

# **Danfoss KPU Series Temperature and Pressure Controls Owner's Manual**

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**Danfoss KPU Series Temperature and Pressure Controls** 



# **Specifications**

• Bulb Type: Remote bulb

• Contact/Reset: -30 to 80 SPST/Auto

• Maximum Tube Length at Lowest Bulb: 120 inches

# **KPU 60/70 Thermostats**

• Bulb Type: Remote air coil

• Contact/Reset: -20 to 60 SPDT/Auto

• Capillary Tube Length: 80 inches

Differential at Limboot Temp. Setting: 10 to 40

Differential at Limboot Temp. Setting: 0.5 to 46

• Differential at Highest Temp. Setting: 2.5 to 13

# **KPU Pressure Switches**

• Pressure System: Low (in. Hg/psig)

Reset: AutomaticContact: SPDT

• Range: 6 to 108 psig

• Differential: 10 to 60 psig

### **KPU Dual Pressure Switches**

Low Pressure Side Range: 6 to 108 (in. Hg/psig)

• High Pressure Side Range: 100 to 465 psig

· Reset: Automatic

Contact System: SPST (NO/NC)

• Max. Working Pressure: 250/510 psig

### Temperature and pressure controls are designed with the contractor in mind

KPU temperature and pressure controls are designed for easy installation and service. They feature bottom and rear knockouts, differential adjustment dial, a tamper-resistant design, and a robust thermoplastic housing. Danfoss KPU temperature and pressure controls maintain precise set point values and are easy to set and adjust. Learn more about how to select the right Danfoss products for your needs at <a href="mailto:choose.danfoss.com">choose.danfoss.com</a>.

• Reliable temperature and Pressure control systems are designed for flawless performance.

# Technical data and ordering

#### KPU 19 Thermostats

KPU Series	Bulb type	Range (°F)	Contact/ Reset	Capillary tube length (in.)	Differential at lowest temp. setting	Maximum bulb temperature (°F)	Competitor part no.	Danfoss type	Danfoss Code No.
KPU 19	Remote bulb	-30 to 80	SPDT/Auto	120	3.6 to 12.6	140	A19ABC-24C A19ABC-37C A19ABC-74C A19AAC-4C A19AAF-20C	KPU19	060L2150 <sup>1</sup>
KPU 19		-30 to 80	SPST/Auto	80	3.6 to 12.6	140	A19AAD-5C A19ABA-40C A19AAD-12C	KPU19	060L2151 <sup>1</sup>
KPU 19	Room bulb	-30 to 80	SPDT/Auto	Room sensor	3.6 to 12.6	140	A19BBC-2C A19BAB-3C A19BAC-1C A19BAF-1C	KPU19	060L2152

As 060L1250 is SPDT, 060L2150 can replace competitor parts crossed to both 060L2150 and 060L2151.

#### Technical data and ordering

KPU 60/70 Thermostats

Danfoss		Range	Contact/	Capillary	Diffe	rential	Maximum	Competitor	Danfoss
Type	Bulb type	(°F)	Reset	tube length (in.)	at lowest temp. setting	at highest temp. setting	bulb temperature (°F)	part no.	Code No.
KPU 61	Straight capillary tube	-20 to 60	SPDT/Auto	80	10 to 40	2.5 to 13	250	O10-1416 O10-1010 O16-111 O10-1419	060L5201
KPU 61	Remote air coil	-20 to 60	SPDT/Auto	80	10 to 40	2.5 to 13	250	O10-1408 O10-1409 O10-1473 O16-104 O10-1410	060L5203
KPU 62	Room sensor	-20 to 60	SPDT/Auto	Room sensor	10 to 40	2.5 to 13	250	O10-1072 O10-1418 O16-594 O60-101	060L5206
KPU 73	Remote bulb	-15 to 60	SPDT/Auto	80	6.5 to 32	5 to 50	175	O60-100 O60-120	060L5208

