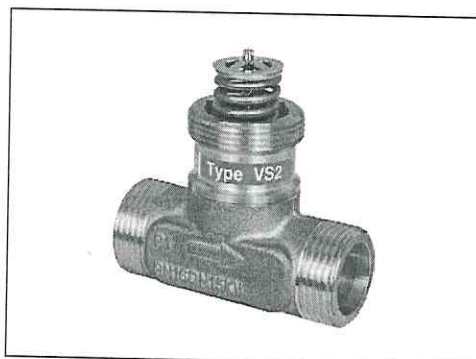


Techninis aprašymas

Balniniai vožtuvai (PN 16)

VS 2 – dvieigis vožtuvas, išorinis sriegis

Aprašymas



VS 2 yra dvieigis vožtuvas, skirtas naudoti su „Danfoss“ elektros pavaromis AMV 150, AMV(E) 10, AMV(E) 20, AMV(E) 30 arba „Danfoss“ elektros pavaromis, turinčiomis spyruoklinę grįžties funkciją, AMV(E) 13, AMV(E) 23 ir AMV(E) 33.

VS 2 vožtuvus paprastai rekomenduojama naudoti sudėtingiausiose sistemose, pvz.:

- centralizuoto šildymo;
- šildymo;
- karšto vandens paruošimo su šilumokaičiu arba akumuliacine talpa, kur vožtuvai užtikrina ilgą ir sklandų sistemos veikimą.

Savybės:

- SKAIDYTA reguliavimo savybė yra skirta sudėtingiausiems naudojimo atvejams (DN 20 ir DN 25).
- Kelios k_{vs} reikšmės.
- Įstumiamoji jungtis, leidžianti lengvai mechaniškai prijungti prie pavaros.
- Reguliavimo ribos min. 50:1.

Pranašumai:

- greitas ir stabilus reguliavimas;
- daugiau komforto dėl stabilios karšto vandens buitinėms reikėms temperatūros;
- energijos taupymas dėl stabilaus reguliavimo;
- komponentai ilgiau veikia dėl mažesnių temperatūros svyravimų.

Pagrindiniai duomenys:

- DN 15–25
- k_{vs} 0,25–4,0 m³/h
- PN 16
- Temperatūra:
 - Cirkuliacinis vanduo / glikolio tirpalas iki 30 %: 2 ... 130 °C
- Jungtys:
 - Išorinis sriegis

Tipas	AMV 150	AMV 10/13	AME 10/13	AMV(E) 20/23	AMV(E) 30/33
VS 2 DN 15 *	•	•	-	-	-
VS 2 DN 20	-	•	•	•	•
VS 2 DN 25	-	•	•	•	•

* VS2 DN 15 vožtuvas turi tiesinę charakteristiką ir netinka karštam vandeniui ruošti, ypač su tolygaus valdymo (AME) pavaromis, nes toks derinys neužtikrina tikslaus karšto vandens valdymo.

Užsakymas

Pavyzdys:

Dvieigis vožtuvas, DN 15, k_{vs} 1,6, PN 16,

t_{maks} 130 °C, išorinis sriegis

- 1x VS 2 DN 15 vožtuvas
Kodas: **065F2115**

Pasirinktis:

- 1x Antgaliai
Kodas: **003H6908**

DN	k_{vs} (m ³ /h)	PN	Išorinis sriegis ISO 228/1	Kodas
15	0,25	16	G ¾ A	065F2111
	0,40			065F2112
	0,63			065F2113
	1,0			065F2114
	1,6			065F2115
20	2,5	16	G 1 A	065F2120
25	4,0		G 1 ¼ A	065F2125

Priedai – antgaliai

DN	Privirinami antgaliai Kodas	Antgaliai* su išoriniu sriegiu Kodas
15	003H6908	003H6902
20	003H6909	003H6903
25	003H6910	003H6904

* 2 antgalių rinkinys

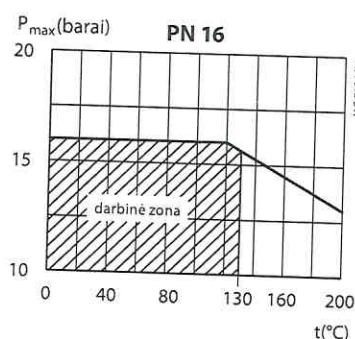
Techniniai duomenys

Sąlyginis skersmuo	DN	15					20	25
k_{vs} reikšmė	m ³ /h	0,25	0,40	0,63	1,0	1,6	2,5	4,0
Eiga	mm	4					5	
Reguliavimo ribos		> 50:1						
Reguliavimo charakteristika		ties.					skaid.	
Kavitacijos koeficientas z		≥ 0.5						
Pralaidumas pagal IEC 534 standartą		Maks. 0,05 % k_{vs}						
Sąlyginis slėgis	PN	16						
Maks. darbinis slėgio perkrytis	bar	6 *						
Maks. uždarymo slėgio perkrytis		10						
Terpė		Cirkuliacinis vanduo / glikolio tirpalas iki 30 %						
Terpės pH		Min. 7, maks. 10						
Terpės temperatūra	°C	2 ... 130						
Jungtys		Išorinis sriegis						
Medžiagos								
Vožtuvo korpusas		Neišsiccinkuojantis žalvaris						
Kūgis, balnas ir stiebas		Nerūdijantis plienas						

