D1G097-EF41-14

EC centrifugal fan

forward-curved, dual-intake

with housing (flange)

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Nominal data

Type	**D1G097-EF41-14**	
Motor	**M1G055-BD**	
Nominal voltage	VDC	48
Nominal voltage range	VDC	36 .. 57
Method of obtaining data		fa
Speed (rpm)	min^{-1}	2120
Power consumption	W	53
Current draw	A	1.35
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	60

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	1.7 kg
Fan size	97 mm
Rotor surface	Painted black
Impeller material	Sheet steel, galvanized
Housing material	Sheet steel, galvanized
Guard grille material	Steel, galvanized and coated with white-aluminum plastic (RAL 9006)
Motor suspension	Motor mounted with brackets on one side
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	IP20
Insulation class	"B"
Moisture (F) / Environmental (H) protection class	H0 - dry environment
Max. permitted ambient temp. for motor (transport/storage)	+ 80 °C
Min. permitted ambient temp. for motor (transport/storage)	- 40 °C
Installation position	Shaft horizontal, outlet on right or left side
Condensation drainage holes	None
Mode	S1
Motor bearing	Ball bearing
Technical features	- Control input 0-10 VDC / PWM - Tach output - Motor current limitation - Soft start
EMC immunity to interference	According to EN 61000-6-2
EMC interference emission	According to EN 61000-6-3
Motor protection	Reverse polarity and locked-rotor protection
Conformity with standards	EN 60950

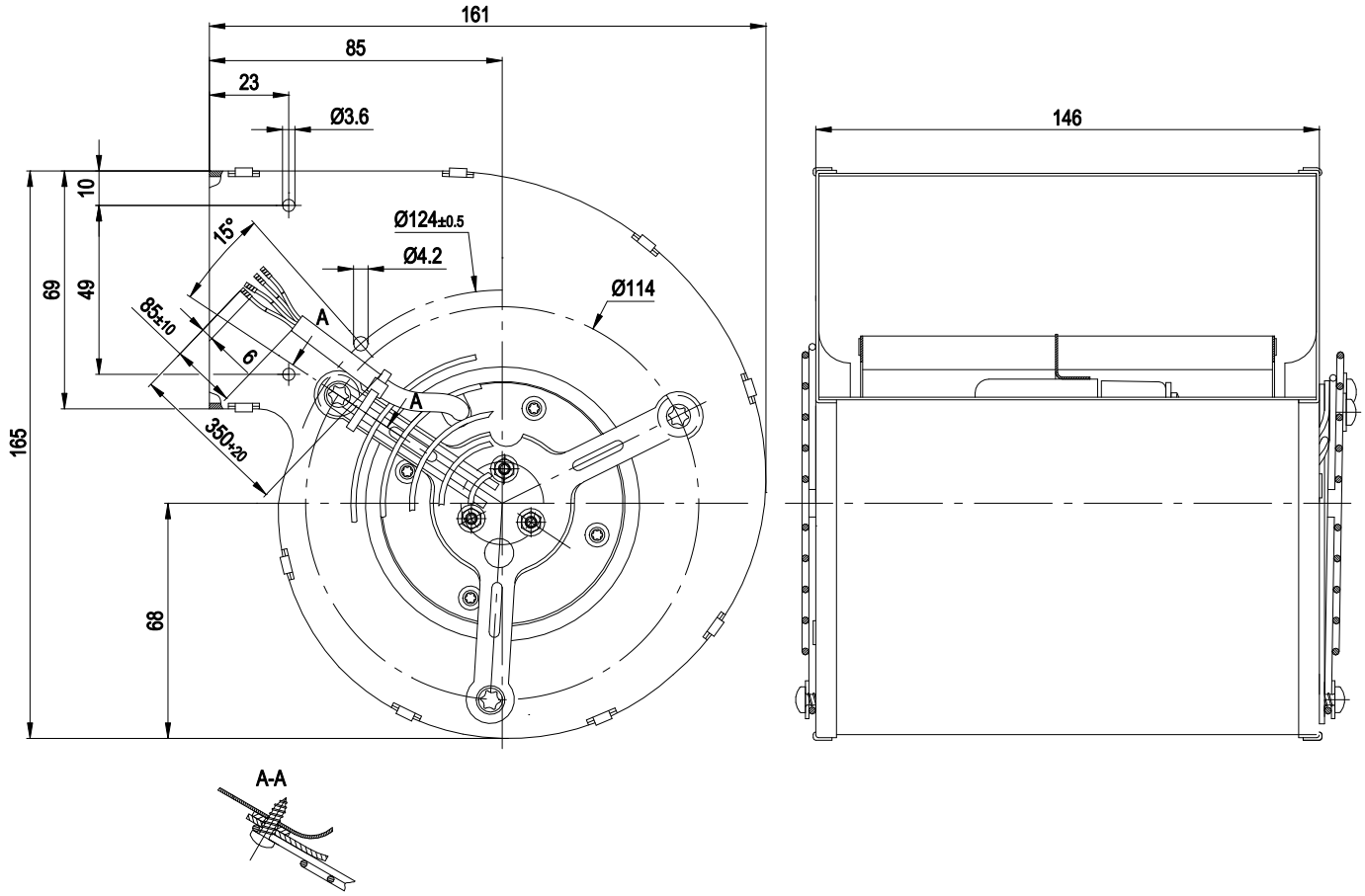
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Product drawing



