



# Rotary Vane Pumps

## Miniature Series



### PRODUCT FEATURES

- Maintenance free
- Oil-less
- Compact
- Pulsation free
- High flow
- Low vibration
- No valves
- Reversible

### TYPICAL APPLICATIONS


























































- Automotive
- Medical
- Analysis
- Automation
- Fuel Cell



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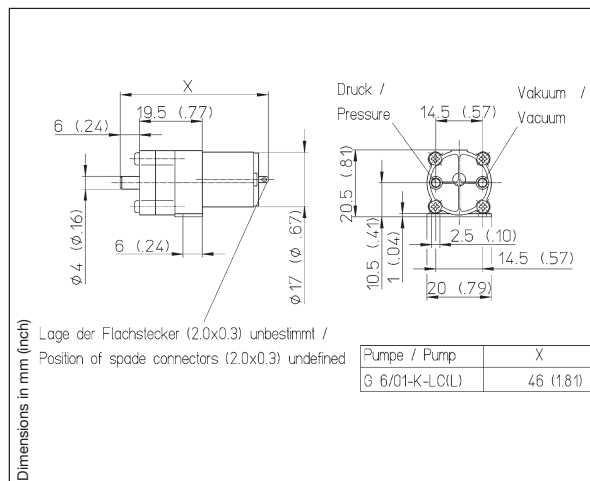
# Rotary Vane Vacuum and Pressure Pumps

## Product Overview

Model	Flow	Max. Pressure	Max. vaccum	Page
<b>G 01-K-LC</b>	2,2 l/min 	80 mbar 	7 % 	<b>3</b>
<b>G 01-K-EB</b>	1,4 l/min 	40 mbar 	4 % 	<b>4</b>
<b>G 01 EB</b>	1,6 l/min 	180 mbar 	20 % 	<b>5</b>
<b>G 01-4 EB</b>	1,4 l/min 	280 mbar 	29 % 	<b>6</b>
<b>G 02 EB</b>	3,6 l/min 	190 mbar 	19 % 	<b>7</b>
<b>G 02-4 EB</b>	3,7 l/min 	310 mbar 	31 % 	<b>8</b>
<b>G 02-8</b>	2,7 l/min 	410 mbar 	37 % 	<b>9</b>
<b>BL-G 02-4</b>	2,1 l/min 	200 mbar 	19 % 	<b>10</b>
<b>G 04 EB</b>	6,8 l/min 	150 mbar 	16 % 	<b>11</b>
<b>G 04-4 EB</b>	5,1 l/min 	240 mbar 	26 % 	<b>12</b>
<b>G 04-8</b>	4,4 l/min 	260 mbar 	25 % 	<b>13</b>
<b>G 045-LC</b>	6,5 l/min 	750 mbar 	63 % 	<b>14</b>
<b>G 045</b>	6,1 l/min 	750 mbar 	70 % 	<b>15</b>
<b>G 07</b>	21 l/min 	1400 mbar 	77 % 	<b>16</b>
<b>G 07-N</b>	20 l/min 	900 mbar 	72 % 	<b>17</b>
<b>G 08</b>	15,5 l/min 	1400 mbar 	83 % 	<b>18</b>
<b>G 08-T</b>	36 l/min 	1400 mbar 	93 % 	<b>19</b>
<b>BL-G 085 M</b>	8,5 l/min 	450 mbar 	50 % 	<b>20</b>
<b>G 09</b>	11 l/min 	370 mbar 	35 % 	<b>21</b>

# Rotary Vane Pump G 01-K-LC

<b>Flow</b>	<b>2,2 l/min</b>
<b>Max. pressure</b>	<b>80 mbar</b>
<b>Max. vacuum</b>	<b>7 %</b>



## Pneumatic Data

Description	G 6/01-K-LCL	G 6/01-K-LC
Part number	<b>50027</b>	<b>50017</b>
Max. flow	2,0 l/min	2,2 l/min
Max. intermittent pressure	60 mbar	80 mbar
Max. continuous pressure	25 mbar	25 mbar
Max. intermittent vacuum	6 %	7 %
Max. continuous vacuum	2,5 %	2,5 %

## Electrical Data

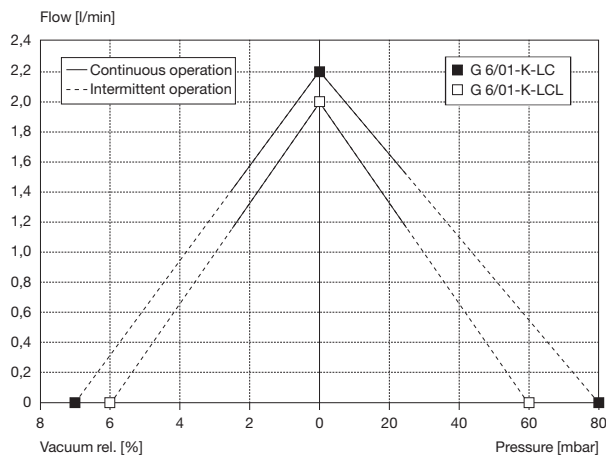
Motor type	Permanent magnet	Permanent magnet
Nominal voltage	6 V DC	6 V DC
Min. current consumption	0,17 A	0,18 A
Max. current consumption	0,23 A	0,27 A
Protection class	IP40	IP40
Motor bearing	Sleeve bearing	Sleeve bearing

## General Data

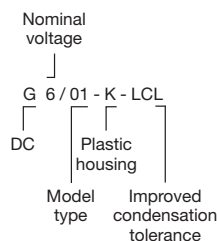
Ambient temperature	0 to 40 °C	0 to 40 °C
Weight	0,03 kg	0,03 kg
Direction of rotation	cw/ccw	cw/ccw

All listed values are measured at standard atmospheric conditions.

## Flow Curves



Model key:



500... Stock programme

Current consumption:

Min.: at open flow

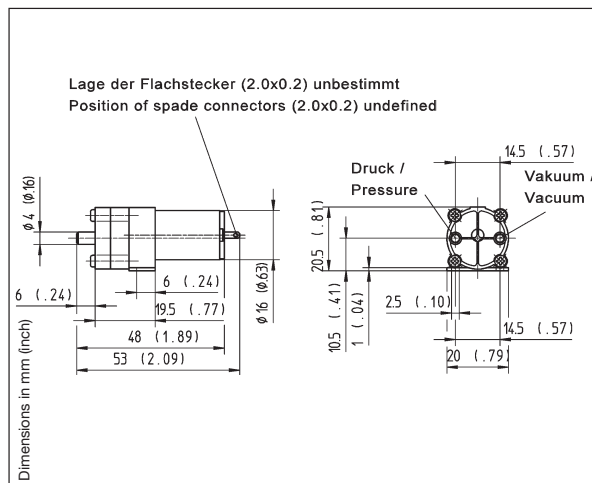
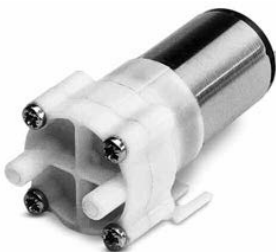
Max.: at max. intermittent operation

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# Rotary Vane Pump G 01-K-EB

<b>Flow</b>	<b>1,4 l/min</b>
<b>Max. pressure</b>	<b>40 mbar</b>
<b>Max. vacuum</b>	<b>4 %</b>



## Pneumatic Data

Description	G 6/01-K-EB12	G 6/01-K-EB9L	G 6/01-K-EB9	G 12/01-K-EB18L
Part number	<b>50251</b>	<b>50094</b>	50250	50080
Max. flow	0,9 l/min	1,2 l/min	1,4 l/min	1,2 l/min
Max. intermittent pressure	20 mbar	25 mbar	40 mbar	18 mbar
Max. continuous pressure	10 mbar	10 mbar	10 mbar	10 mbar
Max. intermittent vacuum	2 %	2,8 %	4 %	1,8 %
Max. continuous vacuum	1 %	1 %	1 %	1 %

## Electrical Data

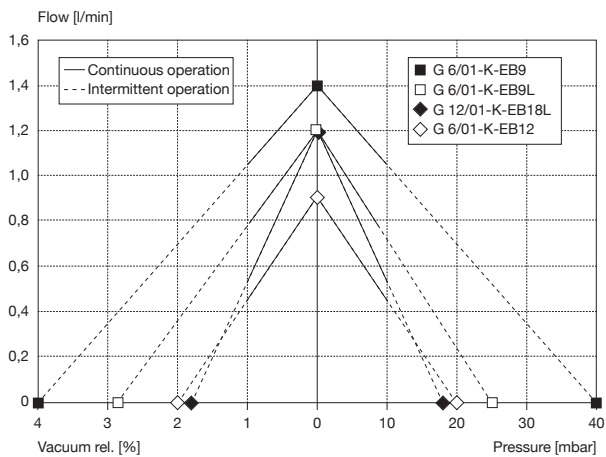
Motor type	Ironless Core DC	Ironless Core DC	Ironless Core DC	Ironless Core DC
Nominal voltage	6 V DC	6 V DC	6 V DC	12 V DC
Min. current consumption	18 mA	36 mA	50 mA	25 mA
Max. current consumption	30 mA	65 mA	70 mA	48 mA
Protection class	IP50	IP50	IP50	IP50
Motor bearing	Sleeve bearing	Sleeve bearing	Sleeve bearing	Sleeve bearing

## General Data

Ambient temperature	-20 to 40° C	-20 to 40° C	-20 to 40° C	-20 to 40° C
Weight	0,04 kg	0,04 kg	0,04 kg	0,04 kg
Direction of rotation	cw/ccw	cw/ccw	cw/ccw	cw/ccw

All listed values are measured at standard atmospheric conditions.

