Installation and Commissioning Instruction

RWA - Control Unit BCR

Note the safety instructions!
Links to safety instructions, assembly instructions, manufacturer statements and product certificates:
Please scan in the QR code and follow the link to the **BTR** homepage.

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	LED`s from motherboard			LED`s from breakglass unit (HSE)		
State	**B**	**S**	**A**	**Operation**	**Fault**	**Emergency-OPEN**
Standby	ON	OFF	OFF	ON	OFF	OFF
Emergency-OPEN / alarm (power supply operation)	ON	OFF	ON	ON	OFF	ON
Emergency-OPEN / alarm (back-up accumulators mode)	OFF	flashes	ON	OFF	flashes	ON
Power failure (highest priority)	OFF	flashes	OFF	OFF	flashes	OFF
Fault breakglass unit lines	OFF	ON	OFF (*)	OFF	ON	OFF (*)
Fault smoke detector lines	OFF	blinks slowly	OFF (*)	OFF	ON	OFF (*)
Fault motor-line 1	OFF	blinks (4x)	OFF (*)	OFF	blinks slowly	OFF (*)
Fault motor-line 2	OFF	blinks (5x)	OFF (*)	OFF	blinks slowly	OFF (*)
Fault HSE reset	OFF	blinks (6x)	OFF	OFF	blinks slowly	OFF
Fault back-up accumulators (lowest priority)	OFF	blinks fast	OFF	OFF	blinks fast	OFF
Maintenance due	ON	blinks (2x)	OFF	ON	blinks (2x)	OFF
Rain active	ON	blinks (3x)	OFF	ON	OFF	OFF
Wind active	ON	blinks (4x)	OFF	ON	OFF	OFF
Wind and rain active	ON	blinks (5x)	OFF	ON	OFF	OFF
Smoke detector still active after reset	X	X	blinks slowly	X	X	blinks slowly

(*) = Depending on the configuration „fault Emergency-OPEN" ON or OFF

Fuse		
F1	Automotive Blade Fuse	5,2 x 0,64 mm
F2	Glass Cartridge Fuse	5 x 20 mm
F3	Glass Cartridge Fuse	5 x 20 mm

RWA - Control Unit BCR			
F1	5 A	(accumulators)	**BCR 2A - 0101**
F2	3,15 AT	(drives)	
F1	5 A	(accumulators)	**BCR 4A - 0101**
F2	6,3 AT	(drives)	
F1	10 A	(accumulators)	**BCR 8A - 0102**
F2	10 AT	(drive 1)	
F3	10 AT	(drive 2)	
F1	20 A	(accumulators)	**BCR 12A - 0102**
F2	10 AT	(drive 1)	
F3	10 AT	(drive 2)	

DIP switch function			
switch	**ON**	**OFF**	
DIP 1	Mode to: Vent switches BIASED	BIASED OFF	
DIP 2	Fault motor lines triggers alarm	disabled	Fault to motor lines is only displayed
DIP 3	Fault breakglass unit lines triggers alarm	disabled	
DIP 4	Fault smoke detector lines triggers alarm	disabled	
DIP 5	Fault power supply triggers alarm	disabled	
DIP 6	Fault back-up accumulators triggers alarm	disabled	

Safety Instructions

Warning and Safety Symbols:

Warning Failure to comply with the warning notes can result in irreversible injuries or death.

Caution Failure to comply with the warning notes can result in minor or moderate (reversible) injuries.

Note Failure to comply with the warning notes can lead to damage to property.

Caution / Warning
Danger due to electric current.

Caution / Warning
Risk of crushing and entrapment during device operation (is provided as a sticker with the drive).

Attention / Warning
Risk of damage to / destruction of drives and / or windows.

Safety instructions

Warning It is important to follow these instructions for the safety of persons.
These instructions shall be kept in a safe place for the entire service life of the products.

Target Group

These instructions are intended for trained personnel and operators of systems for natural smoke and heat exhaust ventilation systems (RWA) and natural ventilation via windows, who are knowledgeable of operating modes as well as the remaining risks of the system.

Warning This device is not intended for use by persons (including children) with physical, sensory or mental limitations or lacking experience and / or knowledge, unless they are supervised by a person who is responsible for the safety or were instructed on the usage of this equipment.

This „Short Assembly Instruction“ contains the most important safety instructions for installation, commissioning and maintenance of BTR products.
The detailed and always up-to-date „Assembly Instructions“ are available online.