* Didėsniis triukšmo lygis, kaip lėšinis didesnis triukšmas

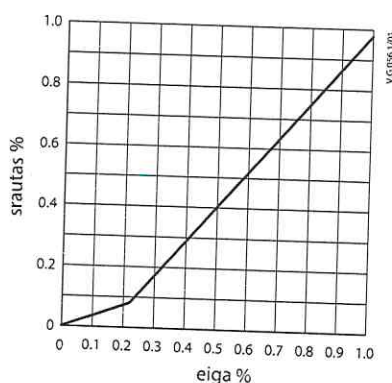
* Didėsnis triukšmo lygis, kai slėgis didėsnis negu 4 barai

Slėgio ir temperatūros grafikas



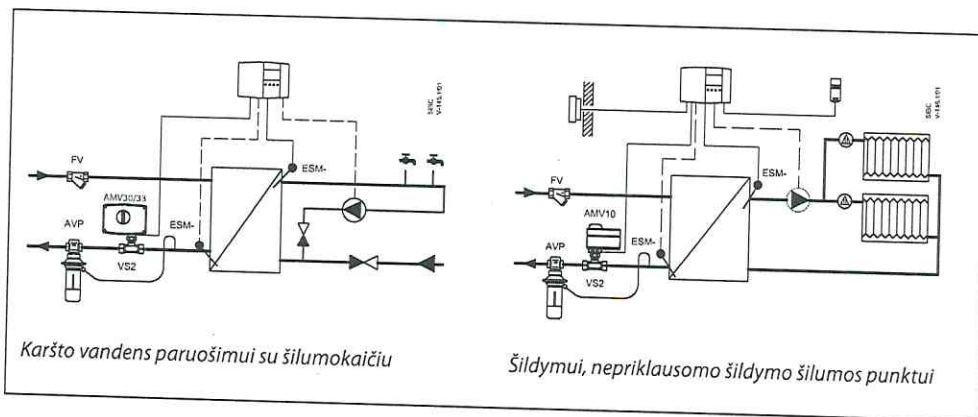
Maksimalus leistinas darbinis slėgis kaip terpės temperatūros funkcija (pagal EN 1092-3).

Skaidytą charakteristika



Greitas ir stabilus reguliavimas net esant mažam debitui. Mažesni temperatūros svyravimai.

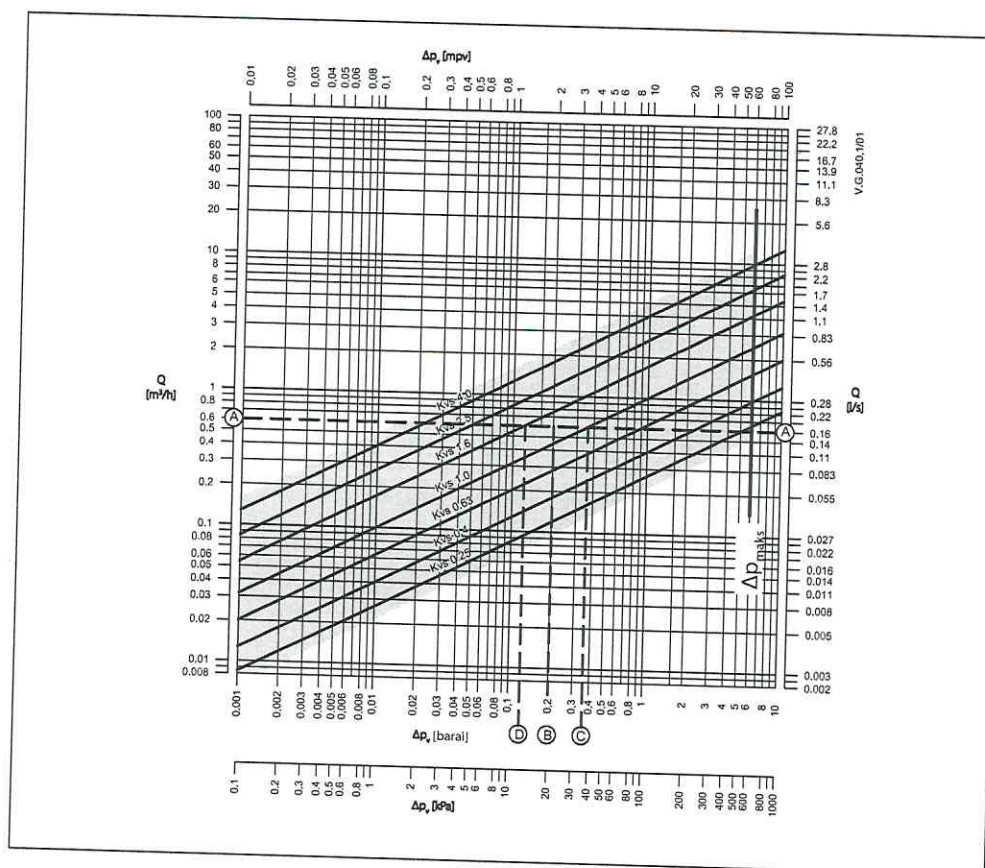
Taikymo principai



Sunaikinimas

Vožtuvas turi būti išmontuotas, o jo dalys surūšiuotos pagal atskiras medžiagų grupes, prieš sunaikinant.

