K3G280-RU26-81

EC centrifugal module

backward-curved, single-intake

with support structure, for rail applications

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Nominal data

Type	**K3G280-RU26-81**	
Motor	**M3G084-CF**	
Nominal voltage	VDC	26
Nominal voltage range	VDC	16 .. 32
Method of obtaining data		fa
Speed (rpm)	min^{-1}	2350
Power consumption	W	252
Current draw	A	10.5
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

Data according to Commission Regulation (EU) 327/2011

		Actual	Req. 2015
01 Overall efficiency η_{es}	%	62.3	46.3
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		77.9	62
05 Variable speed drive		Yes	

09 Power consumption P_e	kW	0.32
09 Air flow q_v	m^3/h	1495
09 Pressure increase p_{fs}	Pa	437
10 Speed (rpm) n	min^{-1}	2275
11 Specific ratio*		1.00

Data obtained at optimum efficiency level.
The ErP data is determined using a motor-impeller combination in a standardized measurement setup.

* Specific ratio = 1 + p_{fs} / 100 000 Pa

LU-143852

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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
Ambient temperature note	Occasional start-up at temperatures between -40°C and -25°C is permitted. For continuous operation at ambient temperatures below -25°C (such as refrigeration applications), use must be made of a fan design with special low-temperature bearings.
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	None
Cooling hole/opening	On rotor side
Mode	S1
Motor bearing	Ball bearing
Technical features	- Lowering input - Fault output (high-side switch max. 30 mA) - INVLIN (inverse linear control input) - Power limiter - Load dump (58 V) - Motor current limitation - Soft start - Set value input Lin 0-10 VDC / PWM (1.4 V corresponds to V=min, 10 V corresponds to V=max) - Temperature derating - Overvoltage 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

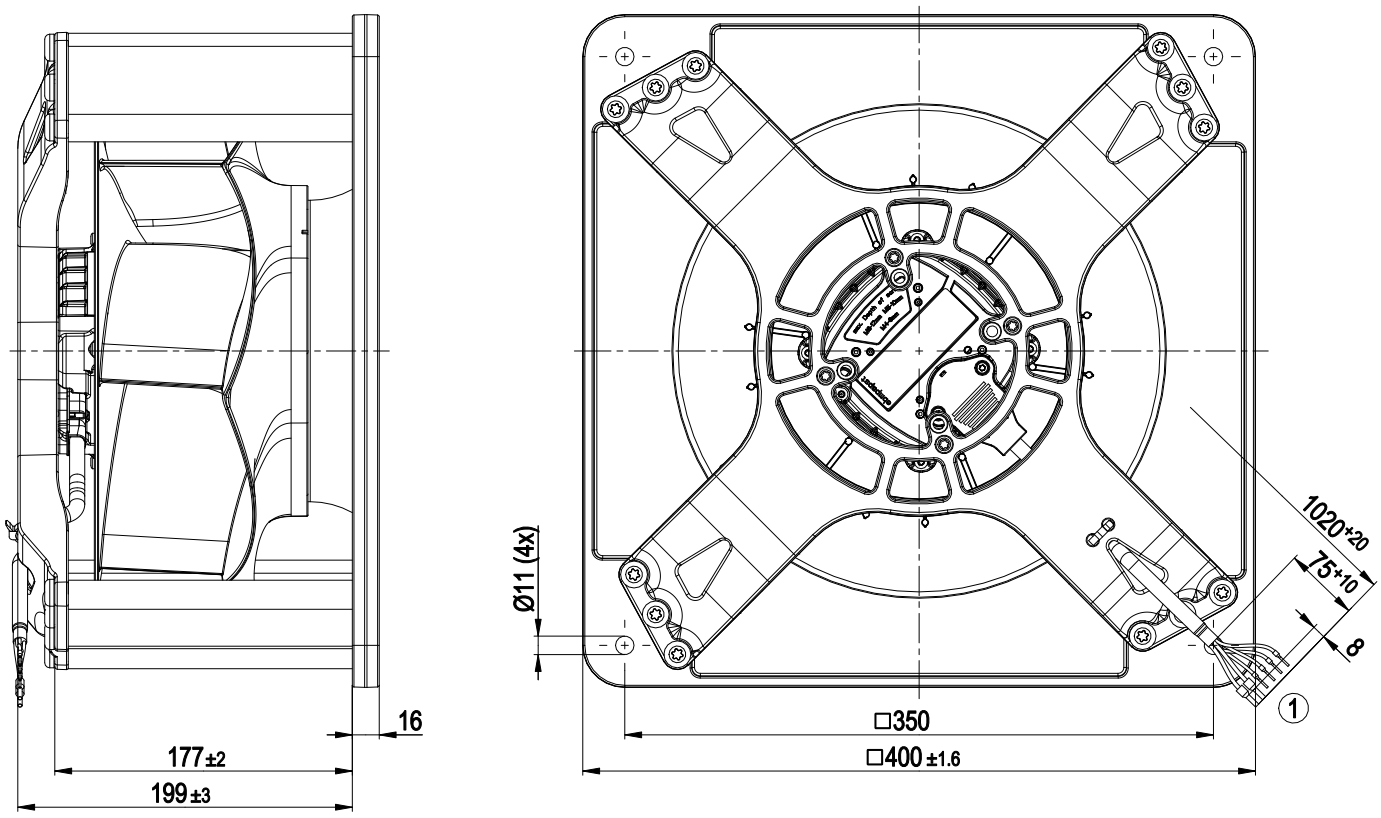
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Product drawing