1	Cable AWG 20-300V, 4 crimped splices

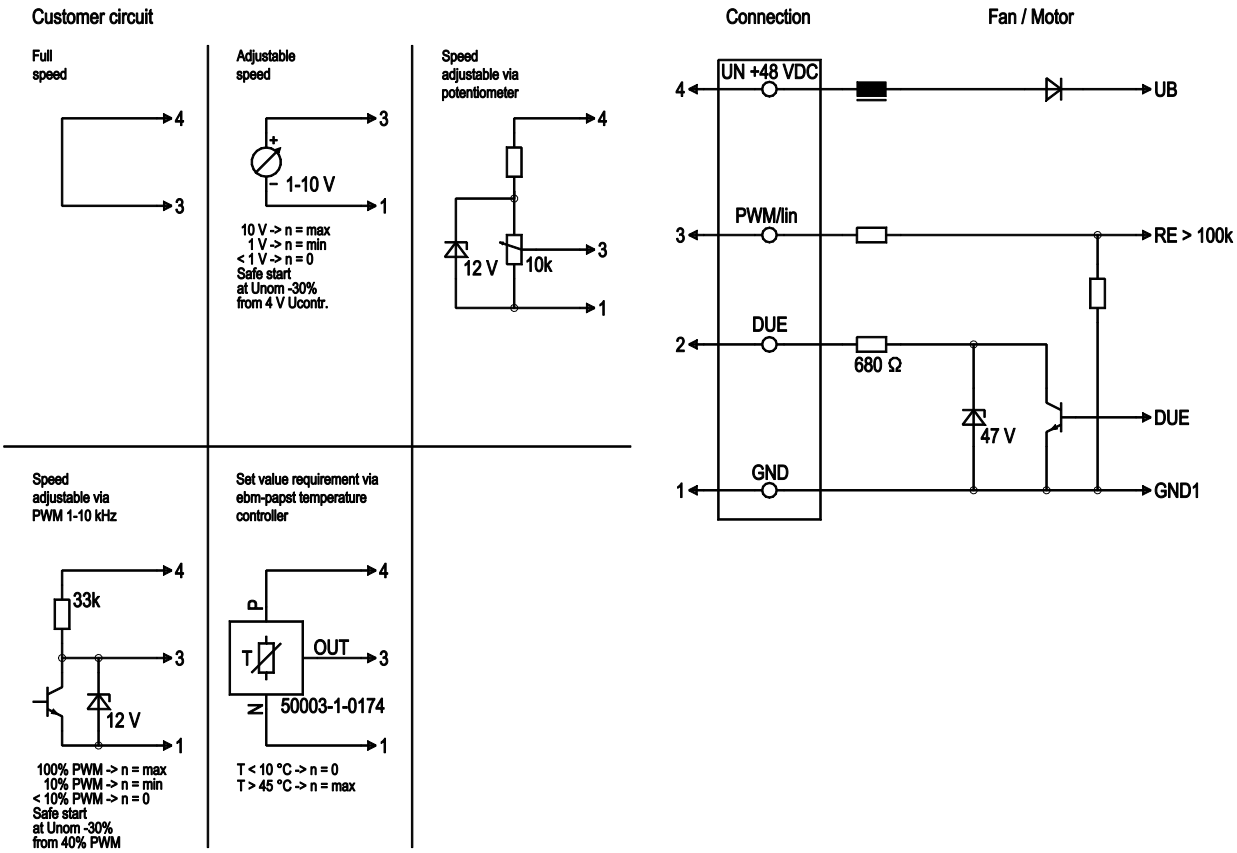
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Connection diagram



