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Amtsgericht (court of registration) Stuttgart · HRA 590344

General partner Elektrobau Mulfingen GmbH · Headquarters Mulfingen

Amtsgericht (court of registration) Stuttgart · HRB 590142

Nominal data

Type	R1G310-AD33-52	
Motor	M1G074-CF	
Nominal voltage	VDC	48
Nominal voltage range	VDC	36 .. 57
Method of obtaining data		fa
Speed (rpm)	min ⁻¹	1600
Power consumption	W	90
Current draw	A	2.2
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	45

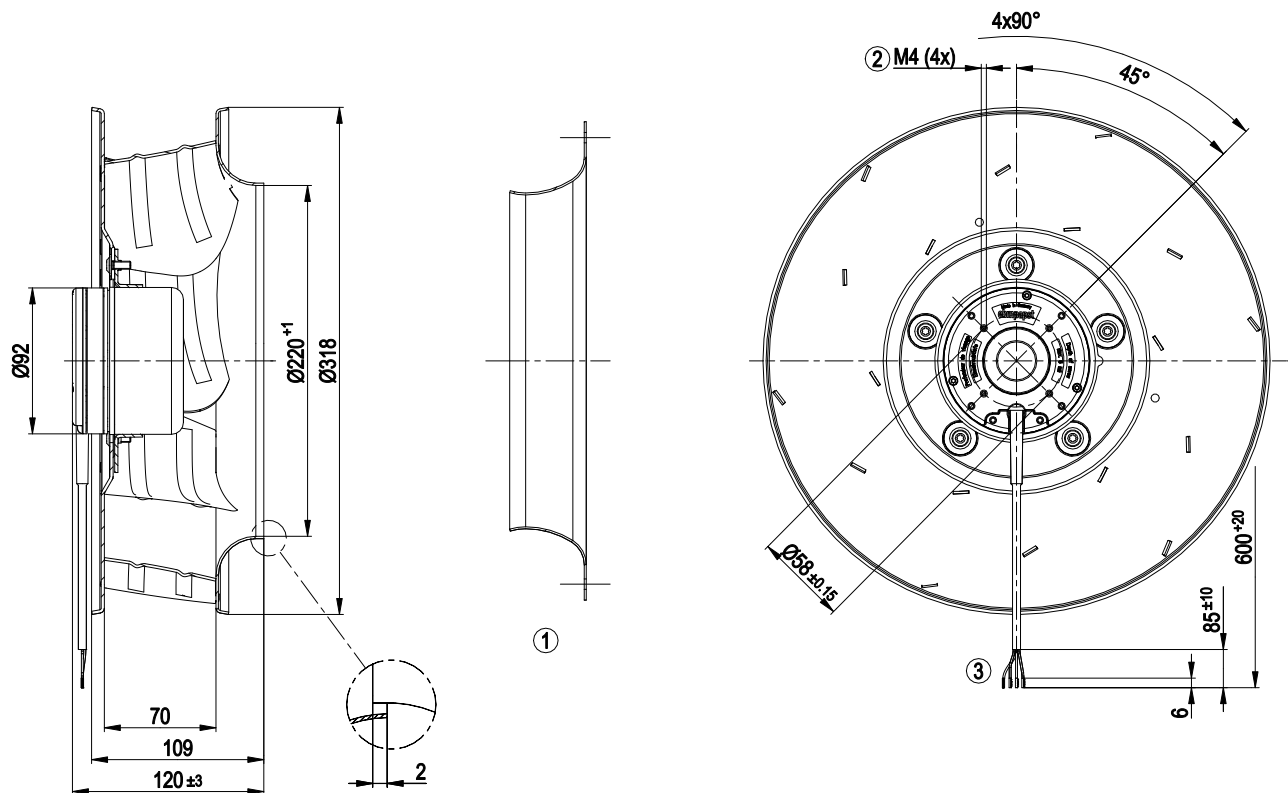
ml = Max. load · me = Max. efficiency · fa = Free air · cs = Customer specification · ce = Customer equipment
Subject to change



Technical description

Weight	2.6 kg
Fan size	310 mm
Rotor surface	Painted black
Impeller material	Sheet aluminum
Number of blades	6
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	IP42
Insulation class	"B"
Moisture (F) / Environmental (H) protection class	F0
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	None
Mode	S1
Motor bearing	Ball bearing
Technical features	- Tach output - Motor current limitation - Soft start - Control input 0-10 VDC / PWM
Motor protection	Reverse polarity and locked-rotor protection
With cable	Variable
Conformity with standards	EN 60950-1
Approval	CCC; EAC; UL 1004-1; CSA C22.2 No. 77

