

Assembly and Operating Instructions

PRIODOOR ETX-RDA

*Air release shutter for
pressure-differential type smoke
control systems*

opening on the shaft side

Dear Customer,

You have opted for a high-quality PRIORIT product.

Thank you.

Please follow the following operating instructions carefully so that we can guarantee perfect functioning of the whole system.

We cannot provide any guarantee if you fail to comply with the instructions.

We expressly reserve the right to make technical changes, even without separate announcement, which serve to improve our product or which are caused by changes in legislation.

These operating/installation instructions may not be reprinted or reproduced – even as excerpts – without the written consent of PRIORIT AG.

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Important information



The product must be installed and mounted plumb and horizontal!

A cross-line laser must be used for the installation.



When putting down individual parts, do not place them on their corners and layout the storage area with soft material beforehand, e.g. with a moving blanket!



May only be installed by skilled personnel!

General safety instructions

- The operating / installation instructions must be kept in the place in which the product is used at all times.
- Legally stipulated safety instructions must be attached in a place visible to the users.
- All safety instructions and hazard warnings and the nameplate must be kept in a legible condition.
- Use the products only if they are in a proper condition.
- Note the technical details of the respective product given in our catalogue or data sheet.
- Improper installation can impair the protective function.
- Follow all information and instructions in these operating and maintenance instructions.
- The locking systems must not be changed or replaced.
- May only be installed by skilled personnel.

Intended use

- The products described in these operating/assembly installations are built to state-of-the-art standards and the recognised rules of safe practice.
- They may only:
 - be used for their intended purpose in indoor areas and
 - only used if they in a faultless, safe condition
- Any other use is deemed not to be as intended and is therefore misuse.
PRIORIT is not liable for the resulting damage and any consequential damage.

Functional test, safety check, care and maintenance

- An interval of 6 months is recommended for the functional test. If two consecutive functional tests do not reveal any defects, the functional test can be carried out annually. This interval of a maximum of one year should not be exceeded. Shorter intervals may be necessary depending on the risk assessment. We recommend that you perform a functional check and visual inspection once a month. The safety check can only be performed with the necessary care by a qualified employee, as adequate experience and a comprehensive level of knowledge are indispensable.
- We recommend carrying out a monthly functional and visual inspection. The safety inspection can only be carried out with the necessary care by a qualified employee, as sufficient experience and a comprehensive level of knowledge are essential for this. Visual inspection for corrosion damage, replace the affected components if necessary.
- Visually inspect the door leaves and frame for mechanical damage, replace damaged parts if necessary.
- Visual inspection for corrosion damage, replacement of the affected components if necessary.
- Visually inspect the door leaves, frame and fittings for dirt, clean if necessary.
- Visually check the smoke and fire protection seals for damage and completeness, replace seals if necessary.

- Common, mild household cleaners can be used to clean the outside of the access panels (only for plastic-coated doors).
- The product must be protected against water, penetrating moisture or splashing water.
- If safety-relevant damage is detected, it must be repaired with original parts before further use.

Warranty, declaration of transfer

To ensure our products function optimally, the installation instructions must always be followed.

The PRIORIT warranty covers the delivered products.

Changes or alterations to the design or construction may only be made following consultation with PRIORIT, as otherwise the approval/warranty expires.

The warranty for installation work must be provided by the installer.

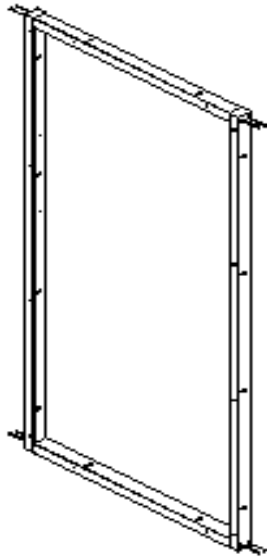
Warranty and liability claims for personal injuries and damage to property are excluded, if they are due to one or several of the following causes:

- The product is not used as intended
- Improper installation, commissioning, operation and maintenance.
- Disregard of the instructions regarding transport, storage, operation and installation.
- Unauthorised structural change to the product
- Improper repairs.
- disasters due to third party interference or force majeure.

Industrial property rights

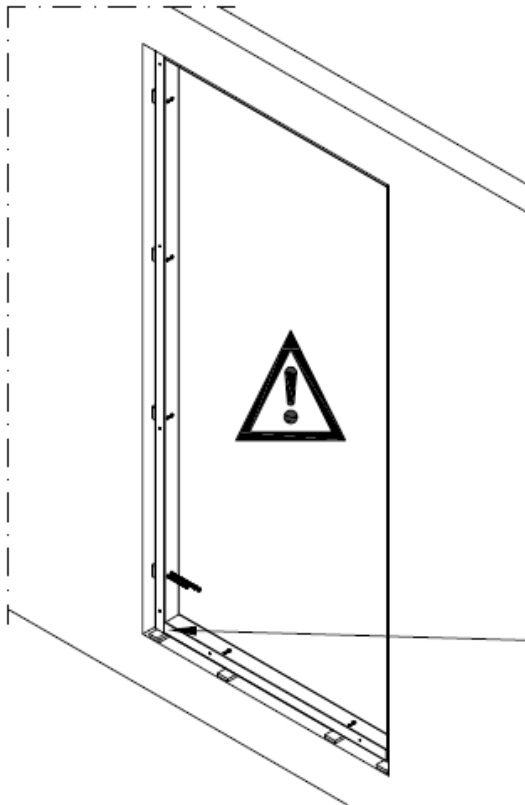
Utility model specifications have been registered with the German Patent Office to safeguard innovation and design.

