R3G280-AP03-10

EC centrifugal fan

backward curved, single inlet

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Nominal data

Type	**R3G280-AP03-10**
Motor	**M3G055-DF**

Phase		1~
Nominal voltage	VAC	230
Nominal voltage range	VAC	200 .. 240
Frequency	Hz	50/60
Type of data definition		ml
Speed (rpm)	min^{-1}	1220
Power input	W	74
Current draw	A	0.64
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	55

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

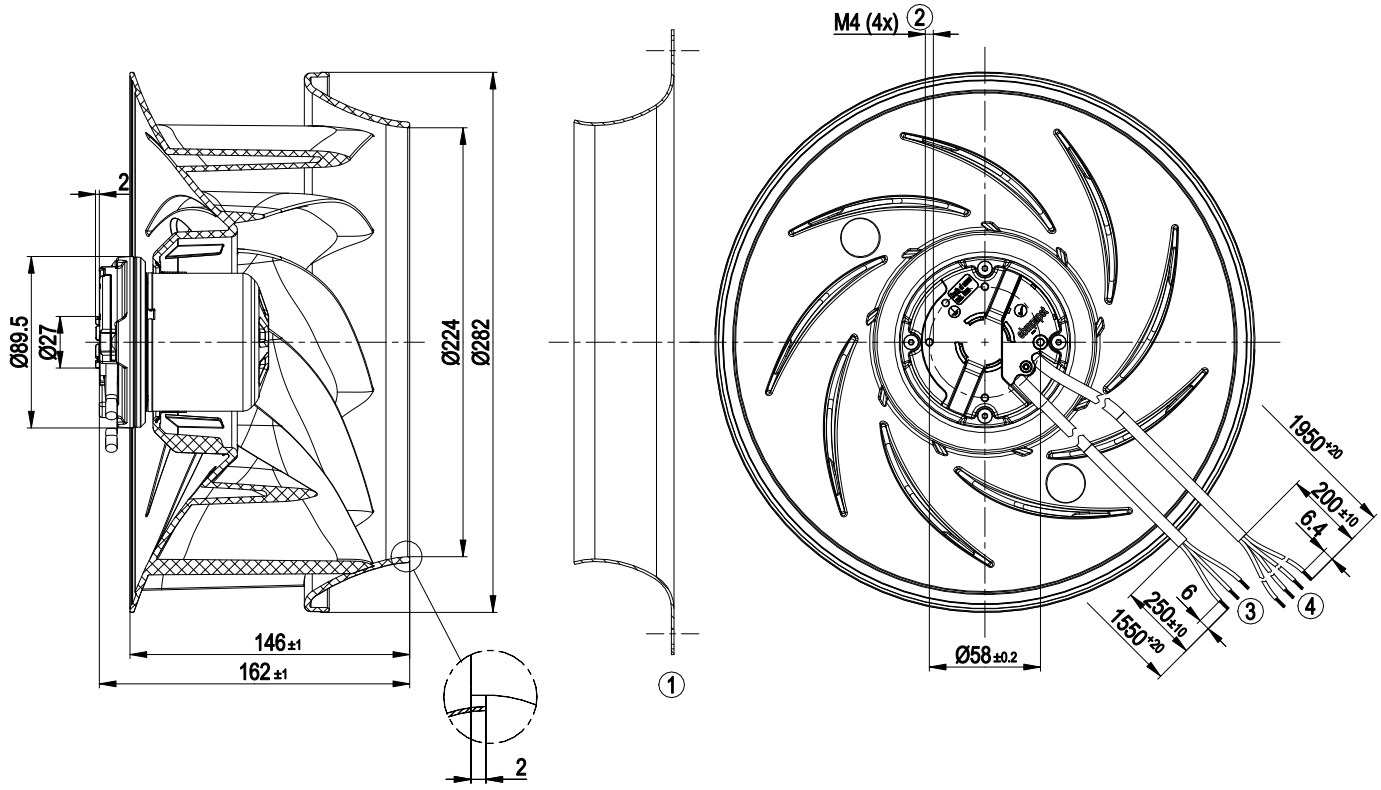
Mass	2.6 kg
Size	280 mm
Surface of rotor	Thick layer passivated
Material of impeller	PA plastic
Number of blades	9
Direction of rotation	Counter-clockwise, seen on rotor
Type of protection	IP 54
Insulation class	"B"
Max. permissible ambient motor temp. (transp./ storage)	+ 80 °C
Min. permissible ambient motor temp. (transp./storage)	- 40 °C
Mounting position	Any
Condensate discharge holes	None, open rotor
Operation mode	S1
Motor bearing	Ball bearing
Technical features	- Output 10 VDC, max. 1.1 mA - Fault output (open collector) - Output limit - Motor current limit - Soft start - Control input 0-10 VDC / PWM - Control interface with SELV potential safely disconnected from the mains - Overvoltage detection - Over-temperature protected electronics / motor - Line undervoltage detection
EMC interference immunity	Acc. to EN 61000-6-2 (industrial environment)
EMC harmonics	Acc. to EN 61000-3-2/3
EMC interference emission	Acc. to EN 61000-6-3 (household environment)
Touch current acc. IEC 60990 (measuring network Fig. 4, TN system)	<= 3.5 mA
Motor protection	Locked-rotor protection
Cable exit	Variable
Protection class	I (if protective earth is connected by customer)
Product conforming to standard	EN 60335-1; CE

