G2D140-AC38-03

AC centrifugal fan

forward-curved, dual-intake

with housing (flange), Automotive, for rail applications

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Nominal data

Type	**G2D140-AC38-03**
Motor	**M2D068-DF**

Phase		3~	3~	3~	3~	3~	3~
Nominal voltage	VAC	400	400	400	400	480	480
Wiring		Δ	Y	Δ	Y	Δ	Y
Frequency	Hz	50	50	60	60	60	60
Method of obtaining data		fa	fa	fa	fa	fa	fa
Valid for approval/standard		-	-	-	-	-	-
Speed (rpm)	min^{-1}	2300	1600	2350	1500	2650	1750
Power consumption	W	145	80	190	90	225	120
Current draw	A	0.22	0.13	0.29	0.14	0.29	0.15
Min. ambient temperature	°C	-40	-40	-40	-40	-40	-40
Max. ambient temperature	°C	80	80	80	80	80	80
Starting current	A	0.55	0.19	0.5	0.18	0.65	0.22

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	3.5 kg
Size	140 mm
Motor size	68
Rotor surface	Painted black
Impeller material	Sheet steel, galvanized
Housing material	Die-cast aluminum
Guard grille material	Hot-dip galvanized and spot-welded net
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	IP44; installation- and position-dependent as per EN 60034-5
Insulation class	"F"
Moisture (F) / Environmental (H) protection class	H1+
Max. permitted ambient temp. for motor (transport/storage)	+ 80 °C
Min. permitted ambient temp. for motor (transport/storage)	- 40 °C
Installation position	Any
Condensation drainage holes	On rotor side
Mode	S1
Motor bearing	Ball bearing
Touch current according to IEC 60990 (measuring circuit Fig. 4, TN system)	< 0.75 mA
Motor protection	Thermal overload protector (TOP) with basic insulation
With cable	Axial
Protection class	I (with customer connection of protective earth)
Conformity with standards	EN 45545-2 + A1:2015; EN 50155: 2008; EN 61373, Cat. 1B: 2010
Approval	EAC

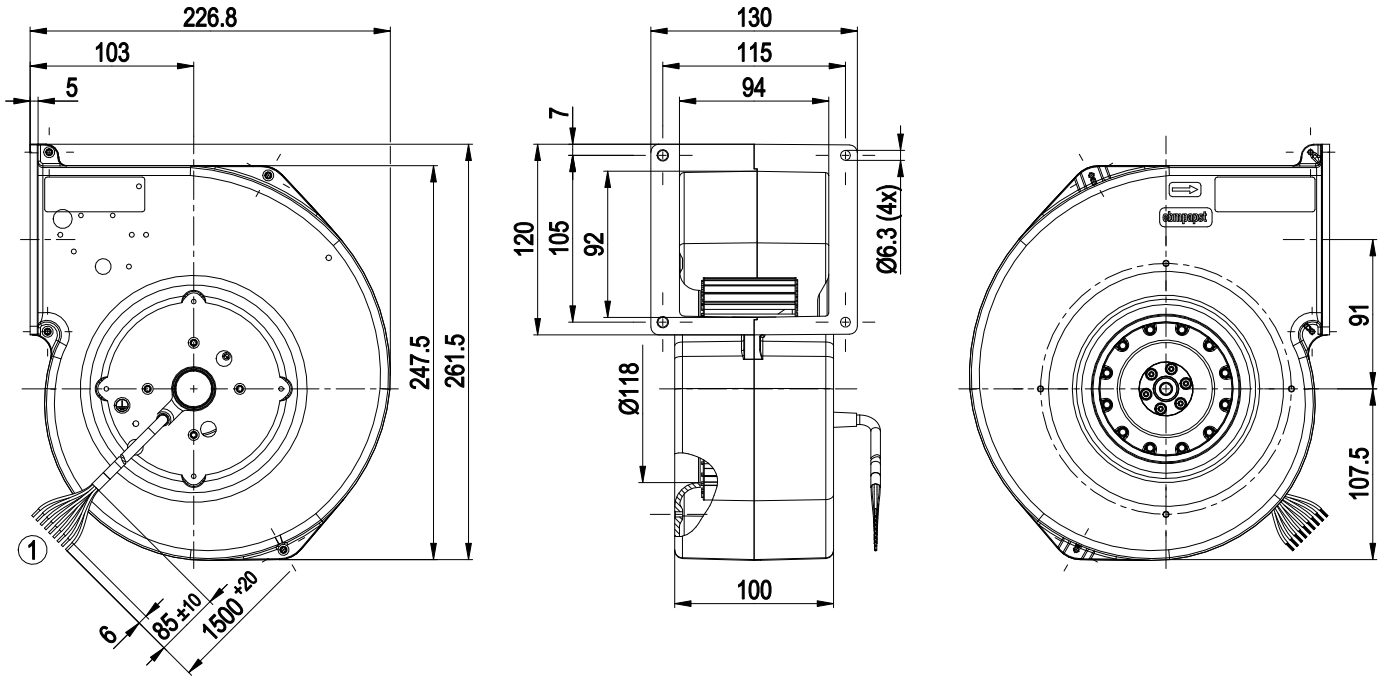
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Product drawing



