R3G280-AF29-92

EC centrifugal fan

backward-curved, single-intake

for rail applications



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Nominal data

Type	**R3G280-AF29-92**	
Motor	**M3G084-DF**	
Nominal voltage	VDC	110
Nominal voltage range	VDC	77 .. 145
Method of obtaining data		ml
Status		prelim.
Speed (rpm)	min^{-1}	2200
Power consumption	W	300
Current draw	A	2.8
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	40

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	4.8 kg
Fan size	280 mm
Rotor surface	Painted black
Electronics housing material	Die-cast aluminum
Impeller material	Sheet steel, galvanized
Number of blades	11
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	IP54
Insulation class	"B"
Moisture (F) / Environmental (H) protection class	F3-1
Max. permitted ambient temp. for motor (transport/storage)	+80 °C
Min. permitted ambient temp. for motor (transport/storage)	-40 °C
Installation position	Shaft horizontal or rotor on top; rotor on bottom on request
Condensation drainage holes	None
Mode	S1
Motor bearing	Ball bearing
Technical features	- Output 10 VDC, max. 1.1 mA - Alarm relay - Motor current limitation - Soft start - Control input 0-10 VDC / PWM - Control interface with SELV potential safely disconnected from the mains - Thermal overload protection for electronics/motor - Line undervoltage detection
EMC immunity to interference	According to EN 61000-6-2 (industrial environment)
EMC interference emission	According to EN 61000-6-4 (industrial environment)
Motor protection	Thermal overload protector (TOP) internally connected
With cable	Variable
Conformity with standards	EN 61800-5-1
Approval	CCC

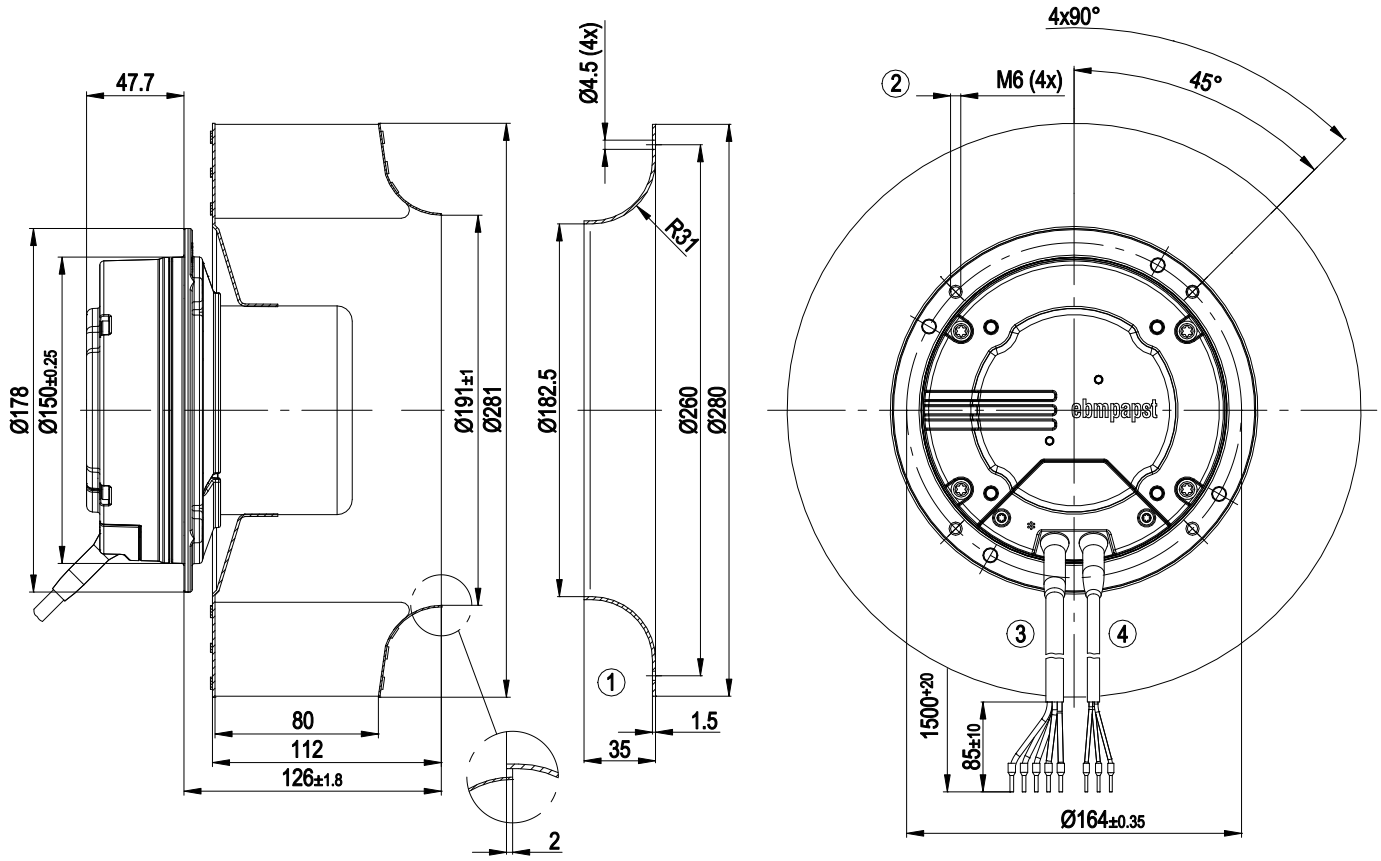
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Product drawing



