

-

Type HPV



Type CKB

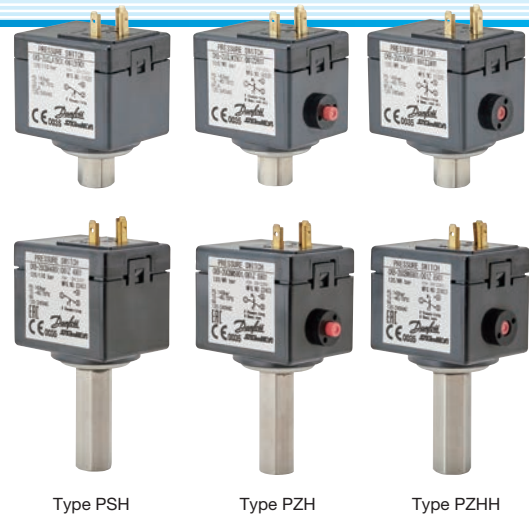
Type CKB

FEATURES

- Suitable for freezing and refrigeration systems using ultra-high-pressure CO₂ refrigerant
- Supports a wide setting pressure range, regardless of transcritical or subcritical regions
- High accuracy and durability
- Narrow on-off differential pressure enables quick unit recovery
- Available in both automatic and manual reset types

COMMON SPECIFICATIONS

- Fluid temperature: -40 to 302°F
- Ambient temperature: -40 to 158°F
- Enclosure: IP65, if used with DIN plug
- Standards: UL/cUL, CE (PED Category IV)
(Please contact us for details.)
- RoHS2 compliant



Type PZHH

SPECIFICATIONS

Catalog No.	Contact Function	Reset Type	Settings (psi [MPa])*1			Max. Working Pressure (psi [MPa])	Connection	Weight (lb [kg])
			OFF	ON	Differential			
CKB-2UCLA1901	SPDT	PSH (automatic reset)	1740 [12.0]	1595 [11.0]	145 [1.0]	2074 [14.3]	1/4" female flare style L	0.40 [0.18]
CKB-2UCLA1902			1566 [10.8]	1421 [9.8]				
CKB-2UCLA1903			783 [5.4]	638 [4.4]				
CKB-2UCLM2901		1740 [12.0]	Manual reset*2	—				
CKB-2UCLM2902		1566 [10.8]						
CKB-2UCLM2903		783 [5.4]						
CKB-2UCLN3901		1740 [12.0]						
CKB-2UCLN3902		1566 [10.8]						
CKB-2UCLN3903		783 [5.4]						
CKB-2UCBA4901		1740 [12.0]	1595 [11.0]	145 [1.0]				
CKB-2UCBA4902		1566 [10.8]	1421 [9.8]					
CKB-2UCBA4903		783 [5.4]	638 [4.4]					
CKB-2UCBM5901		PZH (manual reset)	1740 [12.0]	Manual reset*2	—			
CKB-2UCBM5902			1566 [10.8]					
CKB-2UCBM5903			783 [5.4]					
CKB-2UCBN6901		1740 [12.0]						
CKB-2UCBN6902	1566 [10.8]							
CKB-2UCBN6903	783 [5.4]							

*1 Please contact us if you require a different setting value. 【Pressure adjustment range: 580 psi [4.0 MPa] to 1885 psi [13.0 MPa] (Fixed set value)】

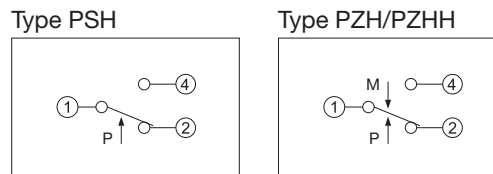
*2 Off-setting value of 580 psi [4.0 MPa] or more and 1015 psi [7.0 MPa] or less : Press the reset button after pressure decreases by approx. 189 psi [1.3 MPa] or more.

Off-setting value of greater than 1015 psi [7.0 MPa] and 1885 psi [13.0 MPa] or less : Press the reset button after pressure decreases by approx. 363 psi [2.5 MPa] or more.

