G4D280-AI03-05

AC centrifugal fan

forward-curved, single-intake

with housing (large flange), for rail applications

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Amtsgericht (court of registration) Stuttgart · HRB 590142

Nominal data

Type	**G4D280-AI03-05**
Motor	**M4D110-IA**

Phase		3~	3~
Nominal voltage	VAC	230	400
Wiring		Δ	Y
Frequency	Hz	50	50
Method of obtaining data		fa	fa
Valid for approval/standard		CE	CE
Speed (rpm)	min^{-1}	1330	1330
Power consumption	W	1320	1320
Current draw	A	4.75	2.75
Min. back pressure	Pa	0	0
Min. back pressure	inH2O	0	0
Min. ambient temperature	°C	-25	-25
Max. ambient temperature	°C	65	65

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

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Technical description

Weight	18.4 kg
Fan size	280 mm
Rotor surface	Cast in aluminum
Impeller material	Sheet steel, hot-dip galvanized
Housing material	Sheet steel, hot-dip galvanized
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	IP54
Insulation class	"F"
Moisture (F) / Environmental (H) protection class	F3-1
Max. permitted ambient temp. for motor (transport/storage)	+ 80 °C
Min. permitted ambient temp. for motor (transport/storage)	- 40 °C
Installation position	Shaft horizontal
Condensation drainage holes	On rotor side
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 61800-5-1; CE
Approval	VDE; EAC

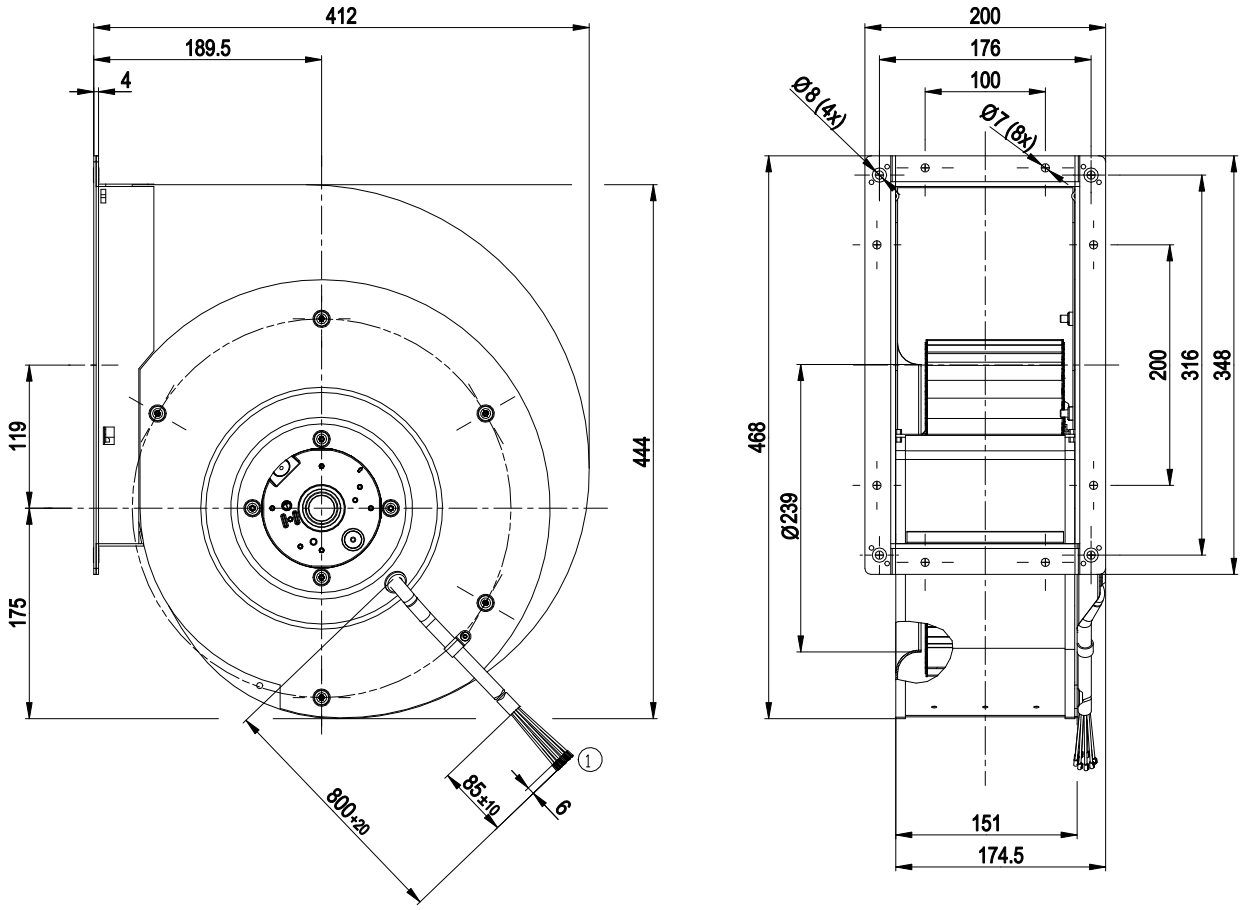
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Product drawing



