R3G280-AF45-81

EC centrifugal fan

backward-curved, single-intake

for rail applications



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Nominal data

Type	**R3G280-AF45-81**
Motor	**M3G084-DF**

Phase		1~
Nominal voltage	VAC	115
Nominal voltage range	VAC	100 .. 130
Frequency	Hz	50/60
Method of obtaining data		ml
Speed (rpm)	min^{-1}	2300
Power consumption	W	355
Current draw	A	4.1
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	4.87 kg
Fan size	280 mm
Rotor surface	Painted black
Electronics housing material	Die-cast aluminum
Impeller material	Sheet steel, hot-dip 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	H1
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	- Control input 0-10 VDC / PWM - Output 10 VDC, max. 1.1 mA - Thermal overload protection for electronics/motor - Alarm relay - Line undervoltage detection - Motor current limitation - Soft start
EMC immunity to interference	According to EN 61000-6-2 (industrial environment)
EMC interference emission	According to EN 61000-6-4 (industrial environment)
Touch current according to IEC 60990 (measuring circuit Fig. 4, TN system)	<= 3.5 mA
Motor protection	Thermal overload protector (TOP) internally connected
With cable	Variable
Conformity with standards	EN 61800-5-1
Approval	UL1004-3 +60730; C22.2 No.77 + CAN/CSA-E60730-1; EAC; CCC

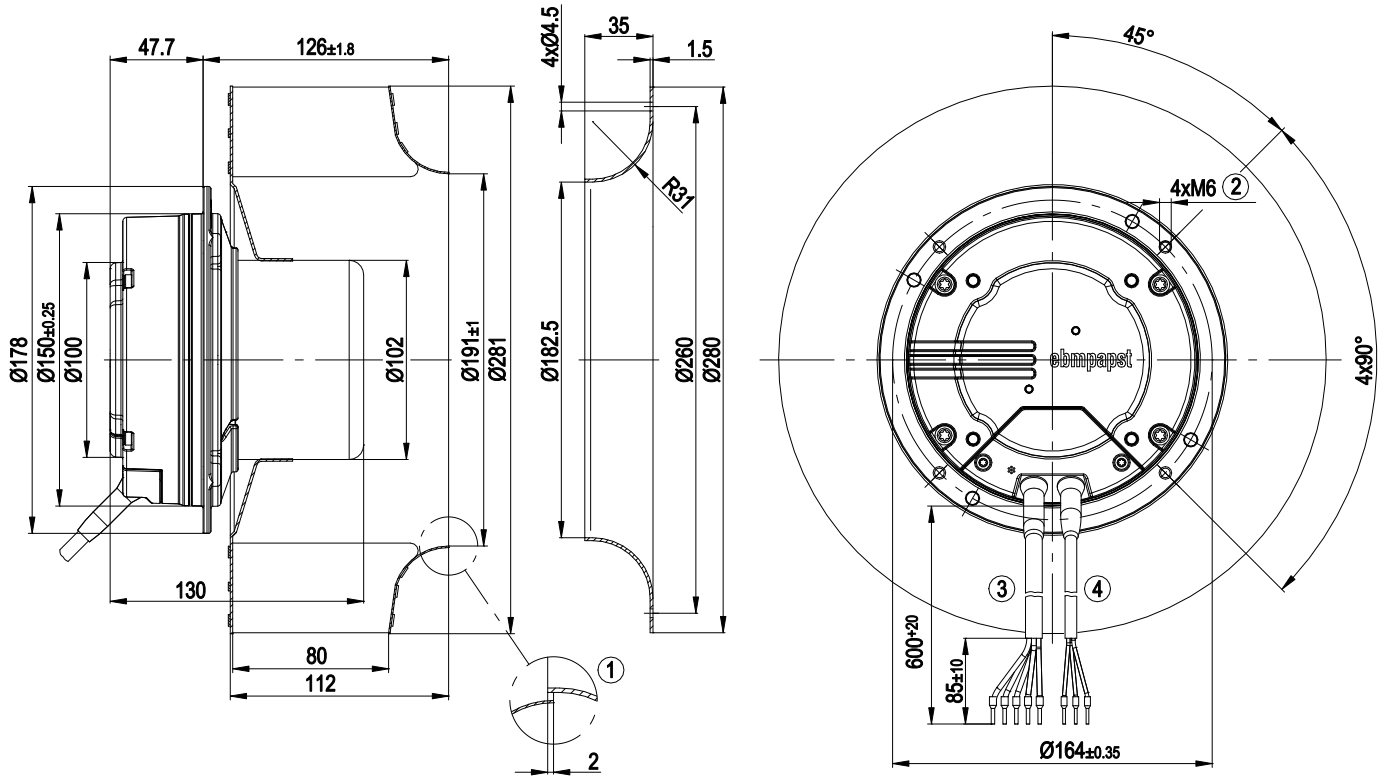
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Product drawing



1	Accessory part: inlet ring 96360-2-4013 not included in scope of delivery, other inlet rings on request
2	Clearance for screw 8-10 mm
3	Cable AWG18, 5x crimped ferrules
4	Cable AWG22, 3x crimped ferrules