Assembling the mounting frame

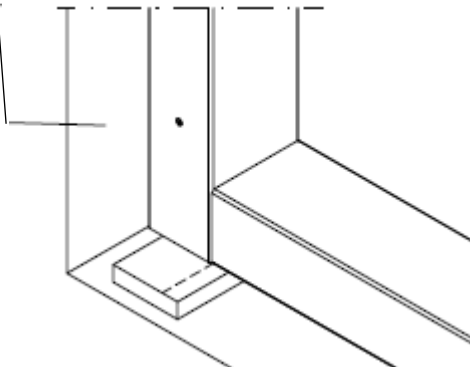


- Use 4.5 x 80mm countersunk head screws to screw together the upright and transverse parts of the mounting frame.

Installing the mounting frame

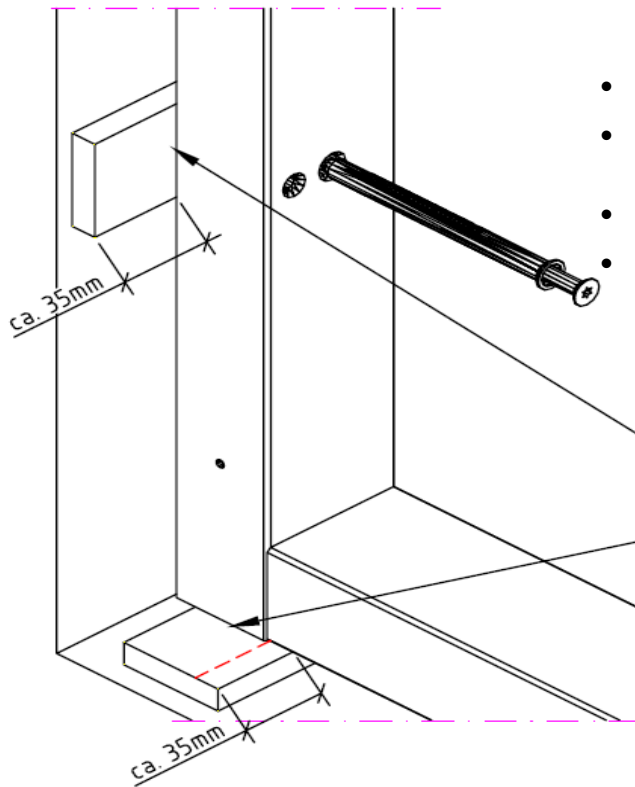


- Attention - shaft work: **Protect yourself and your tools against falling!**
- Place the mounting frame in the wall opening.
- Align vertically (plumb) and horizontally.
- Arrange the all-round opening gap uniformly.
- Place packer material under the screw fixing points. (Not included in the scope of supply)
- Let the transverse packer material at the bottom protrude, it serves as a contact area for the door element later.
- Place packer material behind the vertical frame.
- Secure against falling out!



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- Fix in a solid wall with anchor plugs 8 x 120.
- Place packer material behind the screw fixing points.
- Underlay vertical frames.
- Fill the void between the mounting frame and the wall opening with gypsum. (e.g. Knauf Uniflott)

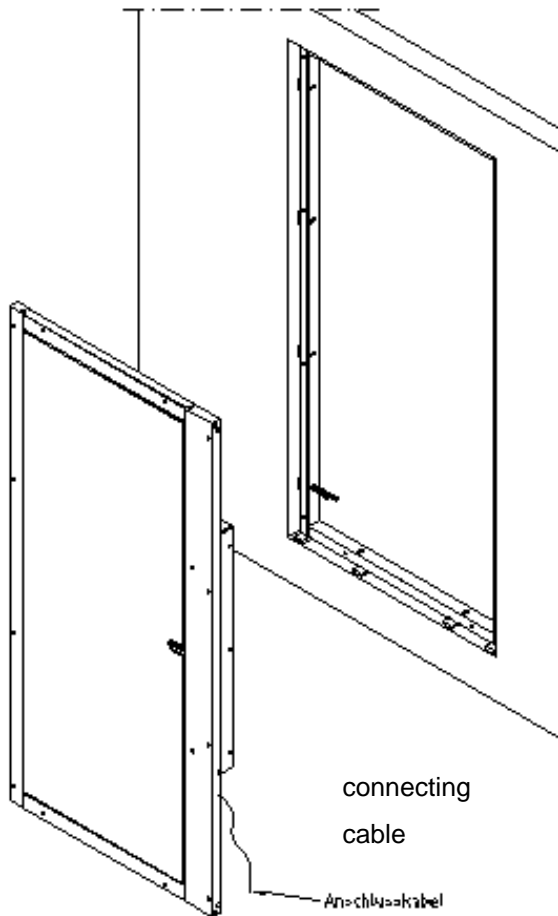
Packer material

We recommend using our packer blocks made of non-combustible PRIODEK H to install the product. Packer is available in our product range.