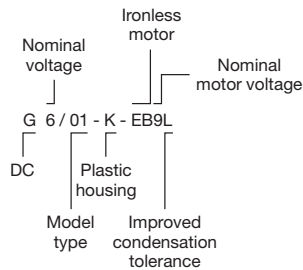
## Flow Curves



Model key:

50... Stock programme

Current consumption:  
Min.: at open flow  
Max.: at max. intermittent operation



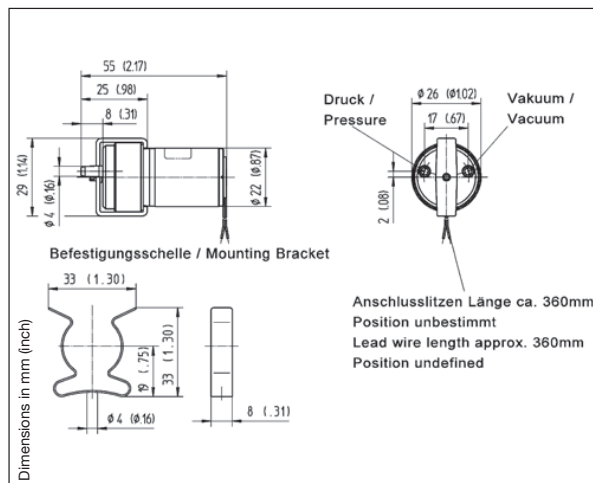
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# Rotary Vane Pump G 01 EB

Flow	1,6 l/min
Max. pressure	180 mbar
Max. vacuum	20 %



## Pneumatic Data

Description	G 3/01 EB	G 6/01 EB	G 12/01 EB	G 24/01 EB
Part number	50083	<b>50081</b>	<b>50096</b>	50099
Max. flow	0,9 l/min	1,0 l/min	1,4 l/min	1,6 l/min
Max. intermittent pressure	90 mbar	120 mbar	150 mbar	180 mbar
Max. continuous pressure	80 mbar	80 mbar	100 mbar	100 mbar
Max. intermittent vacuum	9 %	12 %	16 %	20 %
Max. continuous vacuum	8 %	8 %	10 %	10 %

## Electrical Data

Motor type	Ironless Core DC	Ironless Core DC	Ironless Core DC	Ironless Core DC
Nominal voltage	3 V DC	6 V DC	12 V DC	24 V DC
Min. current consumption	0,12 A	0,07 A	0,09 A	0,05 A
Max. current consumption	0,28 A	0,19 A	0,20 A	0,13 A
Protection class	IP50	IP50	IP50	IP50
Motor bearing	Sleeve bearing	Sleeve bearing	Sleeve bearing	Sleeve bearing

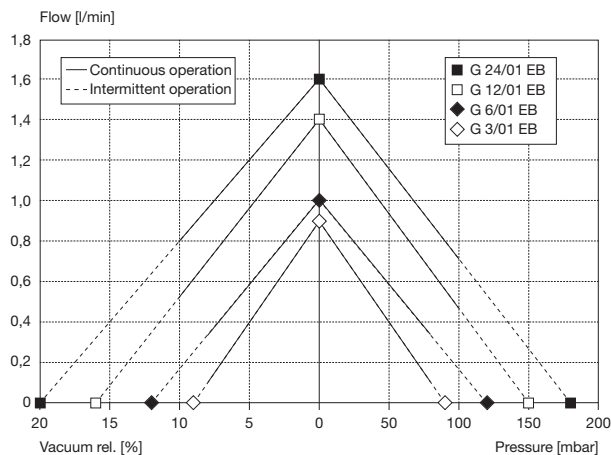
## General Data

Ambient temperature	-30 to 50 °C	-30 to 50 °C	-30 to 50 °C	-30 to 50 °C
Weight	0,1 kg	0,1 kg	0,1 kg	0,1 kg
Direction of rotation	cw	cw	cw	cw

Pumps include mounting bracket.

All listed values are measured at standard atmospheric conditions.

## Flow Curves



Model key:

Nominal voltage  
G 6 / 01 EB  
DC  
Ironless motor  
Model type

500... Stock programme

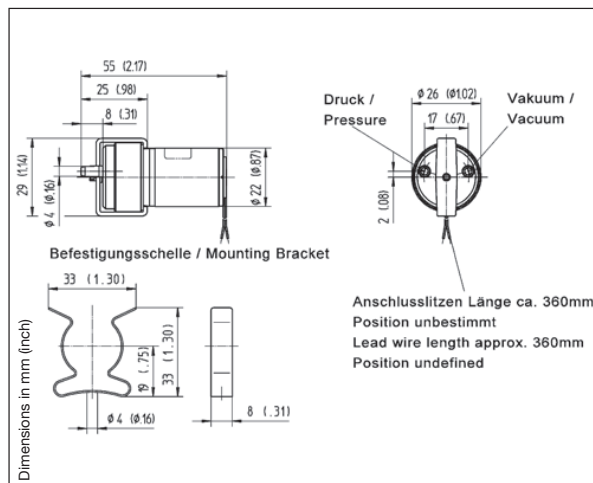
Current consumption:  
Min.: at open flow  
Max.: at max. intermittent operation

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# Rotary Vane Pump G 01-4-EB

Flow	1,4 l/min
Max. pressure	280 mbar
Max. vacuum	29 %



## Pneumatic Data

Description	G 6/01-4 EB	G 12/01-4 EB	G 24/01-4 EB
Part number	50088	50090	50092
Max. flow	1,0 l/min	1,4 l/min	1,4 l/min
Max. intermittent pressure	180 mbar	280 mbar	280 mbar
Max. continuous pressure	100 mbar	100 mbar	100 mbar
Max. intermittent vacuum	20 %	28 %	29 %
Max. continuous vacuum	10 %	10 %	10 %

## Electrical Data

Motor type	Ironless Core DC	Ironless Core DC	Ironless Core DC
Nominal voltage	6 V DC	12 V DC	24 V DC
Min. current consumption	0,10 A	0,11 A	0,06 A
Max. current consumption	0,32 A	0,31 A	0,17 A
Protection class	IP50	IP50	IP50
Motor bearing	Sleeve bearing	Sleeve bearing	Sleeve bearing

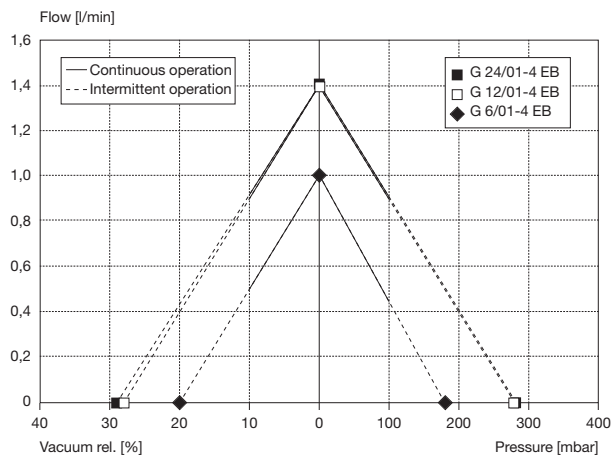
## General Data

Ambient temperature	-30 to 50 °C	-30 to 50 °C	-30 to 50 °C
Weight	0,1 kg	0,1 kg	0,1 kg
Direction of rotation	cw/ccw	cw/ccw	cw/ccw

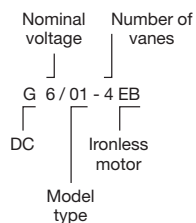
Pumps include mounting bracket.

All listed values are measured at standard atmospheric conditions.

