G4D180-CD28-23

AC centrifugal fan

forward curved, single inlet

with housing (large flange), for railway applications

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Nominal data

Type	**G4D180-CD28-23**
Motor	**M4D068-EC**

Phase		3~	3~	3~
Nominal voltage	VAC	415	440	460
Connection		Y	Y	Y
Frequency	Hz	50	60	60
Type of data definition		ml	ml	ml
Valid for approval / standard		CE	CE	CE
Speed (rpm)	min^{-1}	1290	1500	1520
Power input	W	180	220	225
Current draw	A	0.34	0.36	0.37
Min. back pressure	Pa	0	100	105
Min. ambient temperature	°C	-25	-25	-25
Max. ambient temperature	°C	85	75	75

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

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Technical features

Mass	5.7 kg
Size	180 mm
Surface of rotor	Coated in black
Material of impeller	Sheet steel, galvanised
Housing material	Sheet steel, galvanised
Direction of rotation	Counter-clockwise, seen on rotor
Type of protection	IP 55; Depending on installation and position as per EN 60034-5
Insulation class	"F"
Humidity (F)/environmental protection class (H)	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 top; rotor on bottom on request
Condensate discharge holes	None
Operation mode	S1
Motor bearing	Ball bearing
Touch current acc. IEC 60990 (measuring network Fig. 4, TN system)	< 0.75 mA
Motor protection	Thermal overload protector (TOP) brought out, basic insulation
Protection class	I (if protective earth is connected by customer)
Product conforming to standard	EN 60335-1, motor does not have factory-installed overheating protection; CE
Approval	EAC

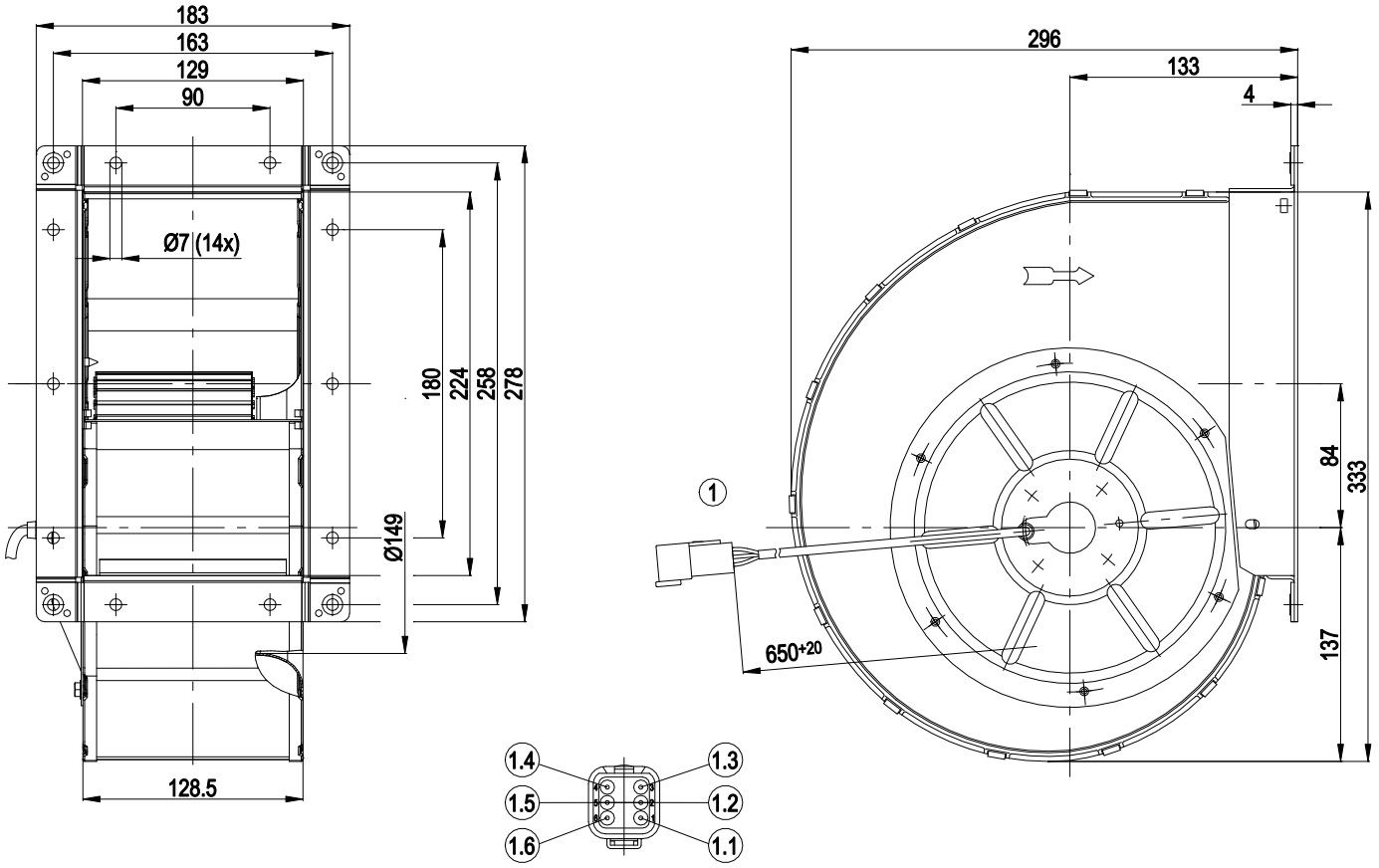
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Product drawing