- The frame and the door element should always be installed **plumb** and **horizontal**. A cross-line laser must be used for this.

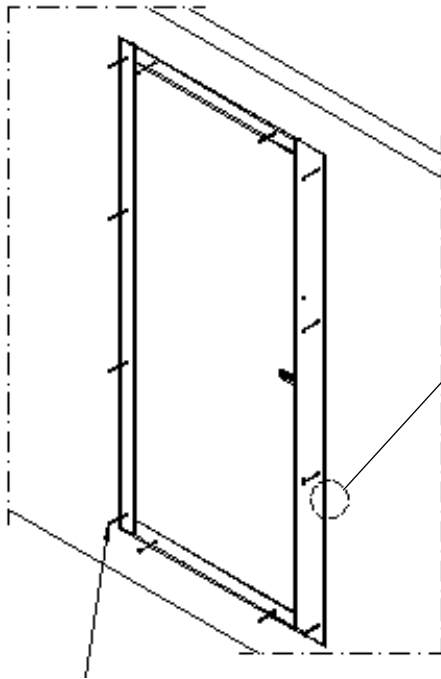
Installing the door element



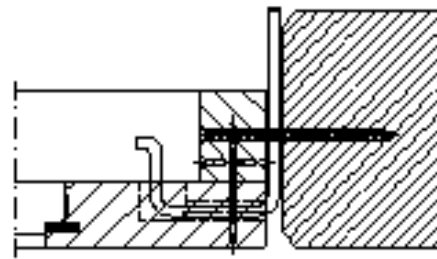
- Turn the door element into the installation position and place it in front of the wall opening.
- Route the connection cable hanging on the lock side towards the front and let it hang.
- Lift the door element into the wall opening and place on the protruding packer material at the bottom.
- Firstly, the door frame must be pushed against the bottom side packer material.
- Align the door element flush with the mounting frame, secure it against falling out and tilting.
- The four bottom countersunk head screws 4.5 x 80mm are then tightened and then the frame is aligned using the cross-line laser.
- Use the countersunk head screws 4.5 x 80mm to screw the remaining frame of the door element onto the mounting frame.
- After screwing the frame onto the mounting frame the door leaf can be opened.
- A power adapter with 24V or a test device is required for this. White cable +24V, brown cable -24V.
- Screw the nameplate onto the mounting frame, in the middle of the opening side, using a panhead screw 4.5 x 20mm.
- After the functional test, lay the connection cable in the shaft between the mounting frame and the wall (see detail below).
- Fill the wall edge joints with mortar or gypsum (e.g. Knauf Uniflott).

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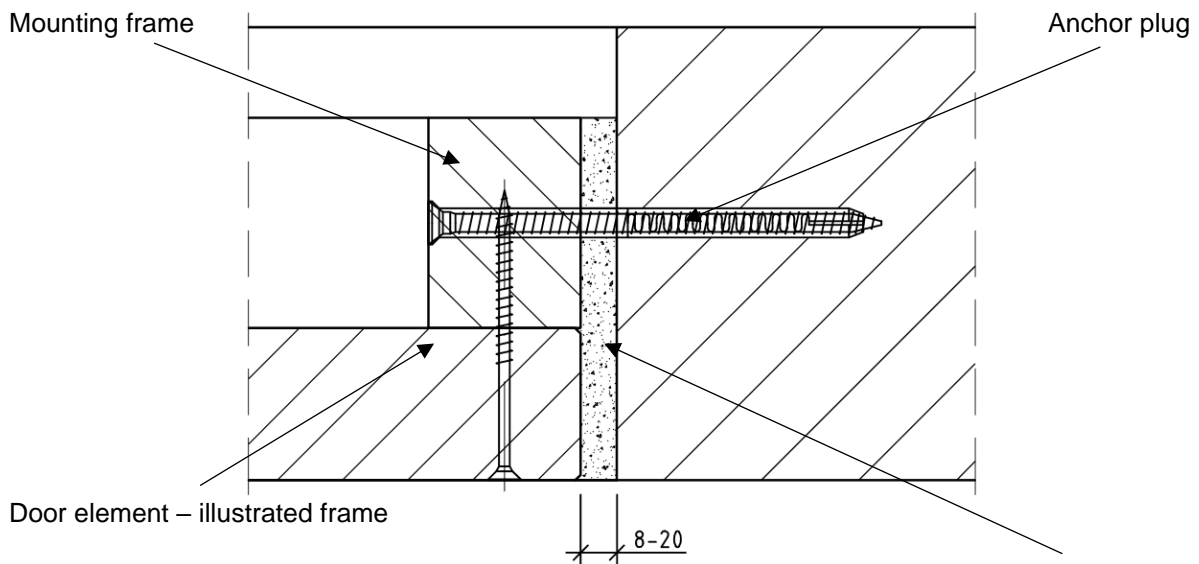