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Product drawing



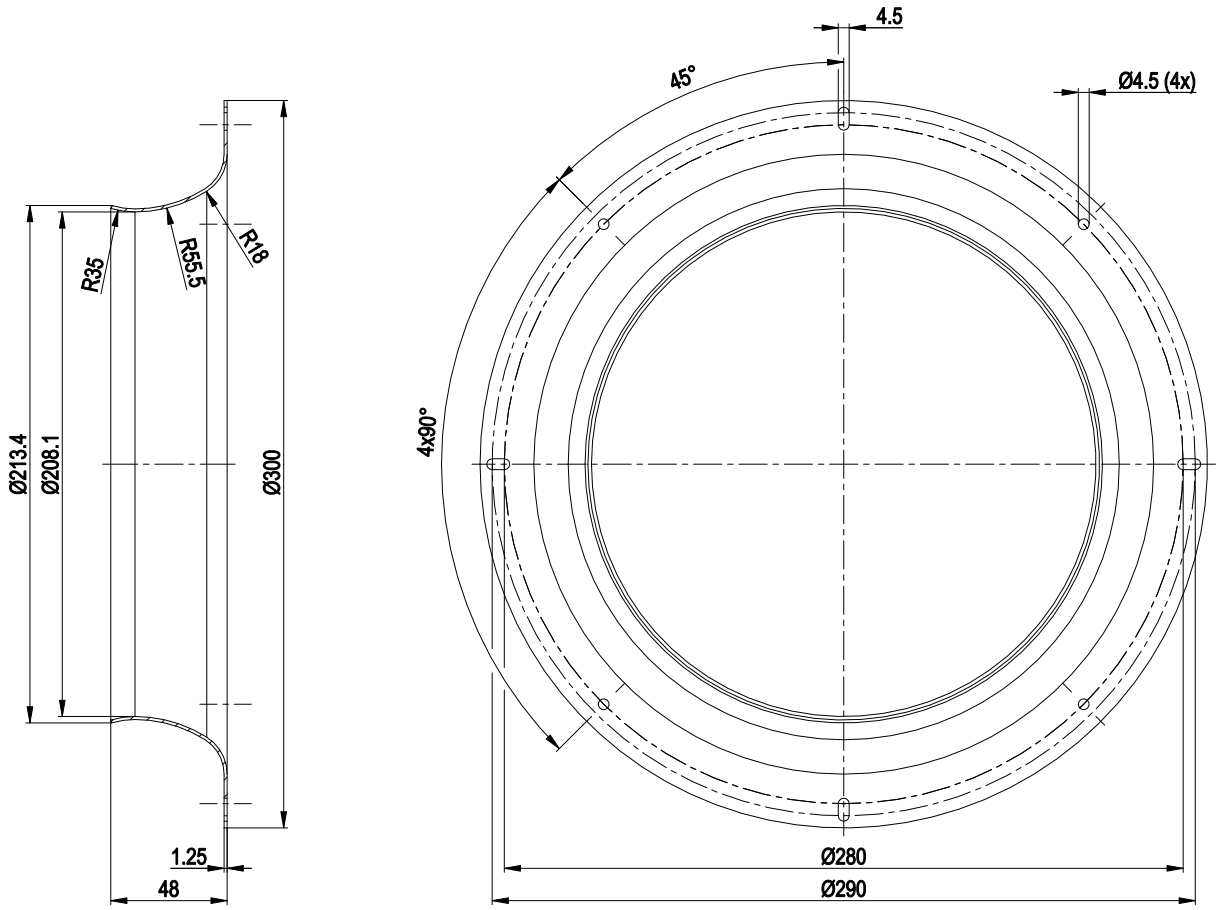
1	Accessory part: inlet nozzle 31050-2-4013 not included in scope of delivery, other inlet nozzles on request
2	Thread reach max. 5 mm
3	Connection line PVC AWG20, 3x lead tips crimped
4	Connection line PVC AWG22, 4x lead tips crimped