1	Connection line halogen-free, BETAtrans® 3 GKW flex, black 6G 0.5 mm², 6x lead tips crimped
1.1	L3
1.2	L1
1.3	L2
1.4	TOP
1.5	TOP
1.6	PE

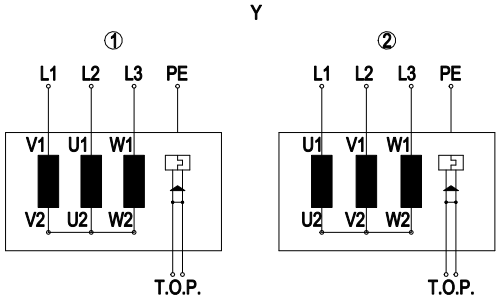
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Connection screen



Y	Star connection, three-phase motor
1	Counter-clockwise operation
L1	blue
L2	black
L3	brown
PE	green/yellow
TOP	grey
2	Clockwise operation
L1	black
L2	blue
L3	brown
PE	green/yellow
TOP	grey

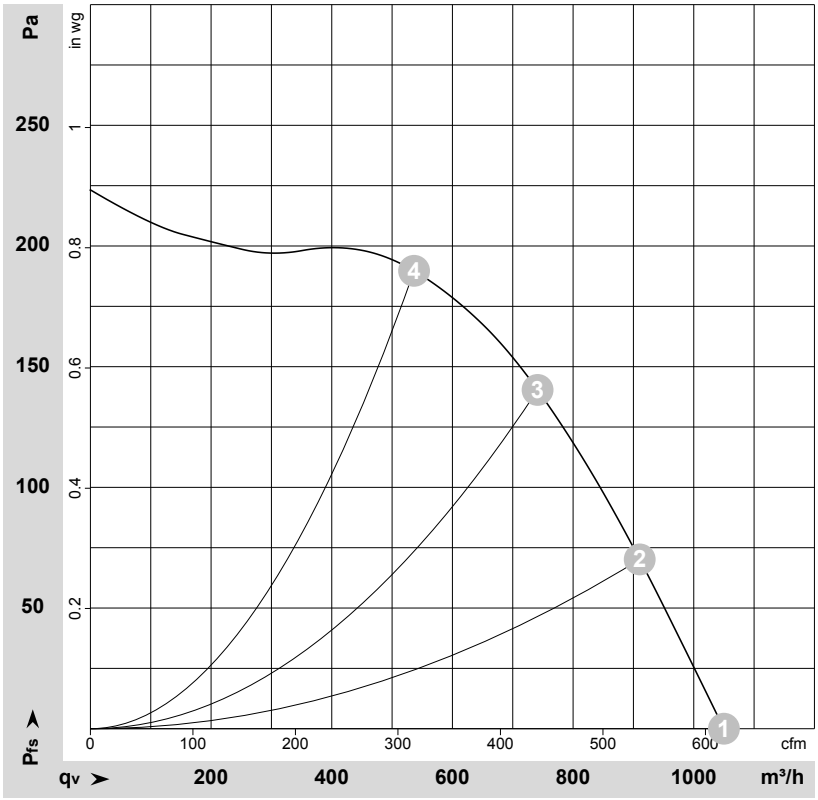
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Charts: Air flow 50 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-168100-1