## Flow Curves



Model key:



500... Stock programme

Current consumption:

Min.: at open flow

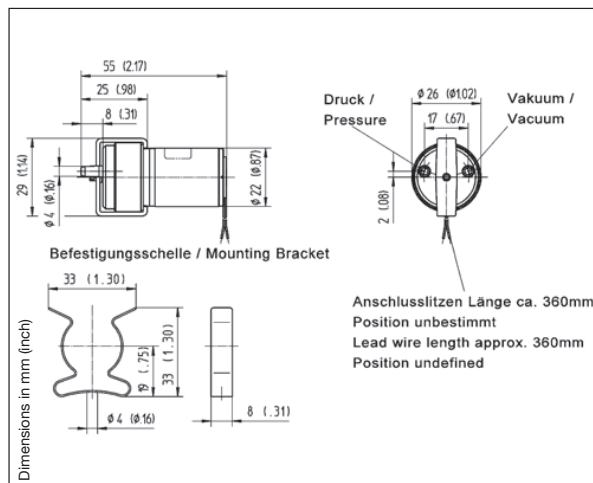
Max.: at max. intermittent operation

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# Rotary Vane Pump G 02 EB

Flow	3,6 l/min
Max. pressure	190 mbar
Max. vacuum	19 %



## Pneumatic Data

Description	G 3/02 EB	G 6/02 EB	G 12/02 EB	G 24/02 EB
Part number	50084	50103	50095	50098
Max. flow	2,4 l/min	2,6 l/min	3,6 l/min	3,6 l/min
Max. intermittent pressure	110 mbar	120 mbar	180 mbar	190 mbar
Max. continuous pressure	90 mbar	80 mbar	100 mbar	100 mbar
Max. intermittent vacuum	11 %	12 %	18 %	19 %
Max. continuous vacuum	9 %	8 %	10 %	10 %

## Electrical Data

Motor type	Ironless Core DC	Ironless Core DC	Ironless Core DC	Ironless Core DC
Nominal voltage	3 V DC	6 V DC	12 V DC	24 V DC
Min. current consumption	0,16 A	0,09 A	0,09 A	0,07 A
Max. current consumption	0,53 A	0,30 A	0,33 A	0,18 A
Protection class	IP50	IP50	IP50	IP50
Motor bearing	Sleeve bearing	Sleeve bearing	Sleeve bearing	Sleeve bearing

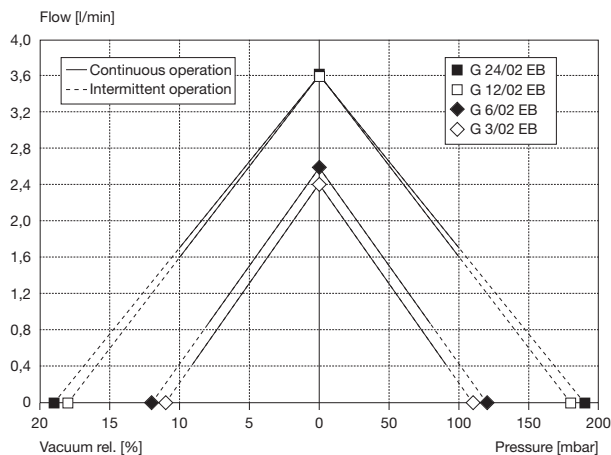
## General Data

Ambient temperature	-30 to 50 °C	-30 to 50 °C	-30 to 50 °C	-30 to 50 °C
Weight	0,1 kg	0,1 kg	0,1 kg	0,1 kg
Direction of rotation	cw	cw	cw	cw

Pumps include mounting bracket.

All listed values are measured at standard atmospheric conditions.

## Flow Curves



Model key:

Nominal voltage  
G 6 / 02 EB  
DC  
Ironless motor  
Model type

50... Stock programme

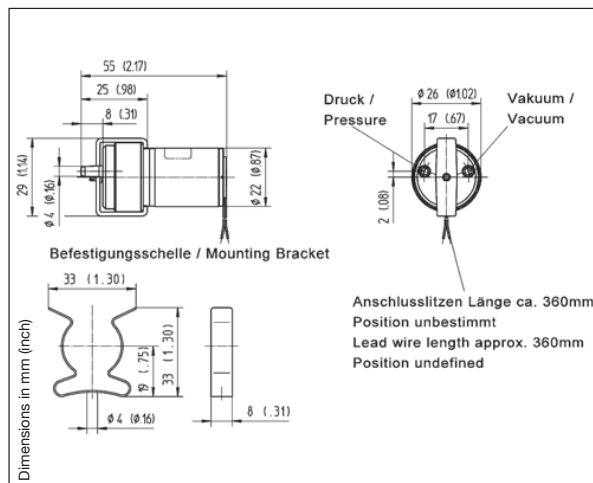
Current consumption:  
Min.: at open flow  
Max.: at max. intermittent operation

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# Rotary Vane Pump G 02-4 EB

Flow	3,7 l/min
Max. pressure	310 mbar
Max. vacuum	31 %



## Pneumatic Data

Description	G 6/02-4 EB	G 12/02-4 EB	G 24/02-4 EB
Part number	50089	50091	50093
Max. flow	2,6 l/min	3,5 l/min	3,7 l/min
Max. intermittent pressure	230 mbar	310 mbar	310 mbar
Max. continuous pressure	100 mbar	100 mbar	100 mbar
Max. intermittent vacuum	23 %	31 %	31 %
Max. continuous vacuum	10 %	10 %	10 %

## Electrical Data

Motor type	Ironless Core DC	Ironless Core DC	Ironless Core DC
Nominal voltage	6 V DC	12 V DC	24 V DC
Min. current consumption	0,13 A	0,15 A	0,09 A
Max. current consumption	0,53 A	0,51 A	0,27 A
Protection class	IP50	IP50	IP50
Motor bearing	Sleeve bearing	Sleeve bearing	Sleeve bearing

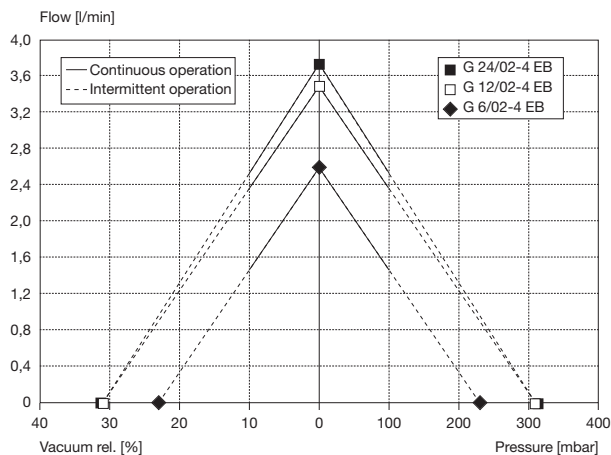
## General Data

Ambient temperature	-30 to 50 °C	-30 to 50 °C	-30 to 50 °C
Weight	0,1 kg	0,1 kg	0,1 kg
Direction of rotation	cw/ccw	cw/ccw	cw/ccw

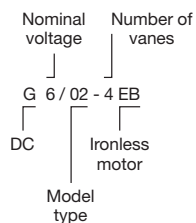
Pumps include mounting bracket.

All listed values are measured at standard atmospheric conditions.

## Flow Curves



Model key:



500... Stock programme

Current consumption:

Min.: at open flow

Max.: at max. intermittent operation

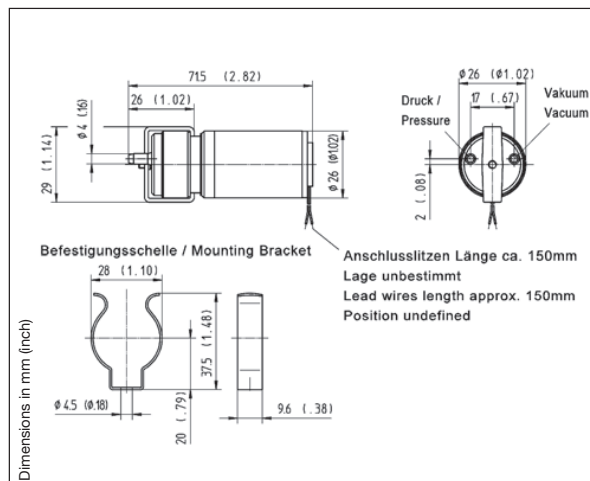
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# Rotary Vane Pump G 02-8

Flow	2,7 l/min
Max. pressure	410 mbar
Max. vacuum	37 %



## Pneumatic Data

Description	G 6/02-8	G 12/02-8
Part number	<b>50163</b>	<b>50165</b>
Max. flow	2,6 l/min	2,7 l/min
Max. intermittent pressure	410 mbar	410 mbar
Max. continuous pressure	200 mbar	200 mbar
Max. intermittent vacuum	37 %	37 %
Max. continuous vacuum	20 %	20 %

## Electrical Data

Motor type	Ironless Core DC	Ironless Core DC
Nominal voltage	6 V DC	12 V DC
Min. current consumption	0,23 A	0,11 A
Max. current consumption	0,70 A	0,35 A
Protection class	IP50	IP50
Motor bearing	Ball bearing	Ball bearing

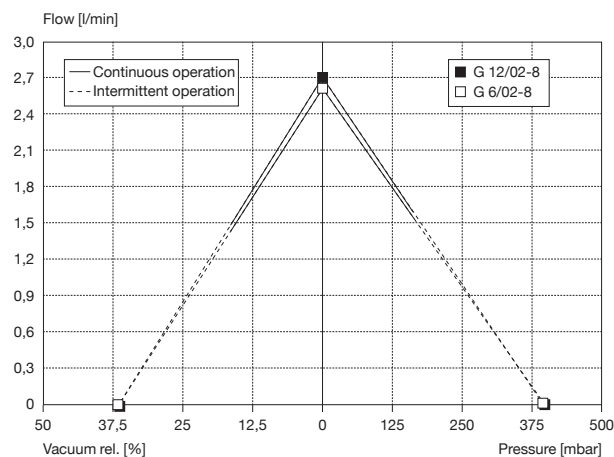
## General Data

Ambient temperature	-30 to 50 °C	-30 to 50 °C
Weight	0,13 kg	0,13 kg
Direction of rotation	cw/ccw	cw/ccw

Pumps include mounting bracket.

All listed values are measured at standard atmospheric conditions.