### Technical data and ordering

#### **KPU Pressure Switches**

Danfoss			Reset Contact Range Differential working Competitor system (in. Hg/psig) (psig) pressure part no.¹ (psig)	Range	Differential		Competitor	Danfoss Code No.		
Туре	Pressure	Reset			¼ in. M flare	36 in. capillary tubes with ¼ in. flare nuts				
KPU 1	Low	Automatic	SPDT	6 to 108	10 to 60	250	O10-1483 P70AB-2C	060-5231	060-5233	
KPU 2	Low	Automatic	SPST (NO)	6 to 73	6 to 30	250	O10-1402 P70AB-12C P170AB-12C	060-5237	060-5235	
KPU 2	Low	Automatic	SPDT	6 to 73	6 to 30	250		060-5239	060-5240	
KPU1B	Low	Manual	SPDT	28 to 100	10.2	250		060-5232	060-5234	
KPU 5	Fan cycling	Automatic	SPST (NO)	100 to 465	25 to 85	510	O10-2054 P70AA-118C	060-5241	060-5242	
KPU 6W <sup>2</sup>	High	Automatic	SPDT	100 to 600	58 to 145	675	O16-108 P170CA-400C P70CA-3C	060-5243	060-5245	
KPU 6B <sup>2</sup>	High	Manual	SPDT	100 to 600	60	675	P70DA-1C	060-5244	060-5246	

### **KPU Dual Pressure Switches**

	Low pressure side		High pressure side		Reset			Max. working		Danfoss Code No.	
Danfoss Type	Range (in. Hg/psig)	Differential (psig)	Range (psig)	Differential (psig)	Low pressure side	High pressure side	Contact system (LP/HP)	pressure (low/high side) (psig)	Competitor part no. <sup>1</sup>	¼ in. M flare	36 in. capillary tubes with ¼ flare nuts
KPU 15	6 to 108	10 to 60	100 to 465	60	Automatic	Automatic	SPST (NO/NC)	250/510	O12-1549 P170LB-1C	060-5247	060-5248
KPU 15B	6 to 108	10 to 60	100 to 465		Automatic	Manual	SPST (NO/NC)	250/510	P70LB-1C P70MA-1C	060-5249	060-5250
KPU 16B	6 to 108	10 to 60	100 to 600		Convertible <sup>3</sup>	Convertible <sup>3</sup>	SPDT/ SPST (NO)	250/675	O12-4834 P170LB-1C P70LB-1C	060-5253	060-5254

- 1. Competitor part no. Equipped with a capillary tube for all but P170LB-1C, which has flare connections.
- 2. KPU 6 and the high-pressure side of KPU 16 are designed with fail-safe double bellows.
- 3. Convertible reset controls can be adjusted for either automatic or manual reset. Adjust the reset setting to match the product being replaced. All controls are supplied with universal mounting bracket and mounting screws.
- 4. Ambient temperature: -40°F to ++122°F(17175°For a maximum of 2 hours). KPU 1, 2, 6, 16 are suitable for all HFC refrigerants, including R-410A.

	120/240 VAC		
Alternating Current			
Motor Full Load Amps (FLA)	24		
Locked Rotor Amps (LRA)	144		
Direct Current	240 V DC: 12W pilot duty		

# **Spare Parts and Accessories**

Description	Type(s) applied to	Danfoss Code No.
Capillary tube; 39 in. with $\frac{1}{4}$ in. flare coupling nuts on each end	KPU with ¼ in. M flare	060-017166



#### Installation

- 1. Ensure the power source is switched off before installation.
- 2. Locate an appropriate placement for the temperature and pressure controls.
- 3. Use bottom and rear knockouts for easy installation.

## **Setting and Adjusting**

- 1. Use the differential adjustment dial to set precise values.
- 2. Adjust the controls as needed for your specific requirements.

#### Maintenance

- 1. Regularly check for any tampering with the controls.
- 2. Clean the thermoplastic housing to ensure proper functioning.

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#### **FAQs**

### Q: Can competitor parts be replaced with Danfoss products?

A: Yes, some competitor parts can be replaced with specific Danfoss codes as mentioned in the manual.

### Q: What is the maximum working pressure for the KPU Pressure Switches?

A: The maximum working pressure varies depending on the specific model, ranging from 250 to 675 psig.

### **Documents / Resources**



<u>Danfoss KPU Series Temperature and Pressure Controls</u> [pdf] Owner's Manual KPU 19, KPU 61, KPU 62, KPU 70, KPU 73, KPU Series Temperature and Pressure Controls, K PU Series, Temperature and Pressure Controls, Pressure Controls

# References

# • User Manual

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