



Movement by Perfection



# Axial Fans

Fans and Controllers for live-  
stock house [DL2.5]  
Version 11/2008

**Addendum**

**FFowlet**

Type

FF 063 - FF 091

The Royal League in ventilation, control and drive technology

**ZIEHL-ABEGG**

# FFowlet-ECblue

for single phase alternating current, 200-277 V

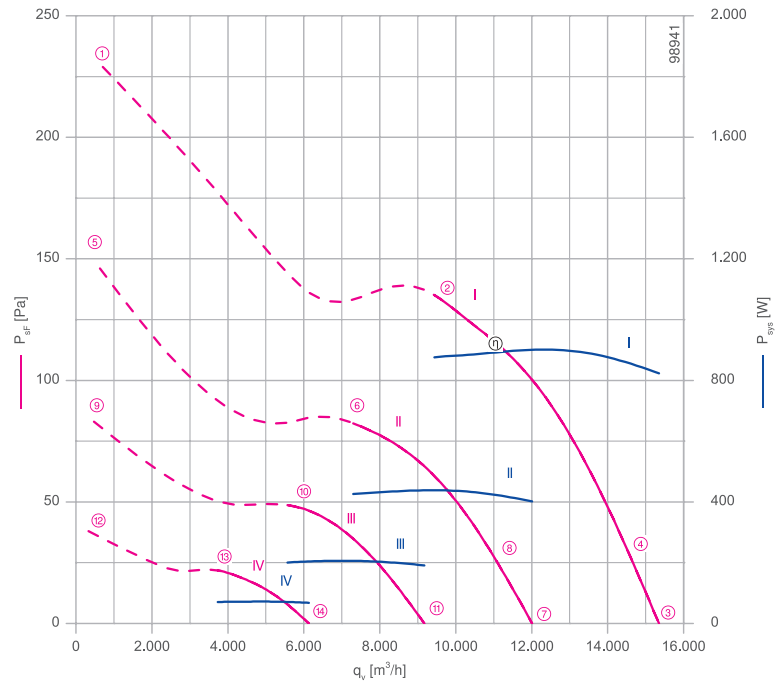
FF063



## Description

Motor technology: EC  
 Rated voltage U: 1~ 200-277 V\*  
 Rated frequency f: 50/60 Hz\*  
 Motor input power  $P_{sys}$ : 0.92 kW\*  
 Rated current I: 4.60- 3.30 A\*  
 Rated speed  $n_{max}$ : 1200 min<sup>-1</sup>\*  
 Thermal class: THCL155\*  
 Min. permitted conveyor temperature  $t_{R(min)}$ : -35 °C  
 Max. permitted conveyor temperature  $t_{R(max)}$ : 55 °C  
 Electrical connection: Integrated controller with attached cable  
 Number of blades: 5  
 Protection class: IP55  
 Motor protection: Integrated active temperature management  
 Blades: Aluminium, powder-coated, ultramarine blue  
 Rotor: Aluminium, 1 coat paint, ultramarine blue  
 Conformity: ErP 2015, CE  
**ErP-data**  
 Efficiency  $\eta_{statA}$ : 46.1 %  
 Efficiency:  $N_{actual} = 52.8 / N_{target} = 40^{**}$   
 EC controller integrated  
 \* Rated data  
 \*\*ErP 2015

## Characteristic curve



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

## Connection diagram

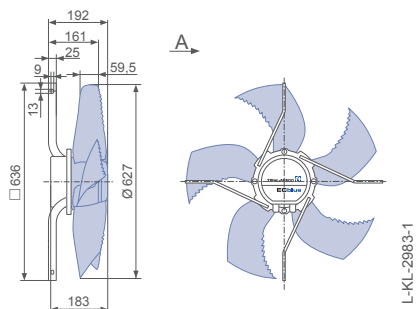
10-0 V                      1360-389 SW  
 0-10 V                     1360-385 SW

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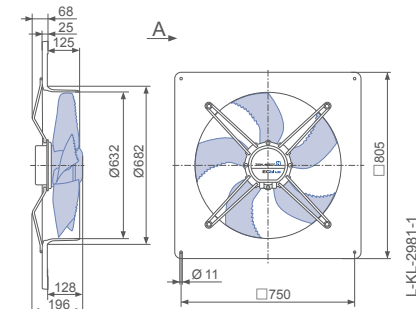
## Dimensions [mm]

### Airflow direction A

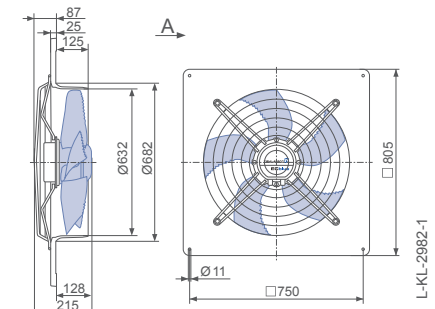
Design T - for installation in chimney exhausts



Design Q full bell mouth, square without guard grille



Design Q full bell mouth, square with contact protection






Performance data

Type	Characteristic curve	Speed	Operating point	Current	Motor input power	Suction side sound power level 7m	Specific power
		n [min <sup>-1</sup> ]		I [A]	P <sub>sys</sub> [W]	L <sub>pA</sub> [dB]	P <sub>spez</sub> [Wh/1000m <sup>3</sup> ]
FF063-ZI_DG_5P1	I	1200	①	4.60	1050		
		1200	②	3.90	880		
		1200	③	3.70	820	51	53.6
		1200	④	3.80	860	50	59.2
	II	940	⑤	2.40	540		
		940	⑥	1.95	420		
		940	⑦	1.85	400	45	33.5
		940	⑧	2.00	420	45	39.2
	III	720	⑨	1.15	240		
		720	⑩	0.96	200		36.0
		720	⑪	0.90	190	40	20.8
	IV	480	⑫	0.44	85		
		480	⑬	0.40	70		18.9
		480	⑭	0.40	70	31	11.1

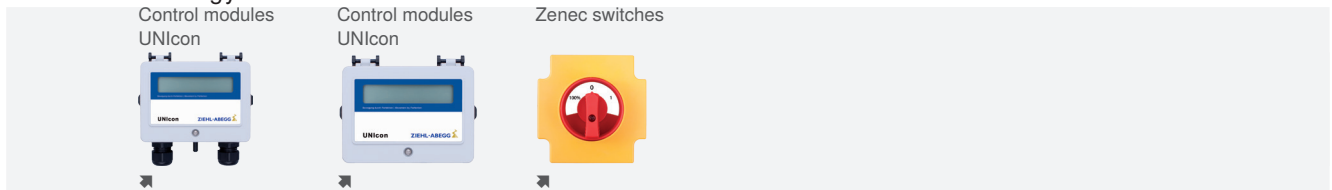
Current values determined at 230V

Fan ordering information

Airflow direction A			
Design	T	Q (without contact protection)	Q (with contact protection)
			