ELECTRICAL RATINGS

Rated Voltage (V) Rated Current (A)		Power Factor (cos ϕ)	AC 120/240
Inductive Current	Full Load	0.75	1 to 6
	Inrush Current	—	36 or less

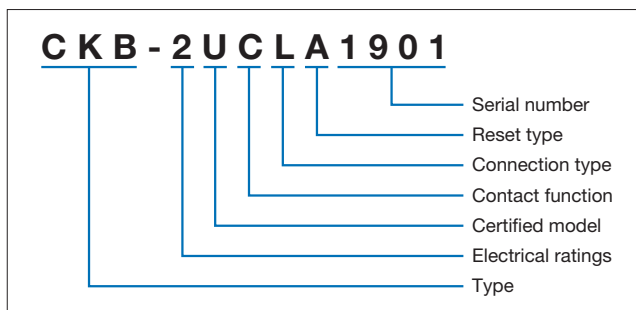
CONTACT FUNCTIONS



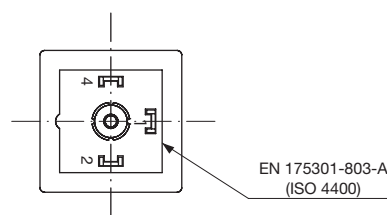
↑ P: Operating direction on press. increase at high press. side

↓ M: Operating direction on manual reset

DESCRIPTION OF CATALOG NO.