## Flow Curves



Model key:

Nominal voltage  
Number of vanes  
G 6 / 02 - 8  
DC  
Model type

501... Stock programme

Current consumption:

Min.: at open flow

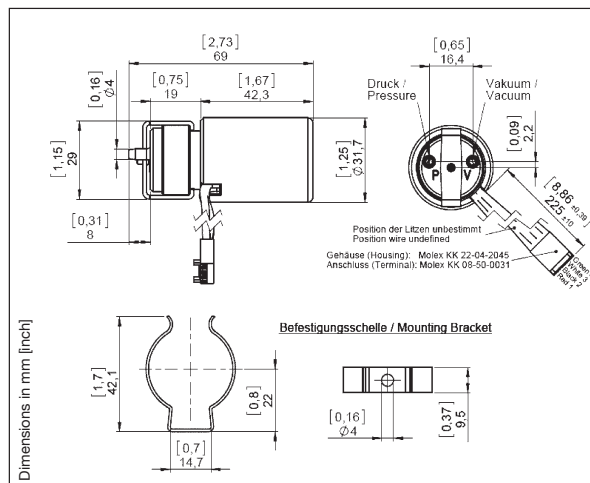
Max.: at max. intermittent operation

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# Rotary Vane Pump BL-G 02-4

Flow	2,4 l/min
Max. pressure	200 mbar
Max. vacuum	22 %



## Pneumatic Data

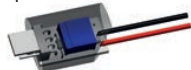
Description	BL-G 12/02-4
Part number	<b>50180</b>
Max. flow	2,1 l/min
Max. intermittent pressure	200 mbar
Max. continuous pressure	150 mbar
Max. intermittent vacuum	19 %
Max. continuous vacuum	15 %

## Electrical Data

Motor type	Brushless DC
Nominal voltage	12 V DC
Drive electronics	integrated with reverse supply voltage protection
Min. current consumption	0,16 A
Max. current consumption	0,33 A
Protection class	IP00
Motor bearing	Ball bearing
Connector	Housing: Molex KK 22-01-2045
	Terminal: Molex KK 08-50-0031

## Wiring diagram

Optional:



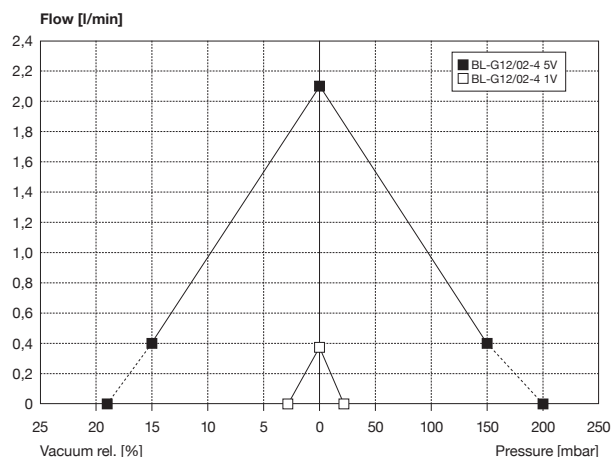
Adapter for 2-wire duty incl. potentiometer for speed adjustment  
part number 29011932

Pin	Function	Colour	Control
Pin 1	V Supply	Red	12 VDC (max. voltage range: 10..18 VDC) 24 VDC (max. voltage range: 10..28 VDC)
Pin 2	Ground	Black	Ground for Vsupply (PIN 1) and Speed Control (PIN3)
Pin 3	Speed control	White	analog: 0..5 VDC (max. 28V) PWM: 6..20 kHz - 14..96% Speed voltage input threshold: 0,2 V
Pin 4	Tacho out	Green	18 pulses per revolution Pulse time „LOW“: 195 µs Output level „LOW“: 0 / max. 0,5 V Output level „HIGH“: min. 4 V / max. 5 V

## General Data

Ambient temperature	0 to 50 °C
Weight	0,13 kg
Direction of rotation	cw

## Flow Curves



Pumps include mounting bracket

Above performance values are based on max. control voltage 5V

All listed values are measured at standard atmospheric conditions and at 50Hz.

Model key:

Nominal voltage  
 Number of vanes  
 BL - G 12/02 - 4  
 Brushless motor  
 Model type  
 DC

501... Stock programme

Current consumption:

Min.: at open flow

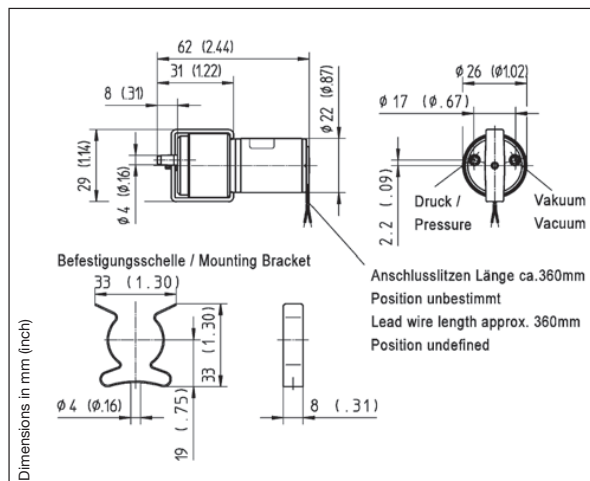
Max.: at max. intermittent operation

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# Rotary Vane Pump G 04 EB

<b>Flow</b>	<b>6,8 l/min</b>
<b>Max. pressure</b>	<b>150 mbar</b>
<b>Max. vacuum</b>	<b>16 %</b>



### Pneumatic Data

Description	G 3/04 EB	G 6/04 EB	G 12/04 EB	G 24/04 EB
Part number	<b>50085</b>	<b>50102</b>	<b>50097</b>	<b>50104</b>
Max. flow	4,5 l/min	4,7 l/min	6,2 l/min	6,8 l/min
Max. intermittent pressure	100 mbar	110 mbar	140 mbar	150 mbar
Max. continuous pressure	50 mbar	50 mbar	50 mbar	40 mbar
Max. intermittent vacuum	11 %	12 %	15 %	16 %
Max. continuous vacuum	5 %	5 %	5 %	4 %

### Electrical Data

Motor type	Ironless Core DC	Ironless Core DC	Ironless Core DC	Ironless Core DC
Nominal voltage	3 V DC	6 V DC	12 V DC	24 V DC
Min. current consumption	0,26 A	0,16 A	0,18 A	0,11 A
Max. current consumption	0,80 A	0,48 A	0,47 A	0,26 A
Protection class	IP50	IP50	IP50	IP50
Motor bearing	Ball bearing/Sleeve bearing	Ball bearing/Sleeve bearing	Ball bearing/Sleeve bearing	Ball bearing/Sleeve bearing

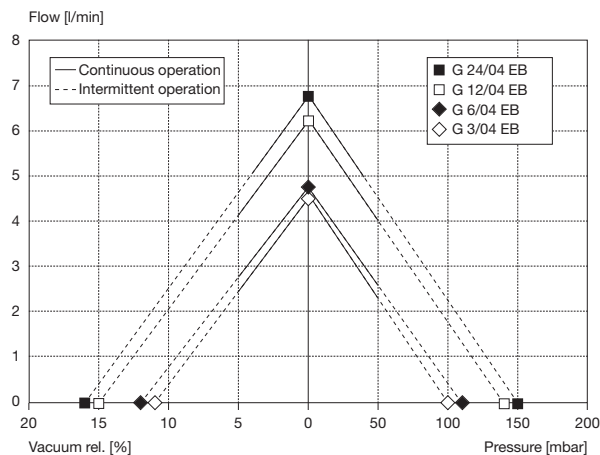
## General Data

Ambient temperature	-30 to 50 °C	-30 to 50 °C	-30 to 50 °C	-30 to 50 °C
Weight	0,1 kg	0,1 kg	0,1 kg	0,1 kg
Direction of rotation	cw	cw	cw	cw

Pumps include mounting bracket.

All listed values are measured at standard atmospheric conditions.

## Flow Curves



Model key:

50... Stock programme

Nominal  
voltage

G 6 / 04 EB

└─ DC      └─ Ironless motor

Model  
type

Current consumption:

Min.: at open flow

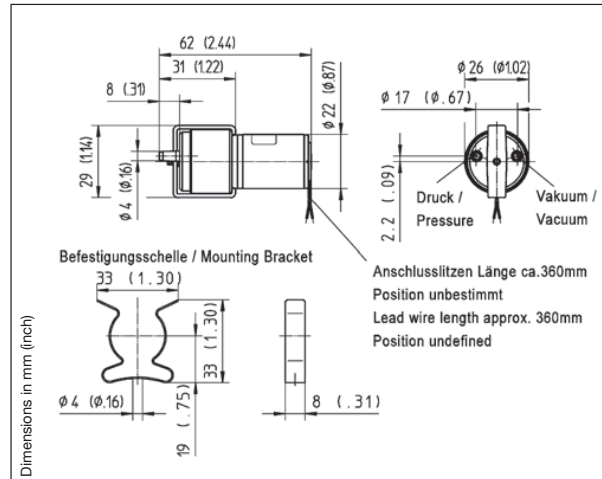
Max.: at max. inter

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# Rotary Vane Pump G 04-4-EB

<b>Flow</b>	<b>5,1 l/min</b>
<b>Max. pressure</b>	<b>240 mbar</b>
<b>Max. vacuum</b>	<b>26 %</b>



