R4D400-CO01-01

AC centrifugal fan

forward-curved, single-intake

R4D400-CO01-01 ebmpapst Datasheet
sales@fansco.com
www.fansco.com

Limited partnership · Headquarters Mulfingen
Amtsgericht (court of registration) Stuttgart · HRA 590344

General partner Elektrobau Mulfingen GmbH · Headquarters Mulfingen
Amtsgericht (court of registration) Stuttgart · HRB 590142

Nominal data

Type	**R4D400-CO01-01**
Motor	**M4D138-NA**

Phase		3~	3~
Nominal voltage	VAC	230	400
Wiring		Δ	Y
Frequency	Hz	50	50
Method of obtaining data		ml	ml
Valid for approval/standard		CE	CE
Speed (rpm)	min^{-1}	1210	1210
Power consumption	W	4920	4920
Current draw	A	14.7	8.5
Min. back pressure	Pa	500	500
Min. back pressure	in. wg	2.01	2.01
Min. ambient temperature	°C	-40	-40
Max. ambient temperature	°C	35	35
Starting current	A	30	17

ml = Max. load · me = Max. efficiency · fa = Free air · cs = Customer specification · ce = Customer equipment
Subject to change

Data according to Commission Regulation (EU) 327/2011 (EN 17166)

		Actual	Req. 2015
01 Overall efficiency η_{es}	%	43.1	40.2
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		46.9	44
05 Variable speed drive		No	

09 Power consumption P_e	kW	2.5
09 Air flow q_v	m^3/h	4025
09 Pressure increase p_{fs}	Pa	966
10 Speed (rpm) n	min^{-1}	1375
11 Specific ratio*		1.01

Data obtained at optimum efficiency level.
The ErP data is determined using a motor-impeller combination in a standardized measurement setup.

* Specific ratio = 1 + p_{fs} / 100 000 Pa

LU-75023

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Technical description

Weight	28 kg
Size	400 mm
Motor size	138
Rotor surface	Cast in aluminum
Impeller material	Sheet steel, galvanized
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	IP20
Insulation class	"F"
Moisture (F) / Environmental (H) protection class	H1
Ambient temperature note	Occasional start-up at temperatures between -40°C and -25°C is permitted. For continuous operation at ambient temperatures below -25°C (such as refrigeration applications), use must be made of a fan design with special low-temperature bearings.
Max. permitted ambient temp. for motor (transport/storage)	+80 °C
Min. permitted ambient temp. for motor (transport/storage)	-40 °C
Installation position	Any
Cooling hole/opening	On rotor and stator sides
Mode	S1
Motor bearing	Ball bearing
Touch current according to IEC 60990 (measuring circuit Fig. 4, TN system)	<= 3.5 mA
Motor protection	Thermal overload protector (TOP) with basic insulation
With cable	Lateral
Protection class	I (with customer connection of protective earth)
Conformity with standards	EN 60034-1 (2010); CE
Approval	VDE; EAC

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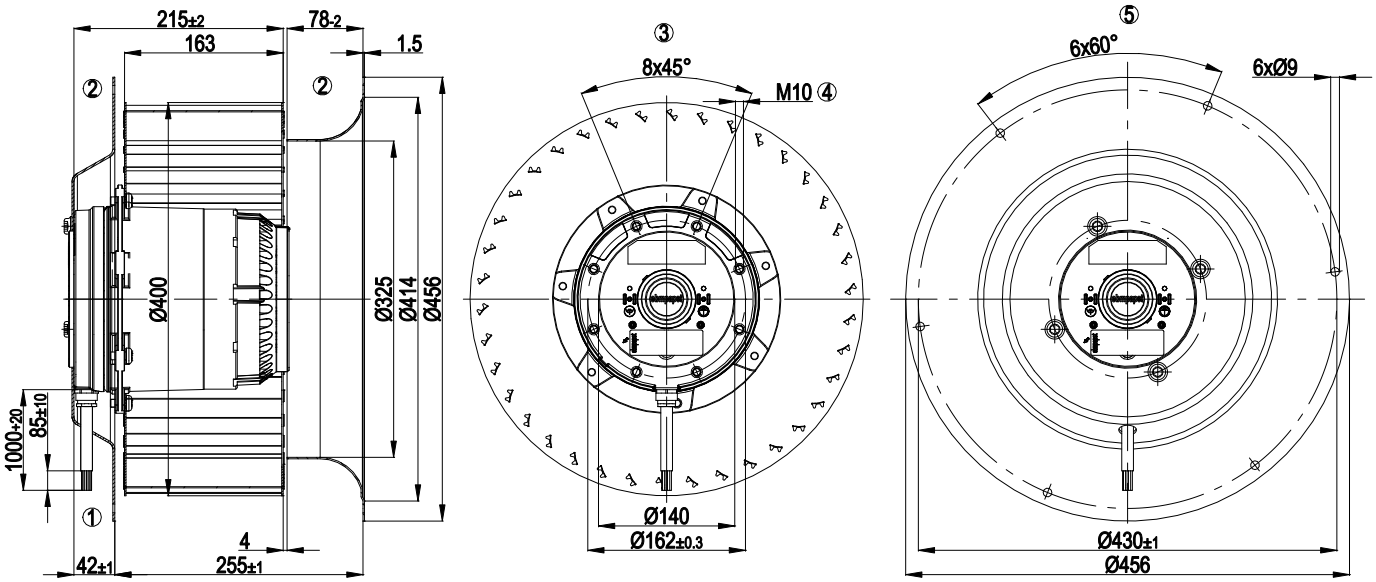
Product drawing