Parinkimas



Pavyzdys

Duomenys:

Debitas: 0,6 m³/h

Sistemos slėgio nuostolis: 20 kPa

Suraskite horizontalią liniją, kuri atitinka 0,6 m³/h debitą (A–A linija). Vožtuvo įtaka išreikšta lygtimi:

$$\text{Vožtuvo įtaka} = \frac{\Delta p_1}{\Delta p_1 + \Delta p_2}$$

Kur:

Δp_1 = slėgio nuostolis visiškai atidarytame vožtuve

Δp_2 = slėgio nuostolis likusioje kontūro dalyje, kai vožtuvas visiškai atidarytas

Gerai parinkto vožtuvo slėgio nuostolis būtų lygus visos sistemos slėgio nuostoliui (t. y. 0,5 įtaka):

$$\text{jei: } \Delta p_1 = \Delta p_2$$

$$a = \frac{\Delta p_1}{2 \times \Delta p_1} = 0,5$$

Šiame pavyzdyje įtaką 0,5 turėtų vožtuvas, kurio slėgio nuostolis 20 kPa, esant tam tikram debitui (taškas B). A–A linijos sankirta su vertikalia linija, nubrėžta nuo B, bus tarp dviejų įstrižainių. Tai reiškia, kad idealiai parinkti vožtuvo negalima. Ties A–A linijos sankirta su įstrižomis linijomis gaunami slėgio nuostoliai naudojant realius, o ne idealius vožtuvus. Šiuo atveju vožtuvo, kurio k_{vs} 1,0, slėgio nuostolis bus 36,0 kPa (taškas C):

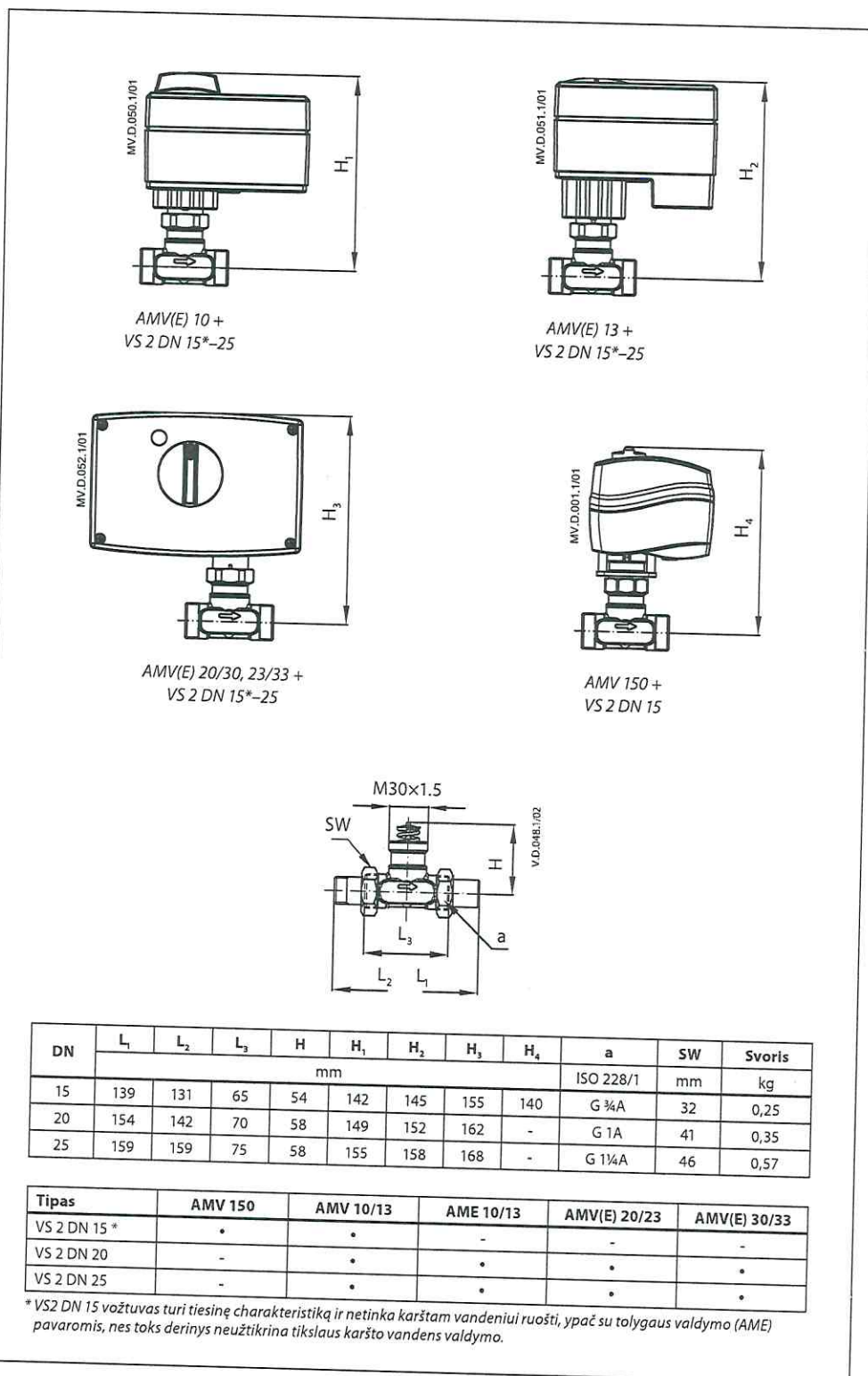
$$\text{vožtuvo įtaka} = \frac{36}{36 + 20} = 0,64$$

Antro pagal dydį vožtuvo, kurio k_{vs} 1,6, slėgio nuostolis bus 14 kPa (taškas D):

$$\text{vožtuvo įtaka} = \frac{14}{14 + 20} = 0,41$$

Dažniausiai naudojant būtų pasirinktas mažesnis vožtuvas (jo įtaka didesnė nei 0,5, taigi pagerėja reguliavimas). Tačiau tai padidins bendrą slėgį, todėl sistemos projektuotojas turėtų patikrinti suderinamumą su esamais siurbiais ir kita įranga. Ideali įtakos vertė yra 0,5, o pageidautinas intervalas nuo 0,4 iki 0,7.