## Pneumatic Data

Description	G 6/04-4 EB	G 12/04-4 EB
Part number	<b>50101</b>	<b>50100</b>
Max. flow	4,0 l/min	5,1 l/min
Max. intermittent pressure	200 mbar	240 mbar
Max. continuous pressure	50 mbar	50 mbar
Max. intermittent vacuum	21 %	26 %
Max. continuous vacuum	5 %	5 %

## Electrical Data

Motor type	Ironless Core DC	Ironless Core DC
Nominal voltage	6 V DC	12 V DC
Min. current consumption	0,30 A	0,29 A
Max. current consumption	0,85 A	0,70 A
Protection class	IP50	IP50
Motor bearing	Ball bearing/Sleeve bearing	Ball bearing/Sleeve bearing

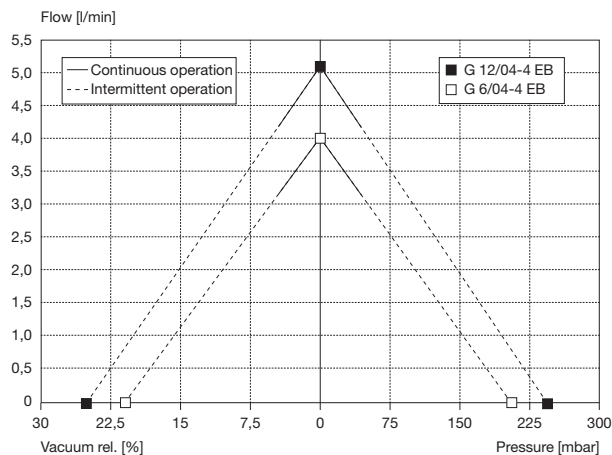
## General Data

Ambient temperature	-30 to 50 °C	-30 to 50 °C
Weight	0,1 kg	0,1 kg
Direction of rotation	cw/ccw	cw/ccw

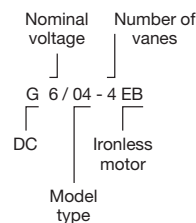
Pumps include mounting bracket.

All listed values are measured at standard atmospheric conditions.

## Flow Curves



Model key:



50... Stock programme

Current consumption:

Min.: at open flow

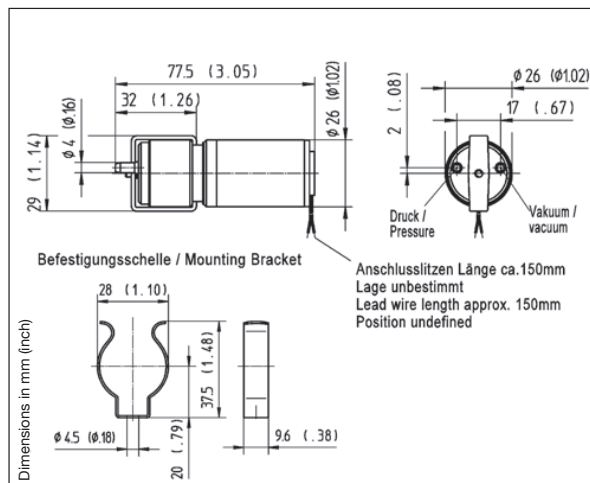
Max.: at max. intermittent operation

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# Rotary Vane Pump G 04-8

Flow	4,4 l/min
Max. pressure	260 mbar
Max. vacuum	25 %



## Pneumatic Data

Description	G 12/04-8
Part number	50119
Max. flow	4,4 l/min
Max. intermittent pressure	260 mbar
Max. continuous pressure	100 mbar
Max. intermittent vacuum	25 %
Max. continuous vacuum	10 %

## Electrical Data

Motor type	Ironless Core DC
Nominal voltage	12 V DC
Min. current consumption	0,21 A
Max. current consumption	0,51 A
Protection class	IP50
Motor bearing	Ball bearing

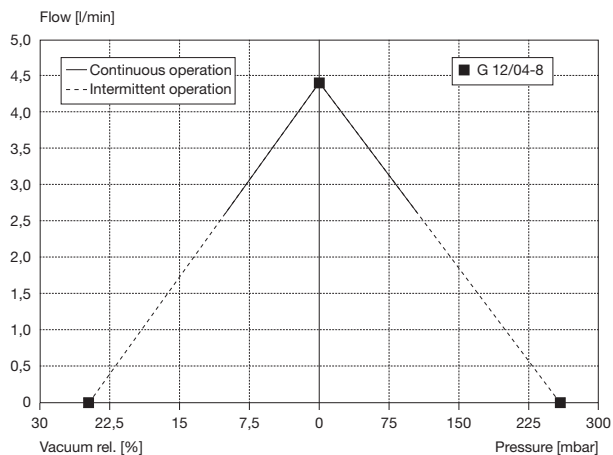
## General Data

Ambient temperature	-30 to 50 °C
Weight	0,14 kg
Direction of rotation	cw/ccw

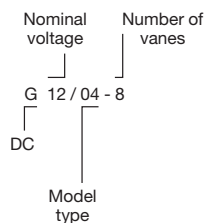
Pumps include mounting bracket.

All listed values are measured at standard atmospheric conditions.

## Flow Curves



Model key:



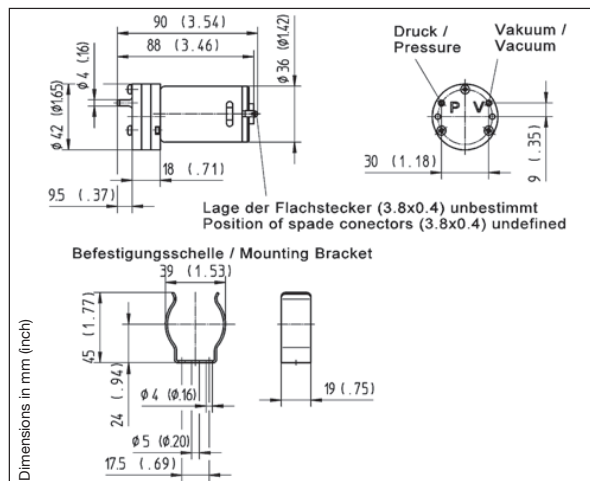
Current consumption:  
Min.: at open flow  
Max.: at max. intermittent operation

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# Rotary Vane Pump G 045-LC

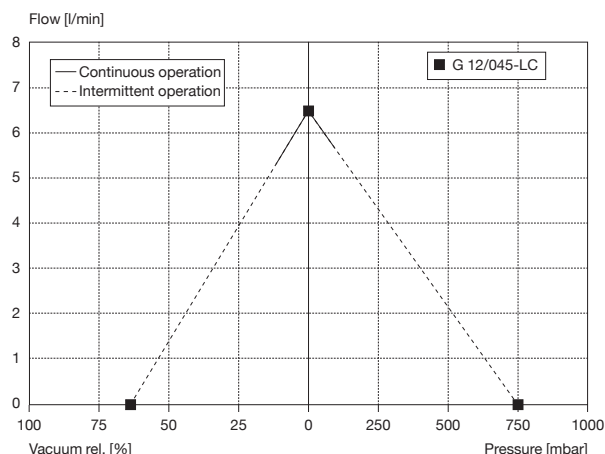
Flow	7,5 l/min
Max. pressure	900 mbar
Max. vacuum	63 %



Pneumatic Data	
Description	G 12/045-LC
Part number	50213
Max. flow	6,5 l/min
Max. intermittent pressure	750 mbar
Max. continuous pressure	100 mbar
Max. intermittent vacuum	63 %
Max. continuous vacuum	10 %
Electrical Data	
Motor type	Permanent magnet
Nominal voltage	12 V DC
Min. current consumption	1,8 A
Max. current consumption	3,5 A
Protection class	IP20
Motor bearing	Ball bearing / Sleeve bearing
General Data	
Ambient temperature	-10 to 40 °C
Weight	0,25 kg
Direction of rotation	cw/ccw

Pumps include mounting bracket.  
All listed values are measured at standard atmospheric conditions.

