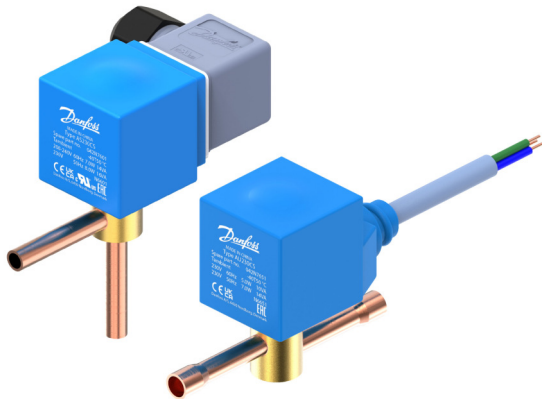


Data Sheet

Solenoid valve and coil
Type **EVL 2.0 - EVL 2.2**

Normally Closed (NC)



EVL is a direct operated solenoid valve for liquid, suction, and hot gas lines with common fluorinated refrigerants

EVL valves are designed for hot gas defrost in small water heaters, Commercial fridges and freezers, ice making machines and other applications for food service etc.

EVL valves and coils are sold separately.

Features

- Designed for media temperatures -40 – 120 °C / -40 – 248 °F
- Supplied as normally closed (NC) with de-energized coil
- Wide choice of coils for AC and DC
- Suitable for listed refrigerants, including flammable refrigerants
- Available in solder connection for straight way or angle way
- Small encapsulated coils with long life time under extreme conditions.
- Compact construction with small dimensions, low weight for both valve and coil
- Simple and fast mounting of coil - clip-ON / OFF

Media

Table 1: Media features

Features	Description
Refrigerant	R290, R410A, R32, R1234ze(E), R134a, R22/R407C, R290, R404A/R507A, R452A, R513A, R600, R600a, R1234yf, R1234ze(E), R125, R134a, R22, R290, R32, R404A, R407C, R407F, R407H, R410A, R417A, R422A, R422B, R422D, R438A, R422A, R422B, R422D, R438A, R442A, R444B, R448A, R449A, R449B, R450A, R452A, R452B, R454A, R454B, R454C, R455A, R463A, R507A, R512A, R513A, R513B, R515A, R515B, R516A, R600, R600a, R23, R1270
Temperature of medium	-40 – 120 °C / -40 – 248°F (Maximum 130 °C / 265 °F during defrosting)
Maximum working pressure	45 bar / 652 psig

For a complete list of approved refrigerants, visit store.danfoss.com and search for individual code numbers, where refrigerants are listed as part of technical data.

NOTE:

Special note for R1234ze(E), R290, R600 and R600a: Ignition risk is evaluated in accordance to ISO 5149 and IEC 60335. EX range Zone 2(category 3 IIA).

For countries where safety standards are not an indispensable part of the safety system Danfoss recommends the installer gets a third party approval of any system containing flammable refrigerant.

Product specification

Rated capacity [kW]

Table 2: Rated capacity [KW] for Liquid

Type	K _v	R134a	R407C	R513A	R452A	R600	R600a R507A	R1234ze(E)	R404A	R22	R290
EVL 2.0	0.12	2.23	2.30	1.86	1.66	3.04	2.70	2.00	1.63	2.41	2.70
EVL 2.2	0.17	3.16	3.26	2.64	2.35	4.31	3.82	2.83	2.32	3.42	3.83

Table 3: Rated capacity [KW] for Suction

Type	K _v	R134a	R407C	R513A	R452A	R600	R600a	R1234ze(E)	R404A	R22	R290
EVL 2.0	0.12	0.19	0.25	0.18	0.22	0.15	0.18	0.16	0.23	0.27	0.33
EVL 2.2	0.17	0.27	0.35	0.26	0.31	0.21	0.26	0.22	0.33	0.38	0.46

Rated liquid and suction vapour capacity is based on:

- evaporating temperature $t_e = -10\text{ °C}$
- condensing temperature $t_c = 29\text{ °C}$
- pressure drop in valve $\Delta p = 0.15\text{ bar}$
- subcooling of refrigerant $\Delta t_{\text{sub}} = 4\text{ K}$

Table 4: Rated capacity [KW] for Hot-gas

Type	K _v	R134a	R407C	R513A	R452A	R600	R600a	R1234ze(E)	R404A	R22	R290
EVL 2.0	0.12	0.83	1.12	0.75	0.91	0.67	0.75	0.67	0.88	1.07	1.23
EVL 2.2	0.17	1.17	1.59	1.07	1.29	0.95	1.07	0.95	1.25	1.52	1.78

Rated hot gas capacity is based on:

- condensing temperature $t_c = 40\text{ °C}$
- pressure drop across valve $\Delta p = 0.8\text{ bar}$
- discharge temperature $t_d = 65\text{ °C}$

Valve selection based on capacity calculation

For extended capacity calculations and valve selection based on capacities and refrigerants, please refer to Coolselector®2. Rated and extended capacities are calculated with the Coolselector®2 calculation engine to ARI standards with the ASEREP equations based on laboratory measurements of selected valves.