<b>Type</b>	<b>FF063-ZIT.DG.A5P1</b>	<b>FF063-ZIQ.DG.A5P1</b>	<b>FF063-ZIQ.DG.A5P1</b>
0-10 V	<b>Article no. 159948</b>	<b>159946</b>	<b>159947</b>
10-0 V	<b>Article no. 159953</b>	<b>159951</b>	<b>159952</b>
Weight [kg]	14.50	19.10	21.30
Wall ring plate		Plastic	Plastic

Ambient temperature with composite material wall ring plate ranges from -10°C to 40°C

Control technology



# FFowlet-ECblue

for single phase alternating current, 200-277 V

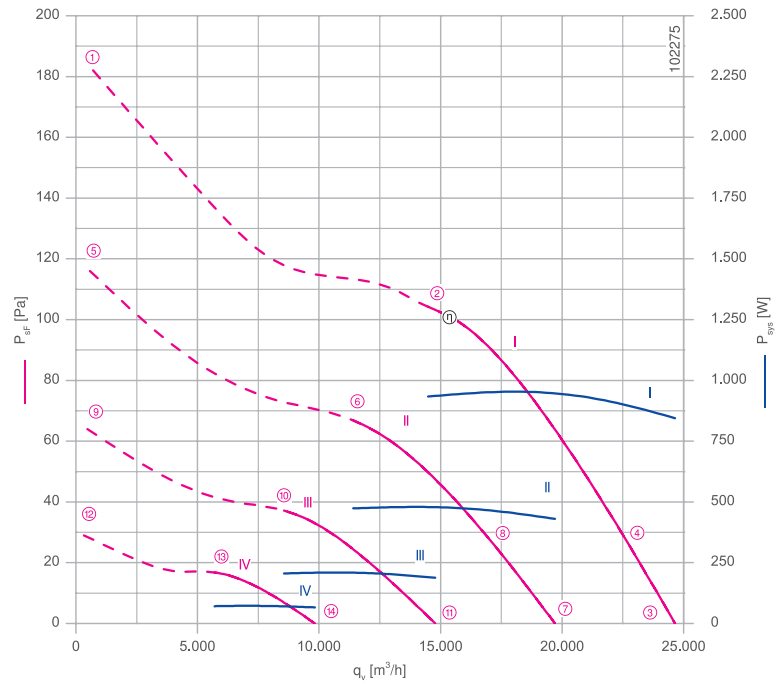
FF091



## Description

Motor technology: EC  
 Rated voltage U: 1~ 200-277 V\*  
 Rated frequency f: 50/60 Hz\*  
 Motor input power  $P_{sys}$ : 0.96 kW\*  
 Rated current I: 5.00- 3.60 A\*  
 Rated speed  $n_{max}$ : 950 min<sup>-1</sup>\*  
 Thermal class: THCL155\*  
 Min. permitted conveyor temperature  $t_{R(min)}$ : -35 °C  
 Max. permitted conveyor temperature  $t_{R(max)}$ : 55 °C  
 Electrical connection: Integrated controller with attached cable  
 Number of blades: 3  
 Protection class: IP55  
 Motor protection: Integrated active temperature management  
 Blades: Aluminium, powder-coated, ultramarine blue  
 Rotor: Aluminium, 1 coat paint, ultramarine blue  
 Conformity: ErP 2015, CE  
**ErP-data**  
 Efficiency  $\eta_{statA}$ : 51,3 %  
 Efficiency:  $N_{actual} = 57.8 / N_{target} = 40^{**}$   
 EC controller integrated  
 \* Rated data  
 \*\*ErP 2015

## Characteristic curve



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

## Connection diagram

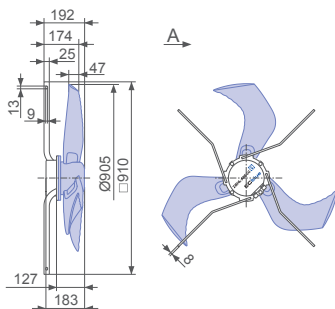
10-0 V                      1360-389 SW  
 0-10 V                     1360-385 SW

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## Dimensions [mm]

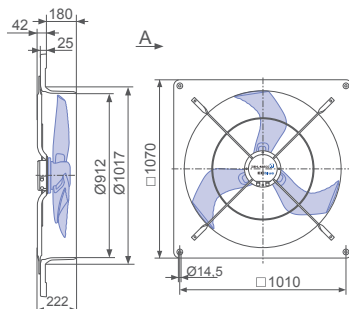
### Airflow direction A

Design T - for installation in chimney exhausts



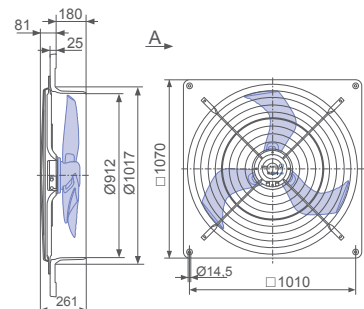
L-KL-3037-01

Design Q full bell mouth, square without guard grille



L-KL-3036-01

Design Q full bell mouth, square with contact protection



L-KL-3044-01






Performance data

Type	Characteristic curve	Speed	Operating point	Current	Motor input power	Suction side sound power level 7m	Specific power
		n [min <sup>-1</sup> ]		I [A]	P <sub>sys</sub> [W]	L <sub>pA</sub> [dB]	P <sub>spez</sub> [Wh/1000m <sup>3</sup> ]
FF091-ZI_DG_3P1	I	950	①	5.00	1100		
		950	②	4.20	940		65.4
		950	③	3.90	840	53	34.2
		950	④	4.20	900	52	40.3
	II	760	⑤	2.60	560		
		760	⑥	2.30	480		41.6
		760	⑦	2.10	440	47	21.8
		760	⑧	2.30	480	47	28.3
	III	570	⑨	1.10	240		
		570	⑩	0.96	210		24.2
		570	⑪	0.88	190	40	12.7
	IV	380	⑫	0.44	80		
		380	⑬	0.40	70		12.5
		380	⑭	0.39	65	30	6.7

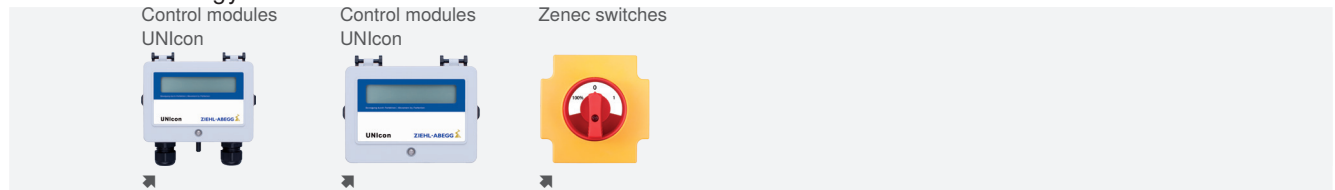
Current values determined at 230V

Fan ordering information

Airflow direction A			
Design	T	Q (without contact protection)	Q (with contact protection)
			
