

Dräger REGARD® 3000 Controller

Monitor various gases and vapours with the modular Dräger REGARD® 3000 control system. Its multi-coloured 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.



Dräger REGARD® 3000



Benefits

Especially well visible and audible from a distance

In the event of an alarm, every second counts - but it is also useful to be able to see the status of the gas detection system at a glance. The Dräger REGARD 3000 makes this possible with its status light. Different colours clearly indicate whether everything is in order (blue), whether there are malfunctions (yellow) or whether alarms are pending (red). In addition, it can be seen immediately whether the alarm is active (flashing red) or has been acknowledged (continuous red light). This way, everyone on site is informed about the system status and daily checks are also made easier. The integrated horn and the SIL2-capable contacts of the REGARD 3000 provide even more safety.

Access the gas warning system more centrally

Often gas transmitters are installed in areas that are difficult to access or are far away from each other and the associated control unit. The REGARD 3000's 4 – 20 mA HART® input module gives you central access to all diagnostic information in the event of an alarm or fault. The transmitter configurations can also be read out and transferred conveniently in this way. The intuitive touch display gives you an overview of the status of your gas detection system at all times.

Flexible options for expansion

If the range of functions or the size of the gas detection system changes: The REGARD 3000 can be expanded by an additional relay or gateway module, depending on the requirements. This way, the system remains flexible and grows with the plant without having to shut down the production process for a longer period of time. A REGARD 3000 can be equipped with a maximum of one input module, one relay module and one gateway module.

Networking individual systems with each other

Do you have several gas detection systems with REGARD 3000 and REGARD 7000? You would like to have all systems in view and control and configure them centrally? Then connect the REGARD 7000 as client to the REGARD 3000 systems via an Ethernet cable connection. Networked in this way, the client can detect, control and configure the REGARD 3000 units as satellites.

Flexible options for mounting

You already have a control cabinet or control station for your production process control system and would like to integrate the gas warning system there? Or you need a small gas detection system that can be easily integrated into your building? With the Dräger REGARD 3000, you have the option of integrating the docking station directly into a control cabinet and mounting the operating unit (display module) in the control cabinet door. Or you can use the smart, compact wall-mounted housing. You can choose between the colours telegrey and black.

Details



Dräger REGARD® 3000 in normal operation



Dräger REGARD® 3000 in the event of a failure or fault



Dräger REGARD® 3000 in the event of a gas alarm

Dräger REGARD® 3000 Gas Detection System



The Dräger REGARD® 3000 offers flexible installation and configuration options. Among other things, it can be networked with a process control system or the Dräger REGARD® 7000.

Related Products



D-6806-2016

Dräger REGARD® 7000

The Dräger REGARD® 7000 is a modular and therefore highly expandable control system for monitoring various gases and vapours. Suitable for gas warning systems with various levels of complexity and numbers of transmitters, the Dräger REGARD® 7000 also features exceptional reliability and efficiency. An additional benefit is the backward compatibility with the REGARD®.

Technical Data

Dräger REGARD® 3000

Characteristics control unit

Type of controller	Modular control unit for gas and fire warning systems for wall or control cabinet mounting	
System boundaries	1 Docking Station, 1 Input Module, max. 1 Output Module, max. 1 Gateway Module, max. 1 configuration PC	
System response times	Transmission of measured values and status information to the REGARD® 3000	typical 1 s max. 3.3 s
	If the maximum transmission time for status information is exceeded, a special status is signalled	
	Measured value update time at the input: 4 – 20 mA Input Module / HART® 2/4 Ch	50 ms
Setting times	Measured value update time at the input: Modbus RTU Gateway Module	max. 6 s
	t20	< 3 s
	t50	< 3 s
	t90	< 3 s
The setting times are independent of the measured gas.		
Time until ready to measure	After switching on the REGARD® 3000	< 60 s

Electrical data

Base Unit

Terminal blocks	Plug-in contacts for conductor diameters from 0.08 mm ² to 2.5 mm ²
Operating voltage	115 – 230 V AC / 50 – 60 Hz
Power consumption	2 A max. (typ. 1 A) (depending on the number of installed modules and connected transmitters)
Power loss	Max. 25 W (10 W (power supply) + 15 W (dockingstation))
Output SFR	Min. 5 V, 10 mA, max. 30 V, 2 A switching capacity; fuse output against overload
Output SSR	Min. 5 V, 10 mA, max. 30 V, 2 A switching capacity; fuse output against overload
Pre-alarm relay output	Min. 5 V, 10 mA, max. 30 V, 2 A switching capacity; fuse output against overload
Master alarm relay output	Min. 5 V, 10 mA, max. 30 V, 2 A switching capacity; fuse output against overload
Monitoring functions	– Input voltage monitoring 18-30 V related to the supply voltage of the dockingstation. In case of undervoltage, the SFR is activated; in case of overvoltage, the supply is switched off and the SFR is activated, after which a restart is necessary. – Total current monitoring Switch-off at >5.5 A (max. 6 A) at 18-30V, after which a restart is necessary. – Overtemperature monitoring Shutdown of the docking station and activation of the SFR, after which a restart is necessary.