Matmenys



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Faks.: (8-5) 2335 355
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Danfoss UAB

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Danfoss firma neatsako už galimas klaidas ir netikslumus kataloguose, bukletuose ir kituose spaudiniuose. Danfoss firma pasilieka teisę be išankstinio pranešimo keisti savo gaminius, taip pat ir užsakytus, su sąlyga, kad nereikės keisti jau suderintų specifikacijų.
Visi paminėti spaudinyje prekybiniai ženklai yra atitinkamų kompanijų nuosavybė. Danfoss ir Danfoss logotipas yra Danfoss A/S nuosavybė. Visos teisės rezervuotos.

V5825B

Small Linear Valve / PN25
DH Compact Valve

PRODUCT DATA



GENERAL

Single-seated 2-way valves for modulating control of hot / chilled water in heating, ventilating, and air conditioning systems.

These valves are designed especially for flow control in hydraulic systems with high temperatures and pressures, such as district heating systems. It can also be used in combination with M6410/M7410 (300 N) actuators as well as with ML7430/35 and ML6435 (400 N) actuators.

FEATURES

- Pressure-balanced k_{vs} 1.0...10 m³/hr
- Normally-closed valve
- Supplied with manual adjustment cap for start-up
- Small size
- Threaded and welding connection sets
- Bronze body, stainless steel trim
- Low seat leakage rate
- Metal-to-metal seating for long life span
- Easy mounting of direct-coupled electric actuators
- Approval per DIN EN 14597

SPECIFICATIONS

Action	valve is closed by its spring
Nominal pressure rating	PN25
Rangeability	50:1
Leakage rate:	max. 0.05% of k_{vs}
Characteristic	split characteristic / linear - equal percentage
Stroke	6.5 mm
Close-off pressure	0...1600 kPa with 300 N actuator 0...2500 kPa with 400 N actuator
Valve body	
End connections	external thread per ISO 228/1
Material	red bronze (DIN 1705)
Trim	
Seat	stainless steel (W.-No. 1.4305)
Plug	stainless steel (W.-No. 1.4305)
Stem	stainless steel (W.-No. 1.4305)
Packing	EPDM, O-ring
Medium	water; glycol/water mixture (max. 50% glycol per VDI 2035)
Medium temperature	2...130 °C
Dimensions	See Fig. 2 on page 4

SIZES AND FLOW CAPACITIES

size	k_{vs} (m ³ /h)	close-off pressure (kPa) with 300 N actuator	close-off pressure (kPa) with 400 N actuator	order number
DN15	0.25	1600	2500	V5825B1001
DN15	0.40	1600	2500	V5825B1019
DN15	0.63	1600	2500	V5825B1027
DN15	1.0	1600	2500	V5825B1035
DN15	1.6	1600	2500	V5825B1043
DN20	2.5	1600	2500	V5825B1050
DN20	4.0	1600	2500	V5825B1068
DN25	6.3	1600	2500	V5825B1076
DN32	10.0	1600	2500	V5825B1084

ACTUATORS

Suitable electric actuators:

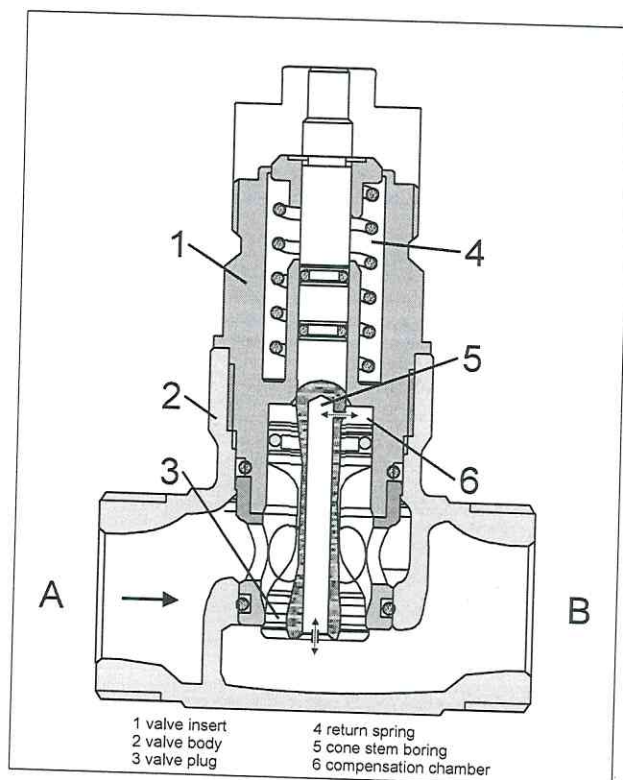
OS no.	data sheet	control signal	auxiliary switches	manual adjustment	stem force (N)	power failure position
M7410C1015	EN0B-0096GE02	24 Vac	-	valve cap	300	-
M6410C2031	EN0B-0096GE02	24 Vac	-	integrated	300	-
M6410C4037	EN0B-0096GE02	24 Vac	2	integrated	300	-
M6410L2031	EN0B-0096GE02	230 Vac	-	integrated	300	-
M6410L4037	EN0B-0096GE02	230 Vac	2	integrated	300	-
M7410E1028	EN0B-0097GE02	0/2...10 V	-	valve cap	300	-
M7410E2034	EN0B-0097GE02	0/2...10 V	-	integrated	300	-
M7410E4030	EN0B-0097GE02	0/2...10 V	2	integrated	300	-
ML6435B1008	EN0B-0259GE51	24 Vac	-	valve cap	400	stem retract
ML6435B1016	EN0B-0259GE51	230 Vac	-	valve cap	400	stem retract
ML7430E1005	EN0B-0260GE51	0/2...10 V	-	integrated	400	-
ML7435E1004	EN0B-0260GE51	0/2...10 V	-	valve cap	400	stem retract

For further technical information about electric actuators, please consult Honeywell Product Data Sheets.