<b>Type</b>	<b>FF091-ZIT.DG.A3P1</b>	<b>FF091-ZIQ.DG.A3P1</b>	<b>FF091-ZIQ.DG.A3P1</b>
0-10 V	<b>Article no. 159983</b>	<b>159981</b>	<b>159982</b>
10-0 V	<b>Article no. 159988</b>	<b>159986</b>	<b>159987</b>
Weight [kg]	16.00	25.90	30.50
Wall ring plate		Plastic	Plastic

Ambient temperature with composite material wall ring plate ranges from -10°C to 40°C

Control technology



# FFowlet

for three phase alternating current, 6 pole

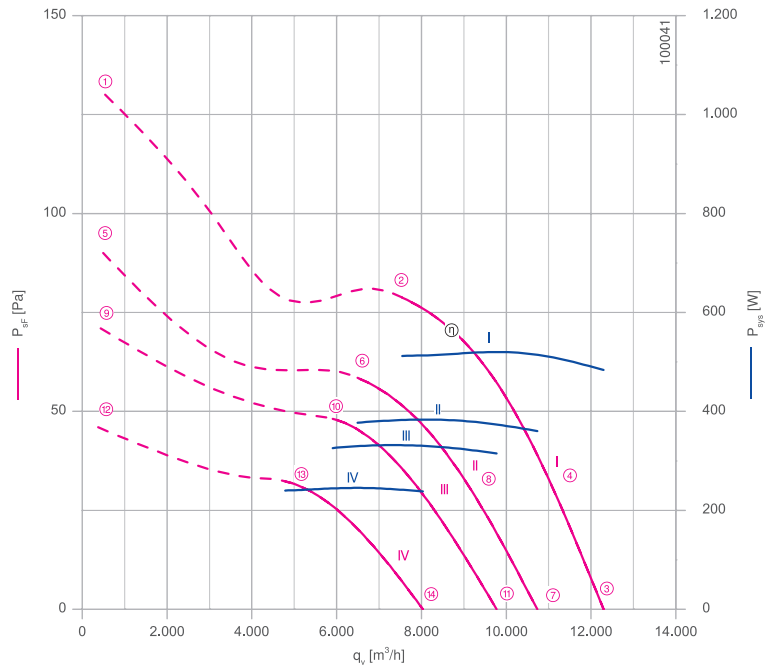
FF063-6D



## Description

Motor technology: AC  
 Rated voltage  $U_N$ : 3~ 230/400 V ( $\Delta/Y$ )  $\pm 10$  %\*  
 Rated frequency  $f_N$ : 50 Hz\*  
 Motor input power  $P_1$ : 0.54 kW\*  
 Rated current  $I_N$ : 2.20/1.25 A\*  
 Rated speed  $n_N$ : 930 min<sup>-1</sup>\*  
 Starting current  $I_s$ : 4.80 A / 2.80 A  
 Current increase  $\Delta I$ : 0 %  
 Thermal class: **THCL155\***  
 Min. permitted conveyor temperature  $t_{R(min)}$ : -40 °C  
 Max. permitted conveyor temperature  $t_{R(max)}$ : 70 °C  
 Electrical connection: Terminal box  
 Number of blades: 5  
 Protection class: IP54  
 Motor protection: Thermal contact  
 Blades: Aluminium, 1 coat paint, black  
 Rotor: Aluminium, 1 coat paint, black  
 Conformity: ErP 2015, CE  
**ErP-data**  
 Efficiency  $\eta_{statA}$ : 34.0 %  
 Efficiency:  $N_{actual} = 42.2 / N_{target} = 40$ \*\*  
 \* Rated data  
 \*\*ErP 2015

Characteristic curve



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

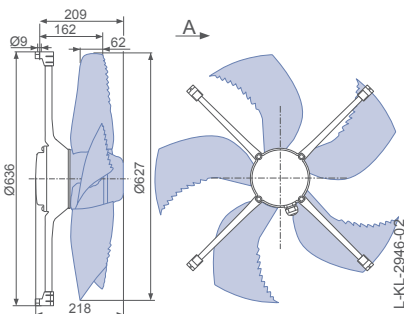
➤ Connection diagram 1360-106XB Page 17

➤ System components

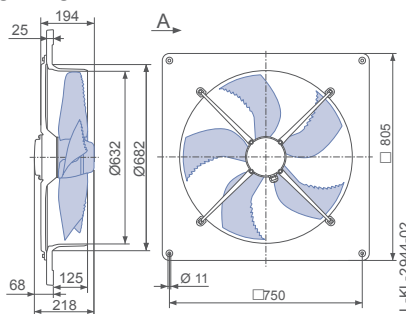
## Dimensions [mm]

### Airflow direction A

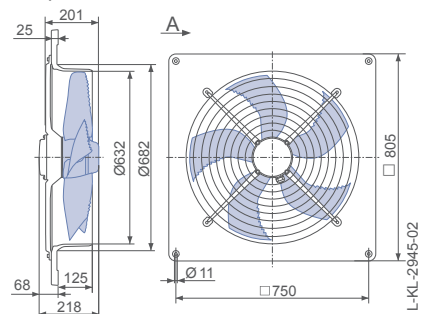
Design T - for installation in chimney exhausts



Design Q full bell mouth, square without guard grill




Design Q full bell mouth, square with contact protection


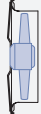



Performance data

Type	Characteristic curve	Voltage	Operating point	Current	Motor input power	Speed	Suction side sound power level 7m L <sub>pA</sub> [dB]	Specific power P <sub>spez</sub> [Wh/1000m³]
		U [V]		I [A]	P <sub>i</sub> [W]	n [min <sup>-1</sup> ]		
FF063-6D_4I_5R2	I	400	①	1.35	600	910		
		400	②	1.25	520	930		
		400	③	1.25	480	940	46	39.3
		400	④	1.25	520	930	46	45.8
	II	230	⑤	1.25	440	760		
		230	⑥	1.10	380	810		
		230	⑦	1.10	360	820	43	33.6
		230	⑧	1.15	380	800	44	41.5
	III	190	⑨	1.25	360	680		
		190	⑩	1.15	330	730		55.5
		190	⑪	1.10	320	750	42	32.2
	IV	145	⑫	1.20	260	550		
		145	⑬	1.10	240	600		50.0
		145	⑭	1.10	240	620	38	29.6

Fan ordering information

**Airflow direction A** 

Design	T	Q (without contact protection)	Q (with contact protection)
			
<b>Type</b>	<b>FF063-6DT.4I.A5R2</b>	<b>FF063-6DQ.4I.A5R2</b>	<b>FF063-6DQ.4I.A5R2</b>
<b>Article no.</b>	<b>159958</b>	<b>159956</b>	<b>159957</b>
Weight [kg]	12.00	18.00	20.20
Wall ring plate		Plastic	Plastic

Ambient temperature with composite material wall ring plate ranges from -10°C to 40°C

Control technology

Frequency inverter Fcontrol 3~	Motor protection units 3~	Transformer-based controllers 3~	Electronic voltage controllers 3~
			

