K3G280-RU65-82

EC centrifugal module - RadiCal

backward-curved, single-intake

with support structure, for rail applications

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Nominal data

Type	**K3G280-RU65-82**	
Motor	**M3G084-CF**	
Nominal voltage	VDC	26
Nominal voltage range	VDC	16 .. 32
Method of obtaining data		fa
Speed (rpm)	min^{-1}	2830
Power consumption	W	460
Current draw	A	18.0
Min. ambient temperature	°C	-40
Max. ambient temperature	°C	70

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	0.001 kg
Size	280 mm
Motor size	84
Rotor surface	Painted black
Electronics housing material	Die-cast aluminum
Impeller material	PA plastic, sheet-metal plate painted black
Spacer material	Aluminum
Inlet nozzle material	Sheet steel, galvanized
Support structure material	Aluminum
Number of blades	6
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	Motor IP24 KM, electronics IP6K9K
Insulation class	"B"
Moisture (F) / Environmental (H) protection class	H4
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 bottom; rotor on top on request
Condensation drainage holes	On rotor side
Cooling hole/opening	On rotor side
Mode	S1
Motor bearing	Ball bearing
Technical features	- Start-up at 85°C (2 min) permissible - Fault output (high-side switch max. 30 mA) - Load dump (58 V) - Motor current limitation - Soft start - Control input 0-10 VDC/PWM - Standstill in the case of open circuit - Temperature derating - Overvoltage detection - Thermal overload protection for electronics - Undervoltage detection
EMC regulations	According to EN 50121-3-2
With cable	Lateral
Protection class	I (with customer connection of protective earth)
Conformity with standards	EN 15085-1, CPC3: 2013; EN 45545-2, HL3: 2013 + A1:2015; EN 50155: 2008; EN 61373, Cat. 1B: 2010
Approval	EAC
Comment	A prerequisite for operation is a Class 1 vehicle electrical system architecture according to EN 50533; if supply potential (e.g. 230 VAC) is passed through the alarm relay, the SELV signal wires lose their property of reinforced insulation and they then have only basic insulation The SELV property (reinforced insulation) is not lost when voltages of up to 110 VDC are passed through the alarm relay.

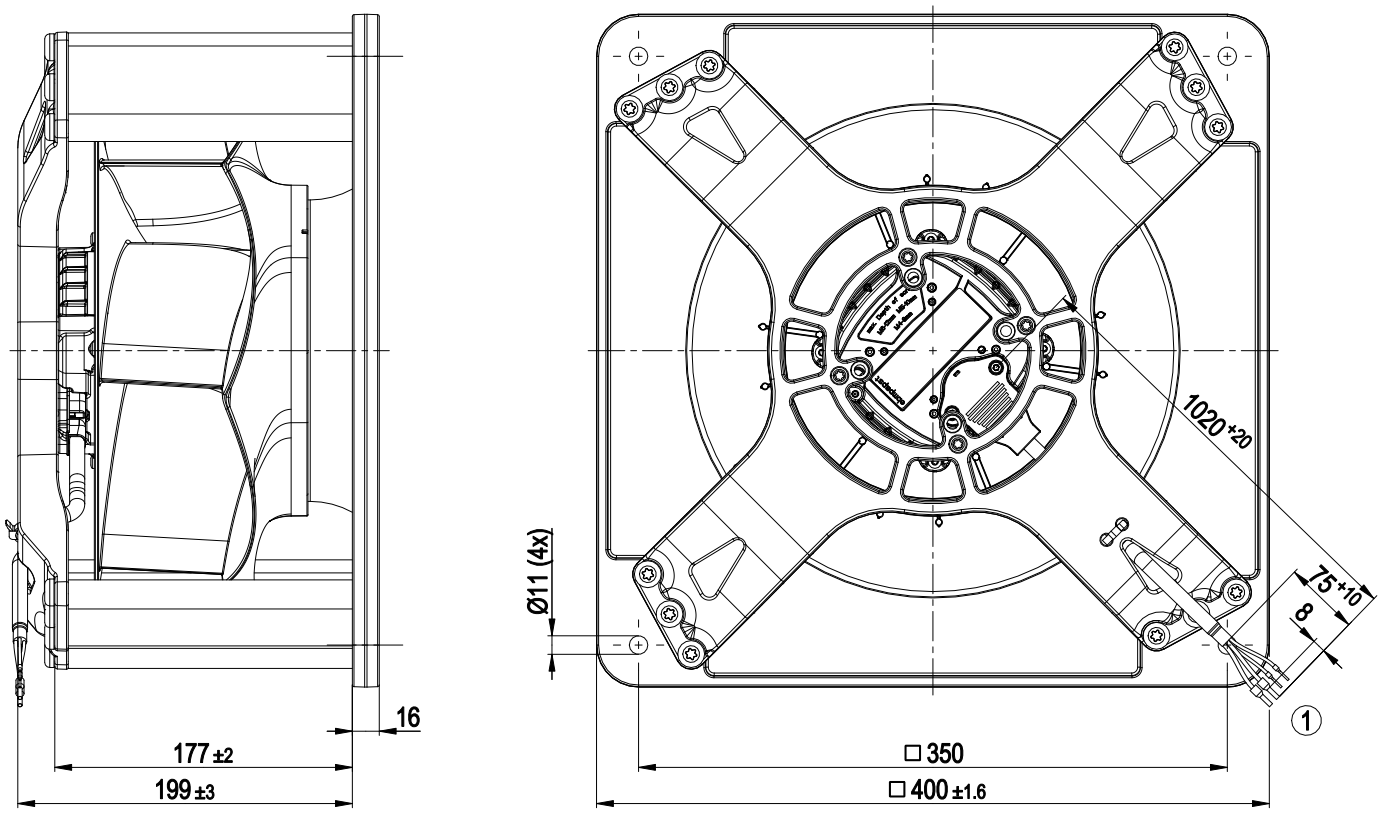
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Product drawing



