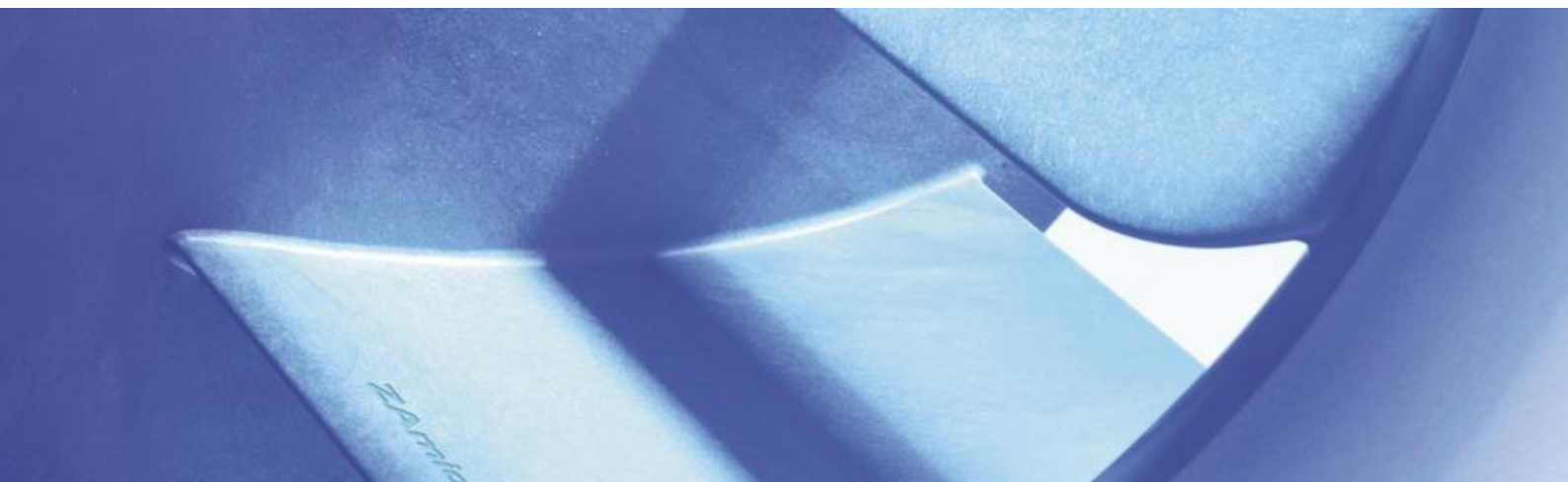


Movement by Perfection



The Royal League in **ventilation**, control and drive technology



[Product documentation](#)

Type
RH31C-ZID.DC.1R

Article number
191176

Product documentation

Customer

ZIEHL-ABEGG Contact

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Type

RH31C-ZID.DC.1R

Article number

191176



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1. Recitals

The Product Specifications contained in this document are final, unless otherwise stated by a separate provision in the "ZIEHL-ABEGG deviation list document" with respect to information provided by the customer (cp. separate Chapter: Attachment).

Other regulations between the parties, regardless of time, form or content, are not part of the subject matter of the contract and the agreement on characteristics/of features (Product Specifications) between the parties.

Compliance with the following specifications is mandatory to ensure the functionality and safety of the product. If the following specifications given especially but not limited for operating conditions, transport, storage, mounting, start-up, maintenance and repair are not observed, the product may not operate safely and may cause a hazard to the life and limb of users and third parties.

Deviations from the following requirements may therefore lead both to the loss of the statutory material defect liability rights and to the liability of the buyer for the product that has become unsafe due to the deviation from the specifications.