## Flow Curves



Model key:

Nominal voltage  
G 12 / 045 - LC  
DC  
Model type

502... Stock programme

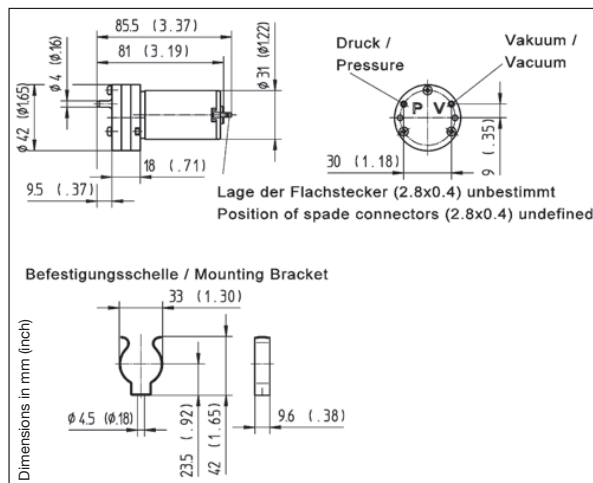
Current consumption:  
Min.: at open flow  
Max.: at max. intermittent operation

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# Rotary Vane Pump G 045

Flow	6,1 l/min
Max. pressure	750 mbar
Max. vacuum	70 %



## Pneumatic Data

Description	G 12/045	G 24/045
Part number	50200	50201
Max. flow	5,5 l/min	6,1 l/min
Max. intermittent pressure	650 mbar	750 mbar
Max. continuous pressure	150 mbar	150 mbar
Max. intermittent vacuum	58 %	70 %
Max. continuous vacuum	15 %	15 %

## Electrical Data

Motor type	Permanent magnet	Permanent magnet
Nominal voltage	12 V DC	24 V DC
Min. current consumption	0,64 A	0,33 A
Max. current consumption	1,36 A	0,77 A
Protection class	IP30	IP30
Motor bearing	Ball bearing	Ball bearing

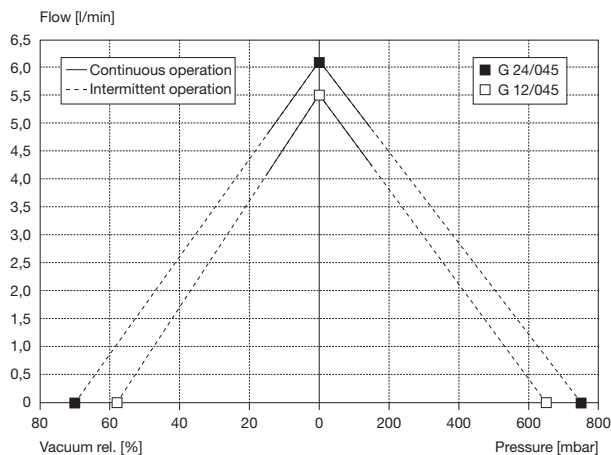
## General Data

Ambient temperature	10 to 40 °C	10 to 40 °C
Weight	0,25 kg	0,25 kg
Direction of rotation	cw/ccw	cw/ccw

Pumps include mounting bracket.

All listed values are measured at standard atmospheric conditions.

## Flow Curves



Model key:

Nominal  
voltage  
G 12 / 045  
DC  
Model  
type

50... Stock programme

Current consumption:

Min.: at open flow

Max.: at max. intermittent operation

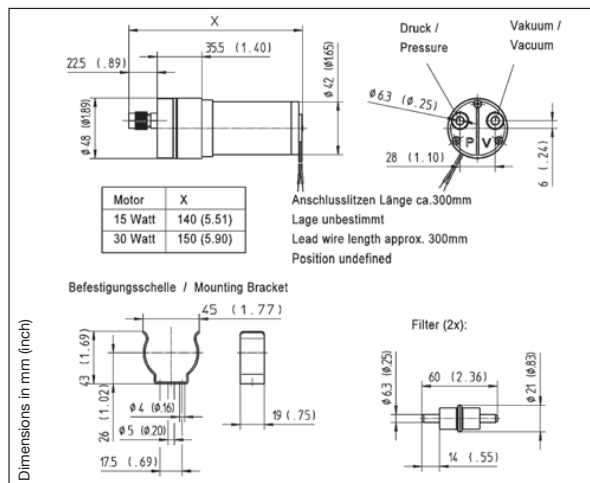
The information presented in this material is based on technical data and test results of nominal units. It is believed to be accurate and reliable and is offered as an aid to help in the selection of Thomas products. It is the responsibility of the user to determine the suitability of the product for the intended use and the user assumes all risk and liability whatsoever in connection therewith. Thomas does not warrant, guarantee or assume any obligation or liability in connection with this information.

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# Rotary Vane Pump G 07

Flow	21 l/min
Max. pressure	1,4 bar
Max. vacuum	77 %



## Pneumatic Data

Description	G 12/07-15 Watt	G 24/07-15 Watt	G 24/07-30 Watt
Part number	<b>50336</b>	<b>50218</b>	<b>50221</b>
Max. flow	17,0 l/min	17,5 l/min	21,0 l/min
Max. intermittent pressure	1,3 bar	1,0 bar	1,4 bar
Max. continuous pressure	0,3 bar		0,2 bar
Max. intermittent vacuum	76 %	75 %	77 %
Max. continuous vacuum	30 %		20 %

## Electrical Data

Motor type	Permanent magnet	Permanent magnet	Permanent magnet
Nominal voltage	12 V DC	24 V DC	24 V DC
Min. current consumption	1,9 A	1,1 A	1,9 A
Max. current consumption	3,2 A	1,6 A	2,5 A
Protection class	IP40	IP40	IP40
Motor bearing	Ball bearing	Ball bearing	Ball bearing

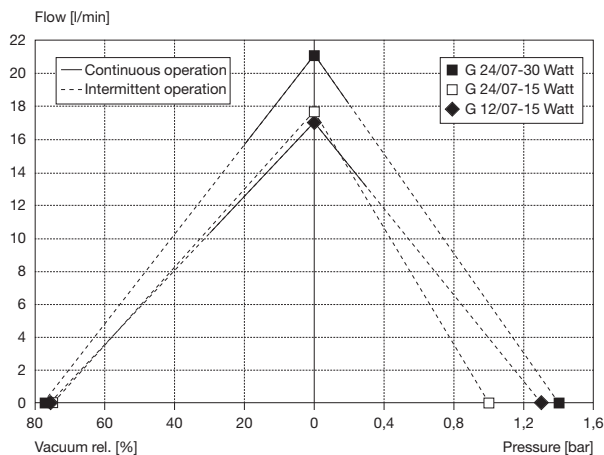
## General Data

Ambient temperature	-10 to 40 °C	-10 to 40 °C	-10 to 40 °C
Weight	0,6 kg	0,6 kg	0,7 kg
Direction of rotation	cw	cw	cw

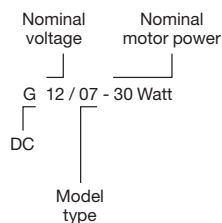
Pumps include tube connector (2x) G 1/8 to tube I.D. 6 mm, mounting bracket and filter (2x).

All listed values are measured at standard atmospheric conditions.

## Flow Curves



Model key:



50...

Stock programme

Current consumption:

Min.: at open flow

Max.: at max. intermittent operation

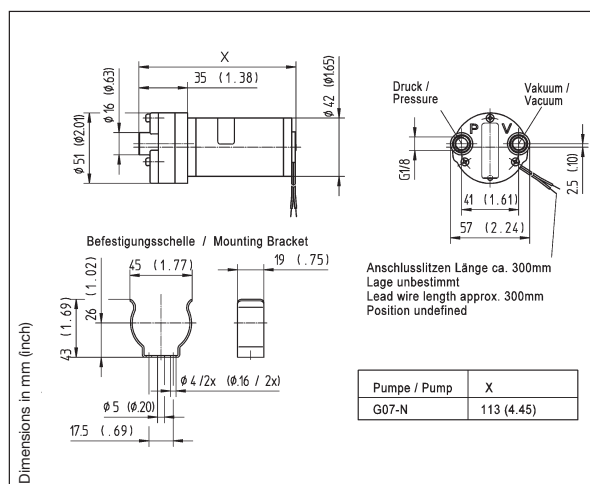
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# Rotary Vane Pump G 07-N

<b>Flow</b>	<b>20 l/min</b>
<b>Max. pressure</b>	<b>0,9 bar</b>
<b>Max. vacuum</b>	<b>72 %</b>



## Pneumatic Data

Description	G 12/07-N	G 24/07-N	G 24/07-N rev.
Part number	<b>50316</b>	50311	<b>50220</b>
Max. flow	20 l/min	18 l/min	17 l/min
Max. intermittent pressure	0,90 bar	0,80 bar	0,7 bar
Max. continuous pressure	0,25 bar	0,30 bar	0,3 bar
Max. intermittent vacuum	70 %	72 %	55 %
Max. continuous vacuum	25 %	30 %	30 %

## Electrical Data

Motor type	Permanent magnet	Permanent magnet	Permanent magnet
Nominal voltage	12 V DC	24 V DC	24 V DC
Min. current consumption	2,6 A	0,8 A	0,9 A
Max. current consumption	4,6 A	1,6 A	2,0 A
Protection class	IP40	IP40	IP40
Motor bearing	Ball bearing	Ball bearing	Ball bearing

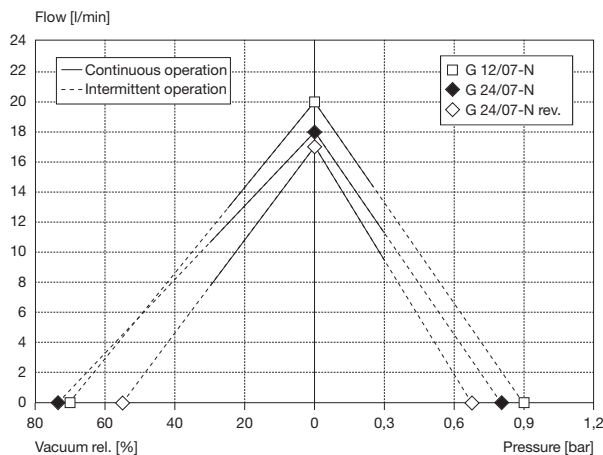
## General Data

Ambient temperature	-10 to 40 °C	-10 to 40 °C	-10 to 40 °C
Weight	0,5 kg	0,5 kg	0,5 kg
Direction of rotation	cw	cw	cw / ccw

Pumps include mounting bracket.

