

Movement by Perfection



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



Product documentation

Type
FN035-VDK.0F.V7P2

Article number
155892

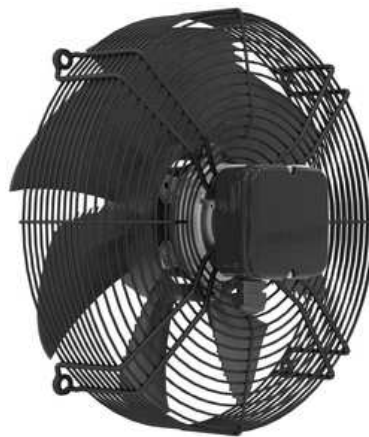
Product documentation

Customer

Project

Type
FN035-VDK.0F.V7P2

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Contents

1.	Product specification - Technical data	3
2.	Characteristic curve	4
3.	Drawing	6
4.	Connection diagram	8
5.	EU-Declaration of conformity	9

1. Product specification - Technical data

Article number	155892
Type	FN035-VDK.0F.V7P2
Designation	Axial fan with sickle blades
Rated values	3~400V±10% D/Y 50Hz P ₁ 190/140W 0,40/ 0,23A ΔI=0% 1390/1170/min COSY 0,69 70°C 3~400V±10% D/Y 60Hz P ₁ 280/180W 0,48/ 0,30A ΔI=10% 1560/1100/min COSY 0,84 70°C 3~460V±10% D/Y 60Hz P ₁ 300/220W 0,46/ 0,30A ΔI=10% 1630/1250/min COSY 0,82 70°C
Electrical connection	Terminal box K05
Min. operating temperature °C	-40***
Mounting type terminal box	Mounted on Stator
Type of protection	IP54
Thermal class	THCL155
Connection diagram	1360-108XA
Rating plate	1x fixed
Fitting position	H/Vu/Vo
Motor protection	thermal contact
Impregnation	Moisture and hot climate protection
Quality of bearings	ball bearing with long-time lubrication
Material Rotor	Aluminium
Painting rotor	Rotor 1 coat painted
colour rotor	RAL 9005 (jet black)
Material blades	High Performance Composite Material
Painting impeller	unpainted
Colour blades	black
Guard grille type	ring grill
Control	--
Painting mot.suspens	Motor suspension powder-coated consistency class 2
colour suspension	RAL 9005 (jet black)
Weight kg	5,30
ErP Data	Efficiency η_{statA} : 29,3 % Efficiency grade: $N_{actual} = 40,3 / N_{target} = 40^*$ *ErP 2015

*** Operating mode:

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

Occasional starting between -40 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.

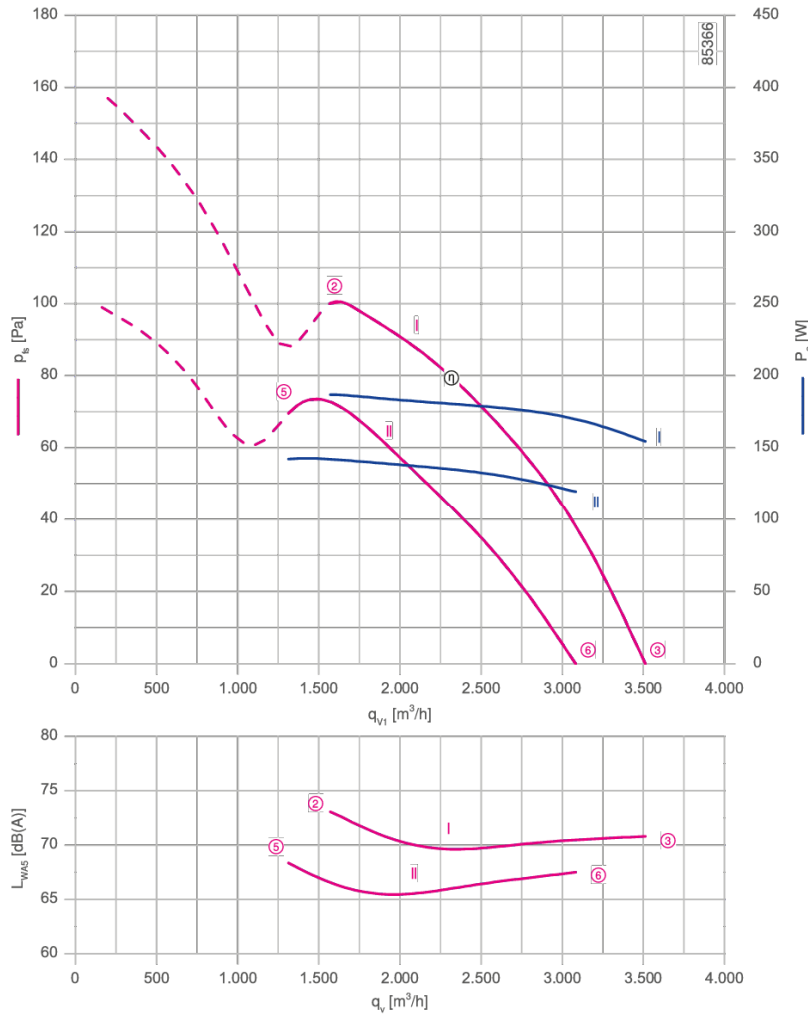
Ball-bearing service life:

The according to standard calculation methods determined bearing service life expectation of the motor-integrated ball bearings is mainly determined by the grease service life F10h and amounts for standard application to approx. 30.000 – 40.000 operating hours. The fan is maintenance-free due to the use of ball bearings with "lifetime lubrication". Once the grease operating life F10h has been reached, it may be necessary to replace the bearing. The bearing service life expectation may change compared to the specified value, if operating conditions such as increased vibrations or shocks, increased or too low temperatures, humidity, dirt in the ball bearing or unfavourable control modes are present. A service life calculation for special applications can be provided on request.

2. Characteristic curve

Characteristic curve

Frequency: 50 Hz

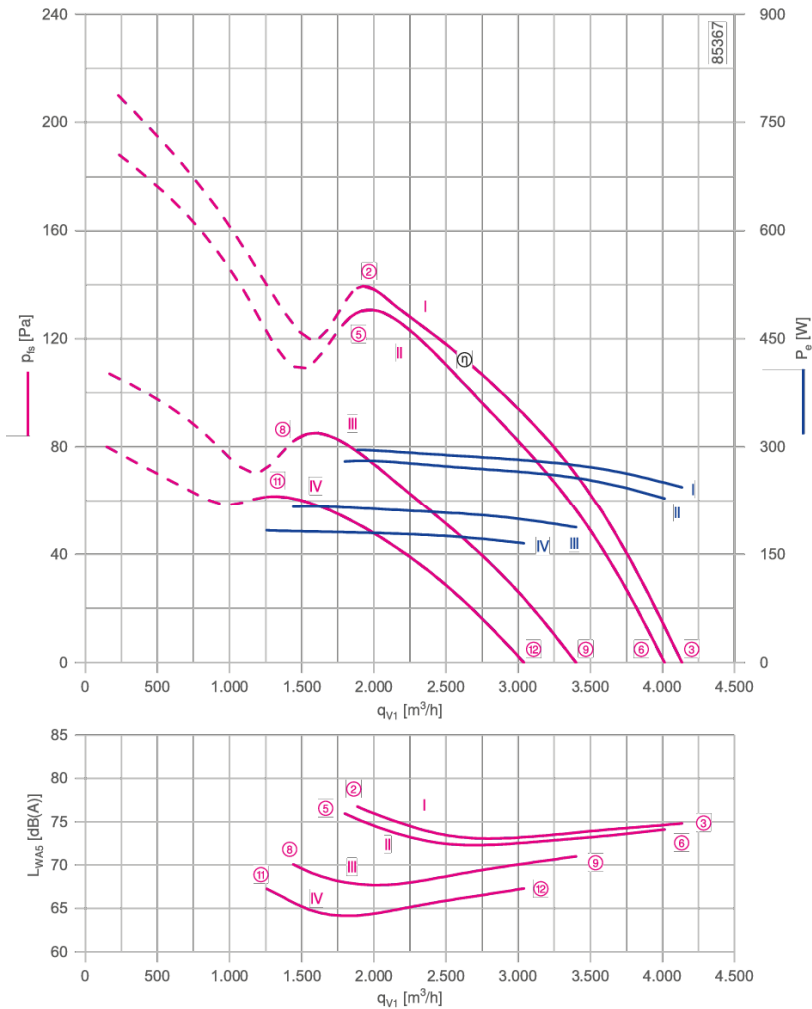


Operating point		②	③	⑤	⑥
Characteristic curve		I	I	II	II
Connection		Δ	Δ	Y	Y
Voltage	V	400	400	400	400
Input power	W	190	150	140	120
Current	A	0,40	0,37	0,23	0,20
Speed	min $^{-1}$	1390	1420	1170	1240
Suction side sound power level	dB(A)	73	71	68	68

Characteristic curve

Frequency: 60 Hz

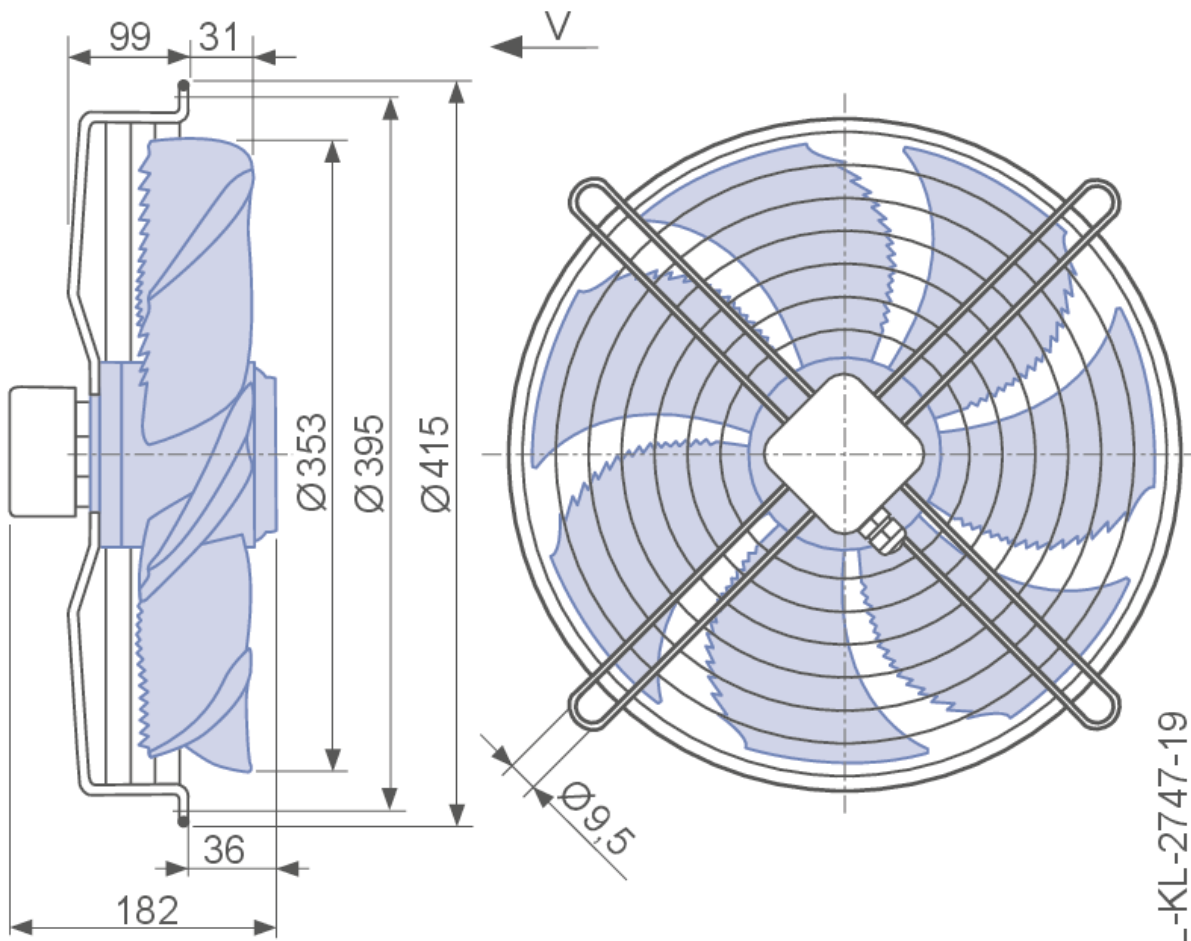
Measured in full nozzle without guard grille in installation type A according to ISO 5801.