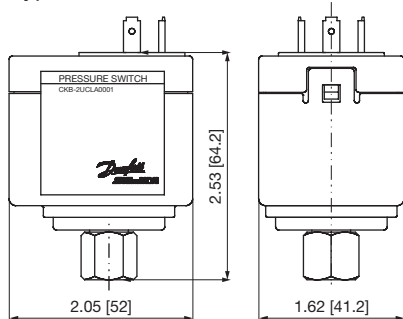
WIRINGS



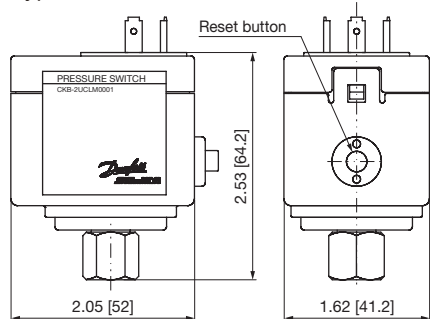
DIMENSION

Connection Style L

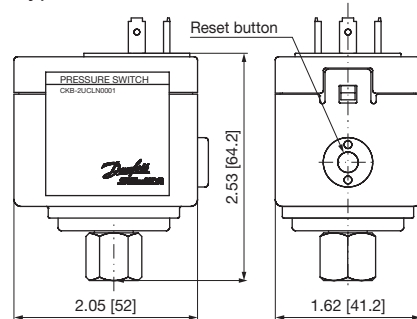
Type PSH



Type PZH

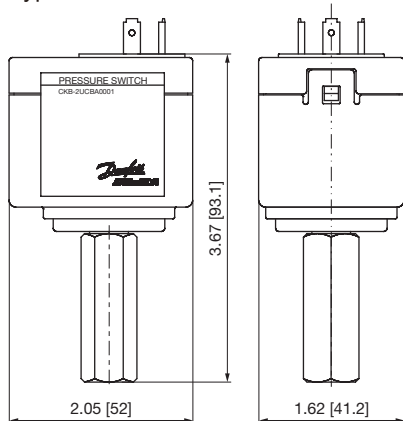


Type PZHH

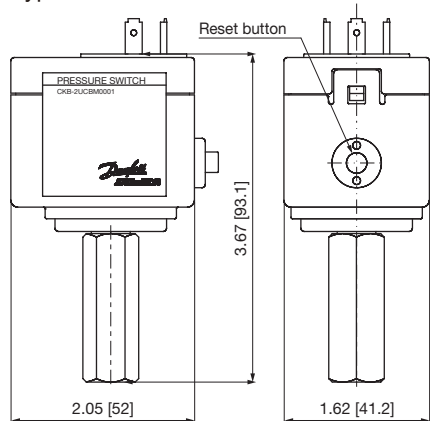


Connection Style B

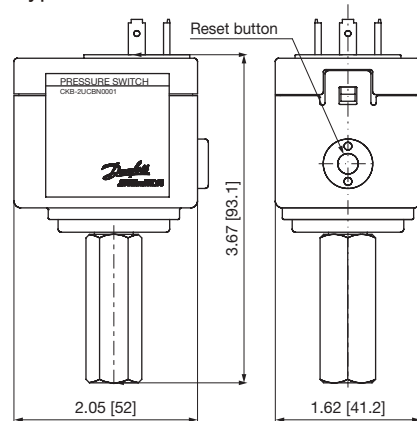
Type PSH



Type PZH

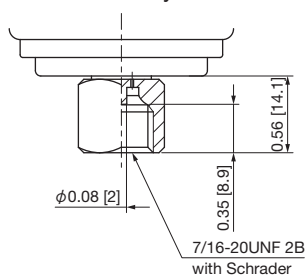


Type PZHH

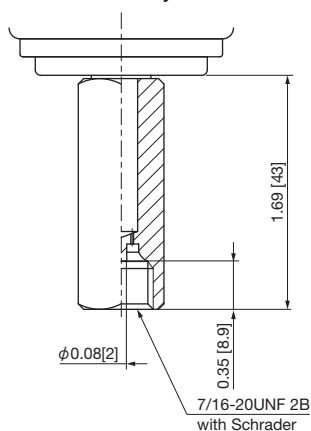


PRESSURE CONNECTIONS (DETAILS)

Connection Style L



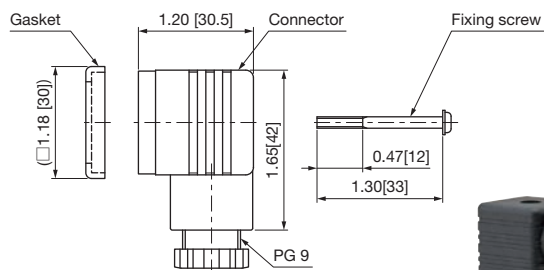
Connection Style B



OPTIONAL PARTS (DIN Plug)

Catalog No.: CKB-P09L000

*Please specify whether the parts are required when ordering.



Unit: Inch [mm]

SMALL PRESSURE CONTROLS

Type CCB

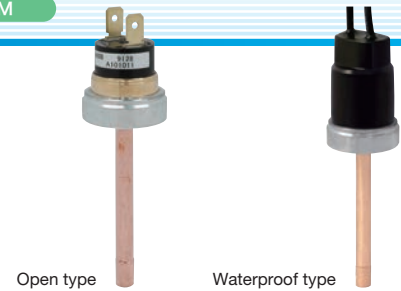
OEM

FEATURES

- Compact and lightweight design
- Wide pressure setting range
- High sealing performance with solder connection

COMMON SPECIFICATIONS

- Fluid temperature: -22 to 248°F
- Ambient temperature: -22 to 212°F
- Enclosure: IP66 (Waterproof type)
- Standards: UL/cUL, CE (PED Category IV)
(Please contact us for details.)



SPECIFICATIONS

Catalog No.	Settings OFF/ON (psi [MPa])	Max. Working Pressure (psi [MPa])	Contact Function	Connection	Type	Weight (lb [kg])	Usage
CCB- * * *	2175 [15.0] / 1450 [10.0] 1958 [13.5] / 1305 [9.0] 1740 [12.0] / 1160 [8.0]	2393 [16.5] *	SPST	1/4" solder	Open	0.15 [0.07]	High-pressure cut-off
					Waterproof	0.24 [0.11]	

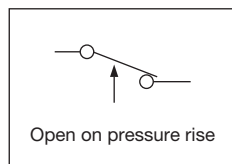
* For set pressure of 2175 psi [15.0 MPa]

ELECTRICAL RATINGS

Category of Ratings		Medium Current		Low Current		Ultra-Low Current	
Rated Current (A)	Rated Voltage (V)	Power Factor (cos ϕ)	125V.AC	250V.AC	125V.AC	250V.AC	12/24V.DC
	Non-Inductive Current		1 to 6	1 to 4	0.05 to 2	0.05 to 1	0.05 to 0.1
Inductive Current	Full Load	0.75	1 to 24	1 to 16	0.05 to 8	0.05 to 4	—
	Inrush Current	—					