Countersunk head screw



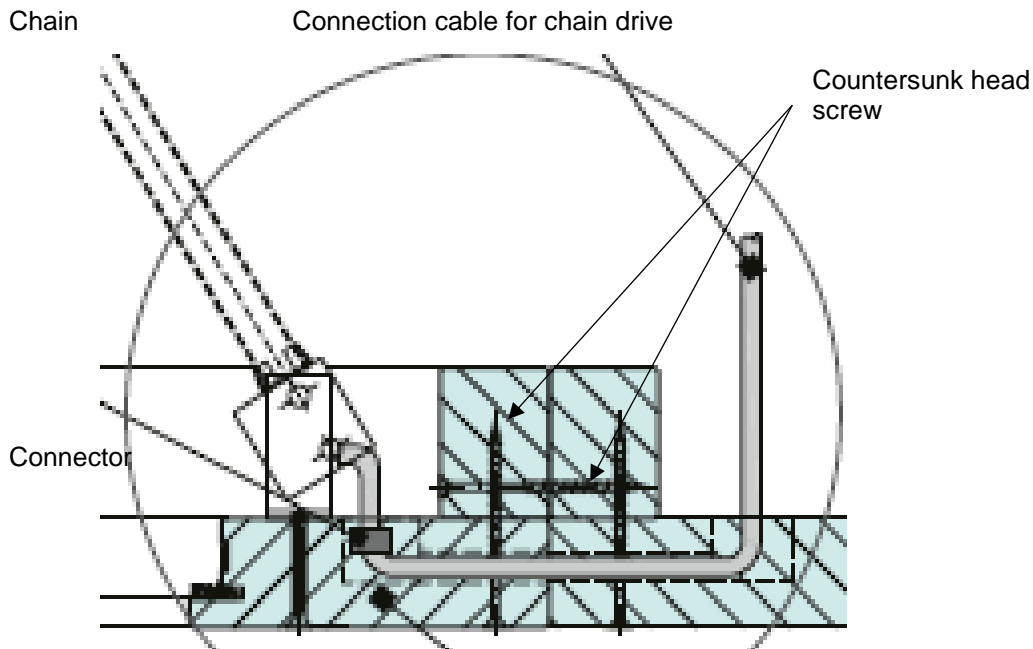
- Make drillholes between the mounting frame and wall, at the level of the connection cable exit position.
- Make sure that the connection cable is not damaged when drilling.
- Guide the connection cable through the drillhole in the shaft.

Installation detail: ETX-RDA in solid wall

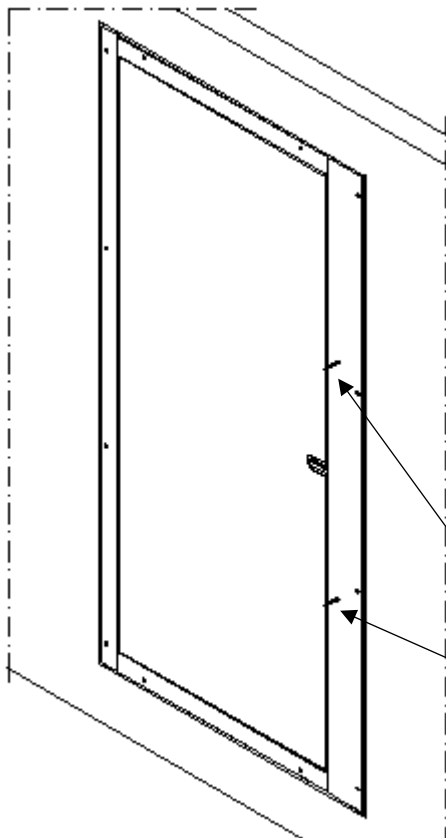


Fill the wall edge joints with gypsum (e.g. Knauf Uniflott).

Installation detail: ETX-RDA in PRIOWALL



Emergency opening of the door element



- Unscrew the two screws with which the U-bracket, which holds the chain drive, is screwed. **IMPORTANT! Do not use a cordless screwdriver, use a manual screwdriver instead.**
- Move the door manually in the direction of the shaft.
- Repair or replace the chain drive, if necessary.
- Extend the chain drive, move the U-bracket including the door leaf into the screw-on position.
- Screw the U-bracket back onto the frame and perform a function test.