# FFowlet

for single phase alternating current, 6 pole

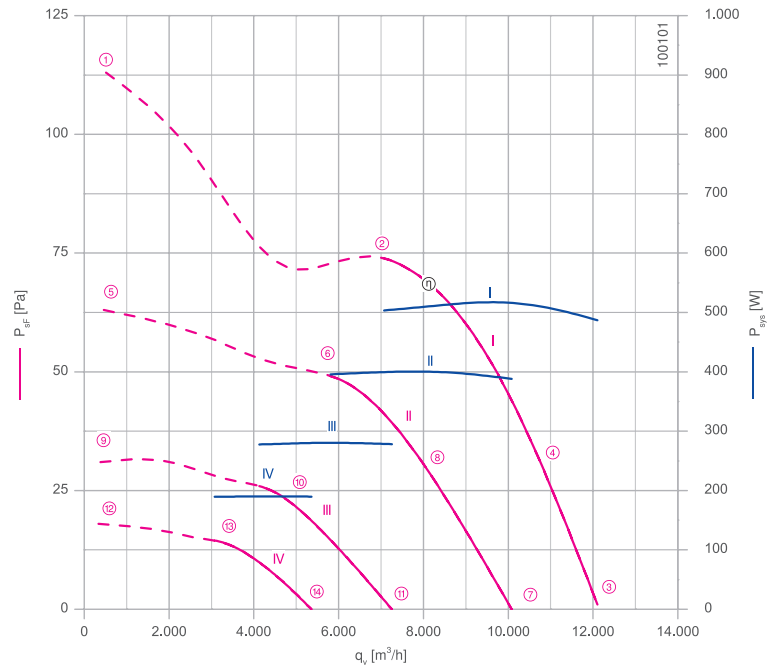
FF063-6E



## Description

Motor technology: AC  
 Rated voltage  $U_N$ : 1~ 230 V $\pm$ 10 %\*  
 Rated frequency  $f_N$ : 50 Hz\*  
 Motor input power  $P_1$ : 0.52 kW\*  
 Rated current  $I_N$ : 2.50 A\*  
 Rated speed  $n_N$ : 890 min<sup>-1</sup>\*  
 Starting current  $I_A$ : 5.50 A  
 Current increase  $\Delta I$ : 5 %  
 Service capacitor  $C_{400V}$ : 10.0  $\mu$ F  
 Thermal class: **THCL155**\*  
 Min. permitted conveyor temperature  $t_{R(min)}$ : -25 °C  
 Max. permitted conveyor temperature  $t_{R(max)}$ : 70 °C  
 Electrical connection: Terminal box  
 Number of blades: 5  
 Protection class: IP54  
 Motor protection: Thermal contact  
 Blades: Aluminium, 1 coat paint, black  
 Rotor: Aluminium, 1 coat paint, black  
 Conformity: ErP 2015, CE  
**ErP-data**  
 Efficiency  $\eta_{statA}$ : 32.1 %  
 Efficiency:  $N_{actual} = 40.3 / N_{target} = 40$ \*\*  
 \* Rated data  
 \*\*ErP 2015

Characteristic curve



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

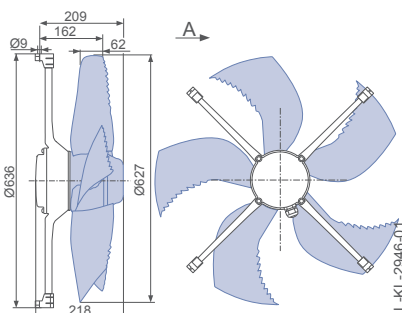
➤ Connection diagram 1360-104XB Page 17

➤ System components

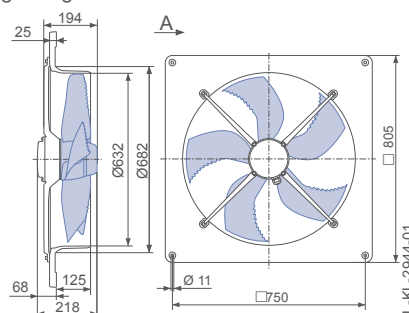
## Dimensions [mm]

### Airflow direction A

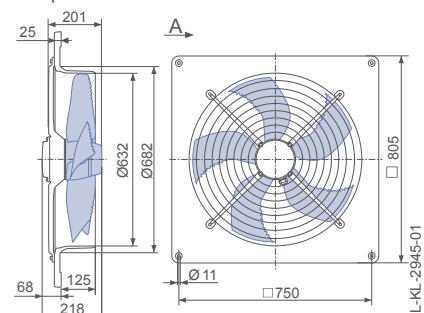
Design T - for installation in chimney exhausts



Design Q full bell mouth, square without guard grille



Design Q full bell mouth, square with contact protection





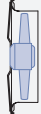



Performance data

Type	Characteristic curve	Voltage	Operating point	Current	Motor input power	Speed	Suction side sound power level 7m L <sub>pA</sub> [dB]	Specific power P <sub>spez</sub> [Wh/1000m³]
		U [V]		I [A]	P <sub>i</sub> [W]	n [min <sup>-1</sup> ]		
FF063-6E_4I_5R2	I	230	①	2.80	580	860		
		230	②	2.40	500	900		
		230	③	2.30	480	900	45	40.2
		230	④	2.40	520	890	46	47.4
	II	170	⑤	2.80	420	650		
		170	⑥	2.50	400	740		
		170	⑦	2.50	390	750	42	38.5
		170	⑧	2.60	400	720	43	50.1
	III	135	⑨	2.40	280	460		
		135	⑩	2.40	280	540		67.1
		135	⑪	2.40	280	540	37	38.3
	IV	110	⑫	2.10	190	350		
		110	⑬	2.00	190	400		61.2
		110	⑭	2.00	190	410	32	35.4





Fan ordering information

**Airflow direction A** 

Design	T	Q (without contact protection)	Q (with contact protection)
			
<b>Type</b>	<b>FF063-6ET.4I.A5R2</b>	<b>FF063-6EQ.4I.A5R2</b>	<b>FF063-6EQ.4I.A5R2</b>
<b>Article no.</b>	<b>159968</b>	<b>159966</b>	<b>159967</b>
Weight [kg]	12.00	18.00	20.20
Wall ring plate		Plastic	Plastic

Ambient temperature with composite material wall ring plate ranges from -10°C to 40°C

Control technology

Frequency inverter Fcontrol 1~	Motor protection units 1~	Transformer-based controllers 1~	Electronic voltage controllers 1~
			