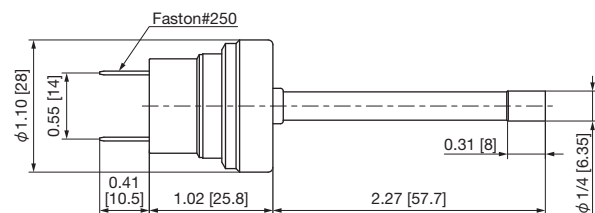
• Certified models have different electrical ratings. Please contact us for details.

CONTACT FUNCTIONS

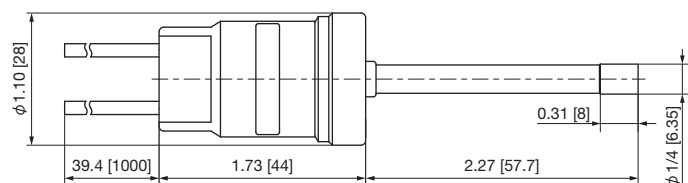


DIMENSION

Open type



Waterproof type



Unit: Inch [mm]

PRESSURE SENSORS

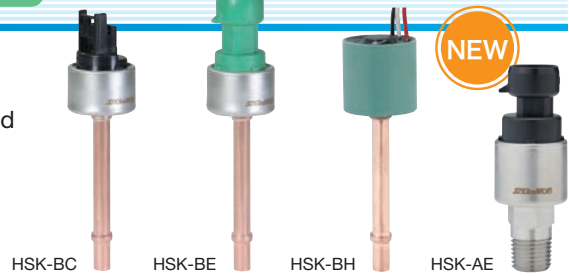
Type HSK

OEM

NEW

FEATURES

- Compact design that integrates the pressure detection circuit and signal conversion circuit into a single chip
- High accuracy of $\pm 1.0\%$ FS across a wide temperature range
- Two types available - ratiometric output type and current output type
- Current output type supports wiring up to 328 feet



COMMON SPECIFICATIONS

- Fluid temperature: -40 to 275°F
- Ambient temperature: -22 to 212°F (HSK-BC/BE)
 -22 to 185°F (HSK-BH)
 -40 to 212°F (HSK-AE)
- Load resistance: $10\text{k}\Omega$ or more (HSK-BC/BE/BH)
 $(V_{cc}-7)/0.02\text{A}$ Ω or less (HSK-AE)
- Enclosure: IP66
- Standards: UL/cUL (Except for HSK-BH), CE

SPECIFICATIONS (Ratiometric output type: HSK-BC/BE/BH)

Catalog No.	Pressure Range (MPa)	Output	Supply Voltage	Accuracy	Electrical Connector	Connection*	Wiring	Weight (lb [kg])
HSK-BC150D-□□□	0 to 2175 [0 to 15.0]	0.5 to 4.5V.DC	5±0.25V.DC	±1.0% F.S. (-4 to 248°F)	MOLEX (52117-0340)	1/4" solder or ϕ 6mm solder	Up to 9.84 ft	0.11 [0.05] (Excluding lead wires)
HSK-BC100D-□□□	0 to 1450 [0 to 10.0]							
HSK-BC060D-□□□	0 to 870 [0 to 6.0]							
HSK-BE150D-□□□	0 to 2175 [0 to 15.0]							
HSK-BE100D-□□□	0 to 1450 [0 to 10.0]							
HSK-BE060D-□□□	0 to 870 [0 to 6.0]							
HSK-BH150D-□□□	0 to 2175 [0 to 15.0]							
HSK-BH100D-□□□	0 to 1450 [0 to 10.0]							
HSK-BH060D-□□□	0 to 870 [0 to 6.0]							
					Cable			

