Electronic Fan Speed Controller Series FSY/FSM

Electronic speed controllers FSY /FSM control the speed of fan motors depending on pressure.

Features

- Adjustable pressure for cut-off
- High Voltage Triac (800 Volts)
- Integrated protection circuit against voltage peaks
- Compact design
- Easy mounting and adjustment
- Easy retrofit in existing systems
- No additional gasket required (completely molded into plug)
- Multi-position plug with EMC filter cable for flexible installation
- CE per 2014/30/EU (together with FSF cable)
- UL file E183816
- Other pressure connection upon request (minimum order volume 100 pieces)

FSY-43S

Selection Table

Type	Part No.	Pressure range*	Factory-setting*	Max. Allowable Pressure PS	Test Pressure PT	Pressure connection
Fan Speed Controllers With Cut-off Mode						
FSY-41S	0715533	4.0....12.5 bar	8.0 bar	27 bar	30 bar	7/16”-20 UNF female
FSY-42S	0715534	9.2....21.2 bar	15.0 bar	32 bar	36 bar	
FSY-43S	0715537	12.4...28.4 bar	21.8 bar	45 bar	50 bar	
Fan Speed Controllers With Min. Speed Mode						
FSM-41S	0715520	4.0....2.5 bar	8.0 bar	27 bar	30 bar	7/16”-20 UNF female
FSM-42S	0715521	9.2....21.2 bar	15.0 bar	32 bar	36 bar	
FSM-43S	0715522	12.4...28.4 bar	21.8 bar	45 bar	50 bar	

Note: *) Pressure at which fan is switched off (FSY) or at which fan is running with minimum speed (FSM)

Cable Assemblies With Plug and EMC Filter

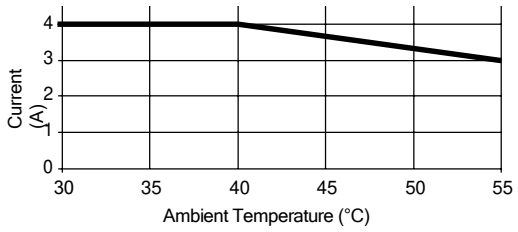
Type	Part No.	Temperature Range	Cable Length
FSF-N15	804640	Temperature Range: -50...+80°C	Cable length 1.5 m
FSF-N30	804641		Cable length 3.0 m
FSF-N60	804642		Cable length 6.0 m
Seal Ring Pack	803780	Copper Gaskets 100 pcs	

Technical Data

Supply Voltage	230VAC, +15%, -20%, 50/60 Hz
Nominal Current (See Diagram Below)	FSY: 0.1 - 4.0A FSM: 0.5 - 4.0A
Starting Current	Max. 8 Amps/5 Sec.
Medium Compatibility	R410A, R134a, R404a, R507, R407C, R407A, R407F, R1234ze, R452A, R448a, R449a, R450A, R513A, R22
Protection Class According to IEC529 /EN 60529	IP 65 (with Fitted Connectors FSF-xxx)
Temperature Ranges Ambient **Storage & Transportation Medium**	-20...+55°C (>40°C See Diagramm) -30...+70°C -20...+70°C

Pressure Change Per Turn of Adjustment Screw	FSY-41: 4.0 .. 12.5 bar Clockwise ~ +1.2 bar Counterclockwise ~ -1.2 bar
	FSY-42: 9.2 .. 21.2 bar Clockwise ~ +2.5 bar Counterclockwise ~ -2.5 bar
	FSY-43: 12.4 .. 28.4 bar Clockwise ~ +3.3 bar Counterclockwise ~ -3.3 bar
Proportional Range	FSY-41: 2.5 bar FSY-42: 3.8 bar FSY-43: 4.6 bar
Housing Material	PC and PA
Marking	(EMC 2014/30/EU, LVD 2014/35/EU, RoHS 2011/65/EU) (FSY)

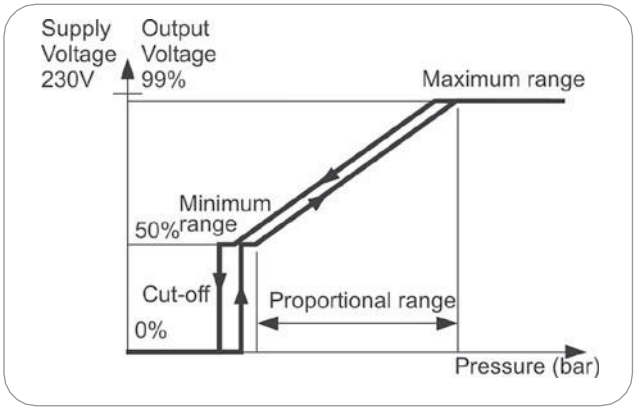
Max.Currentvs Ambient Temperature



Note: 3.0A at 55°C

Function Diagram

The control behaviour can be easily described by looking at the function of output voltage versus input pressure: In the maximum range the FSY provides a constant output voltage of approximately 1% below the supplyvoltage. Thefanisrunning atmaximum speed. Along the proportional range, the output voltage varies between maximum and minimum voltage of approximately 50% of the supply voltage. This causes the fan to slow down from maximum to minimum speed.



Further decrease of pressure in the minimum range leads to cut-off of the fan motor. Reincrease of input pressure will start the motor with a hysteresis of approximately 0.7 bar to avoid cycling. The pressure from which motor cuts off is adjustable (see selection table - adjustment range).