R4D250-CG07-01

AC centrifugal fan

forward curved, single inlet



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ErP2013 EXCEEDS THE NORM

Nominal data

Type	**R4D250-CG07-01**
Motor	**M4D110-GF**

Phase		3~	3~	3~	3~	3~	3~
Nominal voltage	VAC	230	230	277	400	400	480
Connection		Δ	Δ	Δ	Y	Y	Y
Frequency	Hz	50	60	60	50	60	60
Type of data definition		ml	ml	ml	ml	ml	ml
Valid for approval / standard		CE	CE	CE	CE	CE	CE
Speed	min^{-1}	1400	1580	1650	1400	1580	1650
Power input	W	750	1170	1240	750	1170	1240
Current draw	A	2.77	3.46	3.38	1.6	2.0	1.95
Min. back pressure	Pa	0	0	0	0	0	0
Min. ambient temperature	°C	-25	-25	-25	-25	-25	-25
Max. ambient temperature	°C	80	45	45	80	45	45
Starting current	A				10	9.6	

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	27.5	34.5
Efficiency grade N		39.5	37	44
Power input P_e	kW	0.31		
Air flow q_v	m^3/h	1005		
Pressure increase p_{fs}	Pa	344		
Speed n	min^{-1}	1465		

Data definition with optimum efficiency. LU-74223
The ErP data is determined using a motor-impeller combination in a standardised measurement configuration.

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Technical features

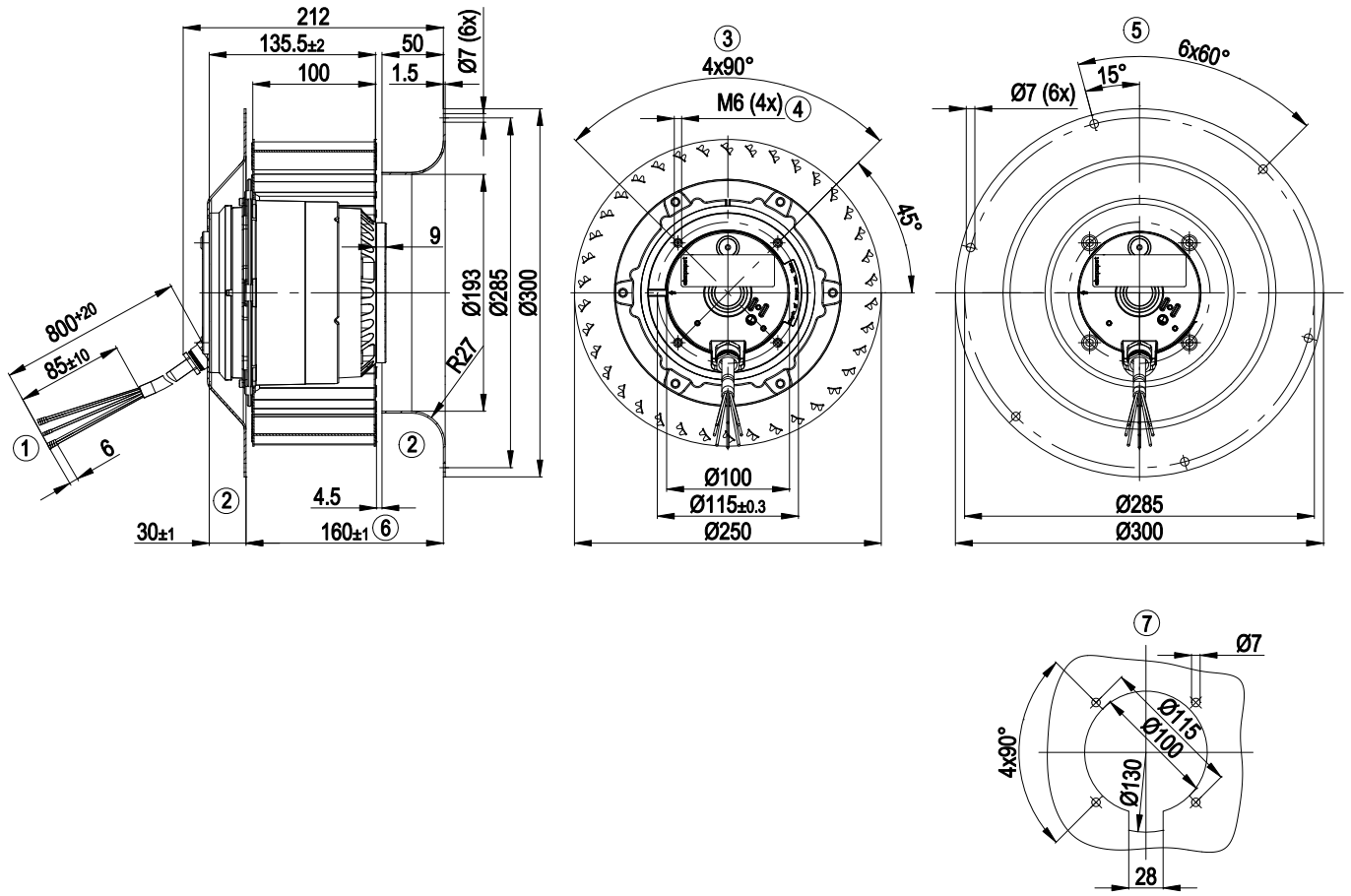
Mass	10 kg
Size	250 mm
Surface of rotor	Cast in aluminium
Material of impeller	Sheet steel, hot-dip galvanised
Direction of rotation	Clockwise, seen on rotor
Type of protection	IP 54
Insulation class	"F"
Humidity class	F3-1
Max. permissible ambient motor temp. (transp./ storage)	+80 °C
Min. permissible ambient motor temp. (transp./storage)	-40 °C
Mounting position	Shaft horizontal or rotor on bottom; rotor on top on request
Condensate discharge holes	Rotor-side
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
Protection class	I (if protective earth is connected by customer)
Product conforming to standard	EN 61800-5-1; CE
Approval	CSA C22.2 Nr.100; EAC; UL 1004-1; VDE