No.	Conn.	Designation	Color	Function/assignment
1	1	GND	blue	Reference ground
1	2	DUE	white	Tach output, 2 pulses per revolution, Isink max = 10 mA
1	3	PWM/LIN	yellow	Control input Re > 100k
1	4	Un +48 VDC	red	Power supply 48 VDC, maximum ripple 3.5%

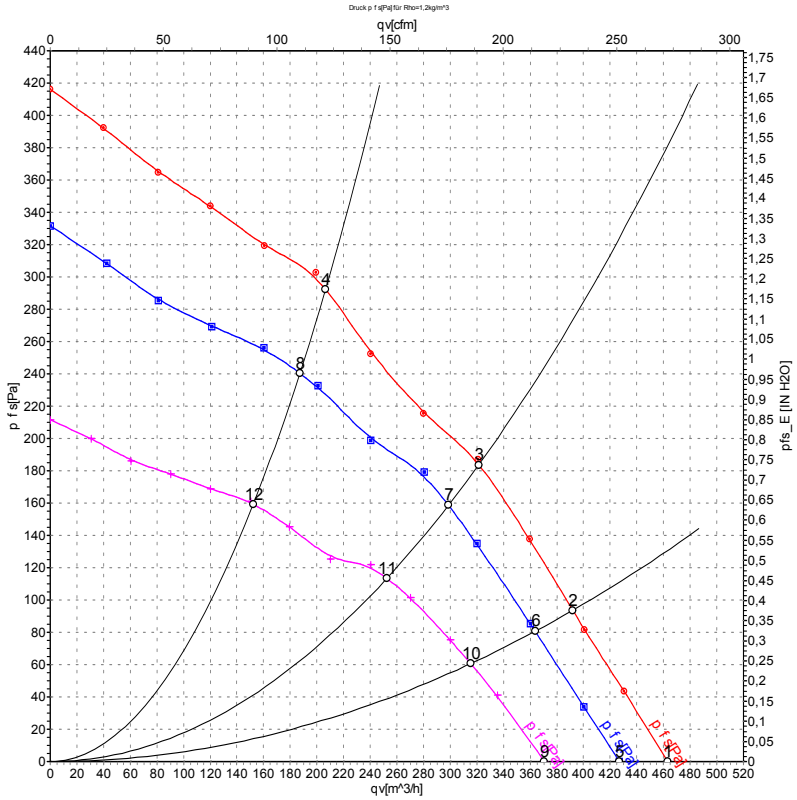
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Curves: Air performance



Measurement: LU-76343-1
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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

	U	n	P_{ed}	I	q_V	p_{fs}	q_V	p_{fs}
	V	min^{-1}	W	A	m^3/h	Pa	cfm	inH2O
1	56	2290	70	1.57	465	0	275	0.00
2	56	2495	61	1.34	390	94	230	0.38
3	56	2745	55	1.15	320	186	190	0.75
4	56	3260	47	0.94	205	294	120	1.18
5	48	2120	53	1.35	425	0	250	0.00
6	48	2315	48	1.17	365	81	215	0.33
7	48	2560	44	1.03	300	159	175	0.64
8	48	2960	36	0.83	185	240	110	0.96
9	36	1845	34	1.05	370	0	220	0.00
10	36	2000	31	0.94	315	61	185	0.24
11	36	2160	27	0.82	255	114	150	0.46
12	36	2425	20	0.61	150	160	90	0.64

U = Power supply · n = Speed (rpm) · P_{ed} = Power consumption · I = Current draw · q_V = Air flow · p_{fs} = Pressure increase

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