2. Product specification - Technical data

Article number	191176
Type	RH31C-ZID.DC.1R
Designation	Single inlet impeller with backward curved blades.
Rated values	3~380-480V 50/60Hz P ₁ 2.20kW 3.60-2.85A 3550min ⁻¹ 60°C
Electrical connection	Integrated controller
ErP Data	Measurement category ErP: A Air flow q _v on Eta opt: 3041 m ³ /h Pressure increase p _{fs} on Eta opt: 1388 Pa Input power P _{ed} on Eta opt: 2110 W Efficiency η _{statA} : 60.7 % Efficiency grade: N _{actual} = 67.8 / N _{target} = 62* *ErP 2015
Min. operating temperature	-35°C***
Thermal class	Thermal class 155
efficiency class	IE5
IO-function	BASIC
Add-on Modul	PREMIUM
coating rotor	Rotor 1 coatpaint resistance class 1 (L-TI-0596)
Colour sheet rotor	RAL 5002 (ultramarine blue)
Material impeller	Impeller made of aluminium
Connection diagram	AP00001C
Installation position	Fitting position H/Vu/Vo
Fitting position mot	Mounting position H/Vu/Vo
Motor protection	integrated active temperaturemanagement
Type of protection	IP55
Impregnation	Moisture and hot climate protection
Quality of bearings	ball bearing with long-time lubrication
Special bearing	With hybrid ball bearing
Labelling UL/CSA	E213826 ZB-155, MK116-0008
Other	Connecting elements made of stainless steel.
Colour motor	Stator/rotor separately
Special motor	End cover made of aluminium
Balance quality	G 6,3
Weight	10.00 kg

*** Operation mode:

Continuous operation with occasional starts (S1) according to DIN EN 60034-1:2011-02.

Occasional starting between -35 °C and -25 °C is permissible. Continuous operation below -25 °C only with special bearings for refrigeration applications on request.

Permissible minimum and maximum ambient temperature for operation:

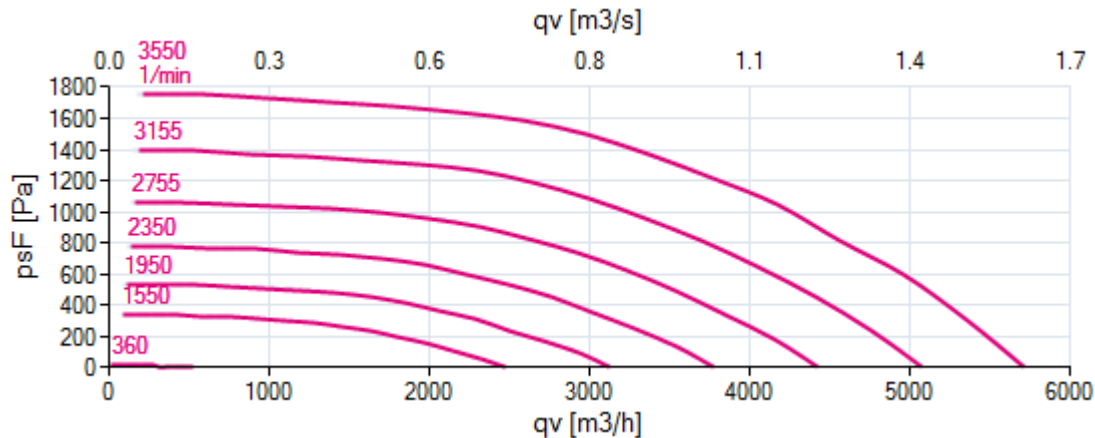
Please refer to the technical documentation of the product for the minimum and maximum ambient temperature valid for the respective fan. Operation below -25 °C as well as partial load operation for refrigeration applications is only possible with special bearings for refrigeration applications on request. If special bearings for refrigeration applications are installed in the fan, please observe the permissible maximum temperatures in the technical documentation of the product.

3. Characteristic Curve

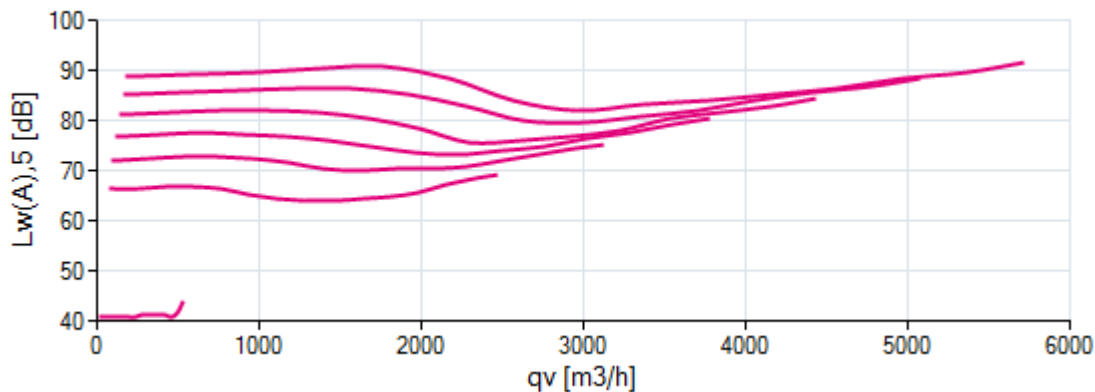
RH31C-ZID.DC.1R
3~ 400V 50Hz

measured in standard nozzle in installation type A according to ISO 5801
measurement density 1,16 kg/m³