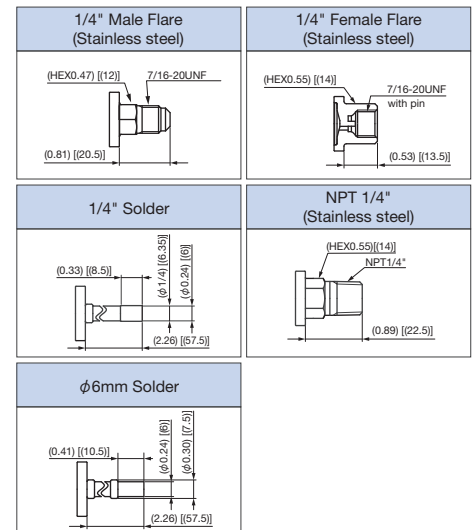
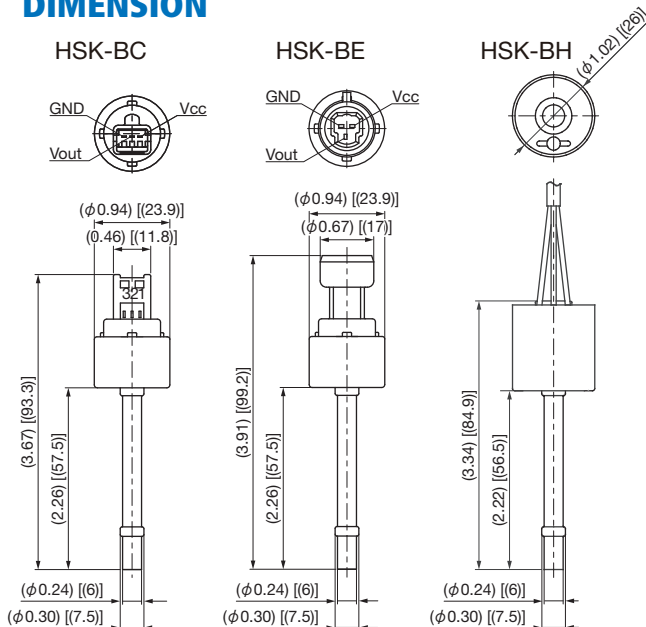
* The □□□ in the catalog number indicates the serial number. *For other connection types, please contact us.

SPECIFICATIONS (Current output type: HSK-AE)

Catalog No.	Pressure Range (MPa)	Output	Supply Voltage	Accuracy	Electrical Connector	Connection*	Wiring	Weight (lb [kg])
HSK-AEB15**-U05	0 to 2175 [0 to 15.0]	4 to 20mA.DC	7 to 35V.DC	$\pm 1.0\%$ F.S. (-40 to 212°F)	Aptiv (12065287)	D1 : 1/4" solder D2 : $\phi 6\text{mm}$ solder N2 : NPT 1/4" (stainless steel)	Up to 328 ft	0.04 [0.02]
HSK-AEB10**-U05	0 to 1450 [0 to 10.0]							(Solder)
HSK-AEA60**-U05	0 to 870 [0 to 6.0]							0.09 [0.04] (NPT)

* The ** in the catalog number indicates the connection type symbol. *For other connection types, please contact us.

DIMENSION



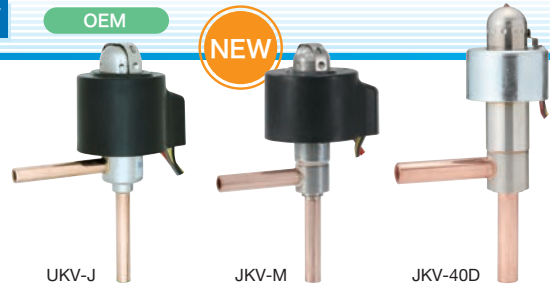
Connections (Details)

Unit: Inch [mm]

MOTOR OPERATED VALVES Type UKV-J/JKV

OEM

NEW



FEATURES

- MOPD 1450 psi
- Compact and lightweight
- Energy-saving design

COMMON SPECIFICATIONS

- Max. working pressure: 2175 psi
- Fluid temperature: -22 to 158°F (Standard coils*¹)
-40 to 140°F (Coils for low temperatures*¹ *²)
- Ambient temperature : -22 to 158°F (Standard coils*¹)
-58 to 140°F (Coils for low temperatures*¹ *²)

*¹ It should be 50% or less on energizing ratio.

*² Available for UKV-J (12/24V.DC) and JKV-40D (12V.DC).

