R4D250-CD12-05

AC centrifugal fan

forward curved, single inlet

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ErP2013 EXCEEDS THE NORM

Nominal data

Type	**R4D250-CD12-05**
Motor	**M4D094-HA**

Phase		3~	3~	3~
Nominal voltage	VAC	400	400	480
Connection		Y	Y	Y
Frequency	Hz	50	60	60
Type of data definition		ml	ml	ml
Valid for approval / standard		CE	CE	CE
Speed	min^{-1}	1385	1555	1625
Power input	W	630	940	1030
Current draw	A	1.46	1.69	1.71
Min. back pressure	Pa	0	0	0
Max. ambient temperature	°C	80	50	50
Starting current	A	5.6	5.2	

ml = Max. load · me = Max. efficiency · fa = Running at free air · cs = Customer specs · cu = Customer unit
Subject to alterations

Data according to ErP directive

Installation category	A
Efficiency category	Static
Variable speed drive	No
Specific ratio*	1.00

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

		Actual	Request 2013	Request 2015
Overall efficiency η_{es}	%	30.4	27.4	34.4
Efficiency grade N		40	37	44
Power input P_e	kW	0.3		
Air flow q_v	m^3/h	905		
Pressure increase p_{fs}	Pa	368		
Speed n	min^{-1}	1455		

Data definition with optimum efficiency. LU-74133
The ErP data is determined using a motor-impeller combination in a standardised measurement configuration.

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Technical features

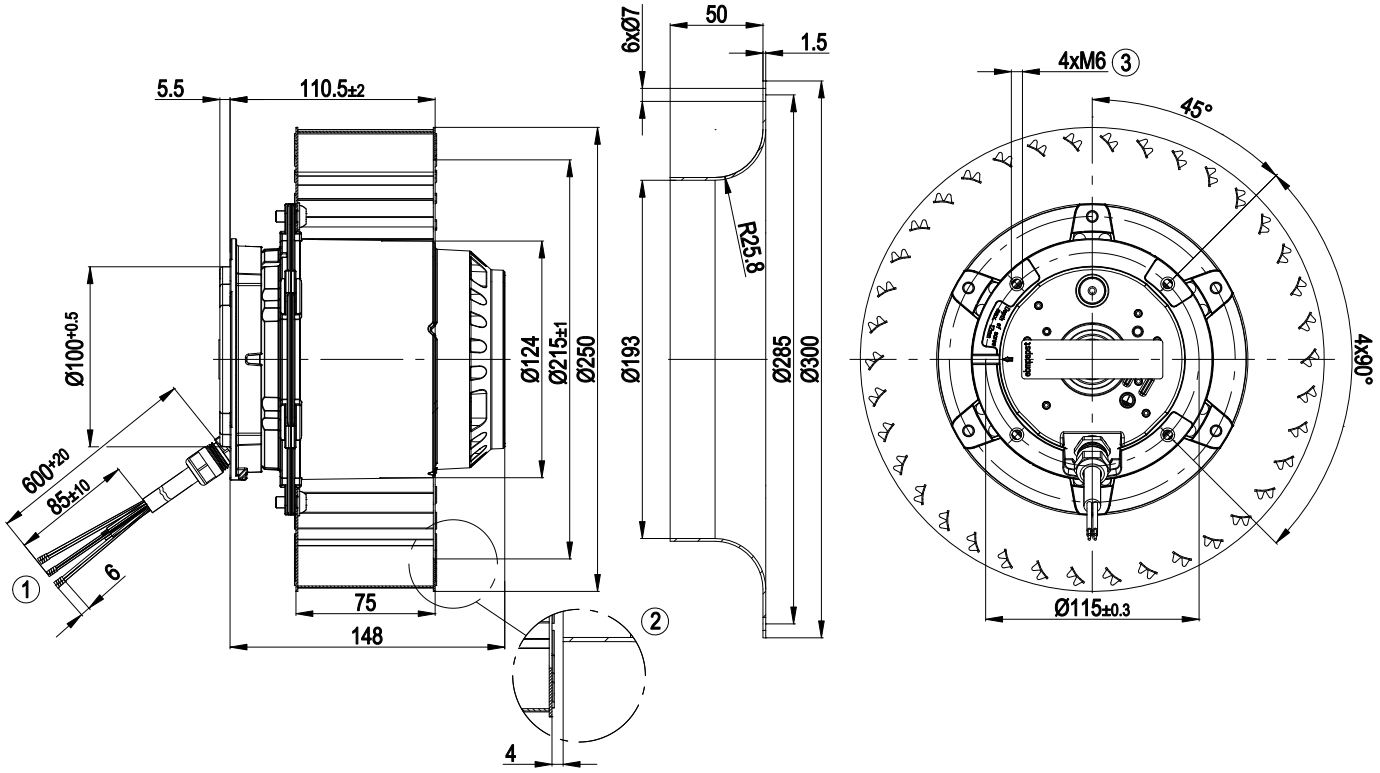
Mass	7.74 kg
Size	250 mm
Surface of rotor	Coated in black
Material of impeller	Sheet steel, galvanised
Direction of rotation	Clockwise, seen on rotor
Type of protection	IP 54
Insulation class	"F"
Humidity class	F4-1
Max. permissible ambient motor temp. (transp./ storage)	+80 °C
Min. permissible ambient motor temp. (transp./storage)	-40 °C
Mounting position	Any
Condensate discharge holes	None
Operation mode	S1
Motor bearing	Ball bearing
Touch current acc. IEC 60990 (measuring network Fig. 4, TN system)	<= 3.5 mA
Motor protection	Thermal overload protector (TOP) brought out
Cable exit	Variable
Protection class	I (if protective earth is connected by customer)
Product conforming to standard	EN 60034-1 (2004)
Approval	EAC