# FFowlet

for three phase alternating current, 6 pole

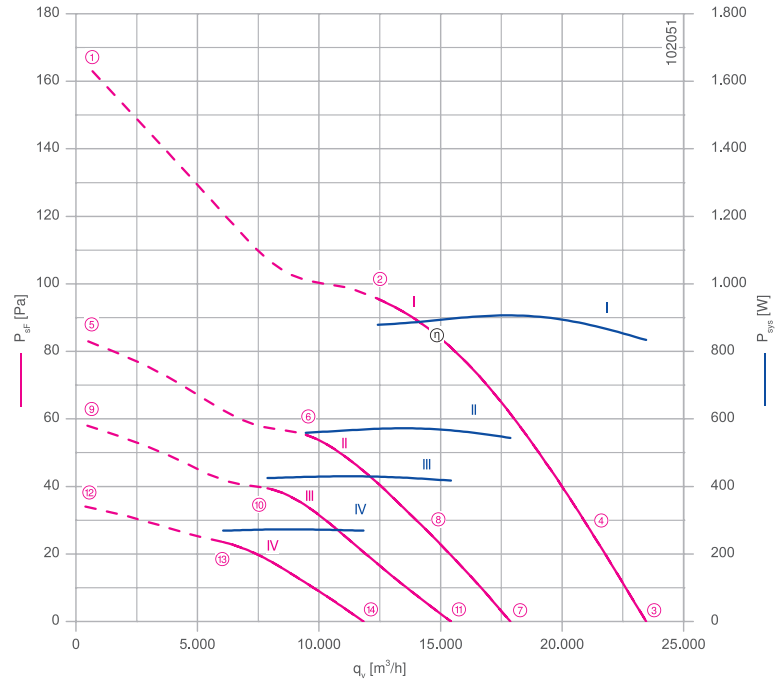
FFO91-6D



## Description

Motor technology: AC  
 Rated voltage  $U_N$ : 3- 230/400 V ( $\Delta/Y$ )  $\pm 10$  %\*  
 Rated frequency  $f_N$ : 50 Hz\* (60Hz data available)  
 Motor input power  $P_1$ : 0.92 kW\*  
 Rated current  $I_N$ : 3.30/1.90 A\*  
 Rated speed  $n_N$ : 880 min<sup>-1</sup>\*  
 Starting current  $I_s$ : 10.00 A / 6.00 A  
 Current increase  $\Delta I$ : 0 %  
 Thermal class: THCL155\*  
 Min. permitted conveyor temperature  $t_{R(min)}$ : -40 °C  
 Max. permitted conveyor temperature  $t_{R(max)}$ : 70 °C  
 Electrical connection: Terminal box  
 Number of blades: 3  
 Protection class: IP54  
 Motor protection: Thermal contact  
 Blades: Aluminium, 1 coat paint, black  
 Rotor: Aluminium, 1 coat paint, black  
 Conformity: ErP 2015, CE  
**ErP-data**  
 Efficiency  $\eta_{statA}$ : 40.3 %  
 Efficiency:  $N_{actual} = 46.9 / N_{target} = 40$ \*\*  
 \* Rated data  
 \*\*ErP 2015

## Characteristic curve



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

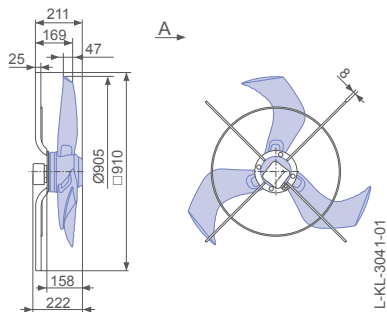
Connection diagram 1360-106XB Page 17

System components

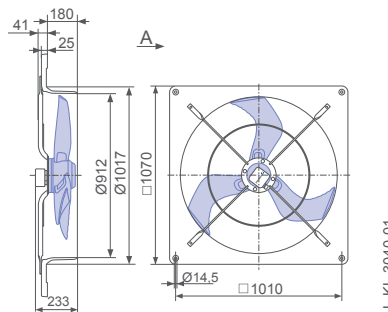
## Dimensions [mm]

### Airflow direction A

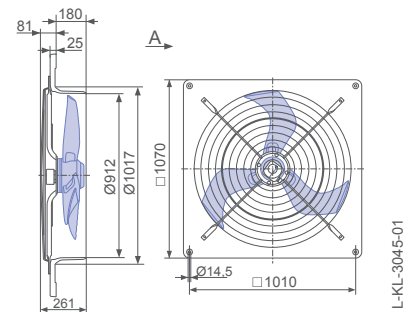
Design T - for installation in chimney exhausts



Design Q full bell mouth, square without guard grille




Design Q full bell mouth, square with contact protection


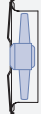



Performance data

Type	Characteristic curve	Voltage	Operating point	Current	Motor input power	Speed	Suction side sound power level 7m L <sub>pA</sub> [dB]	Specific power
		U [V]		I [A]	P <sub>i</sub> [W]	n [min <sup>-1</sup> ]		P <sub>spez</sub> [Wh/1000m <sup>3</sup> ]
FF091-6D_6F_3P2	I	400	①	2.10	1050	860		
		400	②	1.85	880	890		71.5
		400	③	1.80	840	900	51	35.5
		400	④	1.90	880	890	50	42.3
	II	230	⑤	2.00	620	610		
		230	⑥	1.80	560	680		59.8
		230	⑦	1.75	540	690	45	30.4
		230	⑧	1.85	580	660	44	41.1
	III	190	⑨	1.80	440	510		
		190	⑩	1.70	420	570		54.1
		190	⑪	1.65	420	590	41	27.0
	IV	145	⑫	1.50	280	390		
		145	⑬	1.45	270	440		44.4
		145	⑭	1.45	270	460	35	22.7

Fan ordering information

**Airflow direction A** 

Design	T	Q (without contact protection)	Q (with contact protection)
			
<b>Type</b>	<b>FF091-6DT.6F.A3P2</b>	<b>FF091-6DQ.6F.A3P2</b>	<b>FF091-6DQ.6F.A3P2</b>
<b>Article no.</b>	<b>159993</b>	<b>159991</b>	<b>159992</b>
Weight [kg]	19.50	29.30	34.00
Wall ring plate		Plastic	Plastic

Ambient temperature with composite material wall ring plate ranges from -10°C to 40°C

Control technology

Frequency inverter Fcontrol 3~	Motor protection units 3~	Transformer-based controllers 3~	Electronic voltage controllers 3~
			