- Flow direction:
B → A (Single direction)
(Bi-flow model also available for type JKV-M. Please contact us for details.)
- Excitation method: 1-2 phase, uni-polar
- Standards: UL (UKV-J)

SPECIFICATIONS

Catalog No.	Port Size (inch [mm])	Type	Cv Value	Capacity (USRT [kW])		Connection*3 (Solder) (inch [mm])	O.P.D. (psi [MPa])	Max. Working Pressure (psi [MPa])	Weight**4 (lb [kg])
				R744 (CO ₂)*1	R744 (CO ₂)*2				
UKV-J08D	0.03 [0.8]	Close	0.015	0.8 [2.8]	1.1 [3.7]	ϕ 1/4 [6.35] OD	0 to 1450 [0 to 10.0]	2175 [15.0]	0.11 [0.05]
UKV-J10D	0.04 [1.0]		0.025	1.3 [4.6]	1.7 [6.1]				
UKV-J14D	0.06 [1.4]		0.056	2.9 [10.3]	3.9 [13.7]				
		Open	0.067	3.5 [12.3]	4.6 [16.3]				
JKV-M20D	0.08 [2.0]	Close/Open	0.12	6.2 [21.9]	8.2 [29.0]	ϕ 5/16 [7.94] OD			0.18 [0.08]
JKV-M24D	0.09 [2.4]		0.17	8.7 [30.7]	11.6 [40.7]				
JKV-40D	0.16 [4.0]	Close	0.49	25.6 [90.1]	34.0 [119.5]	ϕ 1/2 [12.7] OD	0.66 [0.3]		

*¹ CT=23°F, ET=-13°F, SH=0 K, SC=0 K

*² Gas cooler inlet temp.=158°F, Gas cooler outlet temp.= 71.6°F, ET=42.8°F, SH=0 K

*³ Connection A and B are the same size.

*⁴ Valve only (without coil)

COIL SPECIFICATIONS

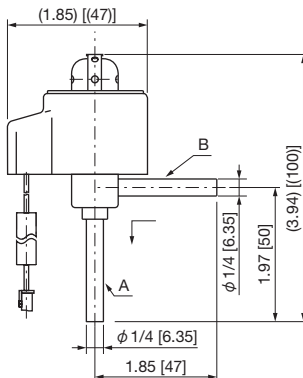
Catalog No.	Compatible Valve Body No.	Rated Voltage	Current	Insulation Class* ¹	Enclosure	Weight* ² (lb [kg])
UKV-A□□□	UKV-J08D, J10D, J14D	12V.DC±10%	0.26A/Phase (20°C)	Class E molded	IP66	0.29 [0.13]
UKV-D□□□		24V.DC±10%	0.13A/Phase (20°C)			
KVC-0H□□□	JKV-M20D, M24D	12V.DC±10%	0.38A/Phase (20°C)		IP56	0.40 [0.18]
VKV-MOZS□□□	JKV-40D	12V.DC±10%	0.38A/Phase (20°C)			
		24V.DC±10%	0.21A/Phase (20°C)			0.37 [0.17]

*¹ Compliant with IEC60085, 60335-2-40.

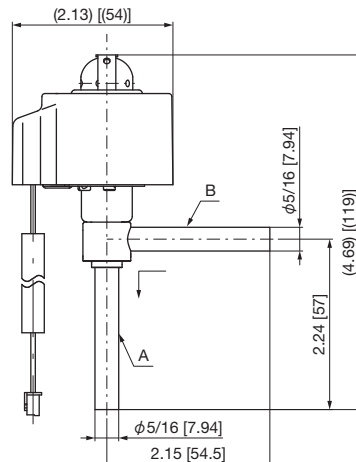
*² For lead wire length of 1000mm (UKV-A, D and KVC-0H) / 500mm (VKV-MOZS)