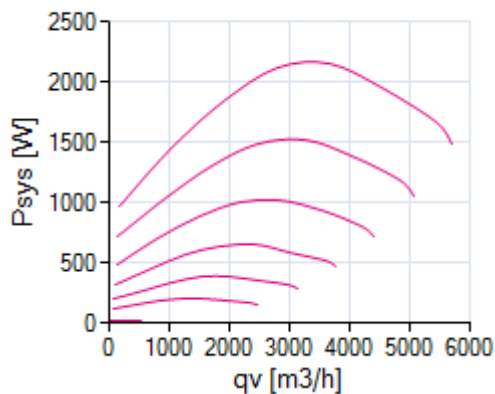
Air performance



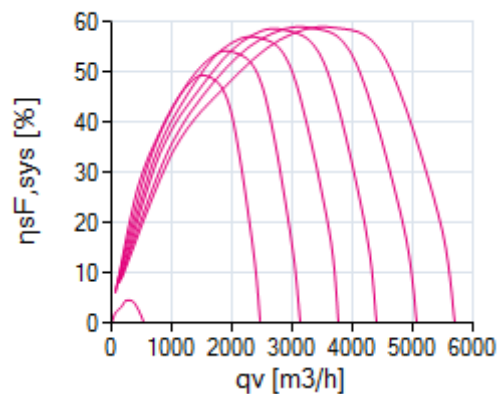
Acoustics



Power input



Efficiency

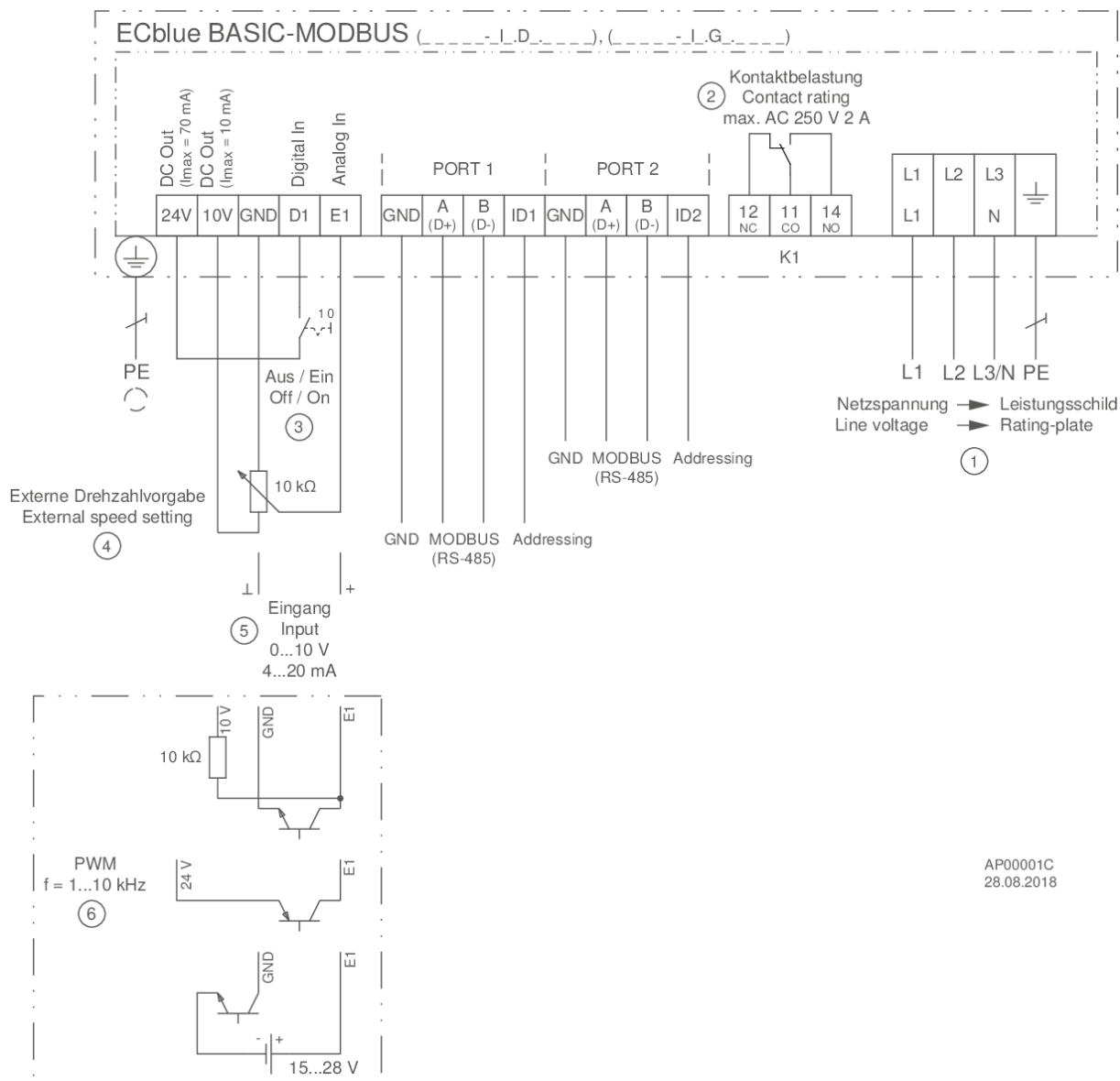


Please note: It's not allowed to use this fan in the stall area!*

*In doubt please ask your responsible ZIEHL-ABEGG sales contact.

5. Connection diagram

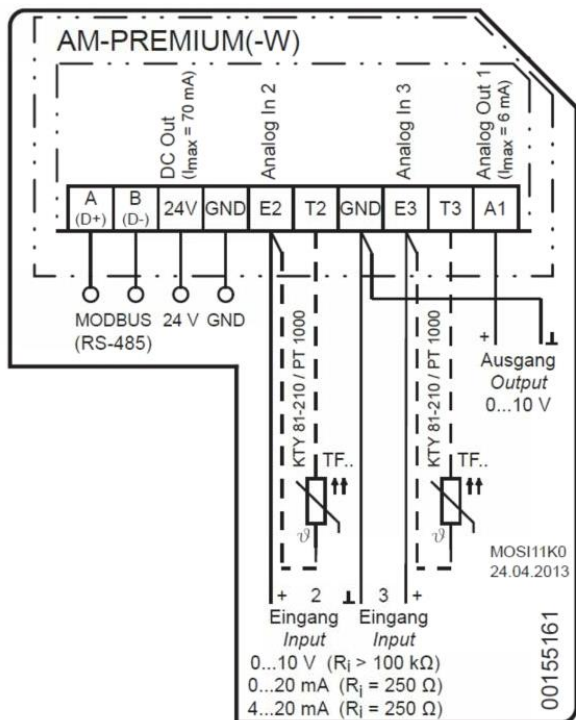
Connection diagram: AP00001C



AP00001C
28.08.2018

Attention!

When the Premium Add-on module is installed, Analog Input port E1 will be programmed as the Digital Input, and it would lost the ability to adjust the speed by giving 0-10V signal on E1.



6. EU-Declaration of conformity

EU declaration of conformity

- Translation -
(english)

ZA75-GB 2044 Index 016

Manufacturer:
ZIEHL-ABEGG SE
Heinz-Ziehl-Straße
74653 Künzelsau
Germany

The manufacturer is solely responsible for issuance of the declaration of conformity.

The products:

- External rotor motor MK.., MW..
- Axial fan DN.., FA.., FB.., FC.., FE.., FF.., FG.., FH.., FL.., FN.., FS.., FT.., FV.., VN.., VR.., ZC.., ZF.., ZG.., ZN..
- Centrifugal fan ER.., GR.., HR.., RA.., RD.., RE.., RF.., RG.., RH.., RK.., RM.., RR.., RZ.., WR..
- Cross-flow fan QG.., QK.., QR.., QT..

