P215LR/BR/TR Series

Single/Dual/Triple Input Pressure Actuated

The P215LR is a single pressure input, the P215BR is a dual pressure input and the P215TR is a triple pressure input fan speed controller for air cooled condensers with respectively single, dual and triple refrigerant circuits.

The controller varies the fan speed by directly sensing the pressure changes of one, two or three separate refrigerant circuits. The setpoint of each pressure transducer can be separately adjusted. The controller selects the input with the greatest cooling demand to control the fan speed.

The controllers can be used in non corrosive refrigerant systems and vary the supply voltage to the motor from 45% to ≥95% of the supplied voltage using the phase cutting principle. It is recommended to confirm with the electric motor manufacturer if a controller using the phase cutting principle for speed variation can be used. If the pressure drops below the adjusted set-point minus the proportional band, the output to the motor is zero volt or the adjusted min. speed setting.

FEATURES

- Condenser pressure control by fan speed variation
- Model with heat pump input available
- Transducers with proven reliability
- Easy accessible set-point screw
- Adjustable minimum speed or cut-off selection (only on LR and BR models)
- Dual pressure input (BR models)
- Triple pressure input (TR models)

Ordering Codes	Range (bar)	P.B (bar)	Setpoint (bar)	Pressure Conn. (Style†)	Notes	List Price
3 Amp Rating						
P215LR-9110	14-24	4	16	90cm cap. (style 50)	A, B	**£154**
P215LR-9111	8-14	2.5	10			**£111**
P215LR-9130	Bulk pack version of type P215LR-9110 (15 pcs)					**£1755**
P215LR-9210	14-24	4	16	Direct mount (47)		**£117**
P215LR-9610				Direct mount (style 51)		**£135**
P215LR-9611	8-14	2.5	10			**£135**
P215LR-9114	22-42	6	30	90cm cap. (style 50)	C	**£136**
P215LR-9140	14-24	4	16		D	**£146**
P215LR-9120					E	**£221**
P215BR-9110					A, F	**£243**
P215BR-9111	8-14	2.5	10			**£257**
P215BR-9210	14-24	4	16	Direct mount (47)		**£137**
P215TR-9110				90cm cap. (50)	G	**£284**

† See page 42 for 'Style' references

Notes:
A = Minimum speed adjustable.
B = Single pressure input
C = For R410A applications
D = 230V heat pump input
E = 400V version
F = Dual pressure input
G = Triple pressure input

REPLACEMENT PARTS (for Fan Speed Control 230V Versions)

Controller Code	Range (bar)	Element Style †	Replacement Item	
			Pressure Transducer	Electronic Module
P215LR-9110	14-24	50	P35AC-9500	P38AA-9111
P215LR-9111	8-14	50	P35AC-9501	P38AA-9111
P215LR-9210	14-24	47	P35AC-9502	P38AA-9111
P215LR-9211	8-14	47	P35AC-9503	P38AA-9111
P215LR-9610	14-24	51	P35AC-9507	P38AA-9111
P215LR-9611	8-14	51	P35AC-9508	P38AA-9111
P215BR-9110	14-24	50	P35AC-9500	P38AA-9211
P215BR-9111	8-14	50	P35AC-9501	P38AA-9211
P215BR-9210	14-24	47	P35AC-9202	P38AA-9211
P215BR-9211	8-14	47	P35AC-9203	P38AA-9211

Notes:
P35 Mechanical Transducers - see page 30
P38 Electronic Boards - please refer to the Sales Support Team

† See page 42 for 'Style' references

Supply Voltage - 230V, 50/60Hz
Rating - 3 Amp
Size - 118 x 70 x 53mm

P255 Series

Single/Dual Input Pressure Actuated (for 3-phase Motors)

These controllers are designed for speed variation of 3-phase motors, especially for fan speed control on air cooled condensers.

Head pressure control of a refrigeration system, through speed variation of the fan, results in optimum performance throughout the year.

Using a pressure transducer as the input device, gives the most direct and fastest response to pressure variations in the refrigerant system. The controller varies the supply voltage to the motor from 30% to at least 96% over the proportional band using the phase cutting principle. It is recommended to confirm with the electric motor manufacturer if a controller using the phase cutting principle for speed variation can be used. Motors that will be controlled by the P255 should not draw more than 5A per phase.

The controller used for dual pressure input varies the fan speed by directly sensing the pressure changes of two separate refrigerant circuits. Each pressure transducer can be adjusted at a setpoint between 8 to 42 bar. The controller selects the input with the greatest cooling demand. The transducers can be used in non-corrosive refrigerant systems.

FEATURES

- Condenser pressure control by fan speed variation
- Dual input possibility
- Transducers with proven reliability
- Easy accessible setpoint screw
- Minimum speed or cut-off selection
- Adjustable minimum speed or cut-off
- Adjustable maximum speed limit
- Proportional band adjustment
- Contact input to force output to max. or off
- Allows connection in both 'Star' and 'Delta' configurations
- Motor speed action can be reversed by interchanging only two wires
- Adjustable hysteresis in cut-off mode
- Cosφ motor adjustment

Ordering Codes	Range (bar)	P.B (bar)	† Style	Full Volt. Setpoint	Notes	List Price
230V, 3-phase						
P255ML-9200	14-24	1-6	47	16	A	**£630**
400V, 3-phase						
P255MM-9100	14-24	1-6	45A	16	-	**£668**
P255MM-9200			47		A	**£640**
P255MM-9201	8-14	0.5-4		10		**£855**
P255MM-9600	14-24	1-6	13	16	-	**£618**
P255MM-9500			50		B	**£640**
P255MM-9501	8-14	0.5-4		10	C	**£640**
P255MM-9503	22-42	1-8		30	D	**£890**

† See page 42 for 'Style' references

For a 4 Amp rating and UL approval please contact the Sales Support Team.

Notes:
A = Direct mount sensor
B = Same as P255MM-9100 but Style 50
C = Same as P255MM-9101 but Style 50
D = For use on R410A applications

Supply Voltage - 230Vac or 400V, 50/60Hz, 3 Phase
Rating - 5 Amp
Controller Mode - Cut-off
Size - 205 x 213 x 107mm
Protection Class - IP54 (for electronic module)

Field Sales - UK South - Graham Vail 0777 980 8349
UK North - Peter O'Malley 0777 980 8348
OEM Sales - Kevin Kirby 0777 980 8525

For further information and additional models please refer to the product data sheet.

Johnson Controls