Terminal Blocks

Terminal type	Plug-in terminal
Conductor diameter	0.5 mm ² to 2.5 mm ²

Technical Data

4-20 mA Input Module / HART® 2/4 Ch

Number of input channels	2 or 4
Transmitter supply voltage	Typically 24 V, depending on the supply voltage of the dockingstation
Transmitter supply current	Max. 500 mA per channel Total max. 1 A per module (ambient temperature $\geq 50^{\circ}\text{C}$) Total max. 2 A per module (ambient temperature $< 50^{\circ}\text{C}$) If the total transmitter supply current is exceeded, the transmitters must be supplied externally.
Current range signal input	0 to 24 mA (short circuit detection at 38 mA)
Input resistance	262 Ohm
Measurement accuracy	$\pm 0.05 \text{ mA} \pm 0.002 \text{ mA/K}$ [0 ... 4 mA] $\pm 1.25 \% \pm 0.05 \%/\text{K}$ [4 ... 24 mA]
Power consumption	Max. 2.1 A
Power loss	Max. 5 W bei 24 V
Deviation with adjustable time parameters	Max. $\pm 1 \%$
Relay Module 4/8 Ch	
Number of output relays	4 or 8 with one potential-free switch contact each
Switching voltage	100 to 240 V AC, 50 to 60 Hz 5 to 50 V DC
Switching current	100 to 240 V AC up to 2 A; cosine $\Phi \geq 0.4$ 5 to 30 V DC, 10 mA to 2 A >30 to 50 V DC, 10 mA to 1.2 A
Power consumption	Max. 100 mA (no relay activated) Max. 150 mA (4 relays activated)
Power loss	Max. 5 W at 24 V DC
Pollution level	2
Overvoltage category	II
Update rate of the switching outputs	0.5 s
Deviation with adjustable time parameters	Max. $\pm 1 \%$

Modbus RTU Gateway Module

Number of channels	1 channel, bidirectional. A gateway module always occupies one port in the overall system.
Current consumption	Type. 100 mA at 24 V
Power loss	Max. 4 W at 24 V
Transmission rate	Adjustable: 9,600 to 921,600 Baud
Cable length Fieldbus side	<57,600 Baud max. 1200 m <230,400 Baud max. 500 m <921,600 Baud max. 120 m

Housing characteristics

Dimensions and weights	[H x W x D] [mm]	[g]
Base Unit	300 x 305 x 100	8000
Display Unit	300 x 303 x 50	2000
Dockingstation	185 x 200 x 50	550
4 – 20 mA Input Module / HART 2/4 Ch	69 x 110 x 35	300
Relay Module 4/8 Ch	69 x 110 x 35	300
Modbus RTU Gateway Module	69 x 110 x 35	300
Slotcover	69 x 110 x 35	200

Technical Data

Ambient conditions

Temperature (during operation)	-20 ... +55 °C
Temperature (in storage)	-30 ... +65 °C
Humidity (with display unit)	5 ... 90 % r.h., non-condensing
Humidity (without display unit)	0 ... 95 % r.h., non-condensing
Humidity (in storage)	5 ... 90 % r.h., non-condensing
Pressure	700 ... 1300 hPa
Height	max. 2000 m above sea level

Approvals

ATEX (metrological performance)	EN 60079-29-1, EN 50104, EN 50271, EN 45544-1, EN 45544-2, EN 45544-3
SIL (Functional Safety)	EN 50402, IEC 61508-3
CE marking	2014/34/EU ATEX Directive
	2014/30/EU EMC Directive
	2014/35/EU Low Voltage Directive
	2011/65/EU RoHS Directive

Ordering Information

Dräger REGARD® 3000

Dräger REGARD® 3000 Base unit black	37 05 684
Dräger REGARD® 3000 Base unit grey	37 06 357
Dräger REGARD® 3000 Display unit black	37 09 719
Dräger REGARD® 3000 Display unit grey	37 05 685
Dräger REGARD® 3000/5000 Slotcover	37 05 672
Dräger REGARD® 3000 4 – 20mA Input Module 2Ch	37 05 680
Dräger REGARD® 3000/5000 4 – 20mA Input Module 4Ch	37 05 681
Dräger REGARD® 3000/5000 Relay Module 4Ch	37 05 687
Dräger REGARD® 3000/5000 Relay Module 8Ch	37 05 688
Dräger REGARD® 3000/5000 MB RTU Gateway Module	37 05 693
Dräger REGARD® 3000/5000 MB TCP Gateway Module	37 05 694
Dräger REGARD® 3000 Adapter plate Set	37 11 953
Dräger REGARD® 3000 Control cabinet cable harness 2 m	37 04 261
Dräger REGARD® 3000 Dockingstation	37 09 678
Dräger REGARD® 3000 Dust cover	37 16 409
Socket spanner for cable gland	37 16 411
Dräger REGARD® 3000 Fixing bracket	37 20 165
Dräger REGARD® 3000/5000 PC-Software Key	37 09 533

Notes

Notes

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