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Accessory part



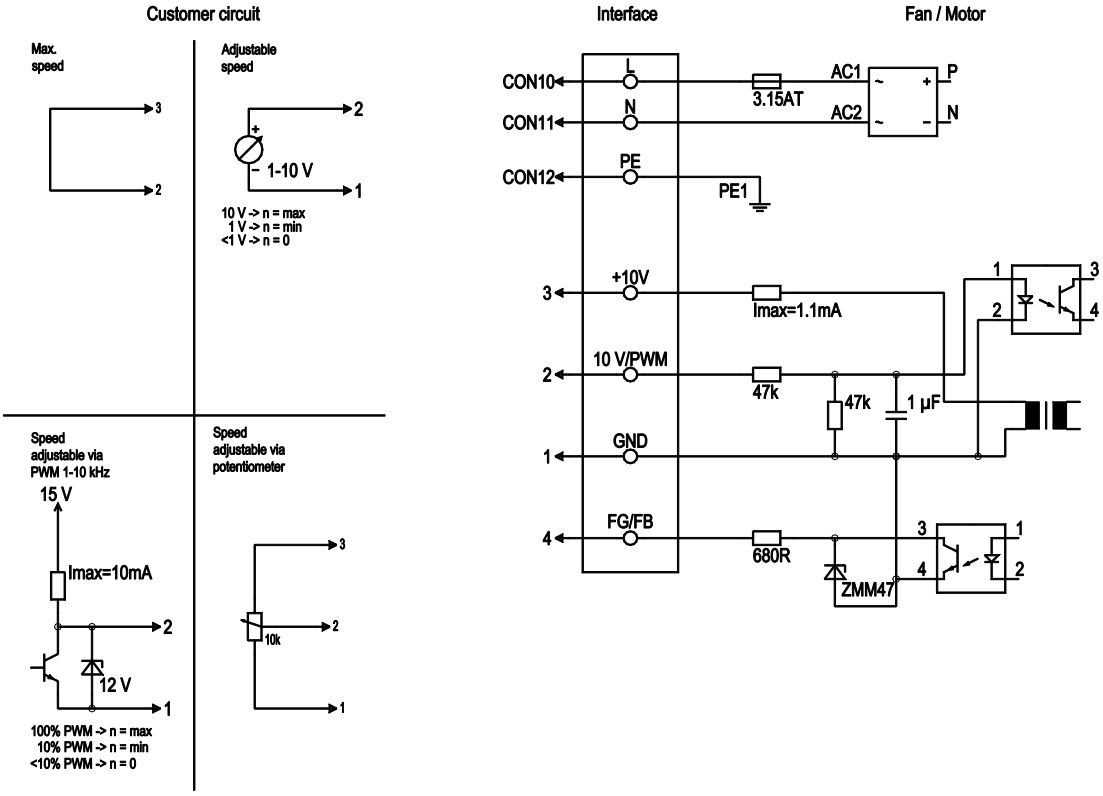
Inlet nozzle 31050-2-4013 not included in scope of delivery