1	Cable halogen-free, BETAtrans® 3 GKW flex, 9G 0.75 mm², 9x crimped splices

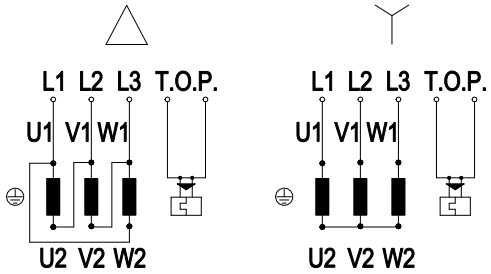
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Connection diagram



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	gray

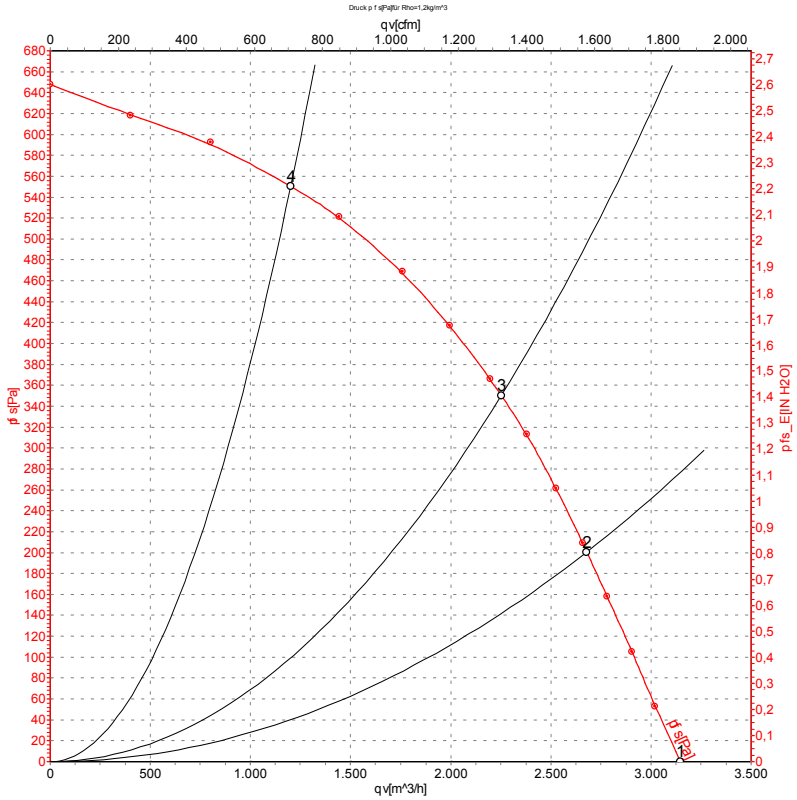
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AC centrifugal fan