1	Cable halogen-free 9 x 0.75 mm², 9 x crimped splices
2	Accessory part: Inlet ring 40010-2-4013 and flange 38400-2-4017 not included in scope of delivery
3	View without flange
4	Max. clearance for screw 18 mm
5	View with flange

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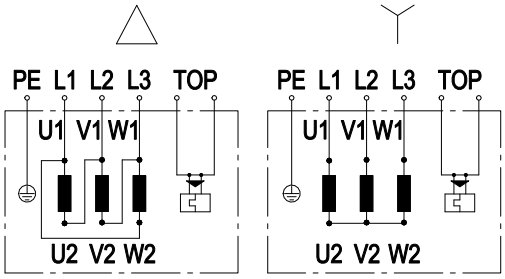
Connection diagram



Note: Change of rotation direction by reversing two phases

Δ	Delta connection	Y	Star connection	L1	black
L2	blue	L3	brown	U1	black
V1	blue	W1	brown	U2	green
V2	white	W2	yellow	TOP	2x gray
PE	green/yellow				

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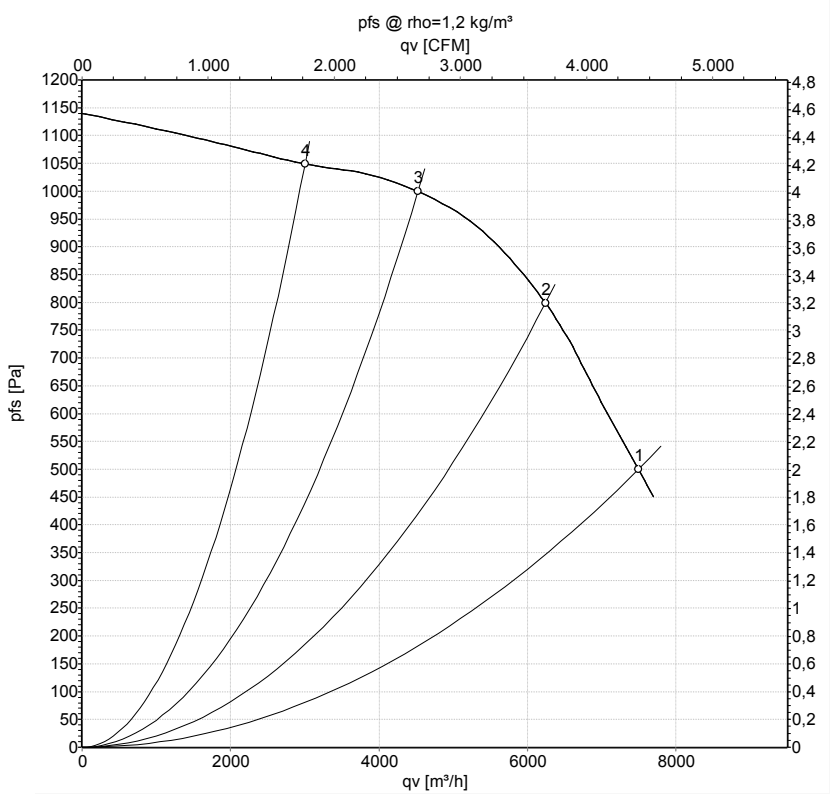
Curves: Air performance 50 Hz Y



Measurement: LU-75023-1

Air performance measured according to ISO 5801 installation category A. For detailed information on the measurement setup, contact ebm-papst. Intake sound level: Sound power level according to ISO 13347 / sound pressure level measured at 1 m distance from fan axis. The values given are valid under the specified measuring conditions and may vary due to conditions of installation. For deviations from the standard configuration, the parameters have to be checked on the installed unit.

Measured values

	Wired	U	f	n	P_e	I	q_V	p_{fs}	q_V	p_{fs}
		V	Hz	min^{-1}	W	A	m^3/h	Pa	cfm	in. wg
1	Y	400	50	1210	4920	8.50	7495	500	4410	2.01
2	Y	400	50	1285	3936	6.84	6240	800	3675	3.21
3	Y	400	50	1360	2804	5.05	4525	1000	2665	4.01
4	Y	400	50	1410	1952	3.83	3005	1050	1765	4.22

Wired = Wiring · U = Voltage · f = Frequency · n = Speed (rpm) · P_e = Power consumption · I = Current draw · q_V = Air flow · p_{fs} = Pressure increase