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Product drawing



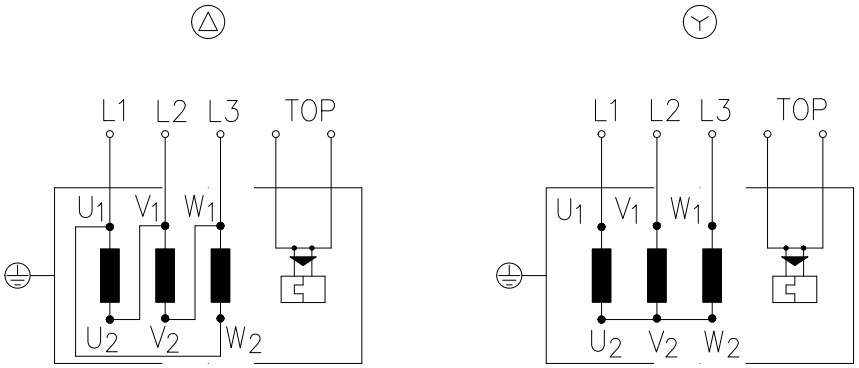
1	Connection line silicone 6G 0.5 mm², 6x brass lead tips crimped
2	Accessory part: Inlet nozzle 25010-2-4013, not included in the standard scope of delivery
3	Depth of screw max. 12 mm

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Connection screen



Changing the direction of rotation by reversing the two phases

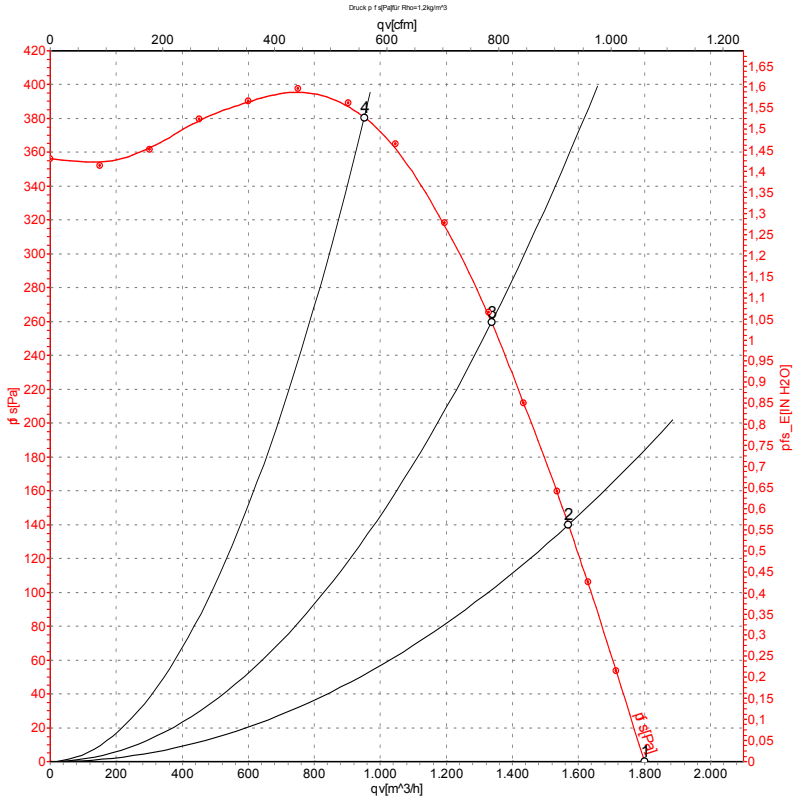
Δ	Delta connection	Y	Star connection	L1	= U1 = black
L2	= V1 = blue	L3	= W1 = brown	W2	yellow
U2	green	V2	white	TOP	2 x grey
PE	green / yellow				