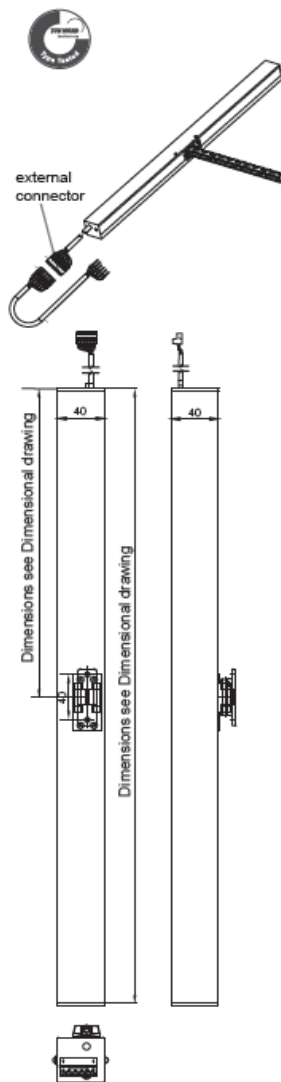
Technical information on the chain drive (excerpts)

SHE chain motor EM EasyDrive PRIORIT®

SHE chain motor EM EasyDrive PRIORIT®

For opening and closing casements, dome lights and skylights for smoke heat extraction and daily ventilation

Technical measures



Area of application

For bottom-hung, top-hung and skylights.

Suitable for smoke heat extraction and ventilation.

Special features

The EasyDrive concept enables the software-based configuration of the following parameters via a computer*:

- Pressing and tractive forces, separately adjustable
- Opening width 21-1017 mm (according to type of drive), adjustable
- OPEN/CLOSED opening speeds = 14 mm/s (separately adjustable), speed reduction 100 mm in front of end position CLOSED = 5 mm/s
- With potential free signal contact "flap full OPEN"
- Seal closure relief, adjustable between, 0-20 mm
- Automatic reverse movement at overload trigger, integrated 20 mm reverse movement way
- With external connector for easy drive exchange

* this configuration software with USB adapter and technical documentation is available as an accessory.

Please keep these operating instructions for future reference and maintenance. Subject to technical modifications. Diagram is not binding.

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Safety instructions

Documentation: This documentation is exclusively valid for the product or product range as stated in the type designation on the cover and must be applied comprehensively. This technical documentation must be read carefully before installation. Follow the guidelines. Contact the manufacturer if you have any questions or problems. This documentation should be retained for future reference.

User: This documentation is aimed at trained, professional electricians with safety awareness, who are familiar with mechanical and electrical equipment installation, accident prevention regulations and industrial compensation laws, and contains important information for operators and users.

Please observe the following safety instructions which are emphasized by special symbols.



Caution: Danger to persons due to electricity.



Attention: Danger to persons due to risks arising from the operation of the equipment.
Danger of crushing/trapping.



Warning: Non-observance leads to destruction.
Danger to material due to incorrect handling.



Important information



Use according to regulations: The product may only be used for the functions and applications detailed, and in accordance with the accompanying documentation. Unauthorised electrical and mechanical modifications are not permitted and will invalidate warranty and liability.

Transport and storage: The product may only be transported and stored in its original packaging. It must not be knocked, dropped, or exposed to moisture, aggressive vapours or harmful environments. More detailed transport and storage instructions provided by the manufacturer must be observed.

Installation: Installation and assembly may only be carried out by trained professional electricians, in accordance with the recognised rules of engineering as well as the technical documentation provided here. This will guarantee that the product will function safely during operation. Care should be taken that all mechanical components are fixed. Immediately after installation the electrical and mechanical components should be checked to ensure that they function correctly, and the tests and the results thereof should be documented.

Operation: Safe operation is guaranteed if the acceptable rated values and guidelines regarding maintenance information stated in this documentation, as well as supplementary information provided by the manufacturer, are followed.

Malfunction: If a malfunction is identified in the course of installation, maintenance, inspection etc., immediate action should be taken to rectify the problem.

Repair and maintenance: Defective equipment must only be repaired by the manufacturer, or by companies authorised by the manufacturer. Only original spare parts may be used. Repairs may only be carried out by trained professional electricians, in accordance with the recognised rules of engineering as well as the technical documentation provided here and supplementary advice from the manufacturer. This will guarantee that the product will function safely during operation. Care should be taken that all mechanical components are fixed. Immediately after repair the electrical and mechanical components should be checked to ensure that they function correctly, and the tests and the results thereof should be documented.

Maintenance: If the product is used as part of a safety system such as a smoke and heat extraction system (SHE), it must be tested, maintained and if necessary repaired at least once a year as specified by the manufacturer or in line with DIN EN 18232-2 Smoke and heat control systems for instance. This is also recommended for systems used purely for ventilation. If the product is to be used in other safety systems, shorter maintenance intervals may be necessary. With systems composed of control units, opening devices, control-sections etc., all components that interact directly with each other are to be included in maintenance. Maintenance must be carried out comprehensively following the manufacturer guidelines and the accompanying documentation. Components requiring maintenance must be accessible. Defective equipment must only be repaired by the manufacturer, or by companies authorised by the manufacturer. Only original spare parts may be used. All components that have a specified maximum operation time (such as batteries) must be replaced within this time (see technical specification) with original parts or manufacturer-approved parts. Regular inspection is necessary to ensure that the equipment is ready for operation. A maintenance contract with a recognised contractor is recommended.