1	Cable halogen-free, BETAtrans® 3 GKW flex, 9G 0.5 mm²
	9x splice

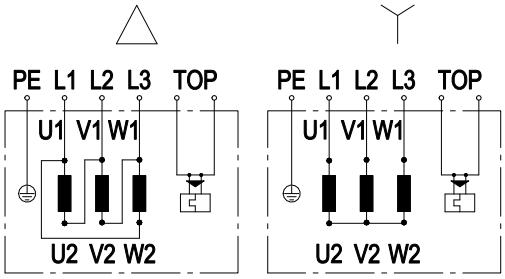
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Connection diagram



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				

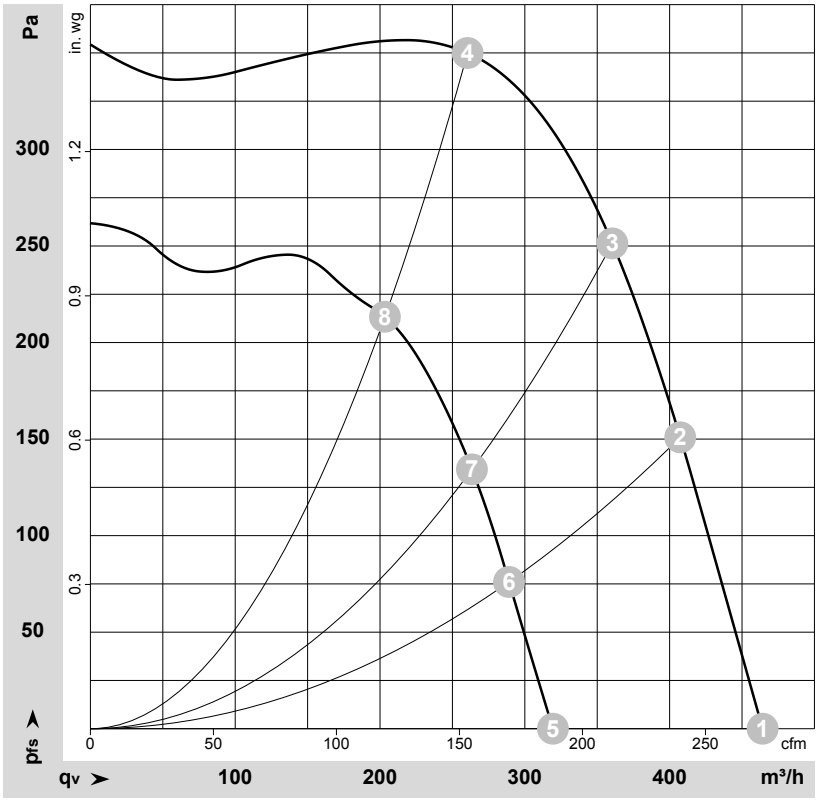
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Curves: Air performance 50 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-192159-1
Measurement: LU-191994-1