# FFowlet

for three phase alternating current, 6 pole

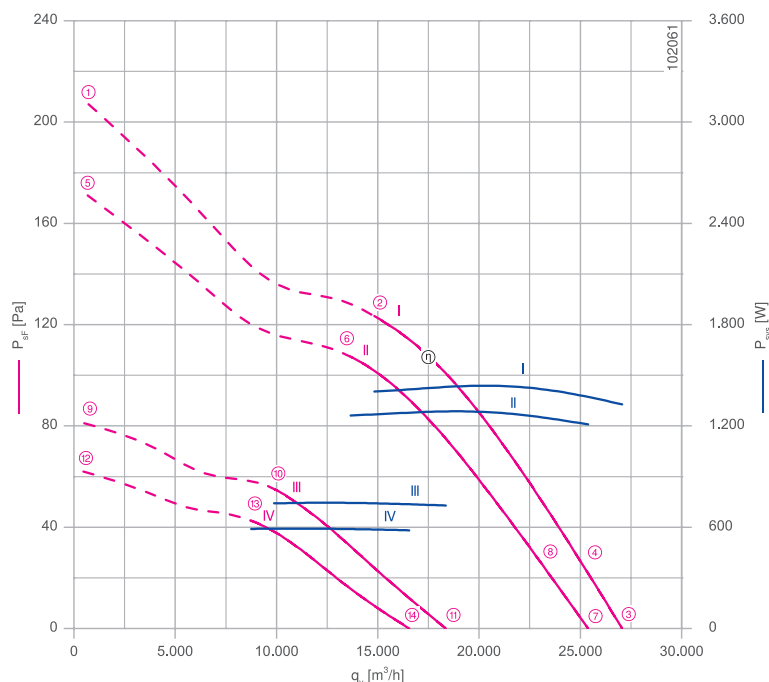
FFO91-6D



## Description

Motor technology: AC  
 Rated voltage U: 3~ 230/400 V (Δ/Y) | 265/460 V (Δ/Y) ±10 %  
 Rated frequency f: 60 Hz  
 Motor input power P: 1.30 kW | 1.45 kW  
 Rated current I: 4.20/2.40 A (Δ/Y) | 4.20/2.40 A (Δ/Y)  
 Rated speed n: 930 min<sup>-1</sup> | 1000 min<sup>-1</sup>  
 Starting current I<sub>s</sub>: 6.00 A | 11.00 A  
 Current increase ΔI: 0 %  
 Thermal class: THCL155  
 Min. permitted conveyor temperature t<sub>R(min)</sub>: -40 °C  
 Max. permitted conveyor temperature t<sub>R(max)</sub>: 45 °C | 45 °C  
 Number of blades: 3  
 Protection class: IP54  
 Blades: Aluminium, 1 coat paint, black  
 Rotor: Aluminium, 1 coat paint, black  
 Conformity: ErP 2015, CE  
 \* Rated data

## Characteristic curve



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

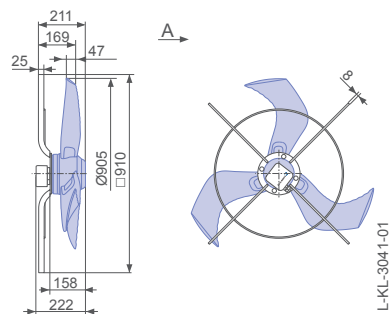
Connection diagram 1360-106XB Seite 17

System components

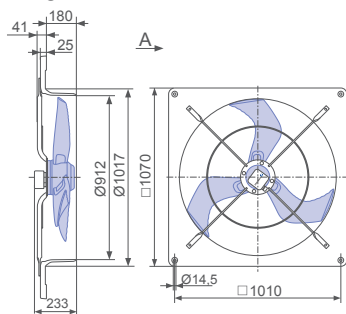
## Dimensions [mm]

### Airflow direction A

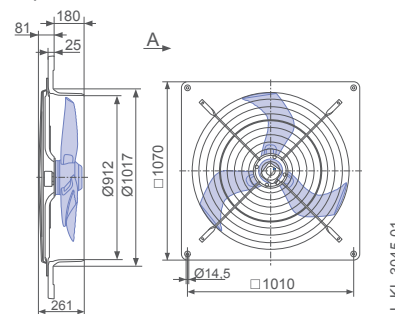
Design T - for installation in chimney exhausts



Design Q full bell mouth, square without guard grill




Design Q full bell mouth, square with contact protection


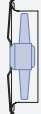



Performance data

Type	Characteristic curve	Voltage	Operating point	Current	Motor input power	Speed	Suction side sound power level 7m L <sub>pA</sub> [dB]	Specific power
		U [V]		I [A]	P <sub>i</sub> [W]	n [min <sup>-1</sup> ]		P <sub>spez</sub> [Wh/1000m <sup>3</sup> ]
FF091-6D_6F_3P2	I	460	①	2.70	1650	960		
		460	②	2.30	1400	1020		95.5
		460	③	2.20	1350	1030	55	49.0
		460	④	2.30	1400	1020	54	56.3
	II	400	⑤	2.70	1450	880		
		400	⑥	2.40	1250	950		92.3
		400	⑦	2.30	1200	970	53	47.6
		400	⑧	2.40	1250	940	52	55.8
	III	265	⑨	2.30	780	600		
		265	⑩	2.20	740	680		75.4
		265	⑪	2.10	720	700	45	39.7
	IV	230	⑫	2.10	600	530		
		230	⑬	2.00	580	600		68.3
		230	⑭	2.00	580	630	43	35.2

Fan ordering information

**Airflow direction A** 

Design	T	Q (without contact protection)	Q (with contact protection)
			
<b>Type</b>	<b>FF091-6DT.6F.A3P2</b>	<b>FF091-6DQ.6F.A3P2</b>	<b>FF091-6DQ.6F.A3P2</b>
<b>Article no.</b>	<b>159993</b>	<b>159991</b>	<b>159992</b>
Weight [kg]	19.50	29.30	34.00
Wall ring plate		Plastic	Plastic

Ambient temperature with composite material wall ring plate ranges from -10°C to 40°C

Control technology

Frequency inverter Fcontrol 3~	Motor protection units 3~	Transformer-based controllers 3~	Electronic voltage controllers 3~
			

# FFowlet

for single phase alternating current, 6 pole

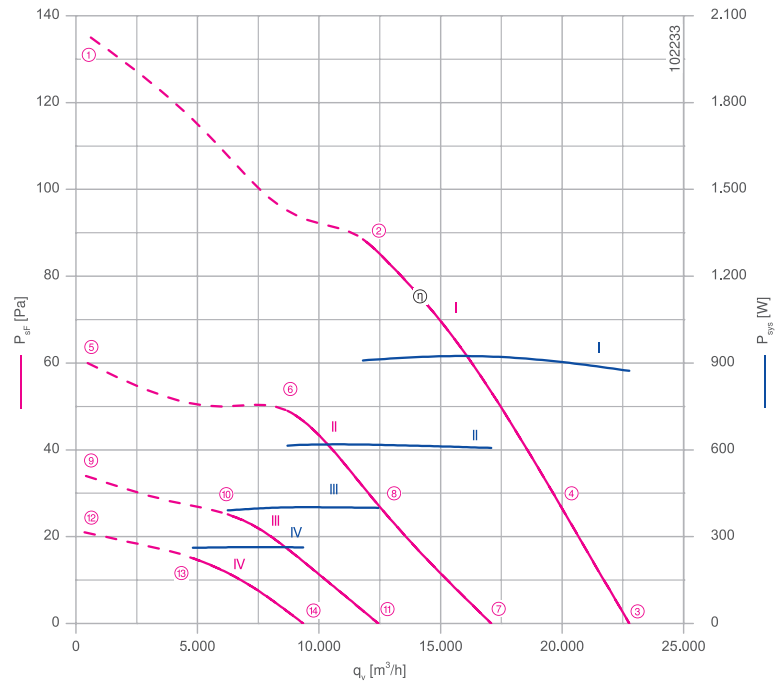
FFO91-6E



## Description

Motor technology: AC  
 Rated voltage  $U_N$ : 1~ 230 V $\pm$ 10 %\*  
 Rated frequency  $f_N$ : 50 Hz\*  
 Motor input power  $P_1$ : 0.94 kW\*  
 Rated current  $I_N$ : 4.20 A\*  
 Rated speed  $n_N$ : 840 min<sup>-1</sup>\*  
 Current increase  $\Delta I$ : 0 %  
 Service capacitor  $C_{400V}$ : 20.0  $\mu$ F  
 Thermal class: **THCL155\***  
 Min. permitted conveyor temperature  $t_{R(min)}$ : -25 °C  
 Max. permitted conveyor temperature  $t_{R(max)}$ : 55 °C  
 Electrical connection: Terminal box  
 Number of blades: 3  
 Protection class: IP54  
 Motor protection: Thermal contact  
 Blades: Aluminium, 1 coat paint, black  
 Rotor: Aluminium, 1 coat paint, black  
 Conformity: ErP 2015, CE  
**ErP-data**  
 Efficiency  $\eta_{statA}$ : 34.2 %  
 Efficiency:  $N_{actual} = 41.4 / N_{target} = 40$ \*\*  
 \* Rated data  
 \*\*ErP 2015