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Curves: Air performance 50 Hz Y



Measurement: LU-110159-1

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	qv	p_{fs}	qv	p_{fs}
		V	Hz	min^{-1}	W	A	m^3/h	Pa	CFM	inH2O
1	Y	400	50	1330	1320	2.75	3160	0	1860	0.00
2	Y	400	50	1375	1031	2.27	2680	200	1575	0.80
3	Y	400	50	1400	848	2.06	2255	350	1325	1.41
4	Y	400	50	1450	497	1.78	1200	550	705	2.21

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

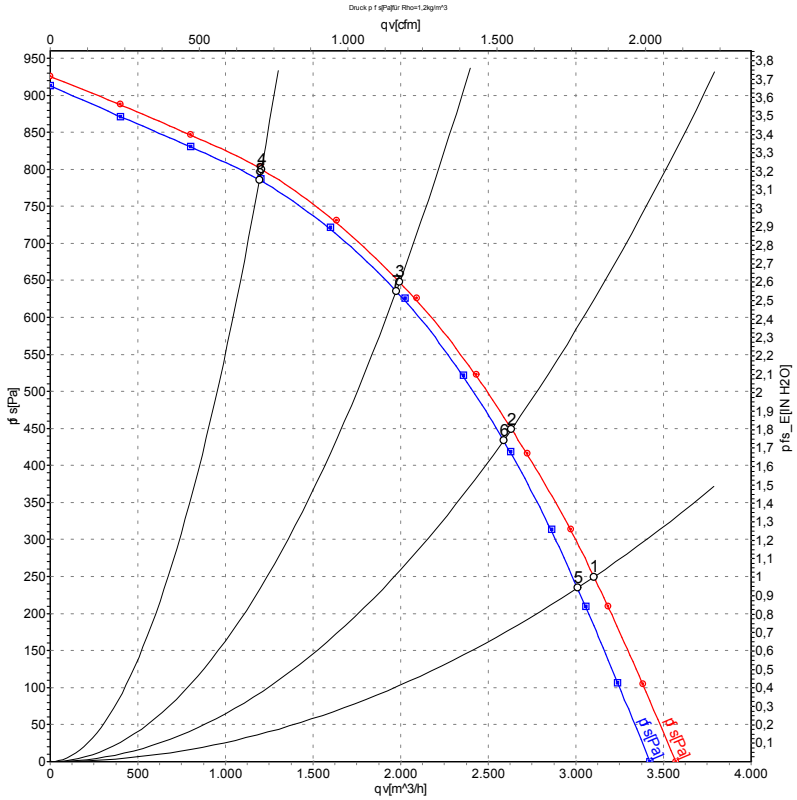
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Curves: Air performance 60 Hz Y



Measurement: LU-110166-1
Measurement: LU-110165-1

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	LpA_{in}	LwA_{in}	qv	p_{fs}	qv	p_{fs}
		V	Hz	min^{-1}	W	A	dB(A)	dB(A)	m^3/h	Pa	CFM	inH2O
1	Y	480	60	1590	1800	2.96	83	89	3200	250	1885	1.00
2	Y	480	60	1650	1382	2.42	81	87	2635	450	1550	1.81
3	Y	480	60	1695	1016	2.06	79	85	1995	650	1175	2.61
4	Y	480	60	1730	709	1.82	78	84	1205	800	710	3.21
5	Y	400	60	1500	1630	2.90	83	88	3010	235	1770	0.94
6	Y	400	60	1580	1303	2.40	81	87	2585	435	1525	1.75
7	Y	400	60	1645	982	1.93	79	85	1975	638	1160	2.56
8	Y	400	60	1700	661	1.51	78	84	1195	788	705	3.16

Wired = Wiring · U = Power supply · f = Frequency · n = Speed (rpm) · P_e = Power consumption · I = Current draw · LpA_{in} = Sound pressure level intake side · LwA_{in} = Sound power level intake side
qv = Air flow · p_{fs} = Pressure increase

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