1	2x cable BETAtrans® GKW R 2.5 mm², 4x cable BETAtrans® GKW R 1.0 mm²
	6x wire-end ferrule

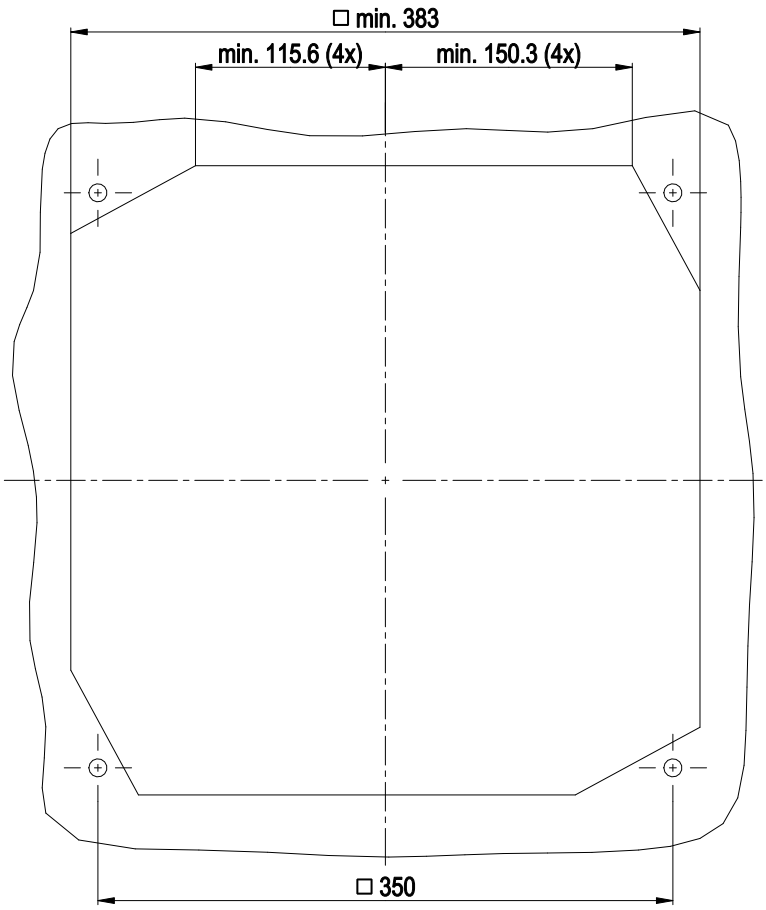
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Mounting dimensions



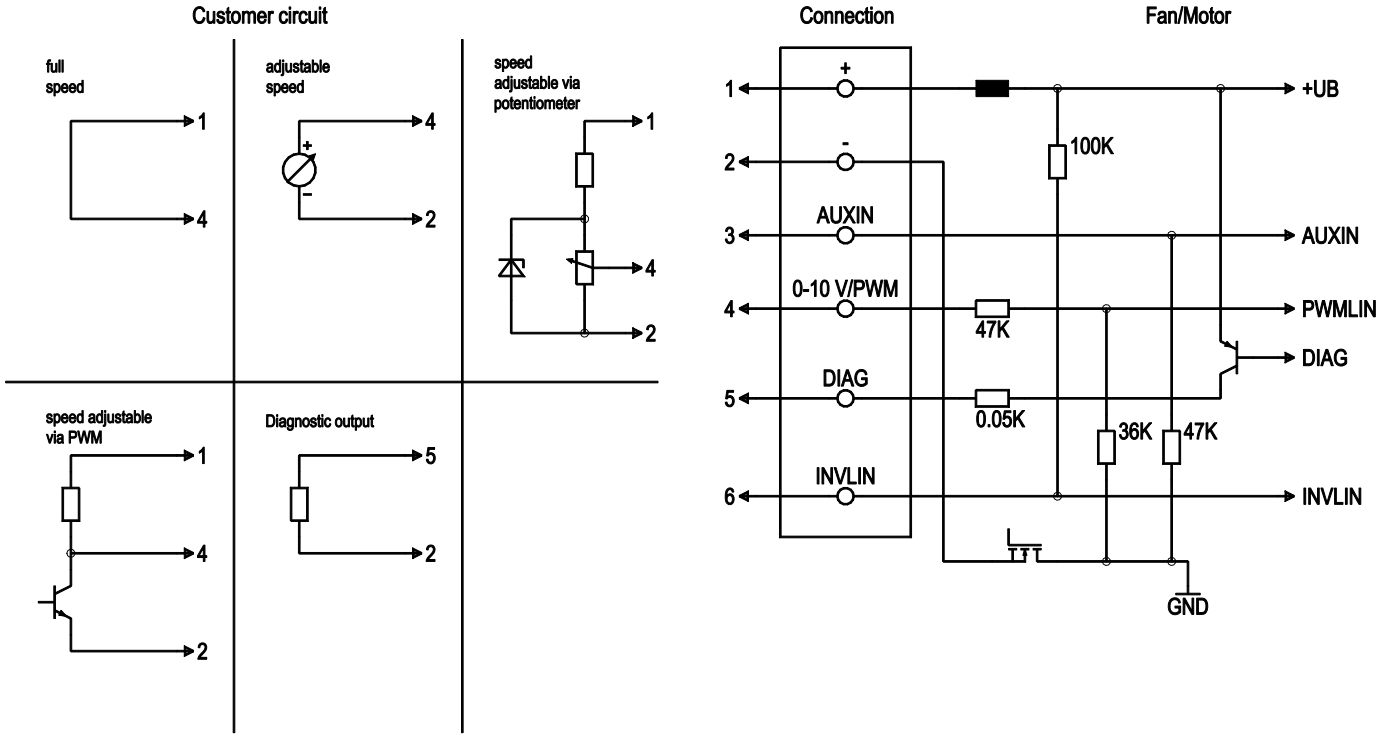
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Connection diagram