Product drawing

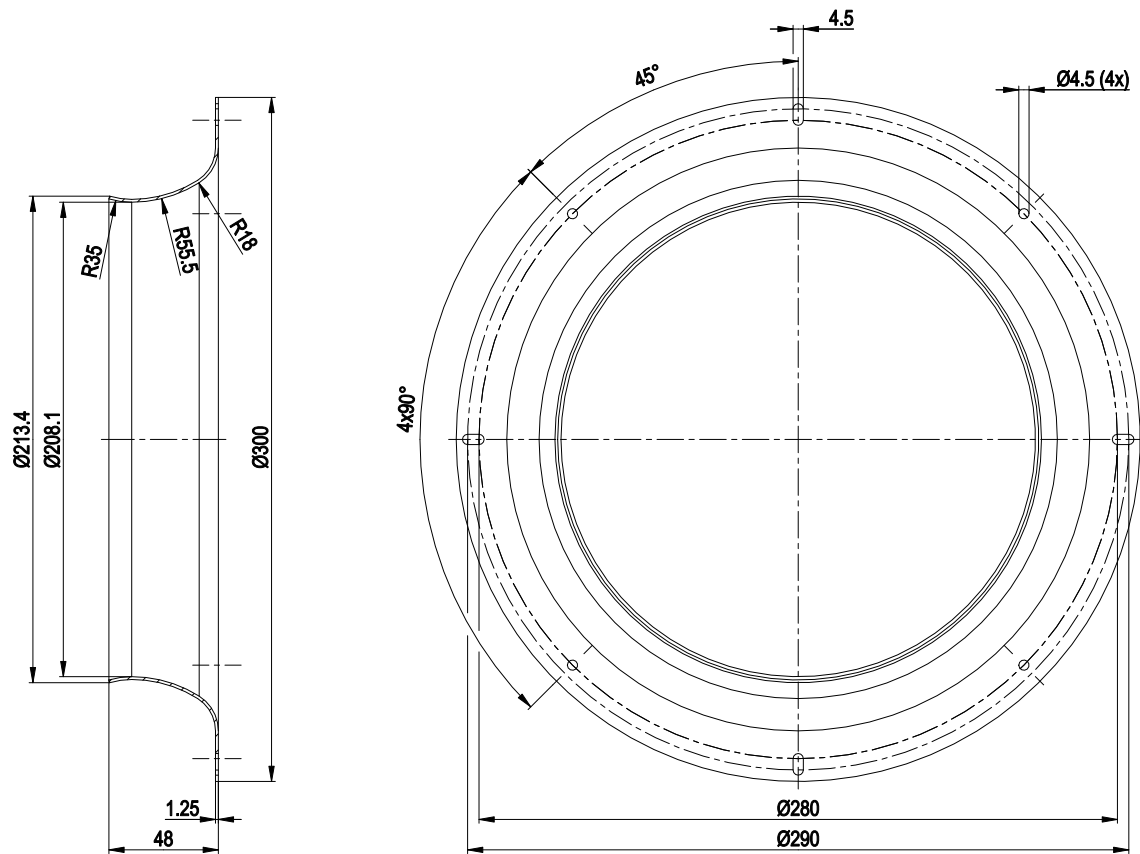


- | | |
|---|---|
| 1 | Accessory part: inlet ring 31050-2-4013 not included in scope of delivery |
| 2 | Max. clearance for screw 6 mm |
| 3 | Cable PVC AWG20, 4x crimped splices |

EC centrifugal fan

backward-curved, single-intake

Accessory part

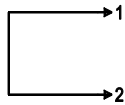


inlet ring 31050-2-4013 not included in scope of delivery

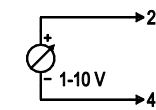
Connection diagram

Customer circuit

Full speed

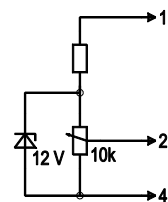


Adjustable speed

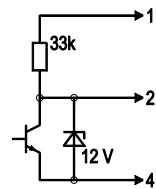


10 V → n = max
 1 V → n = min
 < 1 V → n = 0
 Safe start at Unom -30% from 4 V Ucontr.

Speed adjustable via potentiometer

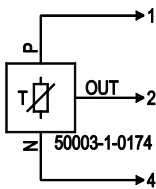


Speed adjustable via PWM 1-10 kHz



100% PWM → n = max
 10% PWM → n = min
 < 10% PWM → n = 0
 Safe start at Unom -30% from 40% PWM