## Characteristic curve



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

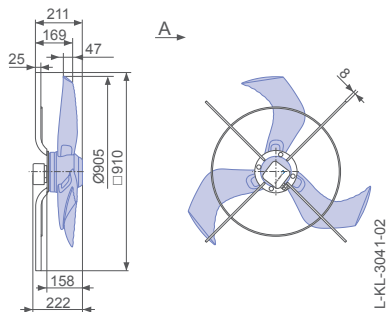
➤ Connection diagram 1360-104XB Page 17

➤ System components

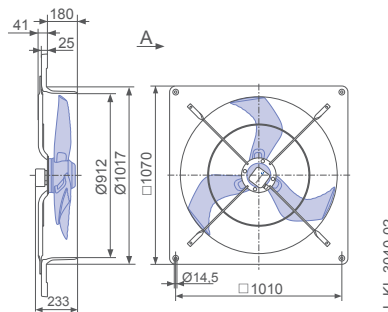
## Dimensions [mm]

### Airflow direction A

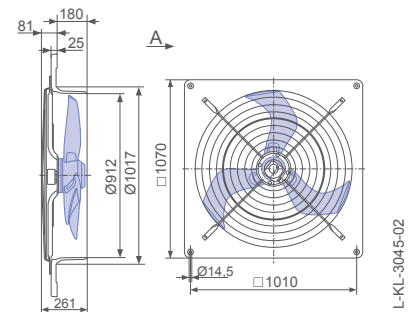
Design T - for installation in chimney exhausts



Design Q full bell mouth, square without guard grille




Design Q full bell mouth, square with contact protection


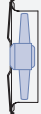



Performance data

Type	Characteristic curve	Voltage	Operating point	Current	Motor input power	Speed	Suction side sound power level 7m L <sub>pA</sub> [dB]	Specific power
		U [V]		I [A]	P <sub>i</sub> [W]	n [min <sup>-1</sup> ]		P <sub>spez</sub> [Wh/1000m <sup>3</sup> ]
FF091-6E_6F_3P2	I	230	①	4.60	1000	780		
		230	②	4.00	900	850		77.8
		230	③	3.80	880	870	50	38.4
		230	④	4.00	900	840	49	46.4
	II	170	⑤	4.00	620	520		
		170	⑥	3.80	620	630		70.9
		170	⑦	3.80	600	650	44	35.5
		170	⑧	3.90	620	610	45	52.0
	III	135	⑨	3.30	390	390		
		135	⑩	3.20	390	450		63.0
		135	⑪	3.20	400	480	36	32.1
	IV	110	⑫	2.70	260	310		
		110	⑬	2.70	260	360		54.6
		110	⑭	2.70	260	370	31	28.1





Fan ordering information

**Airflow direction A** 

Design	T	Q (without contact protection)	Q (with contact protection)
			
<b>Type</b>	<b>FF091-6ET.6F.A3P2</b>	<b>FF091-6EQ.6F.A3P2</b>	<b>FF091-6EQ.6F.A3P2</b>
<b>Article no.</b>	<b>159998</b>	<b>159996</b>	<b>159997</b>
Weight [kg]	19.50	29.30	34.00
Wall ring plate		Plastic	Plastic

Ambient temperature with composite material wall ring plate ranges from -10°C to 40°C