Intended Use

This control device is intended for power-feeding and controlling of electromotive operated windows in facade and roof areas.

The control device is intended for stationary installation and electrical connection as part of a building.

Note By attaching an electric operating drive to a movable element of a window and connecting it to a power supply a so-called “power-operated window” is created which, according to the Machinery Directive 2006 / 42 / EG, represents a machine.

Risk of crushing and entrapment! Window can close automatically!

Crush and shear points
To avoid injuries, **crushing and shear points** between casement and frame must be secured **against entrapment up to an installation height of 2,5 meters above the floor** with appropriate measures - if the window is used for day-by-day ventilation.

Due to the reasonably foreseeable misuse of the power operated window **for natural ventilation**, at the installation site **a risk assessment in accordance with the Machinery Directive 2006/42/EG** and **EN 60335-2-103** is necessary when:

- the installation height of the drive or of the „HSK / main closing edge“ (parallel to hinge) < 2,5 m above the floor
  and one of the following conditions:
- the opening width at the HSK is > 200 mm, **or**
- the closing speed at the HSK is > 15 mm/s, **or**
- the opening speed at the HSK is > 50 mm/s, **or**
- the closing force at the HSK is > 150 N

A sample risk assessment can be found in the download area of our homepage: **www.btr-hamburg.de**

Note Certification according to ISO 21927-9 is only given with **DIP 1** position **ON**!

Warning Pay attention to possible hazards on tilting or rotating windows, whose side closing edges are located at less than 2,5 m installation height above the floor, under consideration of the Control Unit and usage!

Routing Cables and Electrical Connection

Routing or installing of electrical cables and connections may be performed only by specialist companies. All relevant national instructions shall be observed for the installation.

The power line on-site must be secured separately and provided with all poles separators. After opening of the system housing voltage carrying parts are exposed. The system must be separated from the power supply and accumulator voltage before each intervention in the Control Unit of the system.

Note The planning and calculation of the wiring system is the responsibility of the builder or his agent or the authorized constructor and must be performed according to the statutory provisions.

Commissioning, Operation and Maintenance

After the installation and after each modification in the set up all functions shall be checked with a trial run. **After the installation of the system is completed the end-user shall be instructed in all important operating steps.**
If necessary, he must be advised of all remaining risks / dangers.

Note The installation instructions of system components (smoke detector, natural smoke and heat exhaust ventilators, drives, etc.) are part of the documentation for the complete system and must be kept accessible for authorized qualified personnel, together with the installation and operating instructions, for the entire service life of the system.

Caution Check and respect the parameters of the interfaces in between other products and other system components.

Note Post warning signs!

Caution Other persons must be kept away from the casement when a hold-to-run switch (pushbutton) is operated or when a window, which has been opened by a smoke and heat exhaust system, is closing!

Before working on the system it must be completely disconnected from the power supply and emergency power supply (e.g. accumulators) and secured against unintentional reactivation. While working in the Control Unit the workplace must be secured to prevent unauthorized access. It must be ensured that unauthorized personnel are unable to open the Control Unit.
Do not actuate the drive or the casement when repair or resetting works are performed!

Accident prevention regulations
For work on or in a building or building part the provisions and instructions of the respective accident prevention regulations shall be observed and adhered to.

Replacement parts
System components shall only be replaced with spare parts of the same manufacturer. There is no liability, warranty or customer service if third-party parts are used.

Exclusively original spare parts of the manufacturer shall be used.

Ambient conditions
The product may not be subjected to impacts or falls, or to vibrations, moisture, aggressive vapors or other harmful environments.
Ambient temperature: -5 °C … +40°C
Relative humidity: < 90% less 20°C;
< 50% less 40°C;
no formation of condensation

Note Observe temperature range during installation!

Demounting and Dismantling

The Control Unit must be stored only in locations protected from moisture, severe contamination and temperature fluctuations (not above 40°C). The packaging must not be removed until the control system is to be installed.

It is imperative that the following is observed for storage of the accumulators:

Keep the storage time of lead-acid accumulators short, because the accumulators discharge as time passes. At the latest after seven months in storage accumulators must be recharged. Use either a suitable accumulator charger or connect the accumulators to an EMB Control Unit and supply same with mains voltage. In both cases, charging requires a minimum of 8 hours (depending on the discharge state).

If the Control Unit is permanently decommissioned the statutory provisions for destruction, recycling and disposal must be observed. The control device contains plastic, metal, electrical components and accumulators. Replaced accumulators contain highly toxic pollutants and may therefore only be disposed of at collection points prescribed by the legislator.