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Connection screen



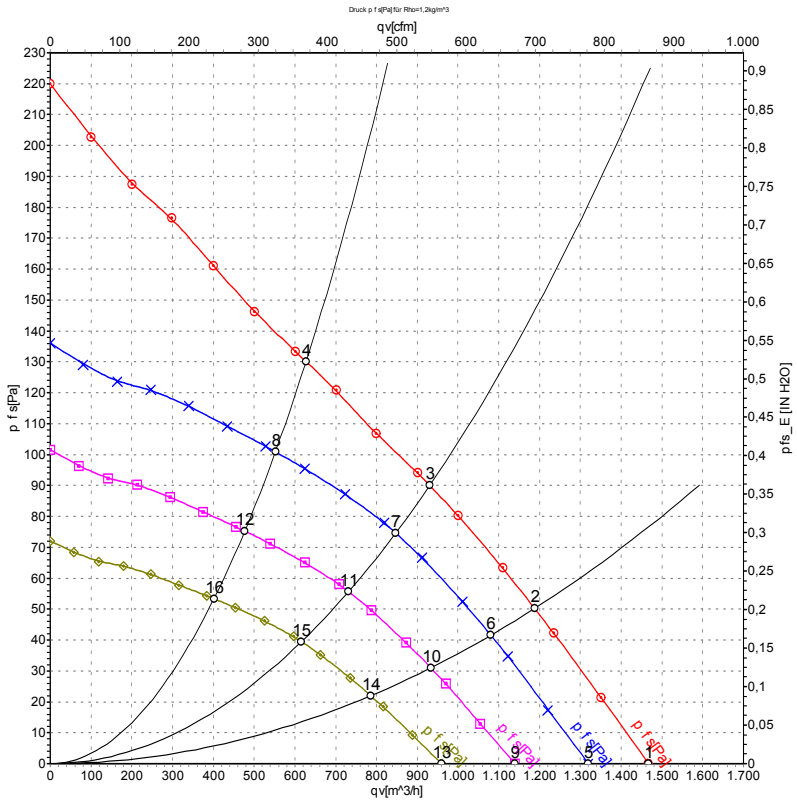
No.	Conn.	Designation	Colour	Function / assignment
	CON10	L	black	Power supply 230 VAC, 50-60 Hz, see type plate for voltage range
	CON11	N	blue	Neutral conductor
	CON12	PE	green/yellow	Protective earth
	1	GND	blue	GND connection for control interface
	2	0- 10V PWM	yellow	Control input 0-10 V or PWM, electrically isolated
	3	10V/ max 1.1mA	red	Voltage output 10 VDC 1.1 mA, electrically isolated, short-circuit-proof
	4	FG/FB	white	Fan good / fan bad: Open collector, fan good = low, electrically isolated

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Charts: Air flow 50 Hz



Measurement: LU-128484-1

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

	U	f	n	P_{ed}	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	230	50	1225	70	0.61	56	63	1465	0	865	0.00
2	230	50	1210	72	0.64	51	60	1190	50	700	0.20
3	230	50	1220	74	0.64	51	60	930	90	550	0.36
4	230	50	1250	66	0.58	53	62	625	130	370	0.52
5	230	50	1100	51	0.44	54	61	1320	0	775	0.00
6	230	50	1100	54	0.48	49	58	1080	42	635	0.17
7	230	50	1100	55	0.48	49	57	845	75	500	0.30
8	230	50	1100	45	0.40	50	59	550	101	325	0.41
9	230	50	950	33	0.28	50	58	1140	0	670	0.00
10	230	50	950	35	0.31	46	54	935	31	550	0.12
11	230	50	950	35	0.31	46	54	730	56	430	0.22
12	230	50	950	29	0.26	47	56	475	75	280	0.30
13	230	50	800	19	0.17	47	54	960	0	565	0.00
14	230	50	800	21	0.18	42	51	785	22	465	0.09
15	230	50	800	21	0.18	42	51	615	40	365	0.16
16	230	50	800	17	0.15	43	52	400	53	235	0.21

U = Supply voltage · f = Frequency · n = Speed (rpm) · P_{ed} = Power input · I = Current draw · LpA_{in} = Sound pressure level inlet side · LwA_{in} = Sound power level inlet side · q_V = Air flow
p_{fs} = Pressure increase

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