1	2x cable BETAtrans® 3 GKW 6 mm², 2x cable BETAtrans® 3 GKW 1 mm²
	4x wire-end ferrule

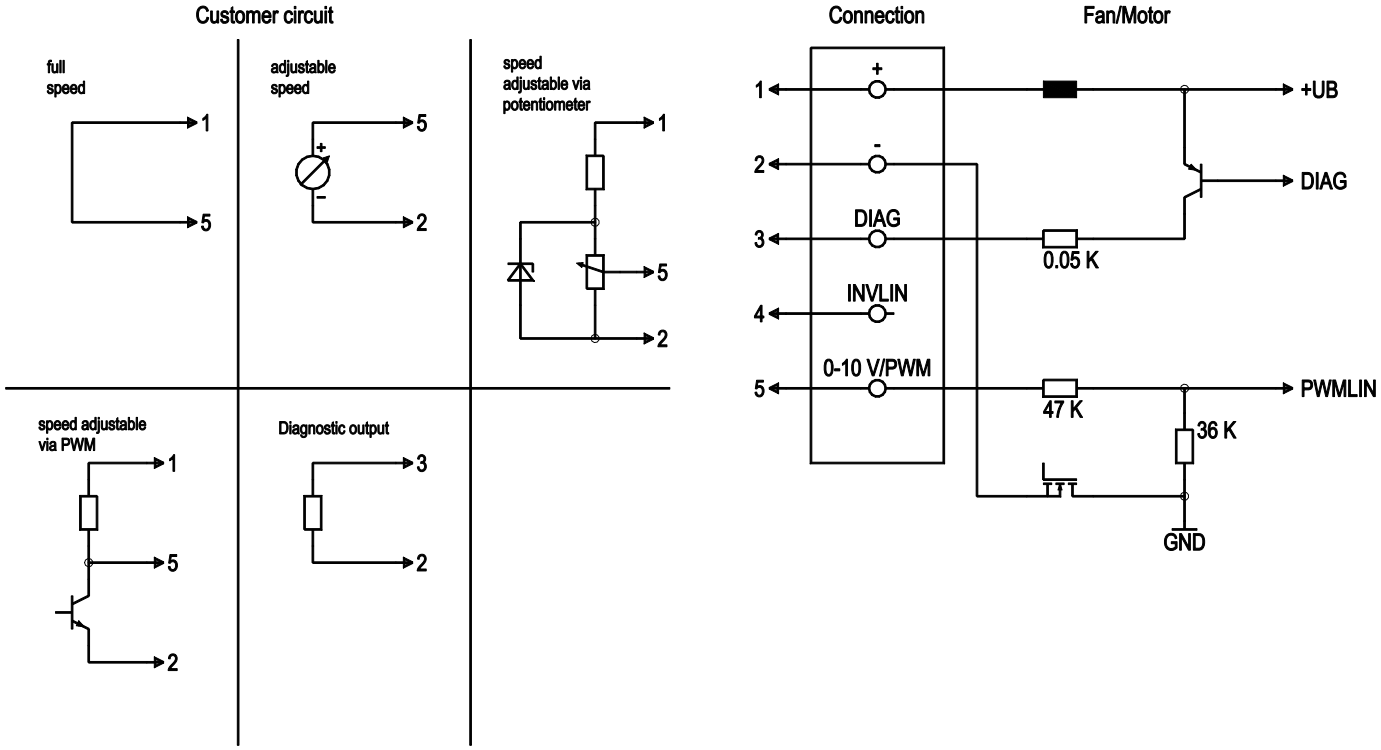
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Connection diagram