DIMENSION

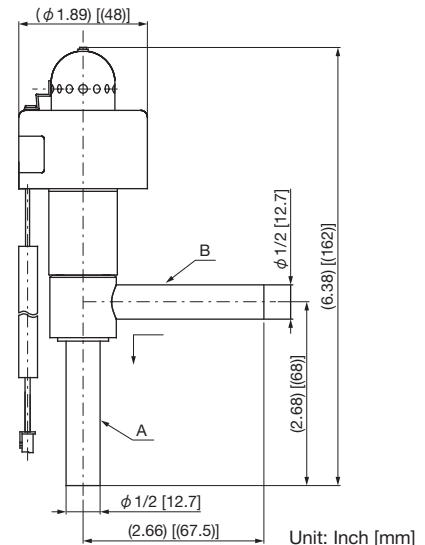
UKV-J



JKV-M20, 24D



JKV-40D



SOLENOID VALVES

Type HPV

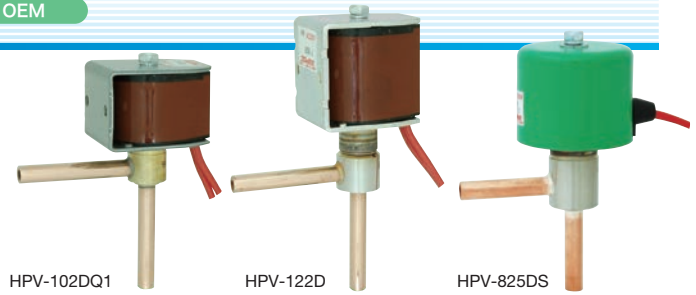
OEM

FEATURES

- MOPD 1450 psi
- Hot gas compatible
- Highly durable
- Compact and highly sealed structure

COMMON SPECIFICATIONS

- Fluid temperature: -22 to 248°F
- Ambient temperature: -4 to 122°F
- Standards: UL/cUL (HPV-102D, 402D), CE
(Please contact us for details.)



SPECIFICATIONS

Catalog No.	Port Size (inch [mm])	Cv Value	Connection		O.P.D (psi [MPa])	Max. Working Pressure (psi [MPa])	Weight*1 (lb [kg])
			Type	Size			
HPV-102DQ1	0.04 [1.0]	0.028	Solder (ODM)	1/4"	0 to 1450 [0 to 10.0]	1885 [13.0]	0.11 [0.05]
HPV-122D	0.05 [1.2]	0.038				2001 [13.8]	0.18 [0.08]
HPV-402DQ3	0.16 [4.0]	0.32				2030 [14.0]	0.20 [0.09]
HPV-825DS	0.31 [7.8]	0.54		5/16"	14.5 to 1450 [0.1 to 10.0]	2175 [15.0]	0.29 [0.13]

*1 Valve only (without coil)

COIL SPECIFICATIONS

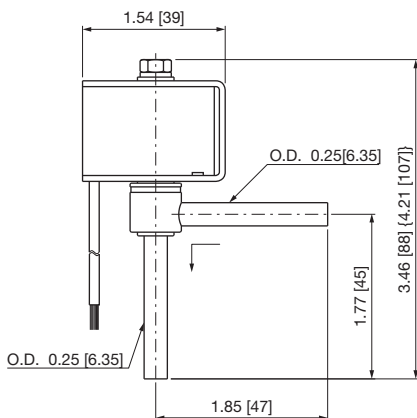
Compatible Valve Body No.	Rated Voltage		Tolerance (%)	Apparent Power (VA)		Power Consumption (W)	Insulation Class	Weight*2 (lb [kg])
				Running	Inrush			
HPV-102DQ1	100V.AC	50/60Hz	±10	11/8	32/27	6/4.5	Class B molded*1	0.29 [0.13]
HPV-122D	200V.AC			16/13	52/38	9/8		0.40 [0.18]
HPV-402DQ3	220V.AC			10/8	32/26	5.5/4.5		0.35 [0.16]
HPV-825DS	200V.AC			14/11	42/33	7/6		0.44 [0.20]

*1 Compliant with IEC60085, 60335-2-40. Some models are of Class E molded. Please contact us for details.

