



The system quickly and reliably detects even small liquid leakages. It transmits a warning in form of an acoustic and optical alarm signal. At the same time, floating contacts take care of the transfer of corresponding messages to the building management and control system.

The system is equipped with

- Electronic monitoring system
- Point sensor/sensor cable
- Accessories

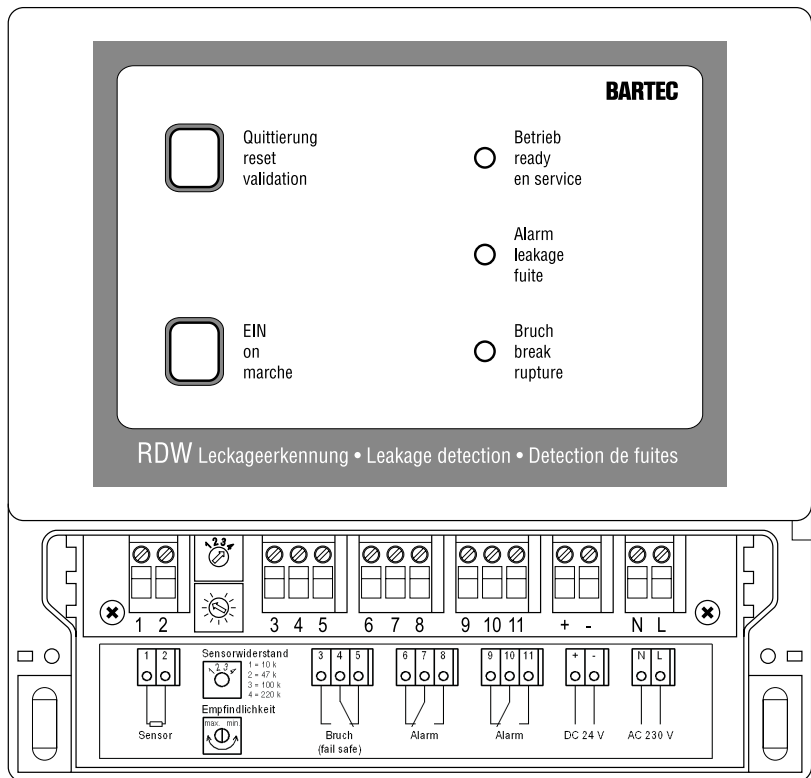
Applications

Computer centers, ultraclean rooms, libraries, banks, insurance companies, public buildings

Technical data RDW 03, Type 17-85F3-8322

| | |
|------------------------|--|
| Enclosure | wall mounting polyester enclosure with a transp-box with membrane keyboard and separate terminal compartment |
| Dimensions (W x H x D) | 166 mm x 160 mm x 84 mm |
| Inputs | power supply AC 230 V/50 Hz/5.3 VA or DC 24 V/1.3 W ± 10 % as standard sensor via two-wire lead sensor cable length: max. 1 000 m point sensors: max. 50 pcs |
| Outputs | alarm relay, 2 separate changeover contacts (6 A at AC 230 V/6 A at DC 24 V) |
| Memory | alarm/open circuit memory |
| Method of measurement | conductive (conductive liquids > 2 µS/cm) |
| Sensitivity | adjustable |
| Self-monitoring | sensor rupture and power failure |
| Operating elements | two-step confirm button (step 1: buzzer off); on/off button |
| Signal | optical: LED-displays for operation/alarm/open circuit acoustic: piezoelectric buzzer |
| Ambient temperature | 0 °C to +60 °C |
| Protection class | IP 54 |