You can download it from <http://coolselector.danfoss.com>

Dimensions and weights - solder connection

Figure 1: EVL 2.0 & 2.2 AW ODM-ODM

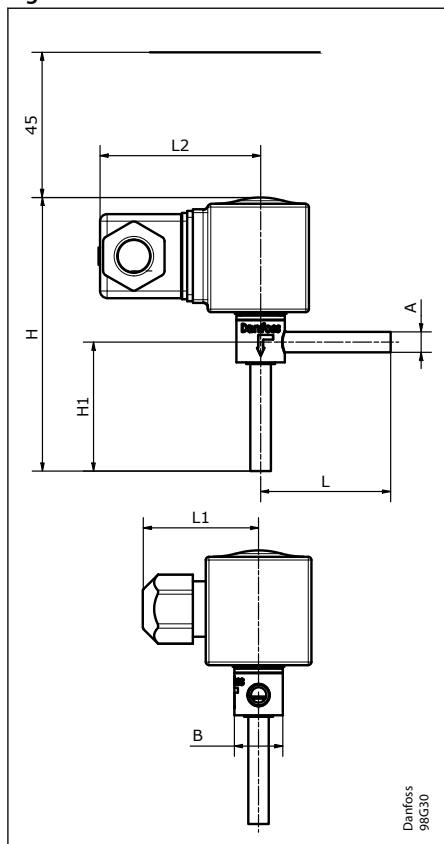


Figure 2: EVL 2.0 SW ODM-ODM

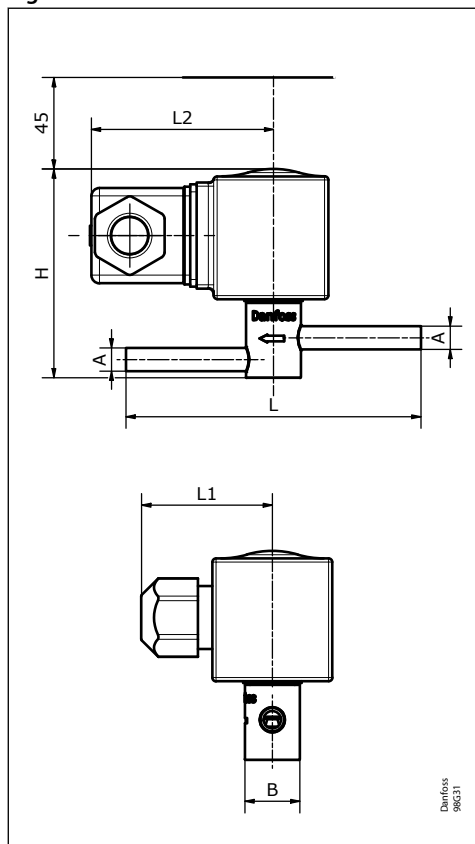


Figure 3: EVL 2.0 SW ODM-ODF

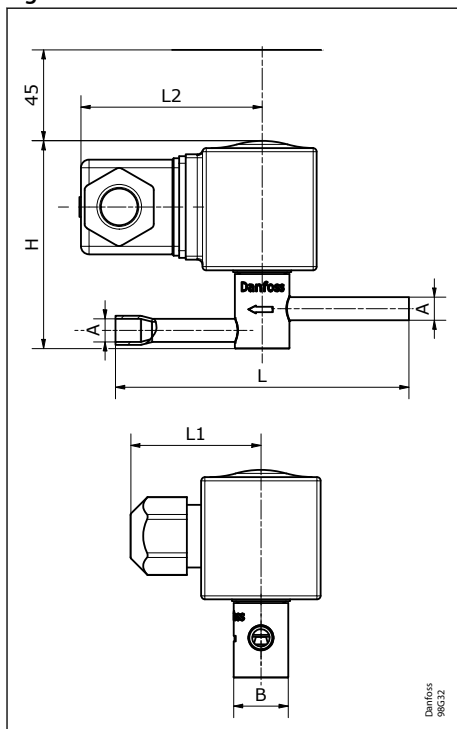
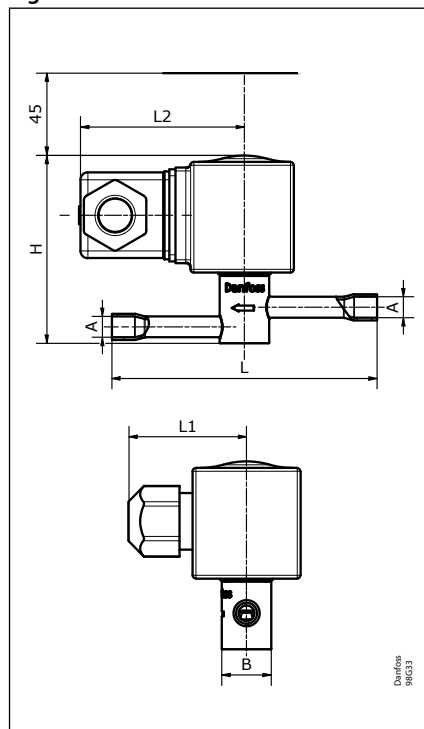