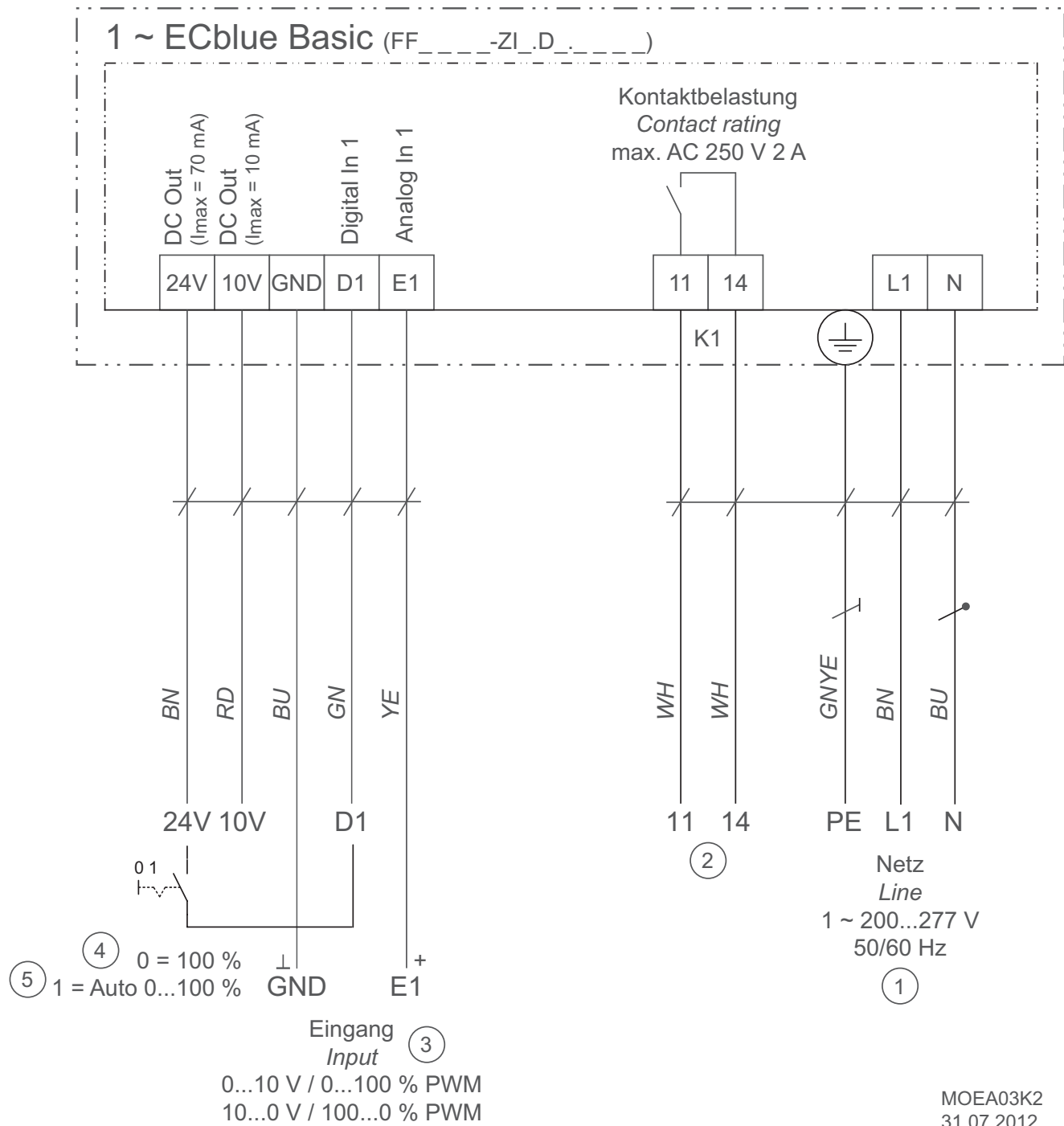
Control technology

Frequency inverter Fcontrol 1~	Motor protection units 1~	Transformer-based controllers 1~	Electronic voltage controllers 1~
			

# Connection diagrams

## EC-Technology

1360-385 & 1360-389



- ① Line voltage 1 ~ 200...277 V, 50/60 Hz
- ② Relay connection, contact load max. AC 250 V 2 A
- ③ input 0...10 V, 0...100% PWM
- ④ 0 = Contact open, full fan speed
- ⑤ 1 = Contact closed, automatic speed control via 0 - 10 V signal



# Connection diagrams AC-Technologie

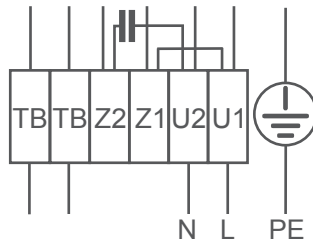
## 104XA

For 1~-motor with capacitor and thermostatic switch (if built in).

**Airflow direction:** V

**Direction of rotation:** clockwise

Please keep the wiring diagram in the terminal box.



**Cable colours:**

U1 brown  
U2 blue  
Z1 black  
Z2 orange  
TB white

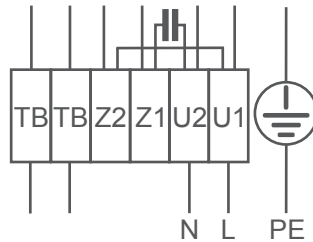
## 104XB

For 1~-motor with capacitor and thermostatic switch (if built in).

**Airflow direction:** A

**Direction of rotation:** counter clockwise

Please keep the wiring diagram in the terminal box.



**Cable colours:**

U1 brown  
U2 blue  
Z1 black  
Z2 orange  
TB white

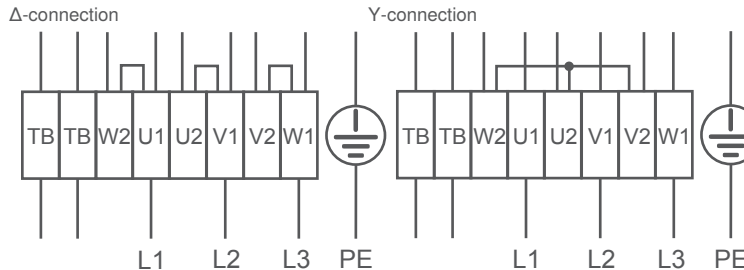
## 106XA

For 3~-motor with one speed and thermostatic switch (if built in).

**Airflow direction:** V

**Direction of rotation:** clockwise

Please keep the wiring diagram in the terminal box.



**Cable colours:**

U1 brown  
U2 blue  
Z1 black  
Z2 orange  
TB white

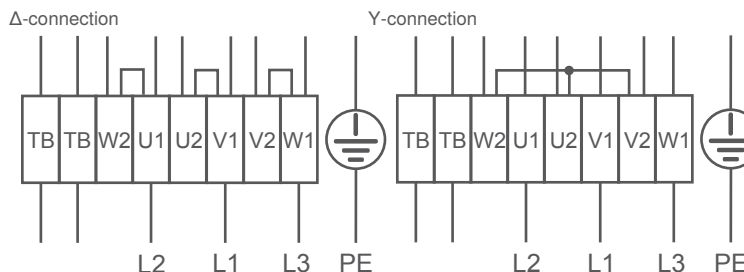
## 106XB

For 3~-motor with one speed and thermostatic switch (if built in).

**Airflow direction:** V

**Direction of rotation:** counter clockwise

Please keep the wiring diagram in the terminal box.



**Cable colours:**

U1 brown  
V1 blue  
W1 black  
U2 red  
V2 grey  
W2 orange  
TB white

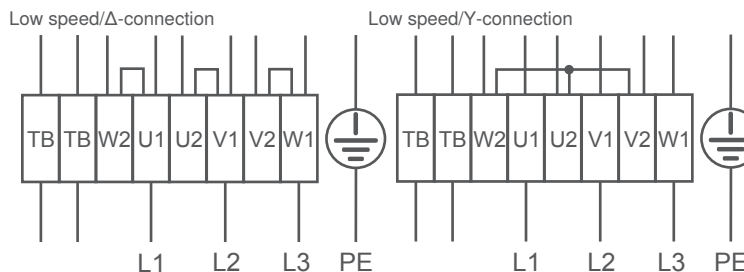
## 108XA

For 3~-Motor with 2 speeds ( $\Delta$ -Y switch over) and thermostatic switch (if built in). Without bridge when using speed change-over switch.

**Direction of air flow:** V

**Direction of rotation:** Counter clockwise

Keep wiring diagram in terminal box.



**Cable colours:**

U1 brown  
V1 blue  
W1 black  
U2 red  
V2 grey  
W2 orange  
TB white

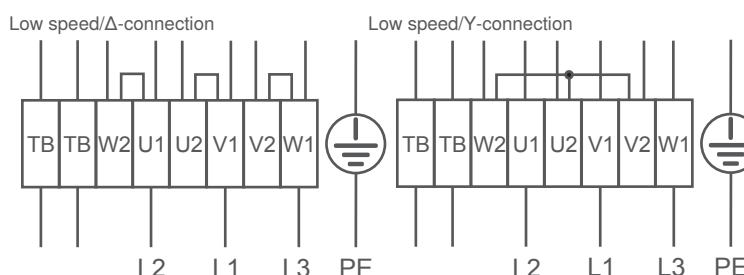
## 108XB

For 3~ motor with 2 speeds ( $\Delta$ -Y switch over) and thermostatic switch (if built in). Without bridge when using speed change-over switch.

**Direction of airflow:** A

**Direction of rotation:** Counter clockwise

Keep wiring diagram in terminal box.



**Cable colours:**

U1 brown  
V1 blue  
W1 black  
U2 red  
V2 grey  
W2 orange  
TB white

# The Royal League



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