Terminal assignment



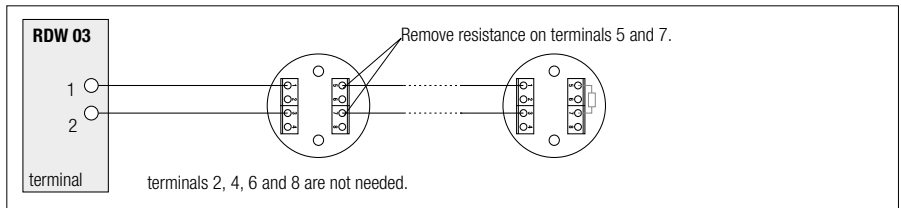
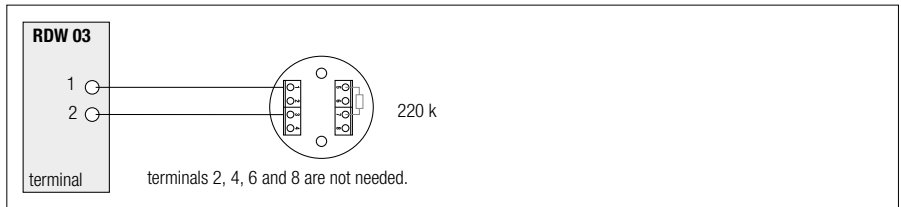
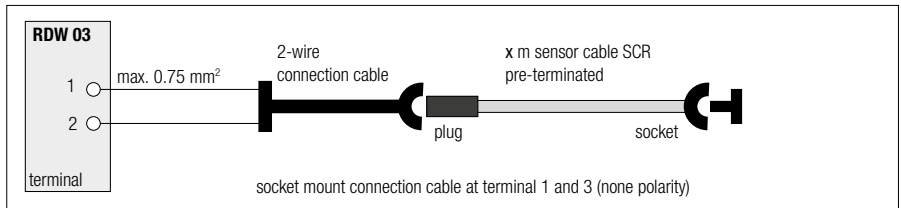
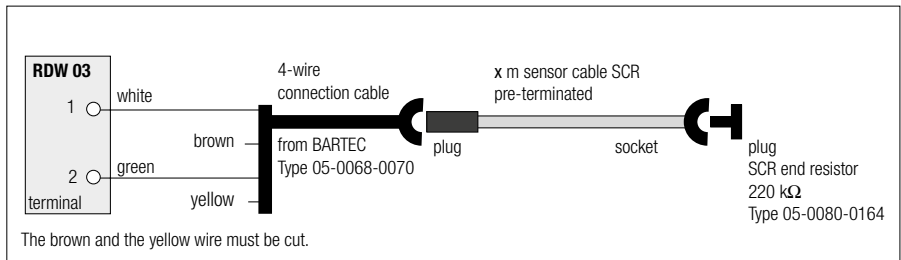
The contact overviews shown for the “break” and “alarm” relays under terminal assignment in the documentation for the connected RDW 03 are depicted with the following status:

RDW 03 to voltage – sensor connected – operating status ready = no leakage present
 “Break” relay is energised, i.e. electrical contact between terminals 4 - 5;
 “Alarm” relays are de-energised, i.e. electrical contact between terminals 6 - 7, 9 – 10

When the RDW 03 is disconnected from the power supply, the “Break” relay is de-energised = fail safe for system safety.

If a leak is detected, the “Alarm” relays are energised;
 recommendation: use terminals 6 - 7, 9 - 10 = fail safe for detecting a leak.

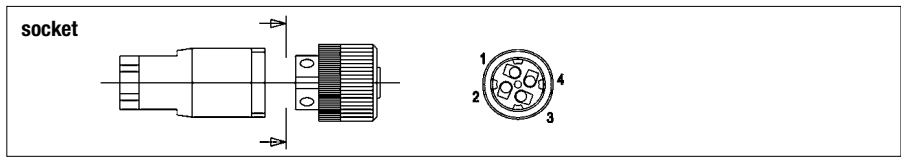
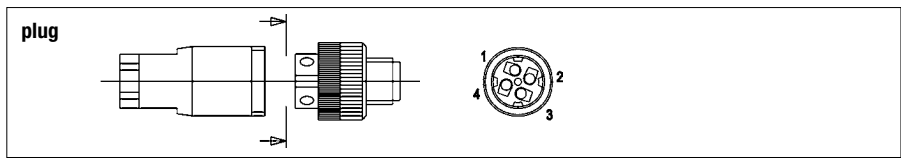
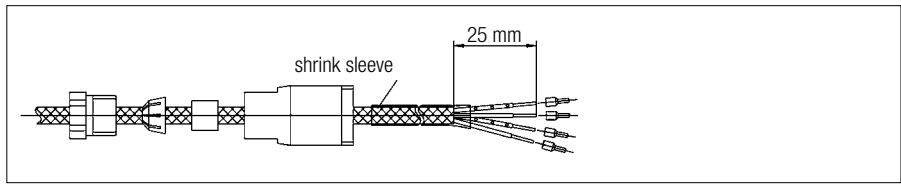
Monitoring examples sensors



Assembly instruction

SCR plug and socket for sensor cable SCR and connection cable.

| Installation sensor cable | plug/socket | Installation connection cable |
|-----------------------------|-------------|-------------------------------|
| Wire white with perforation | terminal 1 | wire 1 |
| Wire white | terminal 2 | wire 2 |
| Wire red with perforation | terminal 3 | wire 3 |
| Wire red | terminal 4 | wire 4 |



Technical data plug/socket

| | |
|-------------------------|--|
| Wire gauge | 0.25 mm ² /0.75 mm ² |
| Cable outlet | Pg 7, max. 6 mm |
| Dimensions | max. length 60 mm, max. Ø 20 mm |
| Material of shell | PA |
| Flammability acc. UL-94 | V-2 |
| Operating temperature | - 40 °C to + 85 °C |

Commissioning

A suitable overcurrent protection mechanism must be provided in the power supply of the device and labelled with the name of the device. This also serves as a separator, for all poles, and must be easily reachable for the user.