The motor type:

- Asynchronous internal or external rotor motor
- Asynchronous internal or external rotor motor with integrated frequency inverter
- Electronically commutated internal or external rotor motor
- Electronically commutated internal or external rotor motor with integrated EC controller

These products comply with the following EU directives:

- EMC Directive 2014/30/EU
- Low Voltage Directive 2014/35/EU
- ErP Directive 2009/125/EC, in conjunction with Regulation (EU) no. 327/2011

The following harmonised standards have been used:

- EN 60034-1:2010 + AC:2010
- EN 60204-1:2006 + A1:2009 + AC:2010
- EN 60529:1991 + A1:2000 + A2:2013 + AC:1993 + AC:2016 + AC:2019
- EN 61000-6-2:2005 + AC:2005
- EN 61000-6-3:2007 + A1:2011 + AC:2012

Compliance with the ErP Directive 2009/125/EC does not refer to external rotor motors MK.., MW..

All ErP-relevant information comprises measurements which are determined using a standardised measurement set-up. More details can be obtained from the manufacturer.

Compliance with the EMC Directive 2014/30/EU refers only to those products when they are connected by mounting / operating instructions. If these products are integrated into a system or supplemented with other components (e.g. sensing controls) and operated, the manufacturer or operator is responsible of the overall system for compliance with the EMC Directive 2014/30/EU.

Künzelsau, 28.10.2020
(location, date of issue)

ZIEHL-ABEGG SE
Dr. W. Angelis
Head of Technics Ventilation Technology
(name, function)



(signature)

ZIEHL-ABEGG SE
Dr. D. Kappel
Head of Electrical Systems
(name, function)



(signature)

ZIEHL-ABEGG 

EC Declaration of Incorporation

- Translation -
(english)

ZA87-GB 2044 Index 009

as defined by the EC Machinery Directive 2006/42/EC, Annex II B

The design of the incomplete machine:

- Axial fan DN., FA., FB., FC., FE., FF., FG., FH., FL., FN., FS., FT., FV., VN., VR., ZC., ZF., ZG., ZN..
- Centrifugal fan ER., GR., HR., RA., RD., RE., RF., RG., RH., RK., RM., RR., RZ., WR..
- Cross-flow fan QD., QG., QK., QR., QT.,

Motor type:

- Asynchronous internal or external rotor motor (also with integrated frequency inverter)
- Electronically commutated internal or external rotor motor (also with integrated EC controller)

complies with the requirements in Appendix I, Articles 1.1.2, 1.1.5, 1.4.1, 1.5.1 in EG Machinery Directive 2006/42/EG.

The manufacturer is

ZIEHL-ABEGG SE
Heinz-Ziehl-Strasse
D-74653 Künzelsau

The following harmonised standards have been used:

EN 60204-1:2006 + A1:2009 + AC:2010	Safety of machinery; electrical equipment of machines; Part 1: General requirements
EN ISO 12100:2010	Safety of machinery - General principles for design - Risk assessment and risk reduction
EN ISO 13857:2008	Safety of machinery; safety distances to prevent danger zones being reached by the upper limbs
Note:	The maintenance of the EN ISO 13857:2008 relates only to the installed accidental contact protection, provided that it is part of the scope of delivery.

The specific technical documentation in accordance with Appendix VII B has been written and is available in its entirety.

The person authorised for compiling the specific technical documentation is: Dr. W. Angelis, address see above.

The specific documentation will be transmitted to the official authorities on justified request. The transmission can be electronic, on data carriers or on paper. All industrial property rights remain with the above-mentioned manufacturer.

It is prohibited to commission this incomplete machine until it has been secured that the machine into which it was incorporated complies with the stipulations of the EC Machinery Directive.

Künzelsau, 28.10.2020
(location, date of issue)

ZIEHL-ABEGG SE
Dr. W. Angelis
Head of Technics Ventilation Technology
(name, function)

(signature)

ZIEHL-ABEGG SE
Dr. D. Kappel
Head of Electrical Systems
(name, function)

(signature)

ZIEHL-ABEGG



7. Deviation list

1. With Premium Add-on module.
2. Set E2 for the input of 0-20mA from Premium analogue input 2
3. Set A1 to the range of 1A to 9A for Premium analogue output 1
A1的输出范围电压0-10V



The Royal League in ventilation, **control** and drive technology

Intelligent control technology for any application

ZIEHL-ABEGG system capabilities:
Everything from a single source – perfectly matched for optimal performance

Please contact us. We would be pleased to design an individual solution for your requirements.

We would like to welcome you on our worldwide exhibitions. Please find our next exhibitions [here](#).