1	Accessory part: Inlet ring 96360-2-4013 not included in scope of delivery, other inlet rings on request
2	Max. clearance for screw 10 mm
3	Cable halogen-silicone-free, 5 x 1.00 mm², 5 x crimped ferrules
4	Cable halogen-silicone-free, 3 x 0.33 mm², 3 x crimped ferrules

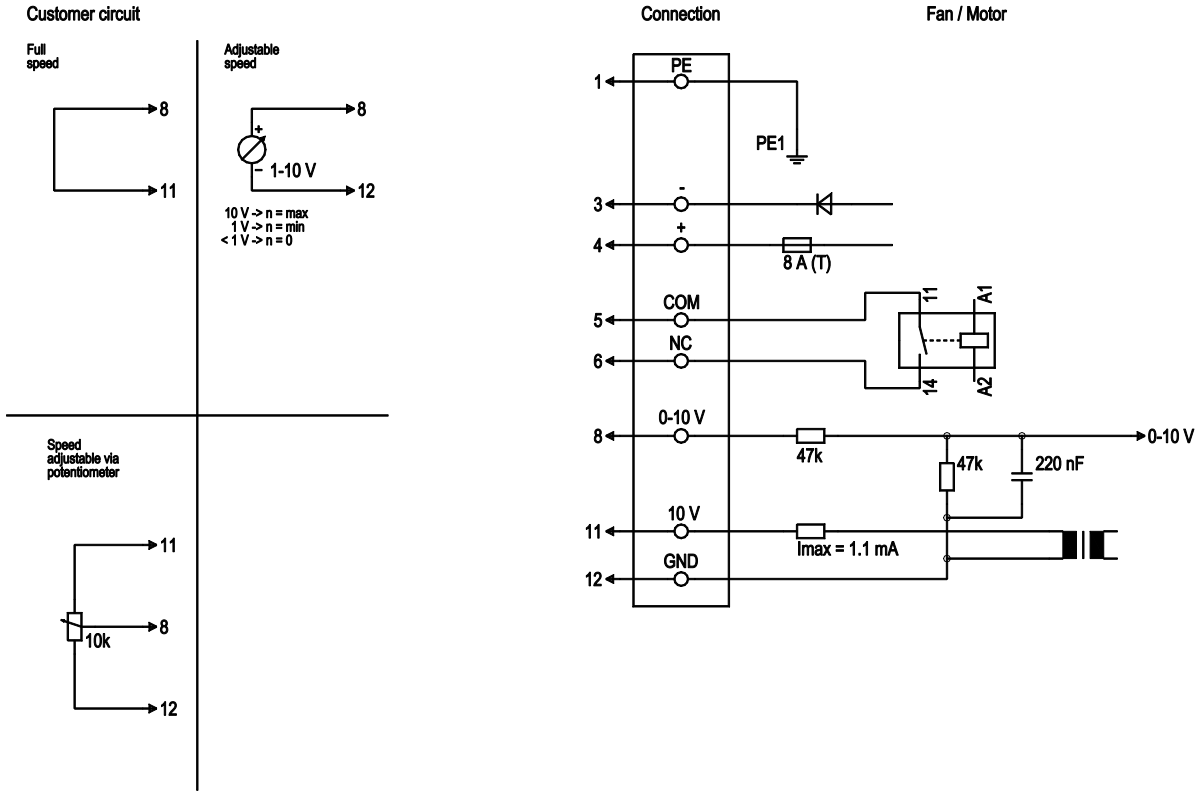
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Connection diagram