⚠ DANGER

Disconnect the device from the power supply before work on the wiring.

ⓘ NOTICE

Loss of function due to incorrect procedure.

- All maintenance and troubleshooting work may only be carried out by authorised qualified personnel.
- Directive 2014/35/EU must be taken into consideration.

The company operating the device must maintain it in a proper condition, operate it correctly, monitor it and clean it regularly.

- Use a screwdriver to knock out the required cable entries in the terminal compartment and mount the included cable glands and lock nuts
- Connect the sensor to terminals of the electronic monitoring (see terminal assignment)
- Connect floating contacts (see terminal assignment)
- Connect supply voltage, either AC 230 V or DC 24 V (safety extra-low voltage according to VDE 0100/T 410)

ⓘ NOTE

The application of the supply voltage causes the automatic insertion of the RDW 03 system (this guarantees the automatic restart after power failure):

LED 'ready' lights up (dry point sensor or sensor cable)

Leakage check

- immerse the leakage probe in about 3 mm or the sensor cable in about 5 cm of water: LED 'leakage' lights up buzzer sounds
- dry point sensor or sensor cable
- confirm with the 'reset' button (step 1: buzzer off)

11 -85F3-7D0001/A-03/2018-EHT-205600

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Open circuit test

- Reconnect the terminal resistance: 'Break' LED lights up
- Press 'RESET' button twice (step 1: buzzer off): System is in monitoring mode

Sensitivity of the sensor

The sensitivity of the system can be changed using the potentiometer in the terminal compartment.

Instructions for installing the sensor cable

based on the example of a raised floor

The correct time for installation

Other work, including cleaning, should be completed before installing the sensor cable in order to prevent the sensor cable from damage caused by other trades.

Installation

- the floor must be **dry, dirt-free** and possibly **dust-free**
- use self-adherent tape to fix the sensor cable where required (e. g. false bottom)
- fasten the sensor cable to the floor at 1 m - distances
- the sensor cable must not be flattened against metal parts as the electronic evaluation system checks the cable for its electrical resistance.
- condensate dripping from pipes or coolers must not wet the sensor cable
- for flush-mounting in walls or other confinements, a non detecting connection cable, a protective conduit or a flexible tube must be used
- locations where the sensor cable could be damaged should be marked by way of labels ('Attention - sensitive sensor cable')
- the sensor cable must rest on the surface to be monitored (obstacles such as directly installed cable routes may be jumped if leakage monitoring can be immediately continued on the other side of the obstacle)
- after its installation and prior to the system start-up, the sensor cable must be checked for its insulation resistance (measuring circuit: >10 MΩ).

NOTE

In this case remove the end resistor!

NOTICE

BARTEC recommends a system inspection at least once a year. The countermeasures introduced when detecting a leak must be adjusted in terms of weighting and reaction speed to the damage to be averted. The operator must clarify insurance requirements (building, liability etc.), for example inspection intervals, scope of inspections, training of the operating staff.

WARNING

Serious accidents due to damaged components.

- Inspect the device and cables regularly for cracks, damage and to check that connections are secure.

NOTICE

Damage to the device due to incorrect cleaning.

- Do not use compressed air to clean soiled RDW 03 monitoring electronics.

Troubleshooting

WARNING

Serious accidents due to the failure to use original spare parts.

- Only replace parts with original parts.

Faulty devices can be repaired. They must be replaced in line with these Operating Instructions.

Accessories, spare parts

NOTE

The monitoring electronics require a terminal resistance (05-0080-0164) in the last PS point sensor (factory installed) or at the end of the SCR sensor cable.

See the BARTEC catalogue for further accessories and spare parts.

Disposal

The components of the BARTEC water detection system contain metal and plastic parts.

Statutory requirements for electronic waste must therefore be complied with during disposal (e.g. disposal by an approved disposal company).

Maintenance

The point sensor itself is maintenance-free.

- Care must be taken during installation that the electrodes are clean and free from grease. This is achieved by cleaning with methylated spirits or a household detergent with fat solvent. You must ensure by means of suitable inspection intervals in line with the degree of contamination or the amount of dust to be expected that the electrodes are kept clean and free from grease.
- Plug-in connections on the installation route must be installed so that they are protected against moisture. When monitoring surfaces, the customer should use spacers on the floor for this purpose.

