

New perspectives with Danfoss Saginomiya Fan Speed Controllers

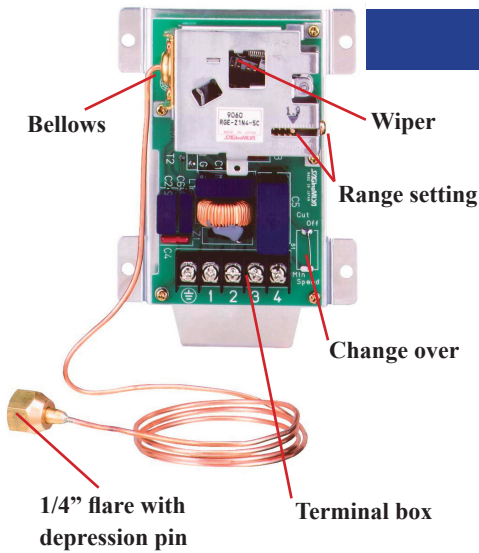


Simple and efficient



- Single and three phase versions
- “All in one” : pressure sensor and fan speed control
- Reliable sensing mechanism using bellows
- Simple to install and easy setting
- Multi-refrigerants : R22/ R407C/R404A/ R134a and R410A
- Weather-proof (IP54)
- CE/ EMC approved

APPLICATION AND PRINCIPLES OF OPERATION



Setting point is increased by turning the range adjusting screw clockwise. It is decreased by turning the screw counter clockwise. Adjustment should be within the range indicated for the setting pointer.

Cut off: Fan motor stops when the pressure decreases below the value “Pmin”.

Min. Speed: Fan motor operates at the Minimum Speed when the pressure decreases below the value “Pmin”.

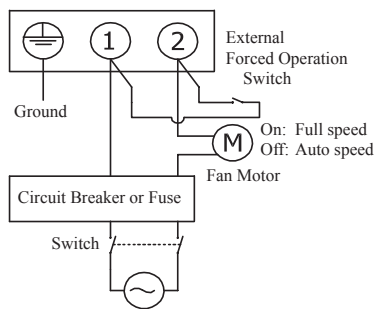
$$\begin{aligned}
 \text{“Pmin”} &= (\text{F.V.S} - \text{E.P.B}) \\
 \text{F.V.S} &= \text{pressure setting for maximum speed} \\
 \text{E.P.B} &= \text{proportional band}
 \end{aligned}$$

The RGE controls the speed of the condenser fan in refrigeration and air conditioning units that work all year long.

It keeps the condensing pressure at a steady level by changing the speed of the fan according to the required condensing pressure.

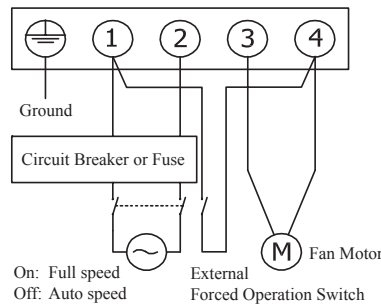
- All RGE models operate at low current down to 0.2A, allowing versatile operation and use.
- The pressure connection of the RGE can be made either before or after the condenser providing more installation options and flexibility.

2A single-phase type



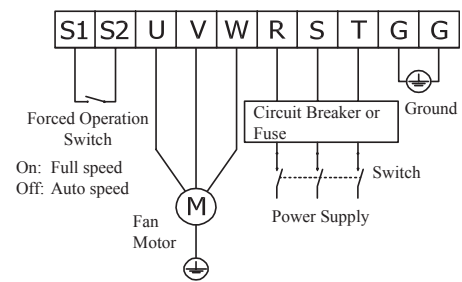
- 2 terminals
- External forced operation switch

4A, 6A, 8A single-phase type



- 4 terminals
- External forced operation switch

Three-phase type



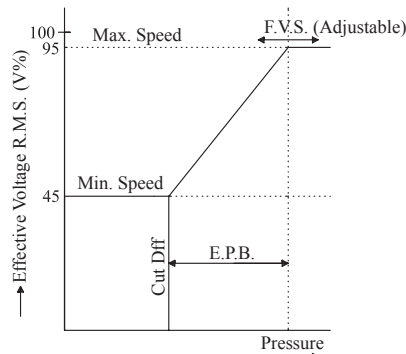
- 8 terminals
- Forced operation switch

On -fan is forced to operate at Maximum speed regardless of the pressure.