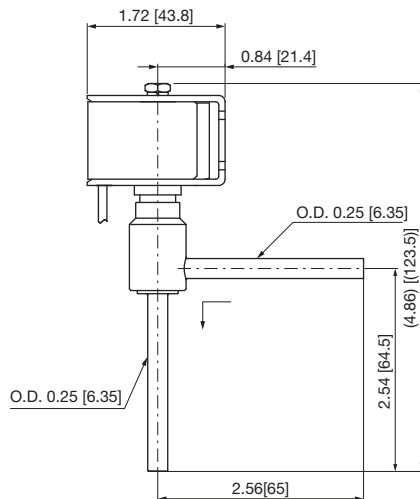
*2 For lead wire length of 300mm (HPV-102DQ1, 122D and 402DQ3) / 280mm (HPV-825DS)

DIMENSION

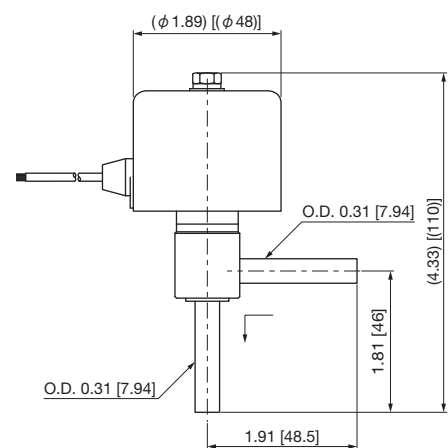
HPV-102DQ1 {HPV-122D}



HPV-402DQ3



HPV-825DS



Please contact us if other connection shapes are required.

Unit: Inch [mm]



FEATURES

- Highly durable (35 million operating times)
- Quiet operation
- Functions as both a supply solenoid valve and an expansion valve
- No backup power source required to close valves during power outages

COMMON SPECIFICATIONS

- Fluid temperature: -40 to 86°F
- Standards: CE
- Ambient temperature: -22 to 122°F

SPECIFICATIONS

Catalog No.	Orifice Size (inch [mm])	Cv Value	Connection		O.P.D (psi [MPa])	Max. Working Pressure (psi [MPa])	Weight*1 (lb [kg])
			Type	Size			
HPV-E1120DQ1	0.04 [1.0]	0.028	Solder (ODM)	1/4"	0 to 870 [0 to 6.0]	0 to 1160 [0 to 8.0]	0.18 [0.08]
HPV-E1120DQ2	0.05 [1.2]	0.038					
HPV-E1120DQ3	0.16 [4.0]	0.32					
HPV-E1120DQ4	0.31 [7.8]	0.54					

*1 Valve only (without coil) · Angled connection type also available.

COIL SPECIFICATIONS

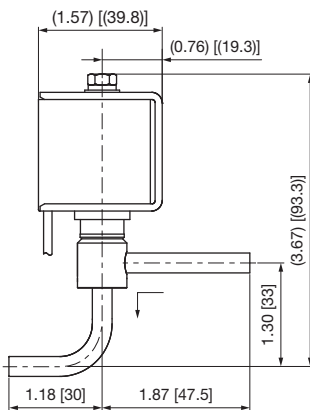
Compatible Valve Body No.	Rated Voltage		Tolerance (%)	Apparent Power (VA)	Power Consumption (W)	Insulation Class	Weight*2 (lb [kg])
HPV-E1120DQ1 to 4	100V.AC	50/60Hz	±10	37	12	Class B molded*1	0.33 [0.15]
	200V.AC			58			

*1 Compliant with IEC60085, 60335-2-40. Some models are of Class E molded. Please contact us for details.

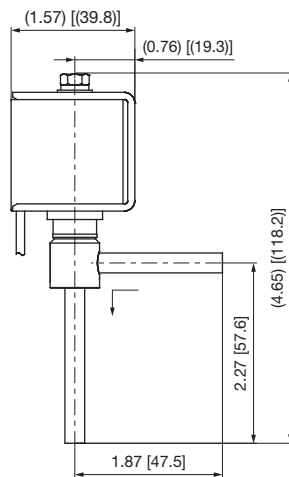
*2 For lead wire length of 600mm

DIMENSION

HPV-E1120DQ1 to 4



Angled connection type (Reference)



Unit: Inch [mm]



NOTES FOR SAFETY

Failure to read and follow all instruction carefully before installing or operating the product could cause personal injury and/or property damage.

Specifications are subject to change without notice.