Service Address

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EU Konformitätserklärung
 EU Declaration of Conformity
 Déclaration UE de conformité

BARTEC

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 Germany

N^o 11-85F4-7C0001

| Wir | We | Nous |
|--|---|--|
| BARTEC GmbH, | | |
| erklären in alleiniger Verantwortung, dass die Produkte | declare under our sole responsibility that the products | attestons sous notre seule responsabilité que les produits |
| Überwachungselektronik RDA01, RDW03 | Electronic monitoring RDA01, RDW03 | Electronique de supervision RDA01, RDW03 |
| 17-85F4-2***/*, 17-85F3-8322/* | | |
| auf die sich diese Erklärung bezieht den Anforderungen der folgenden Richtlinien (RL) entsprechen | to which this declaration relates is in accordance with the provision of the following directives (D) | se réfèrents à cette attestation correspond aux dispositions des directives (D) suivantes |
| NS-Richtlinie 2014/35/EU | LV -Directive 2014/53/EU | Directive BT 2014/53/UE |
| EMV-Richtlinie 2014/30/EU | EMC-Directive 2014/30/EU | Directive CEM 2014/30/UE |
| RoHS-Richtlinie 2011/65/EU | RoHS-Directive 2011/65/EU | Directive RoHS 2011/65/UE |
| und mit folgenden Normen oder normativen Dokumenten übereinstimmen | and is in conformity with the following standards or other normative documents | et sont conformes aux normes ou documents normatifs ci-dessous |
| EN 61010-1:2010 EN 60335-1:2012 EN 60529:1991 +A1:2000 + A2:2013 | EN 61000-6-2:2005 EN 61000-3-2:2014 EN 61000-3-3:2013 EN 61000-6-3 :2007 + A1:2011 + AC:2012 | |
| Verfahren der internen Fertigungskontrolle | Procedure of internal control of production | Procédure de contrôle interne de fabrication |
| CE | | |
| Bad Mergentheim, den 12.02.2018 | | |
| i.V. Michael Wittmann Produktmanagement Wärmetechnik | i.V. Gitta Kugler Director Global Test, Certification & IP Management | |

Customer _____

Commission number _____

Project _____

Building _____

| Item | Installed cable length in metres | Measured insulation resistance in MΩ between conductors 1 and 3 before installation | Measured insulation resistance in MΩ between conductors 1 and 3 after installation* | Measured insulation resistance in MΩ between conductor 1 to ground | | Volume resistance in Ω between conductors 1 and 2 conductors 3 and 4* | | Calculated volume resistance in Ω/m** | Date of test/test engineer |
|------|----------------------------------|---|---|--|-------------|---|-------------------|---------------------------------------|----------------------------|
| | | | | conductor 1 | conductor 3 | conductor 1 and 2 | conductor 3 and 4 | | |
| 1 | | | | | | | | | |
| 2 | | | | | | | | | |
| 3 | | | | | | | | | |
| 4 | | | | | | | | | |

* (measured with end plug), measurement section: sensor cable with incoming feed line
 ** (measured resistance of conductors 1 and 3 in Ω/installed cable length = calculated resistance in Ω/m)

- Conductor 1 = contact 1 = wire white with perforation
- Conductor 2 = contact 2 = wire white insulated
- Conductor 3 = contact 3 = wire red with perforation
- Conductor 4 = contact 4 = wire red insulated

Note

The sensor cable must be checked during assembly also. When checking, disconnect the sensor cable from the monitoring electronics.

Test tolerance for the measurements

Volume resistance in Ω: min: 5.7 Ω/m, max: 6.3 Ω/m
 Insulation resistance in MΩ: not less than 10 MΩ per entire measuring circuit (at a test voltage of 500 V)

 Stamp/signature of installation company

All warranty claims are subject to the submission of a correctly and completely filled-in acceptance report.
 Date and signature are also required.



Start-up protocol WaterWarningSystem

| | |
|--|--|
| Customer/final customer | |
| Order number | |
| Date | |
| Monitoring unit type, production number | |
| Software version | |
| Incoming cable type, length | |
| Connected sensor 1 type, length, room | |
| Connected sensor 2 type, length, room | |
| Others | |

Function test

| | |
|-------------------------|--|
| Alarm/leakage test | |
| Rupture test | |
| Floating alarm contacts | |
| Floating fault contacts | |
| Internal buzzer | |

Note

Result

After execution of the tests/measurements the system operated with/without insufficiencies and restrictions (see notes).

Above information checked:

Place, date Company/signature auditor Company/customer signature

All warranty claims are subject to the submission of a correctly and completely filled in acceptance report.
Date and signature are also required.

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