Off - fan operates according to the RGE function, with speed varying according to pressure.

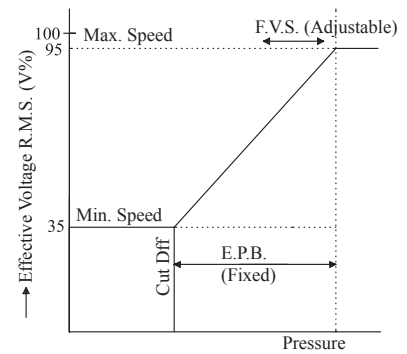
If an external forced operation switch is required, then the switch and connecting cables (not supplied) should have current rating higher than the fan motor rating. For example, a 4A switch is recommended for the 2A RGE model

2A single-phase type



The operating characteristics may vary according to voltage, frequency, and fan motor characteristics

4A, 6A, 8A single-phase type





Single-phase versions 2-8 A

Code number	Catalog number	Factory set [bar]	Refrigerant	Adjusting range* [bar]	Proportional band** [bar]	Electrical motor rating [A]	Power supply	Ambient temp. [°C]
061H3044	RGE-Z1L2-5	11	R134a	8-28	4	0.2 - 2	230V 50Hz	-20 to 50
061H3045	RGE-Z1L4-5	19	R22, R407C, R404A					
061H3048	RGE-Z1L6-5	32	R410A					
061H3002	RGE-Z1N2-5	11	R134a	8-28	4	0.2 - 4	230V 50Hz	
061H3017	RGE-Z1N2-6		230V 60Hz					
061H3005	RGE-Z1N4-5	19	R22, R407C, R404A	16-39	8	230V 50Hz		
061H3014	RGE-Z1N4-6		230V 60Hz					
061H3021	RGE-Z1N6-5	32	R410A	8-28	4	230V 50Hz		
061H3024	RGE-Z1N6-6		230V 60Hz					
061H3007	RGE-Z1P2-5	11	R134a	8-28	4	230V 50Hz		
061H3015	RGE-Z1P2-6		230V 60Hz					
061H3008	RGE-Z1P4-5	19	R22, R407C, R404A	16-39	8	230V 50Hz		
061H3018	RGE-Z1P4-6		230V 60Hz					
061H3022	RGE-Z1P6-5	32	R410A	8-28	4	230V 50Hz		
061H3025	RGE-Z1P6-6		230V 60Hz					
061H3004	RGE-Z1Q2-5	11	R134a	8-28	4	230V 50Hz		
061H3019	RGE-Z1Q2-6		230V 60Hz					
061H3009	RGE-Z1Q4-5	19	R22, R407C, R404A	16-39	8	230V 50Hz		
061H3020	RGE-Z1Q4-6		230V 60Hz					
061H3023	RGE-Z1Q6-5	32	R410A	8-28	4	230V 50Hz		
061H3026	RGE-Z1Q6-6		230V 60Hz					

Three-phase versions 5-7 A

Code number	Catalog number	Factory set [bar]	Refrigerant	Adjusting range* [bar]	Proportional band** [bar]	Electrical motor rating [A]	Power supply	Ambient temp. [°C]
061H3016	RGE-Z3R2-7	11	R134a	8-28	4	0.2 - 5	200V 50/60Hz	-20 to 50
061H3010	RGE-X3R2-7		400V 50/60Hz				-15 to 50	
061H3003	RGE-Z3R4-7	16	R22, R407C, R404A				200V 50/60Hz	-20 to 50
061H3006	RGE-X3R4-7		400V 50/60Hz	-15 to 50				
061H3027	RGE-Z3R6-7	32	R410A	16-39	8	200V 50/60Hz	-20 to 50	
061H3028	RGE-X3R6-7		400V 50/60Hz			-15 to 50		
061H3049	RGE-Z3T2-7	11	R134a	8-28	4	0.2 - 7	200-240V 50/ 60Hz	-15 to 50
061H3050	RGE-Z3T4-7	16	R22, R407C, R404A					
061H3051	RGE-Z3T6-7	32	R410A					

Single phase version: cut-off or minimum speed function selectable with changeover switch at approx. 45% of the maximum effective output.

Three phase version: cut-off or minimum speed function selectable with changeover switch at approx. 35% of the maximum effective output.