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Product drawing



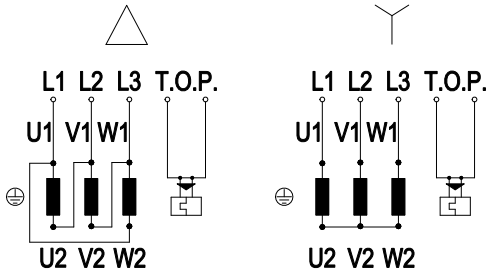
1	Connection line silicone, 9 x brass lead tips crimped
2	Accessory part: Inlet nozzle 25010-2-4013 and flange 94250-2-4017 not included in the standard scope of delivery
3	View without flange
4	Depth of screw max. 12 mm
5	View with flange
6	Housing width
7	Drill pattern for mounting without flange

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Connection screen



Note: Direction of rotation changes when two phases are reversed

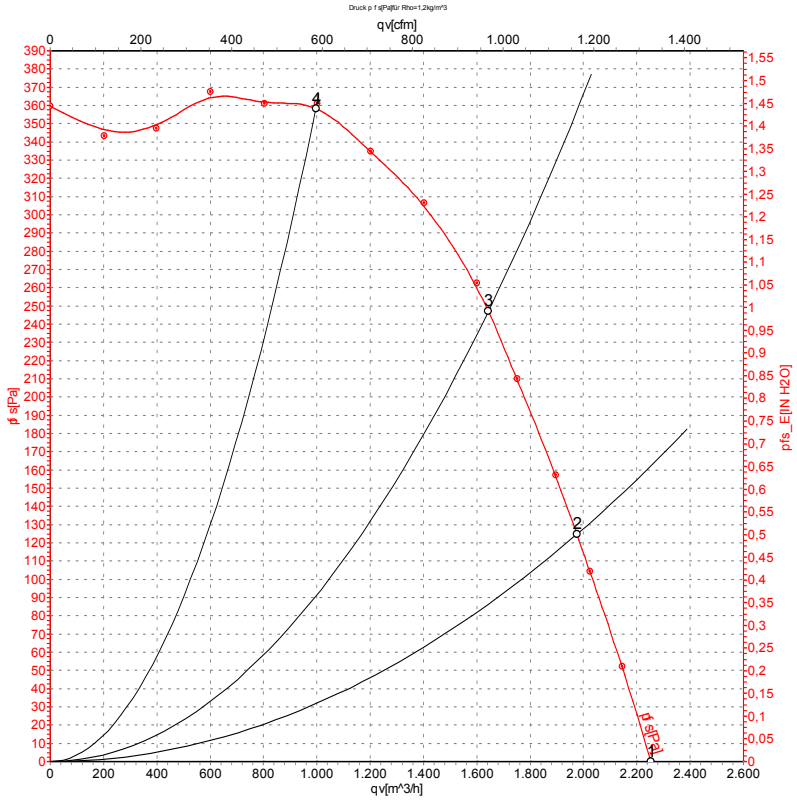
Δ	Delta-connection	Y	Star connection	L1	black
L2	blue	L3	brown	U1	black
V1	blue	W1	brown	U2	green
V2	white	W2	yellow	TOP	grey