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Safety instructions



Disposal: Packaging is to be disposed of appropriately. Electrical equipment is to be disposed of at recycling collection points for scrap electrical and electronic equipment. The Electrical and Electronic Equipment Act relating to disposal of electrical equipment does not apply in this instance. Rechargeable and single-use batteries are to be disposed of in line with § 12 of the Battery Ordinance (BattV), either via the manufacturer or at an appropriate collection point. Electrical equipment and batteries must not be disposed of with household waste.

Compatibility: When putting together a system consisting of various devices made by different manufacturers, the system compatibility must be tested and approved by the constructor to ensure safe function during operation. Equipment modification to achieve compatibility must be authorised by the manufacturer.

Conformity: This confirms that the equipment complies with the recognised rules of engineering. For electrical equipment a declaration of EC conformity can be requested from the manufacturer. Note: if the equipment (e.g. drive unit) is part of a machine in terms of the Machinery Directive 2006/42/EC, this does not render the supplier/contractor exempt from informing the customer with regard to the necessary installation instructions, labelling, documentation and certificates relevant to this directive.

Guarantee: The ZVEI "Green Supply Conditions" are taken as agreed. The guarantee period for material supply is 12 months. Any intervention with the equipment or system that is not authorised by the manufacturer will result in invalidation of liability, guarantee and service.

Liability: Product changes and settings may be modified without advance notice. Illustrations are not binding. No liability will be held for contents despite maximum care being taken.

Electrical safety

Wiring and electrical connections must only be done by an electrician. Mains 230 / 400 V AC must be secured separately on site. The appropriate laws, specifications and standards must be observed, such as the directive relating to fire safety of conduit installations (MLAR / LAR / RbALei), VDE 0100 (specifications for high-voltage circuits up to 1000 V), VDE 0815 (installation cables and wiring), VDE 0833 (fire, burglary and attack alarm systems). If necessary, cable types must be defined in conjunction with the local approval bodies, power supply companies or fire safety authorities.

Cabling for extra-low voltages (e.g. 24 V DC) is to be laid separately from low-voltage line (e.g. 230 V AC). Flexible cables must be laid in such a way that they cannot be sheared off, twisted or snapped during operation. Power supplies, control units and junction boxes must be accessible for maintenance work. Cabling types, lengths and cross-sections are to comply with technical guidelines.



Before work is carried out on the system, the mains current and emergency power supply (eg. rechargeable batteries) is to be disconnected from all-poles and secured to prevent accidental switch-on. Never operate the drive units, control units, operator elements and sensors on supply voltage and connections in such a way as to contravene the guidelines in the operator manual. There is a risk of fatal injury, and it can cause components to be destroyed!

Mechanical safety

Falling window casements: Window casements are to be mounted in such a way that even if one of the suspension elements fails, the design prevents the unit from falling or moving in an uncontrolled way, e.g. by double hanging, security stay, safety catch. Please note: to prevent obstruction/falling of the window, the security stay/safety catch must be compatible with the intended opening span and mechanism of the window. See also the directive for power-operated windows, doors and gates (BGR 232) and the ZVEI brochure "RWA Update No. 3, power-operated windows".

Fittings and fixing material: any fixing materials required or supplied with the product must be adapted to the building and load, and if necessary supplemented.



Crush and shear points: Power-operated windows, doors and gates: Any crush and shear hazard areas, for instance between the casement and frame or skylight and base, must be secured against trapping using appropriate measures to prevent injury. See also the directive for power-operated windows, doors and gates (BGR 232) and the ZVEI brochure " RWA Update No. 3, power-operated windows".

Accident prevention regulations and industrial compensation laws: For works to, on or in a building or part thereof, the appropriate accident prevention regulations (UVV) and industrial compensation laws (BGR) are to be observed.

Environmental conditions: The product must not be knocked, dropped, or exposed to vibration, moisture, aggressive vapours or harmful environments, unless the manufacturer has authorised one or more of these environmental conditions.