APPROVAL

NOTE: For V5825B valves in combination with the following actuators, approval according to DIN EN 14597.

Actuator O.S. no.	DIN registration no.
ML6435B1008 ML6435B1016 ML7435E1004	1F152/08



**Fig. 1. DH Compact Valve V5825B, size DN25
(cross-sectional drawing)**

OPERATION

DH Compact valves V5825B are available in four sizes, from DN15 through DN32. This description refers to size DN25.

A built-in return spring (4) produces the closing force on the port A to port B. The valve is supplied with a screwed-on valve cap for manual operation and for protection of the system. This allows the system to be filled and set up for the initial heating / cooling during the building construction phase without the use of a controller or actuator.

The medium flows through the valve from port A to port B, in the direction of the arrow mark on the valve body.

The flow rate is limited by the setting of the valve plug (3), which is positioned either using the manually adjustable valve cap or by an actuator. Maximum stroke means maximum flow rate.

In order to be able to close precisely against high pressure differences, the valve compensates pressure differences by means of a cone stem boring (5) connecting to a compensation chamber (6).

Some specific actuators automatically retract the stem in the event of a power failure in order to close the valve and stop the flow of medium (refer to section "Actuators" on page 2).

INSTALLATION

When installing the valve, ensure that the flow direction corresponds with the arrow direction on the valve body (see Installation Instructions MU1B-0224GE51).

- The valve must not be mounted with the stem pointing below the horizontal.
- The valve should be installed stress-free. External threaded or welding connection sets are available (refer to section "Accessories" on page 5).
- The installation of a strainer is strongly recommended; in district heating systems, it is obligatory.
- Make sure that water hammers are avoided.
- For pressure test, the valve (with actuator) must be open.
- The adjustment cap must be removed from the valve only when an actuator is fitted.
- The water must not contain more than 50% glycol according to VDI 2035 requirements.

MAINTENANCE

In case of leakage or heavy soiling of the valve, the complete valve insert (1) can be replaced (see section "Spare Parts" on page 6).

DIMENSIONS

Valve V5825B

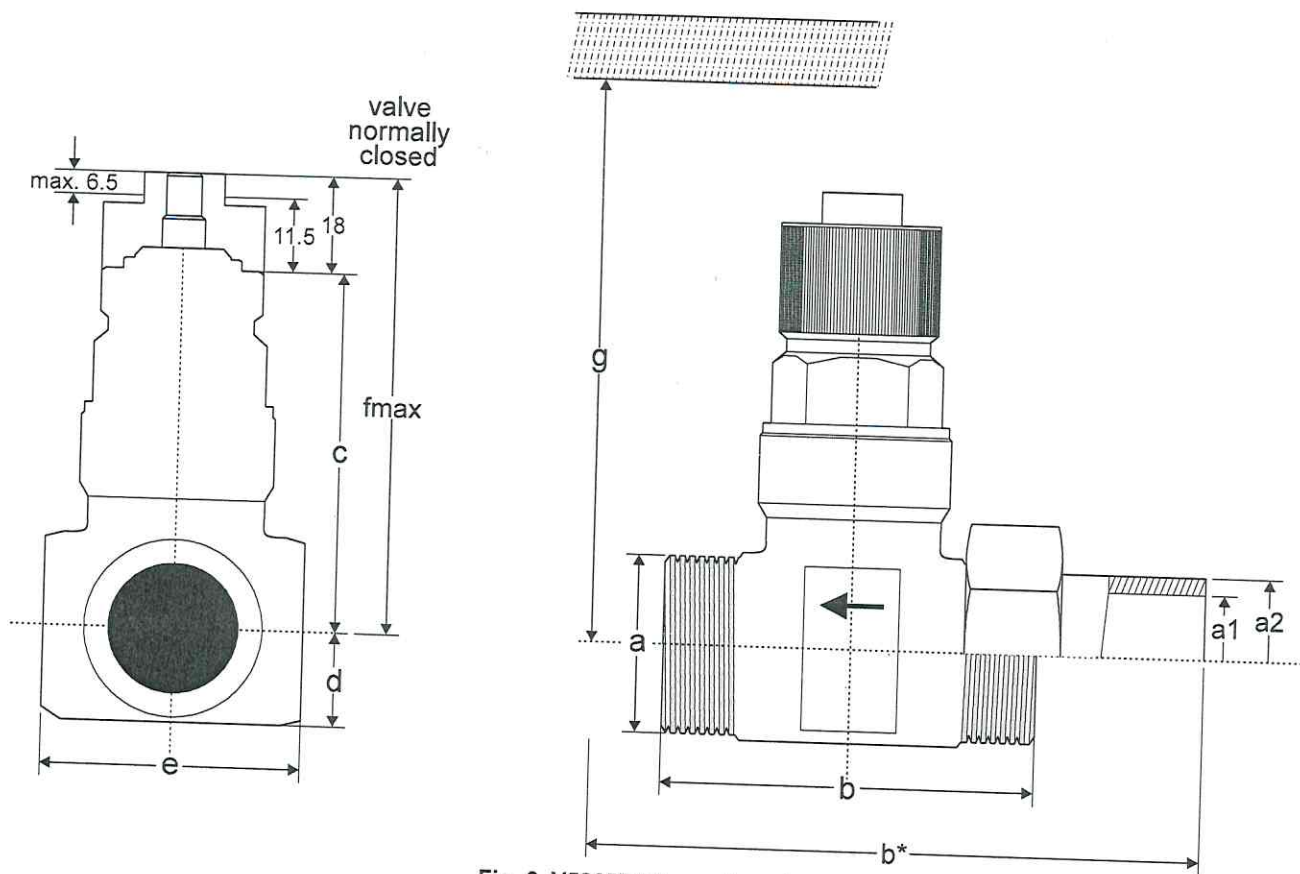


Fig. 2. V5825B Dimensions (mm)