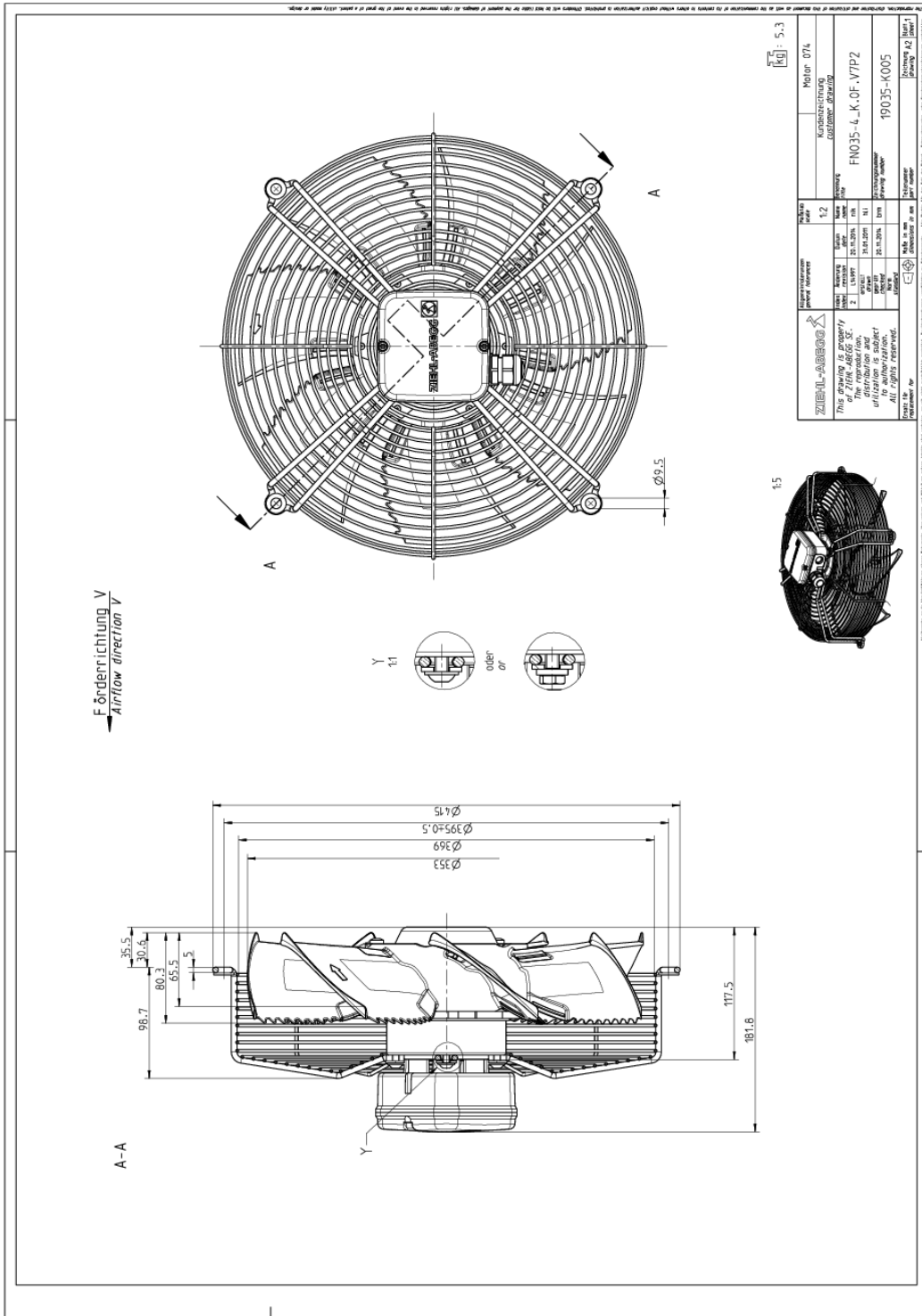


I = 3~460 V D, II = 3~400 V D, III = 3~460 V Y, IV = 3~400 V Y

Operating point	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩	⑪	⑫
Characteristic curve	I	I	I	II	II	II	III	III	III	IV	IV	IV
Connection	Δ	Δ	Δ	Δ	Δ	Δ	Y	Y	Y	Y	Y	Y
Voltage	V	460	460	460	400	400	400	460	460	460	400	400
Input power	W	360	300	240	340	280	230	240	220	190	200	180
Current	A	0,54	0,46	0,42	0,56	0,48	0,40	0,34	0,30	0,26	0,33	0,30
Speed	min ⁻¹	1580	1630	1670	1500	1560	1620	1120	1250	1370	970	1100

3. Drawing





Dimensions in mm
Shown drawing is just to show the dimensions of the fan.

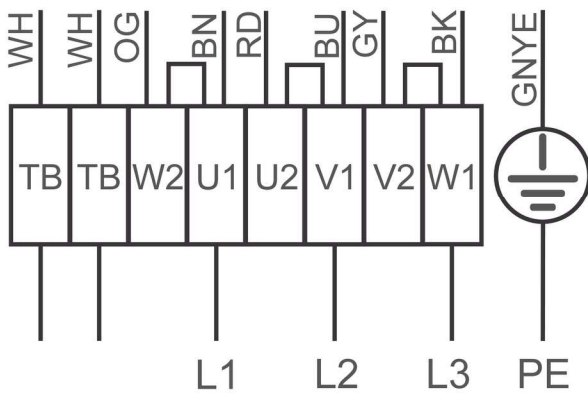
4. Connection diagram

1360-108XA

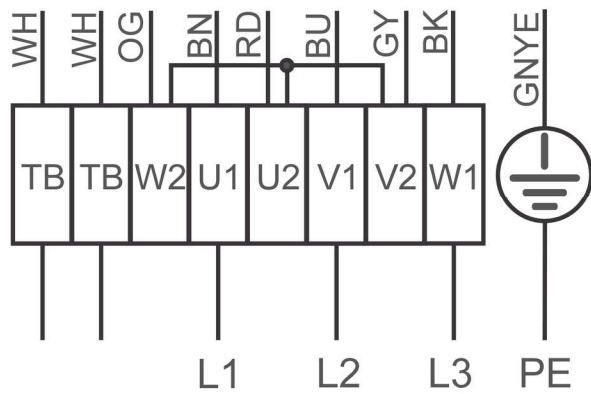
3~ motor, 2 speeds (Δ/Y switch over) with thermostatic switch (if built in). Without bridge when using speed change-over switch.

- BN brown
- BU blue
- BK black
- RD red
- GY grey
- OG orange
- WH white
- GNYE green-yellow

High speed/D-connection



Low speed/Y-connection



5. EU-Declaration of conformity

EU declaration of conformity

- Translation -
(english)

ZA75-GB 1910 Index 015

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..., 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 + Cor.:2010 EN 61000-6-3:2007 + A1:2011 + AC:2012
EN 60204-1:2006 + A1:2009 + AC:2010 EN 61000-6-2:2005 + AC:2005
EN 60529:1991 + A1:2000 + A2:2013

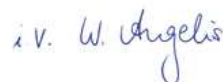
Compliance with the ErP Directive 2009/125/EC does not refer to external rotor motors MK..., MW..

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, 05.03.2019
(location, date of issue)

ZIEHL-ABEGG SE
Dr. W. Angelis
Technical Director Air Movement Division
(name, function)



(Signature)

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



(Signature)





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](#).