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Electrical installation

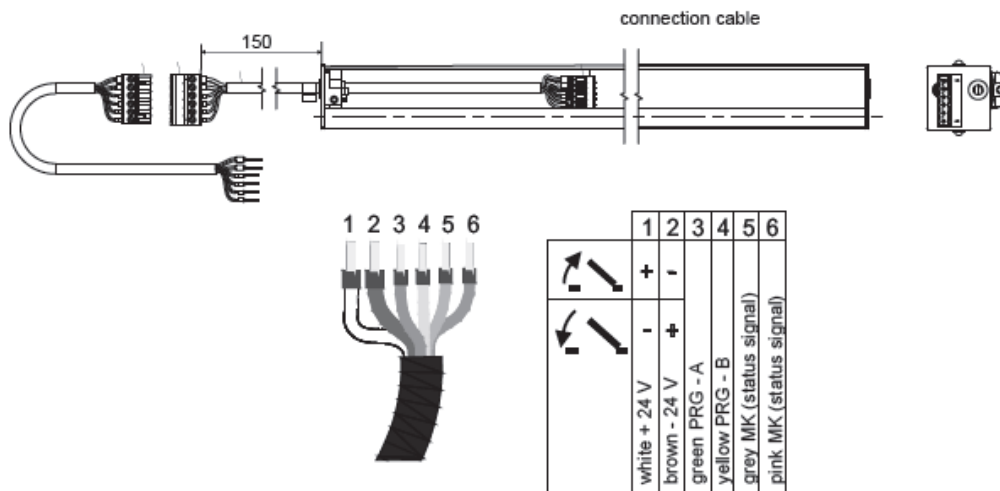


Warning: 24 V direct current! Other voltages will damage the motor.



Note: How to configure the drives via PC-Software you can learn from the instructions contained in the software.

Wiring diagram

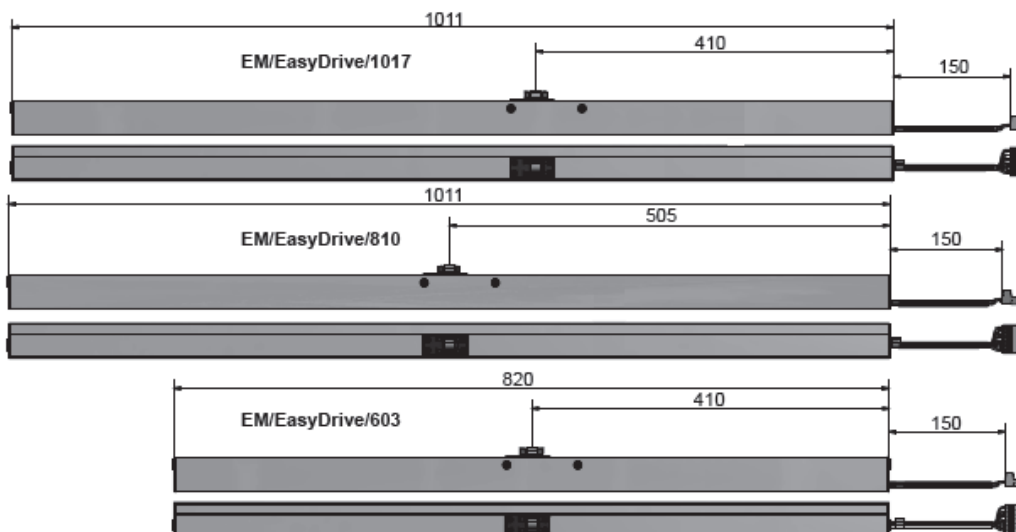


Note: Zerodrive

If the drives have been completely mounted, connected and set and at the end of the close movement, carry on moving a few centimetres, a zerodrive must be initiated. This is necessary if the drives are so mounted that the stroke of the chain is greater than 1 cm when the window is closed.

For a detailed description of how to proceed the "zerodrive", please refer to the Help under Manual, EasyDrive Software, page 31.

Dimensional drawing



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Chain motor technical data

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Technical datas

The power supplies and electrical control equipment are to be operated exclusively with the components authorised by the manufacturer.

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Electrical properties	
Operating voltage supply:	24V DC
Permissible voltage range:	-10% / +25% der Nennspannung
Permissible ripple voltage:	2V _{eff}
Current draw:	1,0A bei 300N Last
Power consumption at cut-out torque:	max. 1,0A
Current still present after switching off (quiescent current)	40mA
Cut-off "Open":	integrierter Endschalter
Cut-off "Close":	eingebaute Lastabschaltung
Power cut-off in each position:	yes
Class of protection:	Class III in accordance with DIN EN 61140 (VDE 0140-1)
Mechanical properties	
Stroke length:	21-603mm, 21-810mm, 21-1017mm (adjustable)
Pressing force:	max. 300N, adjustable ab Hub 603mm = max. 100N
Tractive force:	max. 300N, adjustable*
Nominal clamping force:	max. 3000N
Side force / Shear force:	not allowed
Speed:	OPEN/CLOSED=14 mm/s, 100 mm before CLOSED=5 mm/s (adjustable)
min. Casement height at stroke length:	depending on the profile cross-section and thickness as well as the mounting situation. Example: bottom hung inward opening 855mm till stroke 603mm 1100mm till stroke 810mm
Dimensions (L x H x T):	stroke 21-603mm = 820 x 40 x 40mm stroke 21-810mm = 1011 x 40 x 40mm stroke 21-1017mm = 1011 x 40 x 40mm
Weight	stroke 21-603 (810) mm ca. 2,7kg
Circuit connections and operation	
Connection cable:	connecting cable with connector, length 3,10 m (6-cores: 2 x 0,75mm ² , 4 x 0,25mm ² , silicone cable) Cable entry from Ø 5 mm to Ø 7mm
Electr. connection:	spring-pin connector section 6-core for max. cable cross sections 1.5 mm ²
Connections:	see technical documentation
Terminal connections:	see technical documentation
Pause time during change of polarity:	> = 100ms
Start-up time:	30 % start-up time relating to 10 min, 3 min ON, 7 min OFF
Opening / closing operation	Reversing the polarity of the operating voltage
Pulsing in accordance with prEN 12101-9	suitable, with change in direction and a pole reversal pause time ≥ 500 ms
Service life:	> 10.000 ventilation cycles at nominal load
Multiple triggering against end position:	suited
Continuous voltage:	suited
Maintenance:	see maintenance works