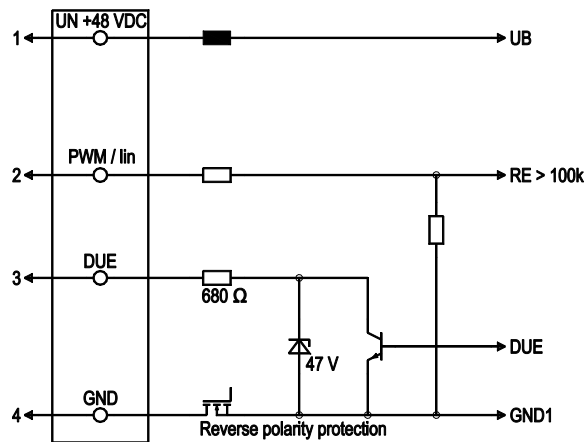
Set value requirement via ebm-papst temperature controller



T < 10 °C → n = 0
 T > 45 °C → n = max

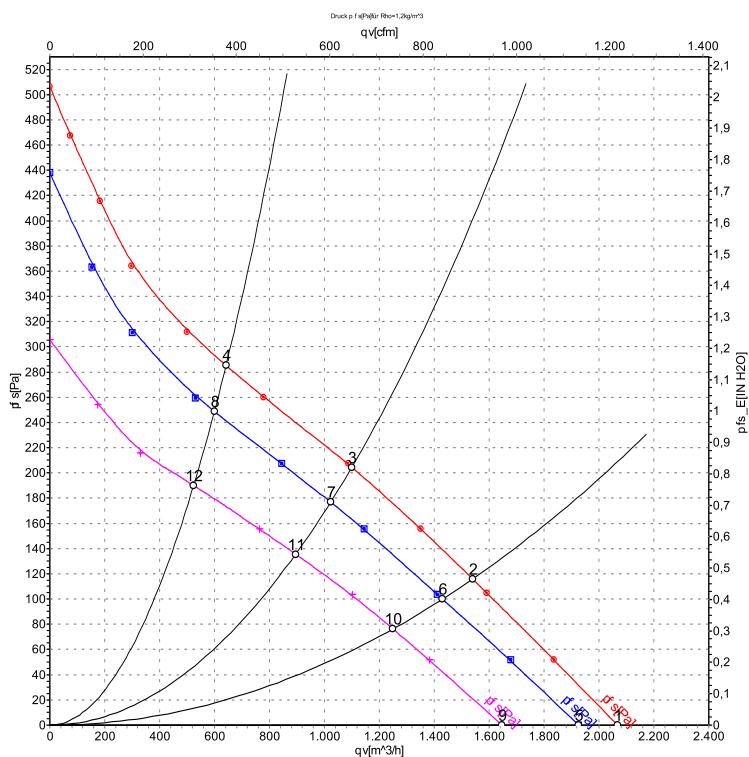
Connection

Fan / Motor



No.	Conn.	Designation	Color	Function/assignment
1	1	Un +48 VDC	red	Power supply 48 VDC, maximum ripple 3.5%
1	2	PWM / lin	yellow	PWM / lin. Control input 0-10 V
1	3	Tach	white	Tach output, 3 pulses per revolution, Isink max = 10 mA
1	4	GND	blue	Reference ground

Curves: Air performance



Measurement: LU-55399-1
 Measurement: LU-55398-1
 Measurement: LU-55400-1

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

	U	n	P _{ed}	I	LpA _{in}	q _v	p _{fs}	q _v	p _{fs}
	V	min ⁻¹	W	A	dB(A)	m ³ /h	Pa	CFM	inH ₂ O
1	57	1725	113	2.40	66	2065	0	1215	0.00
2	57	1550	122	2.66	60	1540	116	905	0.47
3	57	1490	125	2.77	59	1100	205	645	0.82
4	57	1545	122	2.67	63	640	285	380	1.14
5	48	1600	90	2.20	64	1925	0	1135	0.00
6	48	1445	96	2.38	58	1430	100	840	0.40
7	48	1390	99	2.47	58	1025	175	600	0.70
8	48	1440	97	2.39	61	600	250	355	1.00
9	36	1375	57	1.79	60	1650	0	970	0.00
10	36	1265	65	2.02	55	1250	76	735	0.31
11	36	1225	67	2.09	54	895	136	525	0.55
12	36	1255	65	2.05	58	525	190	310	0.76

U = Power supply · n = Speed (rpm) · P_{ed} = Power consumption · I = Current draw · LpA_{in} = Sound pressure level intake side · q_v = Air flow · p_{fs} = Pressure increase