Figure 4: EVL 2.0 SW ODF-ODF



Solenoid valve and coil, Type EVL 2.0 - EVL 2.2

Table 5: Dimensions and weights - solder connection

Type	A Connection			B	H	H1	L	L1	L2	Weight
	Inlet xOutlet	[in]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[kg]
EVL 2.0 AW	ODMXODM	1/4	6.35	15	85	40	40	36	50	0.044
EVL 2.2 AW	ODMXODM	1/4	6.35	15	85	40	40	36	50	0.044
EVL 2.0 SW	ODMXODM	1/4	6.35	15	57	/	81	36	50	0.052
EVL 2.0 SW	ODMXODF	1/4	6.35	15	57	/	81	36	50	0.052
EVL 2.0 SW	ODFXODF	1/4	6.35	15	57	/	81	36	50	0.052

Ordering

Ordering solder connection

Table 6: Ordering - solder connection

Type	Connection			Opening differential pressure with standard coil [bar]		Kv	Code no.
	Inlet xOutlet	[in]	[mm]	Min. OPD	Max. OPD Gas(AC)	m ³ /h	
EVL 2.0 AW	ODMXODM	1/4	6.35	0	31	0.12	032F8800
EVL 2.2 AW	ODMXODM	1/4	6.35	0	28	0.17	032F8801
EVL 2.0 SW	ODMXODM	1/4	6.35	0	31	0.12	032F8802
EVL 2.0 SW	ODMXODF	1/4	6.35	0	31	0.12	032F8803
EVL 2.0 SW	ODFXODF	1/4	6.35	0	31	0.12	032F8804

Ordering solenoid coil with DIN Terminal box IP65

NOTE:

- Please make sure that there is no spark, arc on the spade connection during the application.
- If coils are below IPx5, they must be protected against ultraviolet, moisture and major impact, especially the connection of coils.
- Always install a fuse ahead of the coil to avoid short circuit.
- The coil should be used in area of not more than pollution degree 2.
- Use of socket cable with suitable mechanical lock function to connect with coils.
- Follow the installation guide to mount the coil correctly.

NOTE:

Please follow specific selection criteria stated in the data sheet for this particular refrigerants.

Ordering coil with DIN spade connection

Figure 5: Coil with DIN spade connection

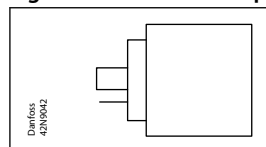
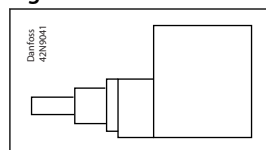


Table 7: Ordering Coil - DIN spade connection

Voltage[V]	Frequency	Power consumption	Code No.	
			Industrial Pack	single pack
24	50/60	Holding: 6W 12VA Inrush: 26VA	—	042N7608
230	50/60		—	042N7601
240	50/60		—	042N7602
12	DC	14W	042N8686	—
24	DC	14W	042N8687	042N7687

Ordering coil cable connection

Figure 6: Coil cable connection



Solenoid valve and coil, Type EVL 2.0 - EVL 2.2

Table 8: Coil cable connection

Voltage[V]	Frequency	Power consumption	Code No.	
[AC]	[Hz]		Industrial Pack	single pack
115	50/60	Holding: 6W 12VA Inrush: 26VA	–	042N7662
230	50/60		042N8651	042N7651
240	50/60		042N8652	–

Accessories

Figure 7: DIN Plug

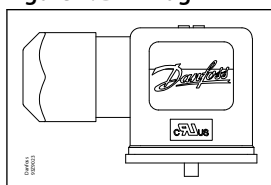


Table 9: Accessories

Description	Code no.
DIN Plug (EN175301-803)	042N1256

Certificates, declarations, and approvals

The list contains all certificates, declarations, and approvals for this product type. Individual code number may have some or all of these approvals, and certain local approvals may not appear on the list.

Some approvals may change over time. You can check the most current status at danfoss.com or contact your local Danfoss representative if you have any questions.

Table 10: Certificates, declarations, and approvals

Document name	Document type	Document topic	Approval authority
033F4078	Manufacturers Declaration	PED	Danfoss
033F0687	Manufacturers Declaration	RoHS Reach	Danfoss
033F0688	Manufacturers Declaration	LVD	Danfoss

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