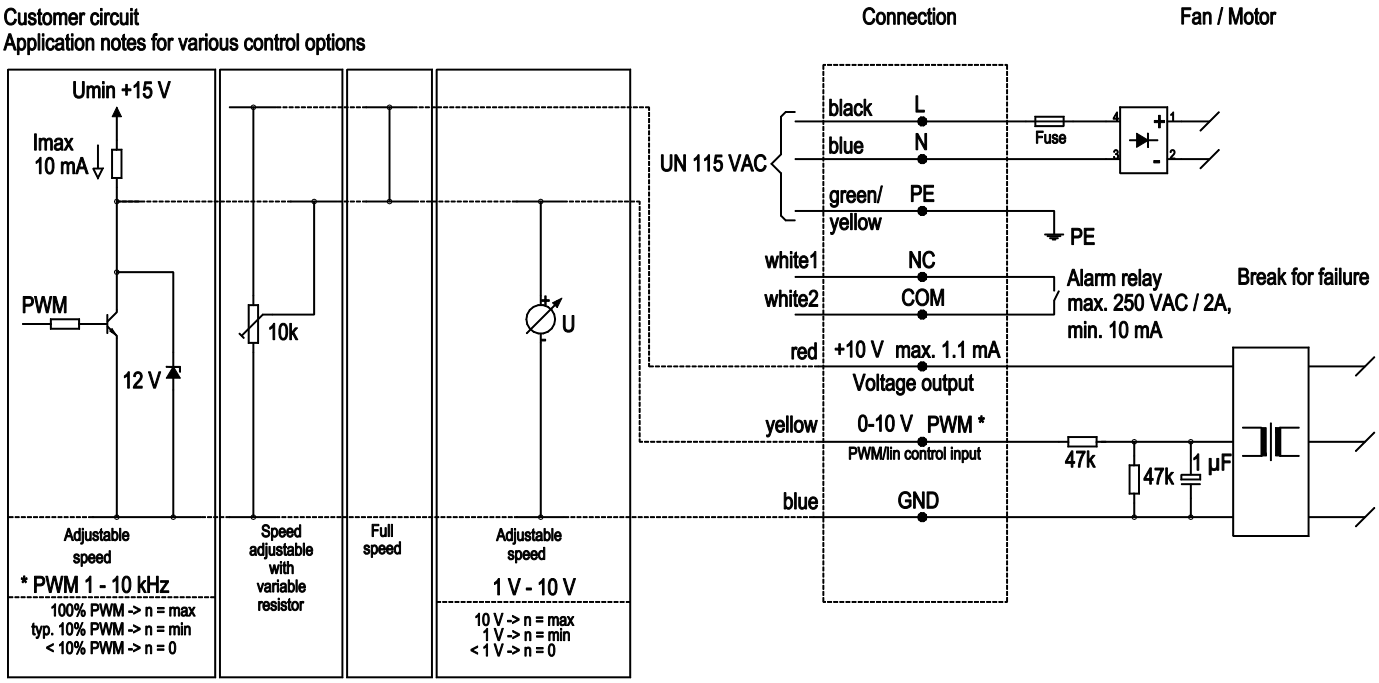
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Connection diagram



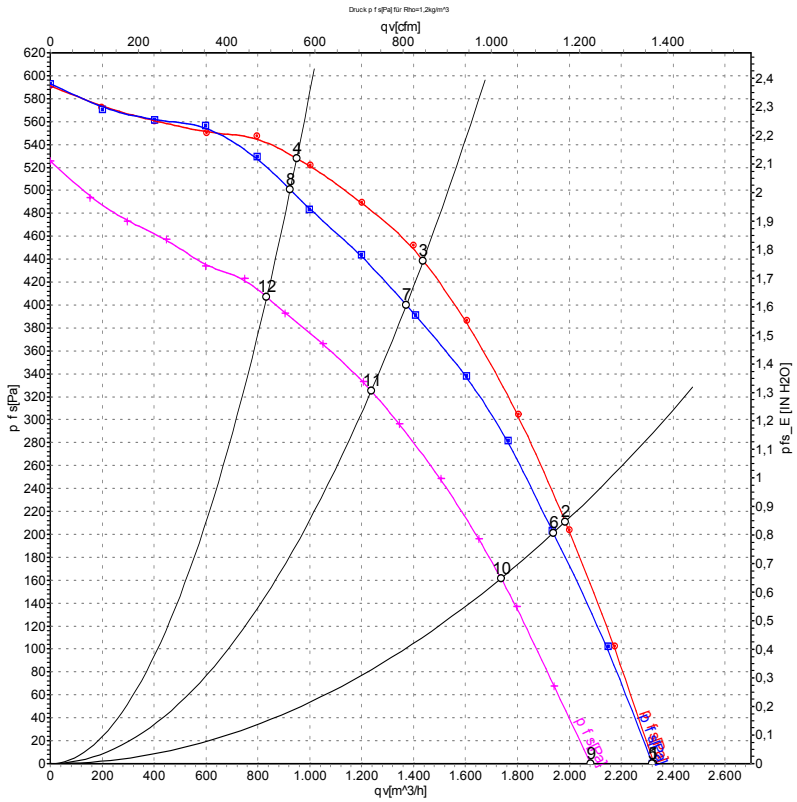
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Curves: Air performance 60 Hz



Measurement: LU-107751-1
Measurement: LU-107749-1
Measurement: LU-107752-1

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	f	n	P_{ed}	I	q_V	p_{fs}	q_V	p_{fs}
	V	Hz	min^{-1}	W	A	m^3/h	Pa	cfm	inH2O
1	130	60	2420	285	3.01	2325	0	1370	0.00
2	130	60	2415	345	3.61	1985	212	1170	0.85
3	130	60	2420	405	4.18	1435	440	845	1.77
4	130	60	2420	342	3.57	950	528	560	2.12
5	115	60	2420	285	3.34	2320	0	1365	0.00
6	115	60	2345	320	3.72	1940	200	1140	0.80
7	115	60	2300	355	4.10	1370	400	810	1.61
8	115	60	2355	324	3.75	925	500	545	2.01
9	100	60	2135	192	2.61	2080	0	1225	0.00
10	100	60	2100	230	3.06	1735	162	1020	0.65
11	100	60	2075	254	3.34	1235	325	730	1.30
12	100	60	2110	226	3.02	835	407	490	1.63

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

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