DN	a	b	dimensions in mm								
			threaded connection		welding connection		c	d	e	f	g
			b*	a2	b*	a1					
15	G¾"	65	125	R½"	175	16Ø	59	18	35	77	270
20	G1"	70	138	R¾"	184	20Ø	67	18	36	85	280
25	G1¼"	75	154	R1"	180	27Ø	69	23	46	87	280
32	G1½"	100	192	R1¼"	264	32Ø	89	25	57	107	300

ACCESSORIES

Connection Sets

For threaded connections according to ISO 7/1 for steel pipes or malleable iron, refer to Fig. 3 (ACS-...T) or Fig. 4 (ACS-...W).

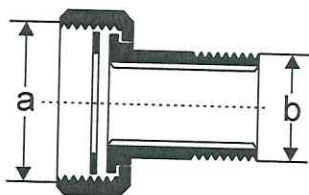


Fig. 3. External threaded connection

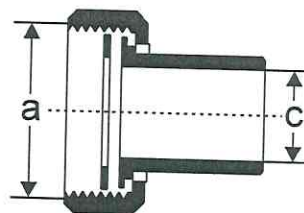


Fig. 4. Welding connection

Two connection sets are necessary

connection	pipe size	DN	order no.	connection set	description	a	b	c
external thread	R $\frac{1}{2}$ "	15	ACS-15T		threaded connection (consisting of 1 union nut, 1 tailpiece, and 1 gasket)	G $\frac{3}{4}$ "	R $\frac{1}{2}$ "	-
	R $\frac{3}{4}$ "	20	ACS-20T			G1"	R $\frac{3}{4}$ "	-
	R1"	25	ACS-25T			G1 $\frac{1}{4}$ "	R1"	-
	R1 $\frac{1}{4}$ "	32	ACS-32T			G1 $\frac{1}{2}$ "	R1 $\frac{1}{4}$ "	-
welding	$\frac{1}{2}$ "	15	ACS-15W		welding connection (consisting of 1 union nut, 1 tailpiece, and 1 gasket)	G $\frac{3}{4}$ "	-	16Ø
	$\frac{3}{4}$ "	20	ACS-20W			G1"	-	20Ø
	1"	25	ACS-25W			G1 $\frac{1}{4}$ "	-	27Ø
	1 $\frac{1}{4}$ "	32	ACS-32W			G1 $\frac{1}{2}$ "	-	32Ø

SPARE PARTS

Table 1. Valve inserts

k_{vs}	order no.
0.25	0903809
0.40	0903810
0.63	0903811
1.0	0903812
1.6	0903813
2.5	0903814
4.0	0903815
6.3	0903816
10.0	0903817

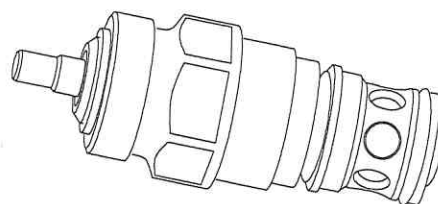


Fig. 5. Typical valve insert

Table 2. Adapter for Salina

valve type to be replaced	new valve model	k_{vs}	order no. of valve adapter kit
V5872B1003	V5825B1001	0.25	AK15-15
V5872B1011	V5825B1019	0.40	AK15-15
V5872B1029	V5825B1027	0.63	AK15-15
V5872B1037	V5825B1035	1.0	AK15-15
V5872B1045	V5825B1043	1.6	AK15-15
V5872B1052	V5825B1050	2.5	AK20-15
V5872B1060	V5825B1068	4.0	AK20-25
V5872B1078	V5825B1076	6.3	AK25-25
V5872B1086	V5825B1084	10.0	n.a.

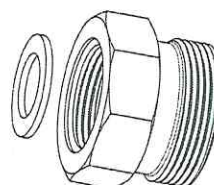


Fig. 6. Valve adapter

NOTE: The valve adapter kit contains all of the components required to replace one V5872B valve with the V5825B.

Honeywell

Manufactured for and on behalf of the Environmental and Combustion Controls Division of Honeywell Technologies Sàrl, Rolle, Z.A. La Pièce 16, Switzerland by its Authorized Representative:

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EN0B-0403GE51 R0709

V5825B

Small Linear Valve / PN25
DH Compact Valve

PRODUCT DATA



GENERAL

Single-seated 2-way valves for modulating control of hot / chilled water in heating, ventilating, and air conditioning systems.

These valves are designed especially for flow control in hydraulic systems with high temperatures and pressures, such as district heating systems. It can also be used in combination with M6410/M7410 (300 N) actuators as well as with ML7430/35 and ML6435 (400 N) actuators.