No.	Conn.	Designation	Color	Function/assignment
1	1	PE	green/yellow	Protective earth
1	3	-	blue	Power supply, GND (110 VDC)
1	4	+	red	Power supply, 110 VDC
1	5	NC	white 1	Floating status contact, break for failure
1	6	COM	white 2	Floating status contact, break for failure (0.6 A-110 VDC, 1 A-80 VDC, 3 A-30 VDC)
2	8	0-10 V	yellow	Control input, set value 0-10 VDC, impedance 100 kΩ, SELV
2	11	10 VDC	red	Voltage output 10 VDC (±3%), max. 1.1 mA, power supply for external devices (e.g. potentiometers), SELV
2	12	GND	blue	Reference ground for control interface, SELV

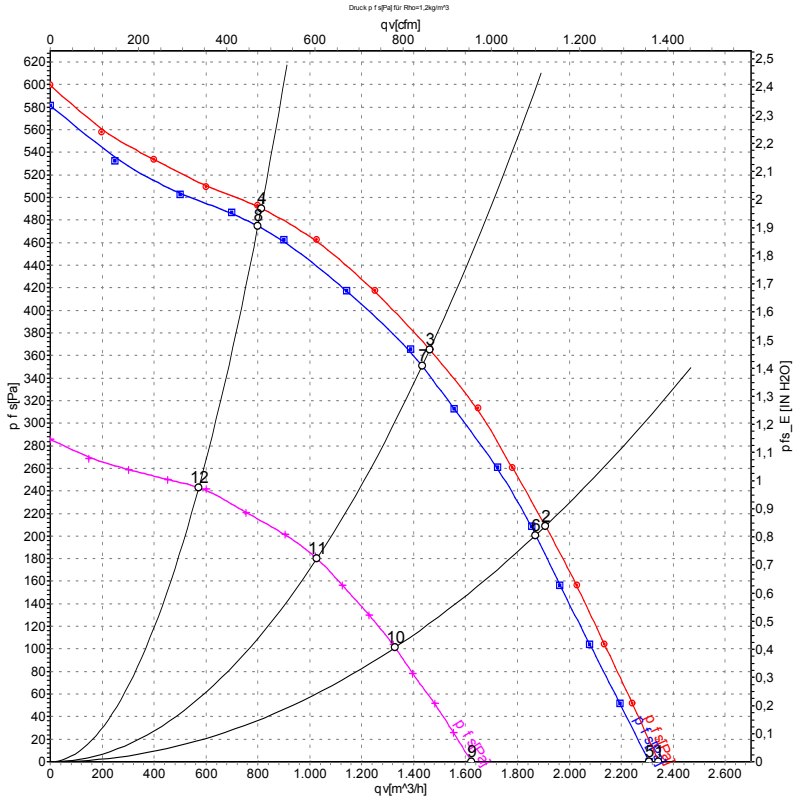
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Curves: Air performance



Measurement: LU-75246-1
Measurement: LU-75245-1
Measurement: LU-75248-1

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	inH2O
1	145	2320	241	1.66	76	2345	0	1380	0.00
2	145	2270	293	2.02	72	1910	209	1125	0.84
3	145	2265	320	2.20	69	1460	366	860	1.47
4	145	2300	266	1.83	70	815	491	480	1.97
5	110	2285	226	2.04		2305	0	1355	0.00
6	110	2230	276	2.50		1870	200	1100	0.80
7	110	2200	300	2.80		1435	350	845	1.41
8	110	2270	251	2.27		800	475	470	1.91
9	77	1625	88	1.15		1620	0	955	0.00
10	77	1605	108	1.42		1330	102	780	0.41
11	77	1600	117	1.53		1025	181	605	0.73
12	77	1625	98	1.28		570	243	335	0.98

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

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