No.	Conn.	Designation	Color	Function/assignment
1	1	+	black	Power supply, see nameplate for voltage range
1	2	-	brown	Power supply, see nameplate for voltage range
1	3	DIAG	white	Diagnostic output: open collector, Isink max = 10 mA, Ri > 2.1 kΩ Fan OK -> high; fan error -> low
1	4	INVLIN		not used
1	5	0-10 V / PWM	yellow	Control input: Ri > 47 kΩ 0-10 V (typ. < 1 V -> n=0; 1.5 V -> n=min; > 10 V -> n=max) PWM (amplitude 10 V; 1-50 kHz; typ. < 5 % -> n=0; 15% -> n=min; > 100% -> n=max)

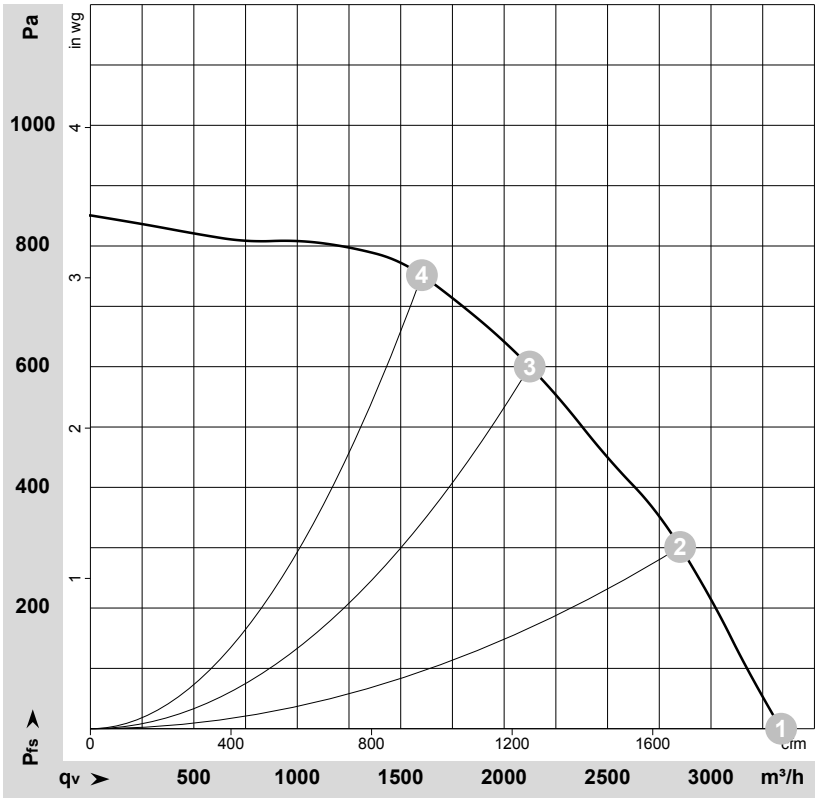
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Curves: Air performance



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-175089-1

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}	LwA_{in}	q_V	p_{fs}	q_V	p_{fs}
	V	min^{-1}	W	A	dB(A)	dB(A)	m^3/h	Pa	cfm	in. wg
1	26	2830	460	18.00	78	85	3340	0	1965	0.00
2	26	2810	584	22.41	74	81	2850	300	1680	1.20
3	26	2810	645	24.77	70	77	2125	600	1250	2.41
4	26	2835	623	23.89	70	77	1605	750	945	3.01

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

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