All listed values are measured at standard atmospheric conditions.

## Flow Curves



Model key:

50... Stock programme

Nominal voltage

G 12 / 07 - N rev Reversible

DC Resin bonded graphite housing

Model type

Current consumption:

Min.: at open flow

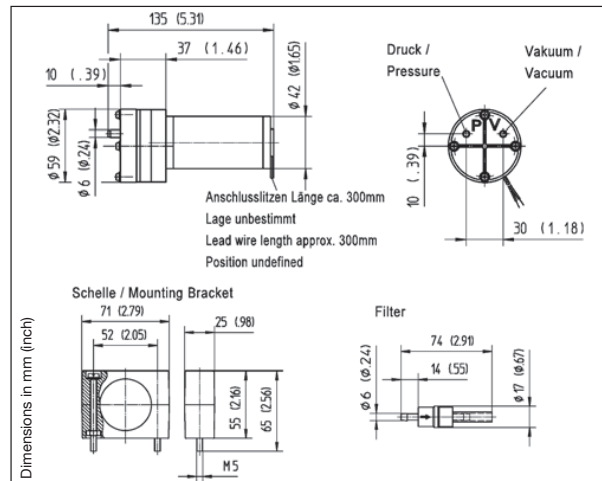
Max.: at max. intermittent operation

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# Rotary Vane Pump G 08

Flow	15,5 l/min
Max. pressure	1,4 bar
Max. vacuum	83 %



## Pneumatic Data

Description	G 12/08-30 Watt	G 24/08-30 Watt	G 24/08-30 Watt rev.
Part number	50325	50358	50360
Max. flow	15,5 l/min	15,5 l/min	15,5 l/min
Max. intermittent pressure	1,2 bar	1,4 bar	1,2 bar
Max. continuous pressure	0,3 bar	0,3 bar	0,3 bar
Max. intermittent vacuum	80 %	83 %	74 %
Max. continuous vacuum	30 %	30 %	30 %

## Electrical Data

Motor type	Permanent magnet	Permanent magnet	Permanent magnet
Nominal voltage	12 V DC	24 V DC	24 V DC
Min. current consumption	1,5 A	0,8 A	0,6 A
Max. current consumption	3,2 A	1,6 A	1,8 A
Protection class	IP40	IP40	IP40
Motor bearing	Ball bearing	Ball bearing	Ball bearing

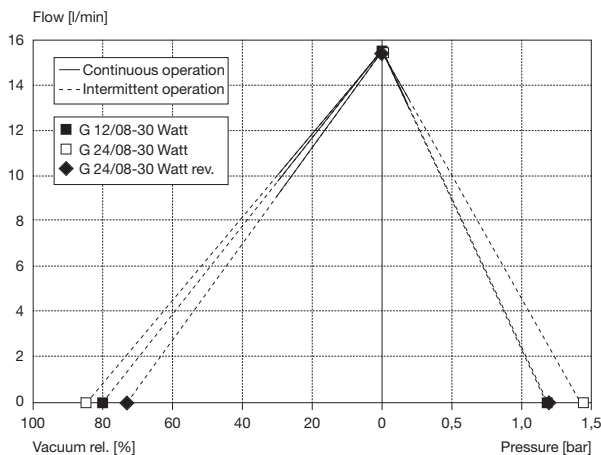
## General Data

Ambient temperature	-10 to 40 °C	-10 to 40 °C	-10 to 40 °C
Weight	0,75 kg	0,75 kg	0,75 kg
Direction of rotation	cw	cw	cw/ccw

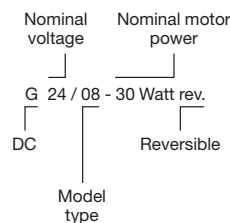
Pumps include mounting bracket and filter.

All listed values are measured at standard atmospheric conditions.

## Flow Curves



Model key:



503... Stock programme

Current consumption:

Min.: at open flow

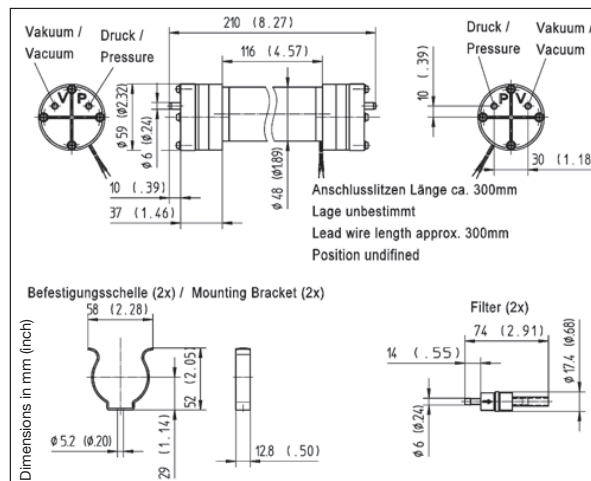
Max.: at max. intermittent operation

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# Rotary Vane Pump G 08-T

<b>Flow</b>	<b>36 l/min</b>
<b>Max. pressure</b>	<b>1,4 bar</b>
<b>Max. vacuum</b>	<b>93 %</b>



## Pneumatic Data

Description	G 12/08-T	G 12/08-T	G 24/08-T	G 24/08-T
Part number	<b>50241</b> connected in series	<b>50241</b> connected in parallel	<b>50238</b> connected in series	<b>50238</b> connected in parallel
Max. flow	17 l/min	33 l/min	19 l/min	36 l/min
Max. intermittent pressure		1,4 bar		1,4 bar
Max. intermittent vacuum	93 %	84 %	93 %	84 %

### Electrical Data

Motor type	Permanent magnet	Permanent magnet	Permanent magnet	Permanent magnet
Nominal voltage	12 V DC	12 V DC	24 V DC	24 V DC
Min. current consumption	4,0 A	4,0 A	2,0 A	2,0 A
Max. current consumption	5,0 A	8,0 A	2,5 A	4,0 A
Protection class	IP40	IP40	IP40	IP40
Motor bearing	Ball bearing	Ball bearing	Ball bearing	Ball bearing

## General Data

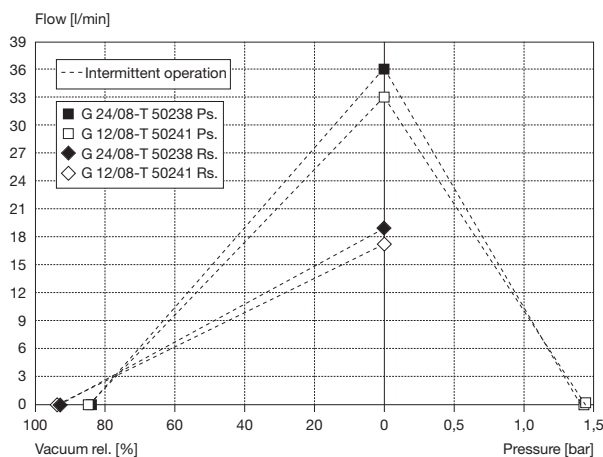
Ambient temperature	-10 to 40 °C	-10 to 40 °C	-10 to 40 °C	-10 to 40 °C
Weight	1,3 kg	1,3 kg	1,3 kg	1,3 kg
Direction of rotation	cw	cw	cw	cw

Pumps include mounting bracket (2x) and filter (2x).

Pumps include mounting bracket (2x) and filter (2x).  
These pumps are **not** suitable for continuous operation.

These pumps are **not** suitable for continuous operation.  
All listed values are measured at standard atmospheric conditions.

## Flow Curves



Model key:

50... Stock programme

Nominal voltage

G 12 / 08 - T

DC Double headed

Model type

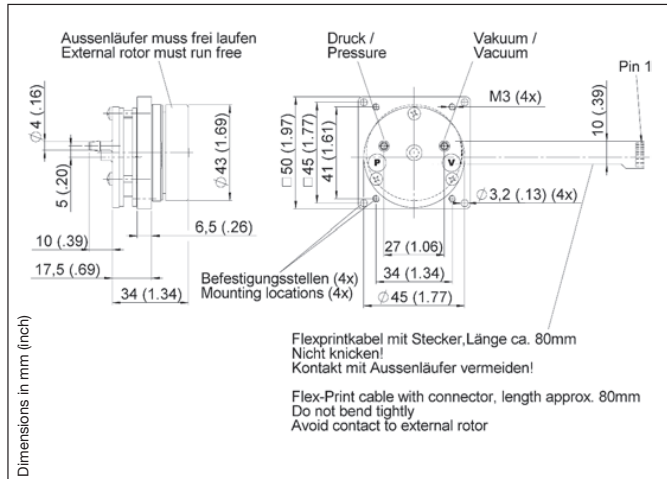
Current consumption:  
Min.: at open flow  
Max.: at max. intermittent operation

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# Rotary Vane Pump BL-G 085 M

Flow	8,5 l/min
Max. pressure	450 mbar
Max. vacuum	50 %



## Pneumatic Data

Description	BL-G 12/085 M
Part number	50209
Max. flow	8,5 l/min
Max. intermittent pressure	450 mbar
Max. continuous pressure	150 mbar
Max. intermittent vacuum	50 %
Max. continuous vacuum	15 %