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}	q_V	p_{fs}	q_V	p_{fs}
		V	Hz	min^{-1}	W	A	dB(A)	dB(A)	m^3/h	Pa	cfm	in. wg
1	Δ	400	50	2300	145	0.22	69	76	465	0	275	0.00
2	Δ	400	50	2425	125	0.20	67	74	405	150	240	0.60
3	Δ	400	50	2505	111	0.18	66	72	360	250	210	1.00
4	Δ	400	50	2640	87	0.15	63	70	260	350	155	1.41
5	Y	400	50	1600	80	0.13			320	0	190	0.00
6	Y	400	50	1725	76	0.12			290	76	170	0.31
7	Y	400	50	1835	71	0.11			265	135	155	0.54
8	Y	400	50	2090	60	0.09			205	214	120	0.86

Wired = Wiring · U = Voltage · 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
q_V = Air flow · p_{fs} = Pressure increase

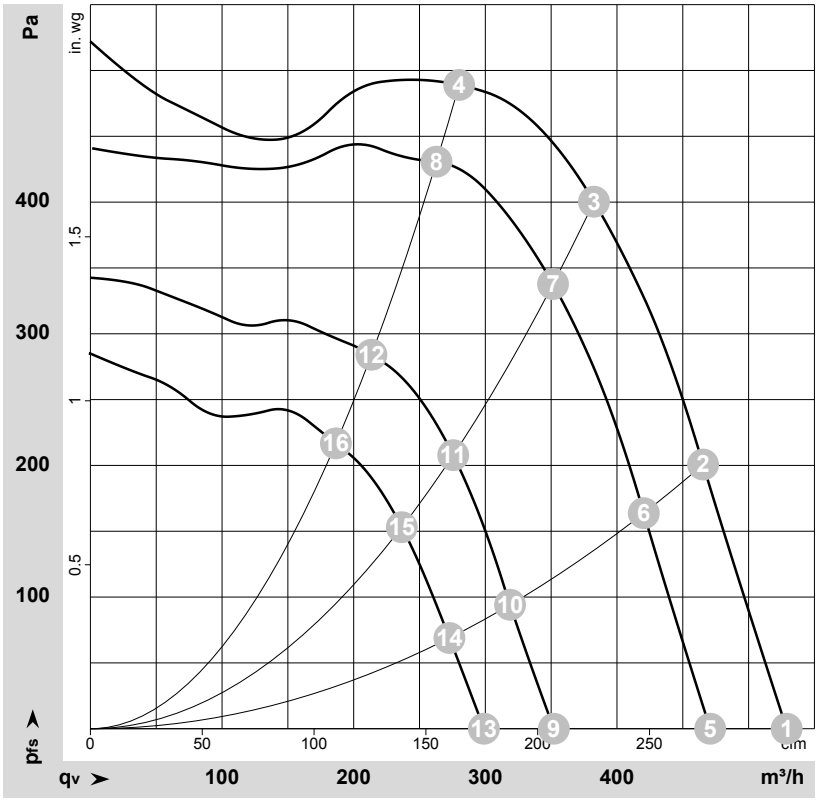
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Curves: Air performance 60 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-192164-1
Measurement: LU-192162-1
Measurement: LU-192163-1
Measurement: LU-192161-1

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	Δ	480	60	2650	225	0.29	530	0	310	0.00
2	Δ	480	60	2785	198	0.26	465	200	275	0.80
3	Δ	480	60	2960	166	0.22	385	400	225	1.61
4	Δ	480	60	3110	134	0.18	280	490	165	1.97
5	Δ	400	60	2350	190	0.29	470	0	275	0.00
6	Δ	400	60	2515	169	0.26	420	164	245	0.66
7	Δ	400	60	2725	144	0.22	350	339	205	1.36
8	Δ	400	60	2925	119	0.19	265	431	155	1.73
9	Y	480	60	1750	120	0.15	350	0	205	0.00
10	Y	480	60	1925	110	0.14	320	94	190	0.38
11	Y	480	60	2140	100	0.13	275	209	160	0.84
12	Y	480	60	2420	87	0.11	215	285	125	1.14
13	Y	400	60	1500	90	0.14	300	0	175	0.00
14	Y	400	60	1640	86	0.13	275	70	160	0.28
15	Y	400	60	1850	79	0.12	235	155	140	0.62
16	Y	400	60	2130	71	0.11	185	217	110	0.87

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

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