FEATURES

- Pressure-balanced k_{vs} 1.0...10 m³/hr
- Normally-closed valve
- Supplied with manual adjustment cap for start-up
- Small size
- Threaded and welding connection sets
- Bronze body, stainless steel trim
- Low seat leakage rate
- Metal-to-metal seating for long life span
- Easy mounting of direct-coupled electric actuators
- Approval per DIN EN 14597

SPECIFICATIONS

Action	valve is closed by its spring
Nominal pressure rating	PN25
Rangeability	50:1
Leakage rate:	max. 0.05% of k_{vs}
Characteristic	split characteristic / linear - equal percentage
Stroke	6.5 mm
Close-off pressure	0...1600 kPa with 300 N actuator 0...2500 kPa with 400 N actuator
Valve body	
End connections	external thread per ISO 228/1
Material	red bronze (DIN 1705)
Trim	
Seat	stainless steel (W.-No. 1.4305)
Plug	stainless steel (W.-No. 1.4305)
Stem	stainless steel (W.-No. 1.4305)
Packing	EPDM, O-ring
Medium	water; glycol/water mixture (max. 50% glycol per VDI 2035)
Medium temperature	2...130 °C
Dimensions	See Fig. 2 on page 4

SIZES AND FLOW CAPACITIES

size	k_{vs} (m ³ /h)	close-off pressure (kPa) with 300 N actuator	close-off pressure (kPa) with 400 N actuator	order number
DN15	0.25	1600	2500	V5825B1001
DN15	0.40	1600	2500	V5825B1019
DN15	0.63	1600	2500	V5825B1027
DN15	1.0	1600	2500	V5825B1035
DN15	1.6	1600	2500	V5825B1043
DN20	2.5	1600	2500	V5825B1050
DN20	4.0	1600	2500	V5825B1068
DN25	6.3	1600	2500	V5825B1076
DN32	10.0	1600	2500	V5825B1084

ACTUATORS

Suitable electric actuators:

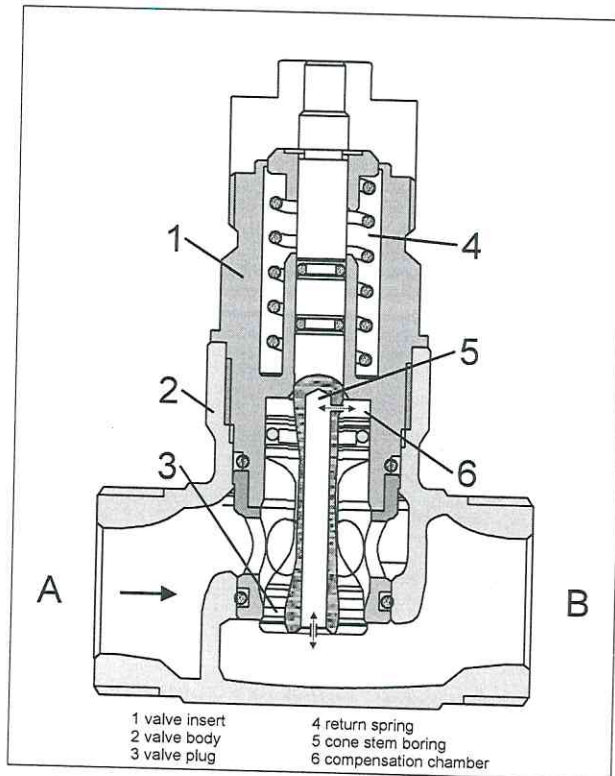
OS no.	data sheet	control signal	auxiliary switches	manual adjustment	stem force (N)	power failure position
M7410C1015	EN0B-0096GE02	24 Vac	-	valve cap	300	-
M6410C2031	EN0B-0096GE02	24 Vac	-	integrated	300	-
M6410C4037	EN0B-0096GE02	24 Vac	2	integrated	300	-
M6410L2031	EN0B-0096GE02	230 Vac	-	integrated	300	-
M6410L4037	EN0B-0096GE02	230 Vac	2	integrated	300	-
M7410E1028	EN0B-0097GE02	0/2...10 V	-	valve cap	300	-
M7410E2034	EN0B-0097GE02	0/2...10 V	-	integrated	300	-
M7410E4030	EN0B-0097GE02	0/2...10 V	2	integrated	300	-
ML6435B1008	EN0B-0259GE51	24 Vac	-	valve cap	400	stem retract
ML6435B1016	EN0B-0259GE51	230 Vac	-	valve cap	400	stem retract
ML7430E1005	EN0B-0260GE51	0/2...10 V	-	integrated	400	-
ML7435E1004	EN0B-0260GE51	0/2...10 V	-	valve cap	400	stem retract

For further technical information about electric actuators, please consult Honeywell Product Data Sheets.

APPROVAL

NOTE: For V5825B valves in combination with the following actuators, approval according to DIN EN 14597.

Actuator O.S. no.	DIN registration no.
ML6435B1008	1F152/08
ML6435B1016	
ML7435E1004	



**Fig. 1. DH Compact Valve V5825B, size DN25
(cross-sectional drawing)**

OPERATION

DH Compact valves V5825B are available in four sizes, from DN15 through DN32. This description refers to size DN25.

A built-in return spring (4) produces the closing force on the port A to port B. The valve is supplied with a screwed-on valve cap for manual operation and for protection of the system. This allows the system to be filled and set up for the initial heating / cooling during the building construction phase without the use of a controller or actuator.

The medium flows through the valve from port A to port B, in the direction of the arrow mark on the valve body.

The flow rate is limited by the setting of the valve plug (3), which is positioned either using the manually adjustable valve cap or by an actuator. Maximum stroke means maximum flow rate.