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Charts: Air flow 50 Hz



Air performance measured as per ISO 5801 Installation category A. For detailed information on the measuring set-up, please contact ebm-papst. Suction-side noise levels: LwA measured as per ISO 13347 / LpA measured with 1m distance to fan axis. The values given are valid under the measuring conditions mentioned above and may vary according to the actual installation situation. With any deviation from the standard set-up, the specific values have to be checked and reviewed with the unit installed.

Measured values

	U	f	n	P_e	I	qv	p_{fs}
	V	Hz	min^{-1}	W	A	m^3/h	Pa
1	400	50	1385	630	1.46	1800	0
2	400	50	1405	530	1.37	1570	140
3	400	50	1425	443	1.31	1335	260
4	400	50	1455	317	1.26	950	380

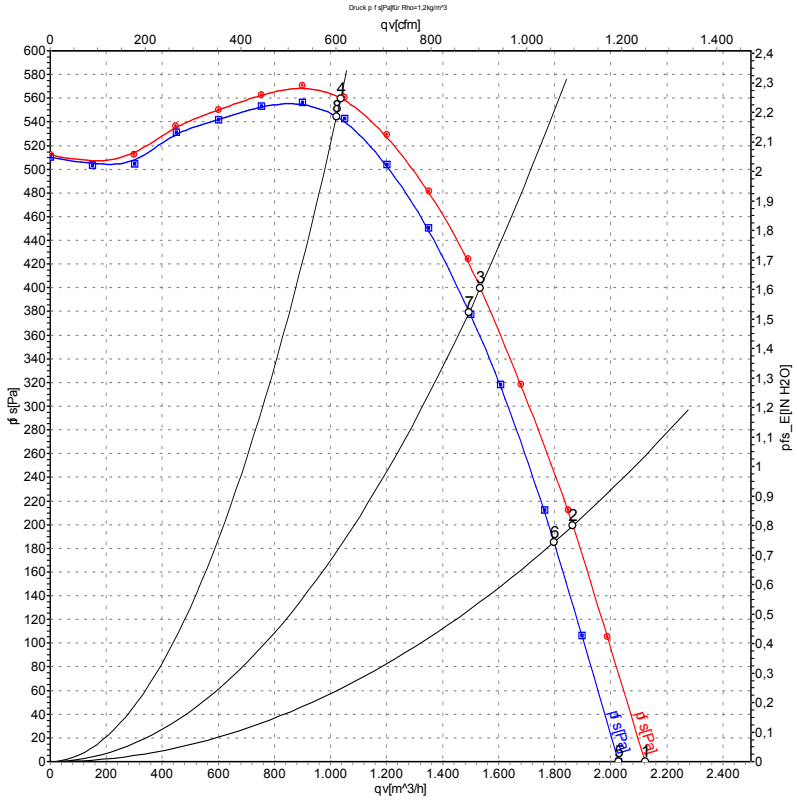
U = Supply voltage · f = Frequency · n = Speed · P_e = Power input · I = Current draw · qv = Air flow · p_{fs} = Pressure increase

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Charts: Air flow 60 Hz



Air performance measured as per ISO 5801 Installation category A. For detailed information on the measuring set-up, please contact ebm-papst. Suction-side noise levels: LwA measured as per ISO 13347 / LpA measured with 1m distance to fan axis. The values given are valid under the measuring conditions mentioned above and may vary according to the actual installation situation. With any deviation from the standard set-up, the specific values have to be checked and reviewed with the unit installed.

Measured values

	U	f	n	P_e	I	qv	p_{fs}
	V	Hz	min^{-1}	W	A	m^3/h	Pa
1	480	60	1625	1030	1.71	2120	0
2	480	60	1660	859	1.54	1865	200
3	480	60	1695	673	1.39	1535	400
4	480	60	1740	446	1.26	1035	560
5	400	60	1555	940	1.69	2025	0
6	400	60	1600	794	1.47	1795	186
7	400	60	1650	624	1.23	1495	380
8	400	60	1715	399	0.98	1020	546

U = Supply voltage · f = Frequency · n = Speed · P_e = Power input · I = Current draw · qv = Air flow · p_{fs} = Pressure increase

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