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	q_V	p_{fs}	q_V	p_{fs}
		V	Hz	min^{-1}	W	A	m^3/h	Pa	cfm	inH2O
1	Y	415	50	1290	180	0.34	1050	0	620	0.00
2	Y	415	50	1330	154	0.31	910	70	535	0.28
3	Y	415	50	1370	125	0.28	740	140	435	0.56
4	Y	415	50	1410	97	0.27	535	190	315	0.76

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

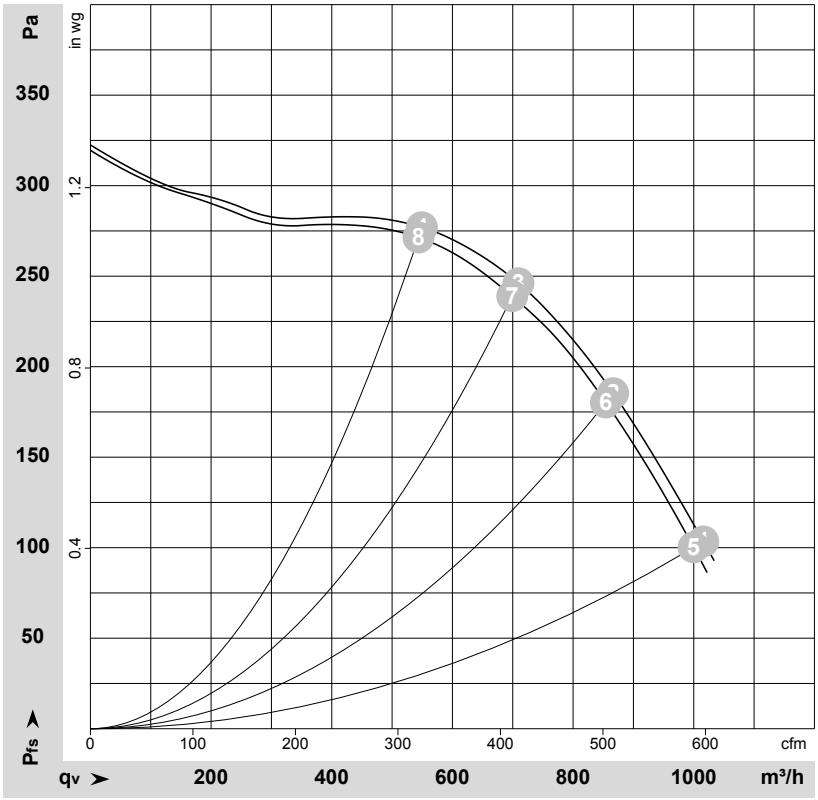
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Charts: Air flow 60 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-168113-1
Measurement: LU-168111-1

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	q_V	p_{fs}	q_V	p_{fs}
		V	Hz	min^{-1}	W	A	m^3/h	Pa	cfm	inH2O
1	Y	460	60	1520	225	0.37	1015	105	600	0.42
2	Y	460	60	1580	189	0.31	865	186	510	0.75
3	Y	460	60	1630	154	0.28	710	248	420	1.00
4	Y	460	60	1670	125	0.26	550	277	325	1.11
5	Y	440	60	1500	220	0.36	1000	100	590	0.40
6	Y	440	60	1560	183	0.31	855	180	505	0.72
7	Y	440	60	1610	151	0.28	700	240	410	0.96
8	Y	440	60	1660	121	0.25	545	270	320	1.08

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

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