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Charts: Air flow 50 Hz Y



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

	Conn.	U	f	n	P_e	I	qv	p_{fs}
		V	Hz	min^{-1}	W	A	m^3/h	Pa
1	Y	400	50	1400	750	1.60	2250	0
2	Y	400	50	1420	629	1.53	1975	125
3	Y	400	50	1440	497	1.40	1645	250
4	Y	400	50	1465	318	1.29	995	360

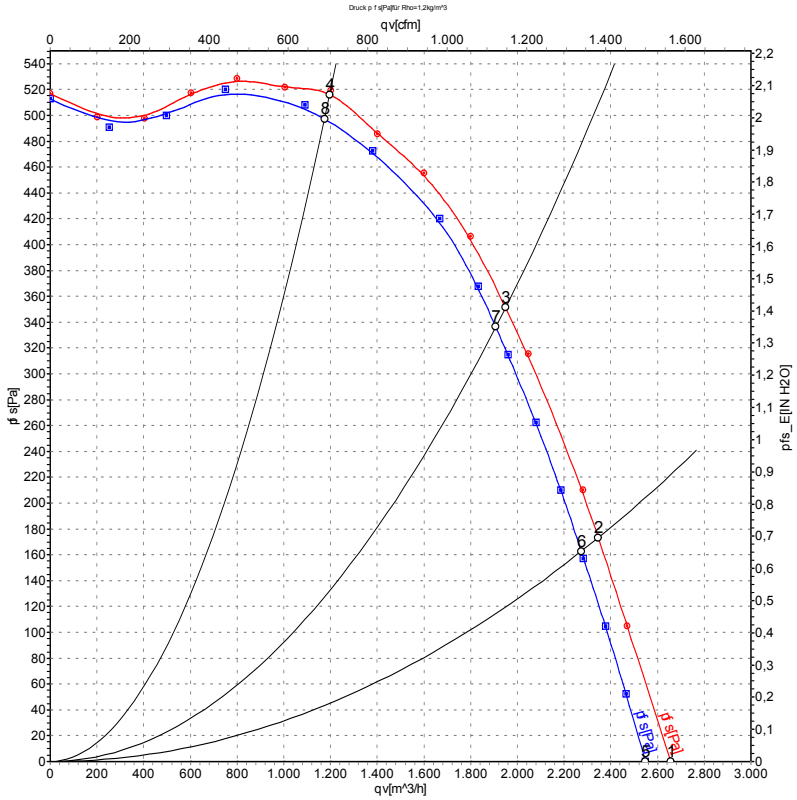
Conn. = Connection · U = Supply voltage · f = Frequency · n = Speed · P_e = Power input · I = Current draw · qv = Air flow · p_{fs} = Pressure increase

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Charts: Air flow 60 Hz Y



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

	Conn.	U	f	n	P_e	I	LwA_{in}	qv	p_{fs}
		V	Hz	min^{-1}	W	A	dB(A)	m^3/h	Pa
1	Y	480	60	1650	1240	1.95	90	2650	0
2	Y	480	60	1675	1042	1.75	88	2345	175
3	Y	480	60	1705	813	1.51	85	1950	350
4	Y	480	60	1745	502	1.26	80	1195	520
5	Y	400	60	1580	1170	2.00	89	2550	0
6	Y	400	60	1620	982	1.76	86	2275	163
7	Y	400	60	1665	771	1.46	85	1910	336
8	Y	400	60	1725	470	1.08	80	1175	498

Conn. = Connection · U = Supply voltage · f = Frequency · n = Speed · P_e = Power input · I = Current draw · LwA_{in} = Sound power level inlet side · qv = Air flow · p_{fs} = Pressure increase

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