## Electrical Data

Motor type*	Brushless DC
Nominal voltage	12 V DC
Min. current consumption	0,7 A
Max. current consumption	2,0 A
Protection class	IP00
Motor bearing	Ball bearing
Electrical connection	Flex-Print connector, 11 poles, pitch 1,0 mm, top contact style

## General Data

Ambient temperature	-40 to 60 °C
Weight	0,15 kg
Direction of rotation	cw/ccw

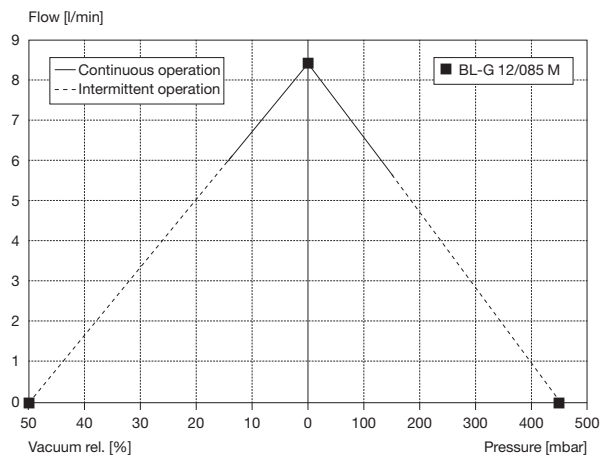
\* without electronics

All listed values are measured at standard atmospheric conditions.

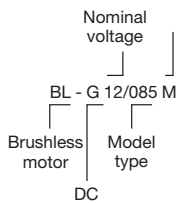
Please contact Thomas if further information regarding electrical connection and electronics is required.

Use provided mounting locations only. Do not allow force on either motor or pump head. Motor bearing can be damaged.

## Flow Curves



Model key:



50210 Stock programme

Current consumption:

Min.: at open flow  
Max.: at max. intermittent operation

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## Pin allocation:

Pin 1	4,5 - 18 VDC
Pin 2	Hall sensor 3
Pin 3	Hall sensor 1
Pin 4	Hall sensor 2
Pin 5	GND
Pin 6	Motor winding 3
Pin 7	Motor winding 2
Pin 8	Motor winding 1

## Option:

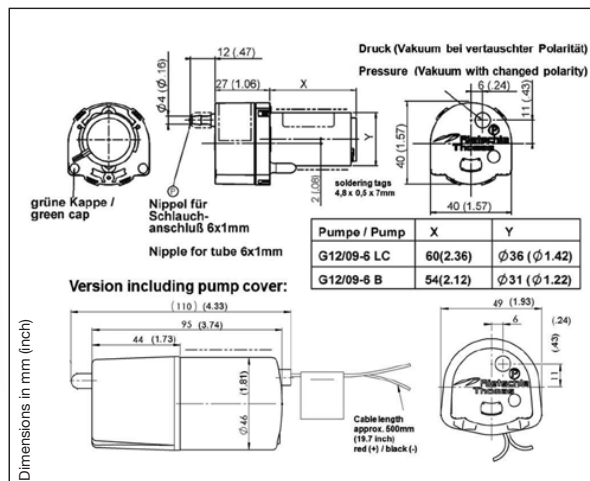
Adaptor for Flex-Print connector to terminal board, part number 63003

BL-G 12/085 M 50210 including external electronics (63002) + adaptor (63003) for Flex-Print connector

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# Rotary Vane Pump G 09

Flow	11 l/min
Max. pressure	370 mbar
Max. vacuum	35 %



## Pneumatic Data

Description	G 12/09-6 B	G 12/09-6 LC	G 24/09-6 LC
Part number	50330/50544	50555/50552 <sup>1)</sup>	50554/50556 <sup>1)</sup>
Max. flow	11,0 l/min	9,0 l/min	9,0 l/min
Max. intermittent pressure	370 mbar	350 mbar	350 mbar
Max. continuous pressure	200 mbar	150 mbar	150 mbar
Max. intermittent vacuum	32 %	35 %	35 %
Max. continuous vacuum	20 %	15 %	15 %

## Electrical Data

Motor type	Permanent magnet	Permanent magnet	Permanent magnet
Nominal voltage	12 V DC	12 V DC	24 V DC
Min. current consumption	0,7 A	0,7 A	0,4 A
Max. current consumption	1,8 A	2,2 A	1,3 A
Protection class	IP30	IP20	IP20
Motor bearing	Ball bearing	Ball bearing / Sleeve bearing	Ball bearing / Sleeve bearing

## General Data

Ambient temperature	-20 to 50 °C	-20 to 50 °C	-20 to 50 °C
Weight	0,24 kg	0,30 kg	0,30 kg
Direction of rotation	cw / ccw	cw / ccw	cw / ccw

Mounting bracket (Option) 31911/31914<sup>1)</sup> 31947/31914<sup>1)</sup>

All listed values are measured at standard atmospheric conditions.

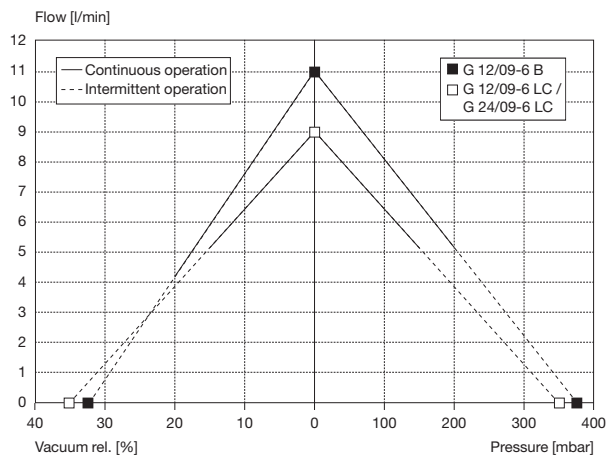
<sup>1)</sup> Pump including EPDM-cover for sound reduction.

For vacuum operation: change electrical polarity.

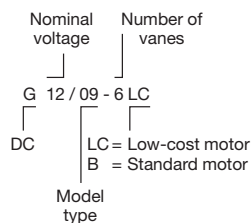
For noise reduction: do not remove green cap. To optimise flow: remove green cap.

Mounting on motor body only. Do not allow force on pump head.

## Flow Curves



Model key:



50... Stock programme

Current consumption:

Min.: at open flow

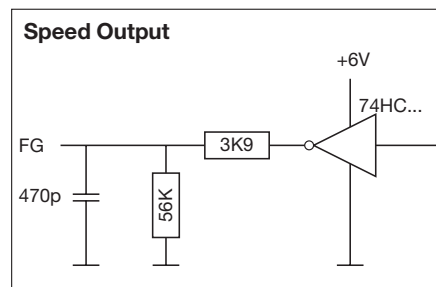
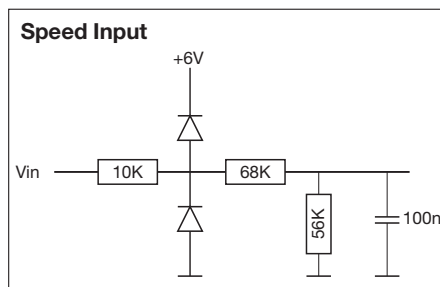
Max.: at max. intermittent operation

The information presented in this material is based on technical data and test results of nominal units. It is believed to be accurate and reliable and is offered as an aid to help in the selection of Thomas products. It is the responsibility of the user to determine the suitability of the product for the intended use and the user assumes all risk and liability whatsoever in connection therewith. Thomas does not warrant, guarantee or assume any obligation or liability in connection with this information.

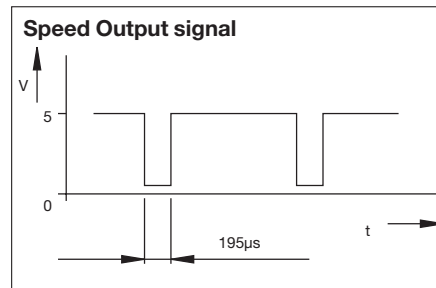
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# Wiring diagram (Brushless DC motor)

	Function	Colour	Control
Pin 1	V Supply	Red	12 VDC (max. voltage range: 10..18 VDC) 24 VDC (max. voltage range: 10..28 VDC)
Pin 2	Ground	Black	Ground for Vsupply (PIN 1) and Speed Control (PIN3)
Pin 3	Speed control	White	analog: 0..5 VDC (max. 28V) PWM: 6..20 kHz - 14..96% Speed voltage input threshold: 0,2 V
Pin 4	Tacho out	Green	18 pulses per revolution Pulse time „LOW“: 195 µs Output level „LOW“: 0 / max. 0,5 V Output level „HIGH“: min. 4 V / max. 5 V



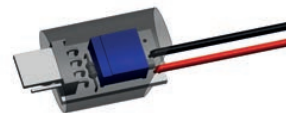
Optional: Adapter for 2-wire duty  
incl. potentiometer for  
speed adjustment



## Options / Accessories

P/N 29011932 **Adapter for BLDC motor**  
4-2 wire w/ manual speed control  
12 V DC “red”

P/N 29011933 **Adapter for BLDC motor**  
4-2 wire w/ manual speed control  
24 V DC “black”



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