



Movement by Perfection



The Royal League in ventilation, control and drive technology



Product documentation

Type
FN040-VDF.0F.A7P1

Article number
162606

1. Product specification - Technical data

| | |
|--------------------------------------|--|
| Article number | 162606 |
| Type | FN040-VDF.0F.A7P1 |
| Designation | Axial fan with sickle blades |
| Rated values | 3~400V ±10% D/Y 50Hz P ₁ 230/170W 0.46/0.27A ΔI=0% 1360/1080/min COSY 0,73 70°C 3~400V±10% D/Y 60Hz P ₁ 350/200W 0.57/ 0.32A ΔI=5% 1500/960/min COSY 0,87 60°C 3~460V±10% D/Y 60Hz P ₁ 370/240W 0.56/ 0.34A ΔI=5% 1580/1110/min COSY 0,83 60°C |
| Electrical connection | Terminal box K51 9x 0,5 mm ² , 55 cm |
| Min. operating temperature °C | -40*** |
| Mounting type terminal box | Mounted on fan housing |
| Cable quality | Li4G4G-J |
| Type of protection | IP54 |
| Thermal class | THCL155 |
| Connection diagram | 1360-108XB |
| 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 |
| Painting housing | Bell mouth powder-coated consistency class 1 |
| Colour housing | RAL 9005 (jet black) |
| Painting mot.suspens | Motor suspension powder-coated consistency class 1 |
| colour suspension | RAL 9005 (jet black) |
| Special mounted part | Flange ring in special design. |
| Weight kg | 8.40 |
| ErP Data | Efficiency η_{statA} : 33.2 % Efficiency grade: $N_{\text{actual}} = 43.6 / N_{\text{target}} = 40^*$ *ErP 2015 |

*** Operation mode:

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

Occasional starting between -40 °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.

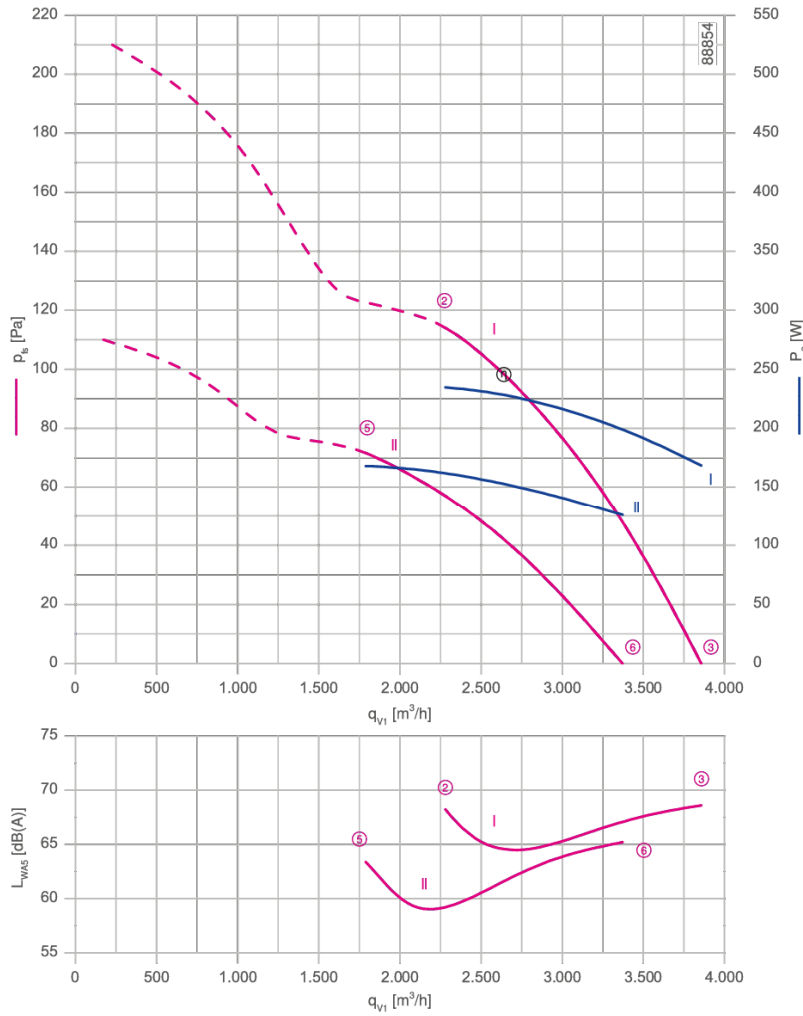
Ball-bearing service life:

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 | 230 | 170 | 170 | 130 |
| Current | A | 0.46 | 0.40 | 0.27 | 0.21 |
| Speed | min^{-1} | 1360 | 1410 | 1080 | 1230 |
| Suction side sound power level | dB(A) | 69 | 69 | 64 | 65 |

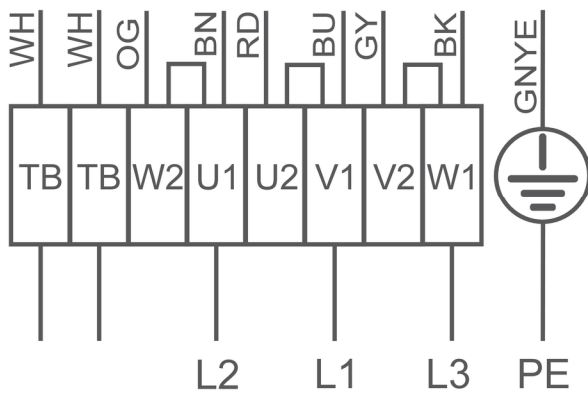
4. Connection diagram

1360-108XB

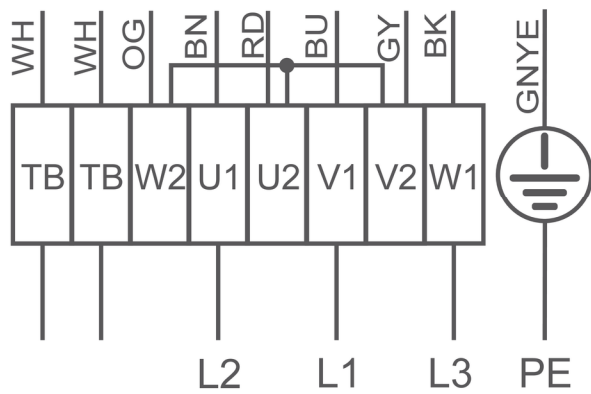
3~ motor, 2 speeds (Δ /Y switch over) with thermostatic switch (if built in). Without bridge when using speed change-over switch.

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

High speed/ Δ -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

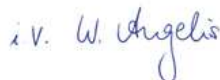
Compliance with the ErP Directive 2009/125/EC does not refer to external rotor motors MK..., MW..

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)





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Intelligent control technology for any application

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Everything from a single source – perfectly matched for optimal performance**

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