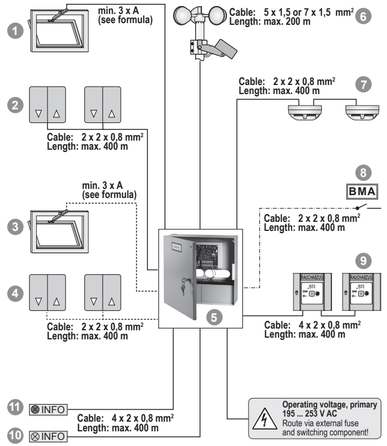
Before dismantling the Control Unit, isolate it completely from the mains!

Disposal

According to the European Directive 2012/19 / EU on Waste Electrical and Electronic Equipment (WEEE) and its transposition into national law, obsolete electrical appliances must be collected separately and sent for environmentally friendly recycling.

Liability

We reserve the right to change or discontinue products at any time without prior notice. Illustrations are subject to change. Although we take every care to ensure accuracy, we cannot accept liability for the content of this document.



Formula to calculate the required wire cross-section of a infeed line

$$A\ mm^2 = \frac{I_A \times L_m \times 2}{\Delta U\ V \times 56\ m/(\Omega * mm^2)}$$

A = cross-section of the wire in mm²
L = line length in m
I = current of connected drives in A
ΔU = line voltage drop = 2 V DC

Warranty and Customer Service

In principle, our following term are applicable:

„General Terms for the Supply of Products and Services of the Electrical Industry (ZVEI)“. „Terms for the used software“.

The warranty is compliant with legal provisions and applies to the country in which the product has been acquired.
The warranty includes material and manufacturing defects incurred during normal use.
The warranty period for delivered material is twelve months.
Warranty and liability claims for personal injuries or tangible damages are excluded, if caused by one or more of the following:

- Improper use of the product.
- Improper installation, commissioning, operation, maintenance or repair of the product.
- Operating the product, if installed defectively or incorrectly, or with its safety and protection devices not working .
- Ignoring instructions and installation requirements in these instructions.
- Unauthorised constructional modifications the product or accessories.
- Disaster situations due to the effects of foreign bodies and force majeure.
- Wear and tear.

Point of contact for possible warranty claims or for repair parts or accessories is the responsible branch office or the responsible person at

BTR GmbH.

Contact data are available at our homepage **(www.btr-hamburg.de)**

Legend	
1	Output for drive line 1, 24 V DC for smoke and heat exhaust and natural ventilation
2	Input for ventilation line 1 (max. 10 vent buttons)
3	Output for drive line 2 (only available for **BCR 8A** and **BCR 12A**)
4	Input for ventilation line 2 (max. 10 vent buttons) (only available for **BCR 8A** and **BCR 12A**)
5	Housing of control unit
6	Connections for wind and rain sensor (disabled in case of alarm and power loss)
7	Input for smoke detectors (max. 10)
8	Input for signal from external fire alarm system (alternative connection) to smoke detectors
9	Input for break-glass units (HSE – max. 10)
10	Output for signal transduction 1 (alarm release)
11	Output for signal transduction 2 (collective fault)
	----- only available for **BCR 8A** and **BCR 12A**

Important note for this original version

We are aware of our responsibility, which is why we present life-supporting and value-preserving products with greatest possible conscientiousness. Although we make every effort to ensure that the data and information are as correct and up-to-date as possible, we still cannot guarantee that they are free from mistakes and errors.
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Basically the General Terms and Conditions of **BTR** GmbH apply to all offers, supplies and services.

The publication of these assembly and commissioning instructions supersedes all previous editions.

Assembly and Commissioning Instruction

The complete **Assembly and Commissioning Instructions** and the **Declarations of Conformity** and of **Incorporation** are available via the QR code or directly on our homepage:
Firm **BTR** GmbH **(www.btr-hamburg.de)**

Declaration of Conformity and of Incorporation

We declare under our sole responsibility that the product described in the „Assembly and Commissioning Instructions“ is in conformity with the following directives:

- 2014/30/EU Directive relating to Electro-Magnetic Compatibility
- 2014/35/EU Low voltage Directiv

CE

Links to the assembly instructions

Please scan in the QR code and follow the link to the **BTR** homepage.

Select on the homepage:
- wished language
- product groupe / product name
- documents.