 ppm. Transmits a 4–20 mA signal to the control system of your choice. Also available in a serial bus version for integration with a Dräger VarioGard system.



Benefits

Increased safety, cost reduction and climate protection

Cooling systems are used today in almost every area of logistics and industry. As it is technically almost impossible to hermetically seal them, up to 30% of the refrigerant charge is released into the environment every year. Gas detection systems from Dräger make it possible to detect even the smallest leaks at an early stage and initiate corrective measures. This increases the safety of your system, reduces operating costs for refrigerants and electrical energy as well as making a significant contribution to climate protection.

Comply with ASHRAE 15 Safety Standard for Refrigeration Systems

ASHRAE 15 requires the use of a refrigerant detection system in all machine rooms and in most cold rooms. Detectors need to trigger visual and audible alarms inside the rooms and outside of each entrance and actuate mechanical ventilation to reduce the gas concentration below TLV-TWA toxicity levels.

Fast and reliable refrigerant detection

Equipped with non-dispersive infrared technology (NDIR), the refrigerant transmitter quickly and reliably detects refrigerant even in the ppm range in ambient air. The optical measuring technology works according to a physical measuring principle – without chemical reactions or wearing parts. This measuring stability gives you security in the operation of your refrigeration system. It also reduces the cost of verification and recalibration.

High accuracy in occupational exposure limits

The infrared sensor measures refrigerant in the ppm range so the transmitter can detect a leak in time. It also makes it easier for you to comply with occupational exposure limits. Connect the refrigerant transmitter via an analogue or digital interface with a Dräger control unit to a gas warning system. This warns you early on exceeding the preset alarm values.

Fast installation and easy handling

The compact and IP54 protected detector is easy to install with only four screws and one cable entry. The design of the gas inlet allows rapid gas exchange for a short response time. You can also fix the calibration adapter on it in order to check and calibrate the transmitter with little effort. The settings on the device are made via push buttons in the front panel. LEDs give the user visual feedback about the respective device status and helps you navigate through the menu.

Broadband – Measure multiple gases simultaneously

With the broadband refrigerant transmitter, multiple gases can be measured in one setup. This is factory calibrated to 2000 ppm R134a, but is also ideal for measuring R125, R404a, R407a, R410a, R448a, R449a and R407f. Using simple conversion factors, which are stored in the software of the gas detector, the measured values can thus be corrected for an accurate measurement.

Details



D-4775-2019

Refrigerant Transmitter 4–20 mA Version



D-23021-2020

Refrigerant Transmitter BUS Version

System Components



D-39857-2021

Dräger REGARD® 3000

Monitor various gases and vapors with the modular Dräger REGARD® 3000 control system. Its multi-colored status light signals the status of your gas detection system. The controller allows you to combine three different modules: Input, Relay and Gateway module. You can connect up to four analogue transmitters and eight relays in combination.



D-1128-2010

Dräger REGARD® 3920

The Dräger REGARD® 3920 is a standalone, self-contained control system for the detection of Toxic, Oxygen and Ex hazards. The control system is fully configurable between 1 and 16 channels, depending upon the type and quantity of input/output boards installed.

System Components



ST-9754-2007

Dräger VarioGard Central Unit

The Dräger VarioGard Central Unit is at the center of a cost-efficient, modular gas detection system. A digital Bus makes it possible to connect and manage up to 100 transmitters for various gases.

Related Products



D-4775-2019

SF6 Transmitter

The SF6 transmitter is ideally suited for the gas measurement of sulfur hexafluoride in the field of high voltage engineering. The transmitter can be used both as a gas leak detector and to monitor the gas quality in gas-insulated switchgear (GIS) or transformers.



ST-3819-2003

Dräger Polytron® 7000

The Dräger Polytron® 7000 gas detector can satisfy all toxic gas and oxygen measurement applications on a single platform. It meets compliance requirements, as well as the high specification requirements of customized solutions.

Technical Data

Measuring principle	Non-dispersive infrared, two wavelengths	
Gas supply	Diffusion, ambient air	
Dimensions (WxHxD)	6" x 3 3/16" x 3 9/16" / 151 x 80 x 90 mm / 151 x 90 x 80 mm (LxWxH)	
Warmup time	≤ 15 minutes	
Enclosure	Wall mounted with included brackets or through the enclosure. IP54 Polycarbonate UL94 V-0 Two M20 cable entry ports with 1 included cable gland	
Electrical data	Power Requirement	10 – 28 V DC 110 mA < 1.2 Watt
	Digital output	RS485 VarioGard Bus
	Wiring	3 conductor shielded, 14 – 18 AWG / 0.75 – 2.5 mm ²
	Analog output	0 – 20 mA Namur NE43
Environmental conditions	Operating temperature	-20 to +40 °C
	Storage temperature	-20 to +60 °C
	Humidity	0% to 95% relative humidity (non-condensing)
	Pressure	800 to 1,150 hPa
Measurement Range	0–1000 ppm or 0–2000 ppm	
Lower Detection Limit	10 ppm	
Minimum Alarm	50 ppm (dependent on gas and application)	
Performance Specialization	Linearity	+/- 30 ppm
	Repeatability	+/- 10 ppm to +/- 20 ppm depending on gas
	Long-term Zero Stability	+/- 30 ppm / 12 months
	Temperature Stability	+/- 3 ppm per deg °C
	Response Time	t90 approx. 60 sec.

Ordering Information

Refrigerant Transmitter – 4–20 mA Version

Name	Measuring range	Order number
Refrigerant Transmitter SF6	1500 ppm	AG01621
Refrigerant Transmitter R513a	2000 ppm	3705324
Refrigerant Transmitter R507a	2000 ppm	AG01620
Refrigerant Transmitter R449a	2000 ppm	3705323
Refrigerant Transmitter R410a	2000 ppm	AG01619
Refrigerant Transmitter R407c	2000 ppm	AG01618
Refrigerant Transmitter R1234ze	2000 ppm	AG01686
Refrigerant Transmitter R407a	2000 ppm	AG01617
Refrigerant Transmitter R404a	2000 ppm	AG01604
Refrigerant Transmitter R22	2000 ppm	AG01606
Refrigerant Transmitter R134a	2000 ppm	AG01603
Refrigerant Transmitter R125	2000 ppm	AG01607
Refrigerant Transmitter R1234yf	1000 ppm	AG01608
Refrigerant Transmitter R1234yf	2000 ppm	AG01649
Refrigerant Transmitter R123	2000 ppm	AG01605
Refrigerant Transmitter Broadband	2000 ppm	3707787
Accessory		
Calibration adapter		AG01625

Notes

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