# 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. Technology for Life®

# 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.

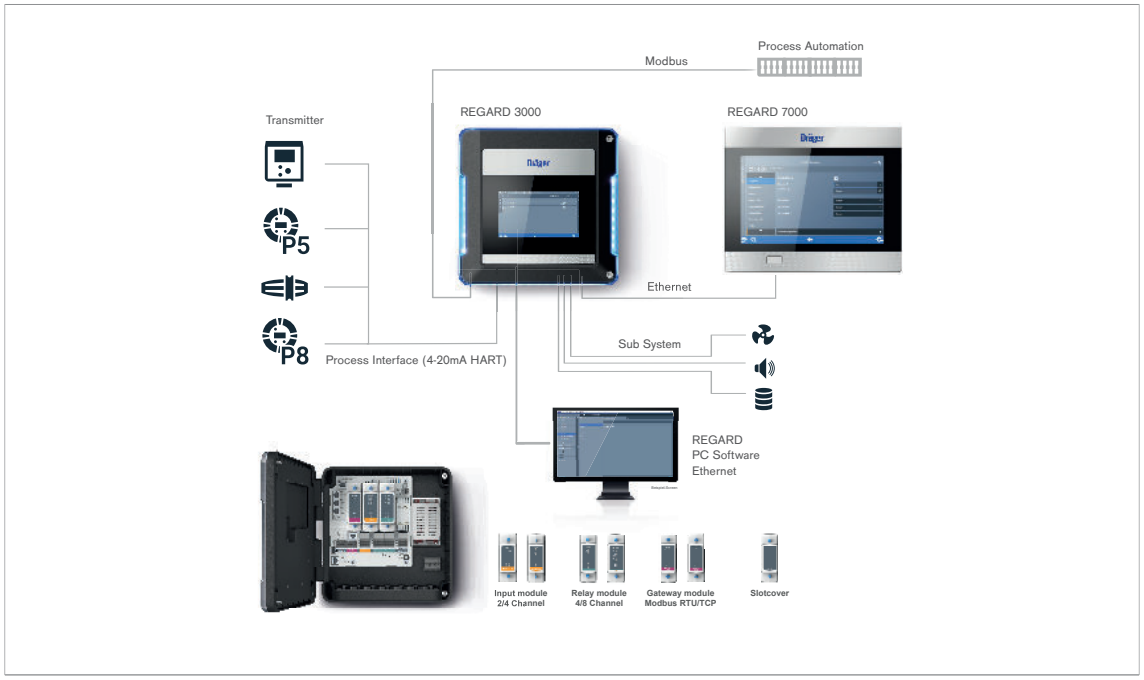
## Details


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<br>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 |
| | Measured value update time at the input: Modbus RTU Gateway Module | max. 6 s |
| Setting times | 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 ≥ 50 °C) |
| | Total max. 2 A per module (ambient temperature < 50 °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 | ± 0.05 mA ±0.002 mA/K [0 ... 4 mA] |
| | ± 1. 25 % ± 0. 05 %/K [4 ... 24 mA] |
| Power consumption | Max. 2.1 A |
| Power loss | Max. 5 W bei 24 V |
| Deviation with adjustable time parameters | Max. ±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 ≥ 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. ±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



9111 341 | 21.06-1 | HQ | PP | Subject to modifications | © 2021 Drägerwerk AG & Co. KGaA

**CORPORATE HEADQUARTERS**
Drägerwerk AG & Co. KGaA
Moislinger Allee 53–55
23558 Lübeck, Germany
www.draeger.com

**REGION EUROPE**
Dräger Safety AG & Co. KGaA
Revalstraße 1
23560 Lübeck, Germany
Tel +49 451 882 0
Fax +49 451 882 2080
info@draeger.com

**REGION MIDDLE EAST, AFRICA**
Dräger Safety AG & Co. KGaA
Branch Office
P.O. Box 505108
Dubai, United Arab Emirates
Tel +971 4 4294 600
Fax +971 4 4294 699
contactuae@draeger.com

**REGION ASIA PACIFIC**
Draeger Singapore Pte. Ltd.
61 Science Park Road
The Galen #04-01
Singapore 117525
Tel: +65 6872 9288
Fax: +65 6259 0398
asia.pacific@draeger.com

**REGION CENTRAL AND SOUTH AMERICA**
Dräger Indústria e Comércio Ltda.
Al. Pucurui - 51 - Tamboré
06406-100 - Barueri - SP
Tel. +55 (11) 4689-4900
relacionamento@draeger.com

**Locate your Regional Sales Representative at:**
**www.draeger.com/contact**