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Technical datas

	EM EasyDrive PREORIT®
Installation and ambient conditions	
Rated temperature:	20°C
Ambient temperature range:	-10°C to +60°C
Suitable for SHE and ventilation	suited
Suitable for external mounting:	not suited
IP protection system:	IP 20 in accordance with DIN EN 60529
Authorisations and certifications	
CE compliant:	in accordance with EMV directive 2004/108/EG and the low voltage directive 2006/95/EG
Type-tested	TÜV, Registration No.. 44 780 12 026515
Acoustic measurements	in accordance with DIN EN 11201
Material	
Housing material:	aluminium
Opening mechanics:	stainless steel chain
End caps:	zinc die-casting in the same colour as the drive
Colour (standard):	powder-coated, white (RAL 9016) or silver grey (RAL 9006)
Special colours:	other RAL colours on request
Power supply line halogen-free:	no
Power supply line silicon-free:	no
Power supply line RoHS compliant:	yes

Trouble-free and safe operation is only warranted when used in conjunction with appropriate manufacturers control unit. Request a technical conformity declaration when using drives from other manufacturers.

*The actual closing forces are basically on the spot to check. For the achievement of the anti-jamming of the Class 2 and 3 (VFF leaflet KB.01) is a limitation of the closing force normally not allowed because Shear forces are to be excluded in principle



Recommended inspections

PRIODOOR ETX RDA (-H) maintenance record	
Project name:	Customer:
Address / location	Order number:
Article number	Serial number:
Date of the check	Next check:

General evaluation
Cleanliness
Lettering/labelling
Accessibility

Maintenance work				
ITEM	Maintenance tasks	ok	Defective	Defect corrected
1	Check the wiring of the drive for damage	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2	If limit switches present: Check the wiring of the limit switch for damage	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3	Check the cleanliness of the ETX-RDA and clean if necessary	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4	Check the condition of the leaves and seals, make good if necessary and prepare the corresponding report	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5	Confirm that the ETX-RDA is opened and closed by the control system and observe the ETX-RDA, make good if necessary and prepare the corresponding report	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6	Confirm the OPEN and CLOSED positions of the limit switches, make good if necessary and prepare the corresponding report	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7	Confirm that the ETX-RDA fulfils its function as part of the smoke removal system	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8	Confirm that the ETX-RDA has been left in its standby position	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9	Test the function of the chain drive	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

REMARK:

A smoke control damper is generally part of a smoke removal system. For this reason, the whole system should be checked as specified in the operating and maintenance requirement for the system.

Visual inspections

ITEM	Description	ok	Defective	Defect corrected
1	Visual inspection of the door leaves and frame for mechanical damage; replace any damaged parts if necessary	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2	Visual inspection for corrosion damage, replace the affected components if necessary	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3	Visual inspection of the door leaves, frame and hardware for dirt, clean if necessary	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4	Visual check of the smoke and fire resistant seals for damage and completeness, replace seals if necessary	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Comments

Final remark

Condition of the installation New Good Poor

System ready for operation Yes No

Inspected by:

Date / Name / Signature

With my signature I confirm that I have been trained (and examined) as a competent person in fire protection, safety and ventilation as well as in the relevant, national occupational safety laws, the regulations of the German bodies responsible for occupational safety ("Berufsgenossenschaften") and the generally recognised rules of good engineering practice. I am also authorised by the manufacturer, PRIORIT AG, to carry out the maintenance/service work.

Troubleshooting

Fault/error	Possible cause	Possible remedy
ETX-RDA does not work.	The green six-pin standard connector is possibly not joined together correctly.	Join the connector correctly until it latches into position.
The ETX-RDA does not function after connecting it to the control system (on site).	No 24V voltage applied on site. Incorrectly wired on site.	Test the voltage in the supply cable. Test the ETX-RDA with an external electricity source. Check the wiring on site.
The ETX-RDA does not open or close correctly or does not function after checking the above points.	Error in the control of the chain drive.	Perform a hard reset while voltage is applied to the chain drive. To do so, jumper 1st cable (white) and 3rd cable (green) for 2 seconds. The chain length and the end position may then have to be reset by a qualified firm.
ETX-RDA does not function after replacing the chain drive.	The green six-pin standard connector is assigned incorrectly.	Check whether the two connector parts are assigned correctly (see page 15).

Notes