No.	Conn.	Designation	Color	Function/assignment
	1	+	black	Power supply, see nameplate for voltage range
	2	-	brown	Power supply, see nameplate for voltage range
	3	AUXIN	blue	Digital input: when active (> 4 V), value of PWM signal is halved
	4	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)
	5	DIAG	white	Diagnostic output: open collector, Isink max = 10 mA, Ri > 50 Ω Fan OK -> low; fan error -> high
	6	INVLIN	orange	Control input, inverse linear

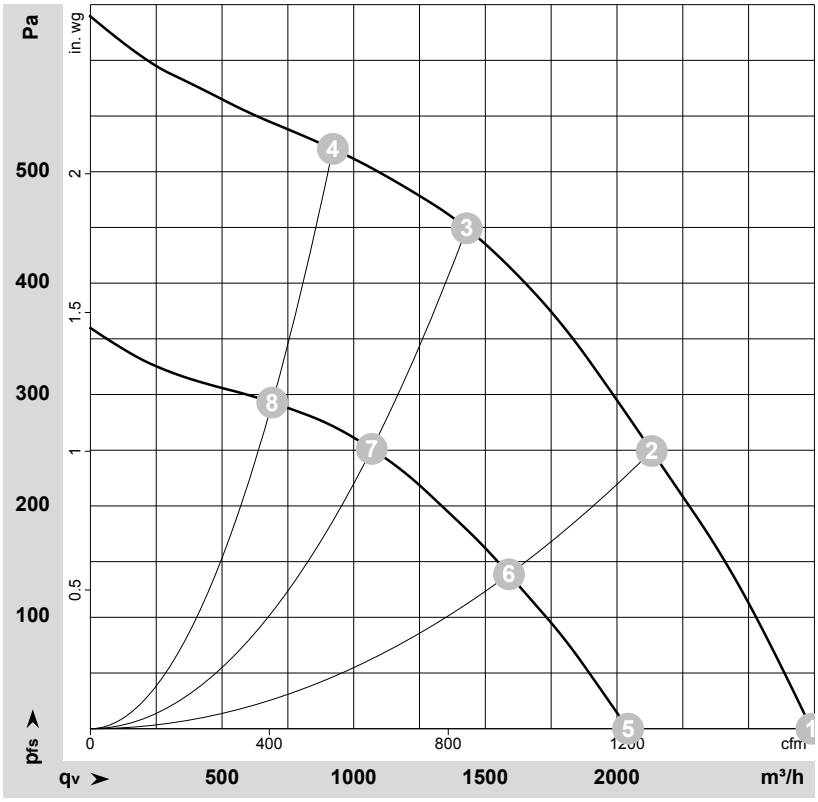
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Curves: Air performance



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-160664-1
Measurement: LU-160865-1

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	24-32	2350	252	10.50*	72	80	2740	0	1610	0.00
2	24-32	2280	298	12.40*	69	75	2130	250	1255	1.00
3	24-32	2265	304	12.60*	67	73	1430	450	840	1.81
4	24-32	2305	280	11.70*	68	74	920	520	540	2.09
5	16	1745	107	6.70			2040	0	1200	0.00
6	16	1715	124	7.77			1590	139	935	0.56
7	16	1700	133	8.33			1070	251	630	1.01
8	16	1730	119	7.48			690	293	405	1.18

U = Voltage · n = Speed (rpm) · P_{ed} = Power consumption · I = Current draw · * = Current measured at nominal voltage · 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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