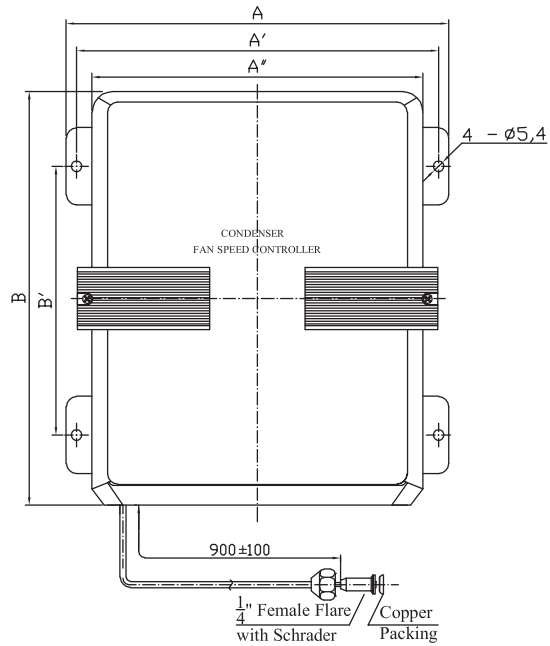
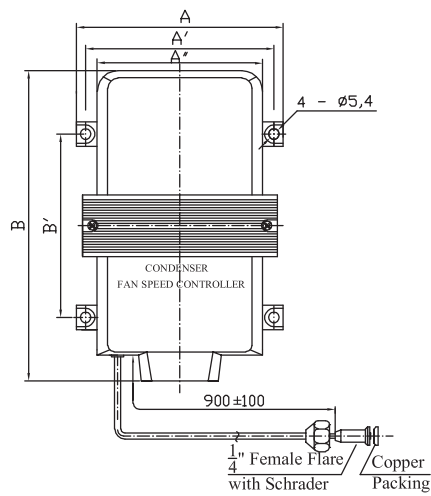
* Adjusting range: pressure at which the control delivers 95% output effective power supply (VRMS) corresponding to maximum speed operation of the fan.

**Proportional pressure band where effective voltage corresponds to the minimum speed or causes cut-off operation.

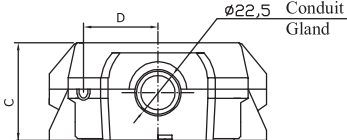
All cased models of RGE are weather-proof (IP54 protection rating) and are suitable for exterior installation.

Single-phase type

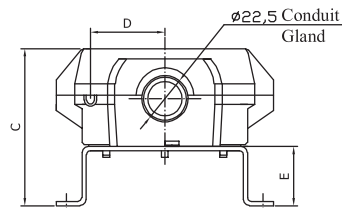
Three-phase type



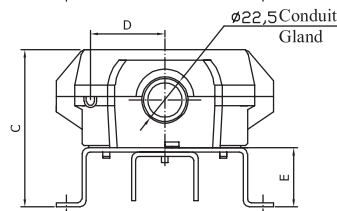
for 2A



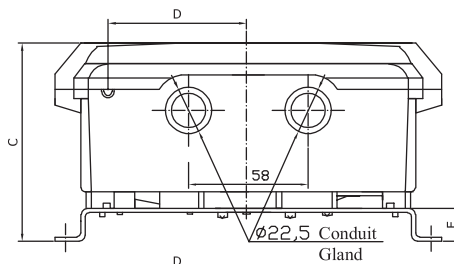
for 4A and 6A



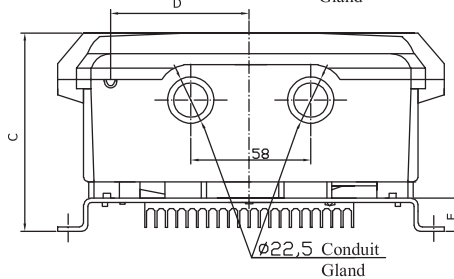
for 8A



for 5A



for 7A



Unit: mm

Dimensions		Single - phase version				Three-phase version	
		2A	4A	6A	8A	5A	7A
A	mm	104		105		185	185
A'		95		95		175	175
A''		85		85		160	160
B		125		150		200	200
B'		75		100		130	130
C		46	57	76	76	98	98
D		36	36	36	36	67	67
E		0	7	25	25	16	16

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