In order to be able to close precisely against high pressure differences, the valve compensates pressure differences by means of a cone stem boring (5) connecting to a compensation chamber (6).

Some specific actuators automatically retract the stem in the event of a power failure in order to close the valve and stop the flow of medium (refer to section "Actuators" on page 2).

INSTALLATION

When installing the valve, ensure that the flow direction corresponds with the arrow direction on the valve body (see Installation Instructions MU1B-0224GE51).

- The valve must not be mounted with the stem pointing below the horizontal.
- The valve should be installed stress-free.
External threaded or welding connection sets are available (refer to section "Accessories" on page 5).
- The installation of a strainer is strongly recommended; in district heating systems, it is obligatory.
- Make sure that water hammers are avoided.
- For pressure test, the valve (with actuator) must be open.
- The adjustment cap must be removed from the valve only when an actuator is fitted.
- The water must not contain more than 50% glycol according to VDI 2035 requirements.

MAINTENANCE

In case of leakage or heavy soiling of the valve, the complete valve insert (1) can be replaced (see section "Spare Parts" on page 6).

DIMENSIONS

Valve V5825B

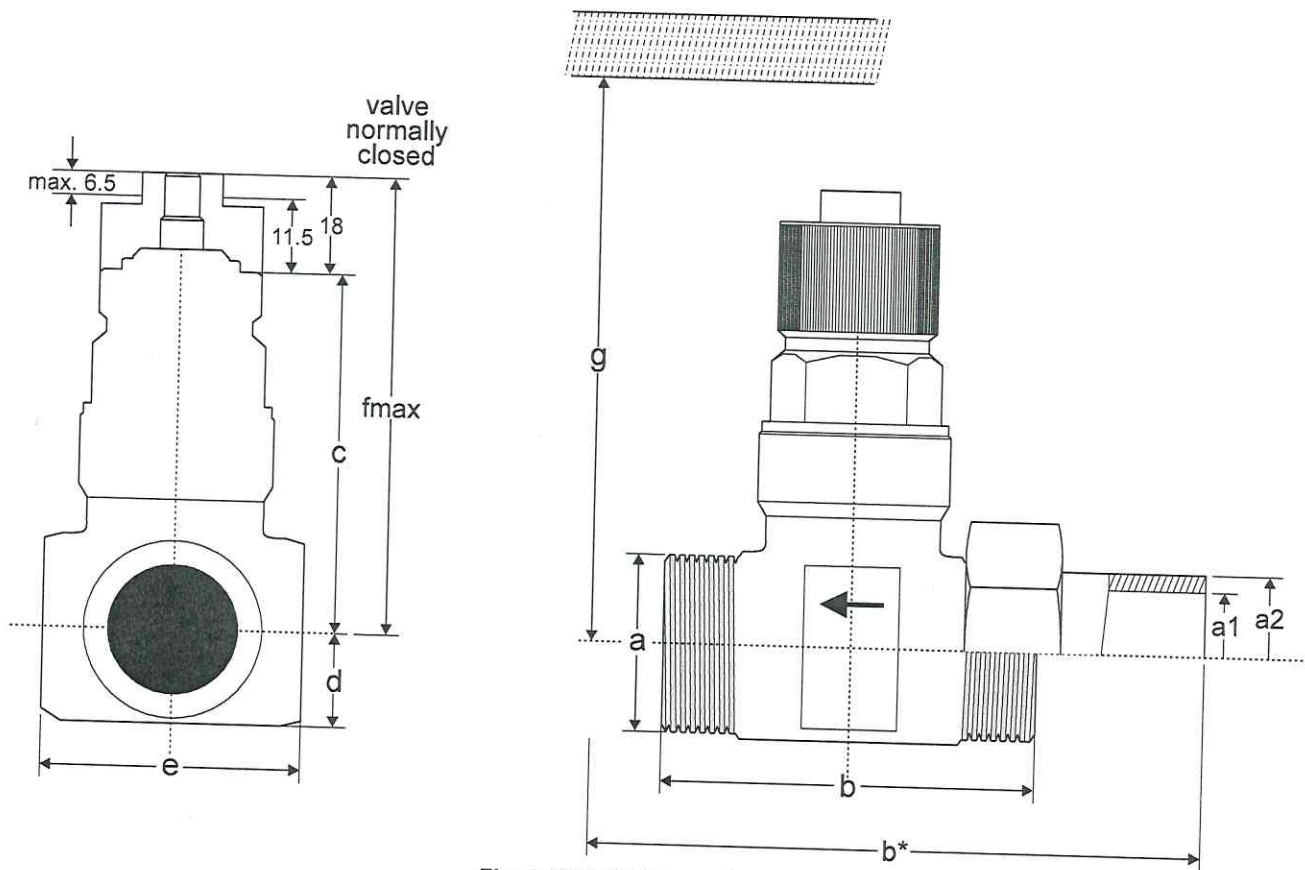


Fig. 2. V5825B Dimensions (mm)

DN	a	dimensions in mm									
		b	threaded connection		welding connection		c	d	e	f	g
			b*	a2	b*	a1					
15	G¾"	65	125	R½"	175	16Ø	59	18	35	77	270
20	G1"	70	138	R¾"	184	20Ø	67	18	36	85	280
25	G1¼"	75	154	R1"	180	27Ø	69	23	46	87	280
32	G1½"	100	192	R1¼"	264	32Ø	89	25	57	107	300

ACCESSORIES

Connection Sets

For threaded connections according to ISO 7/1 for steel pipes or malleable iron, refer to Fig. 3 (ACS-...T) or Fig. 4 (ACS-...W).

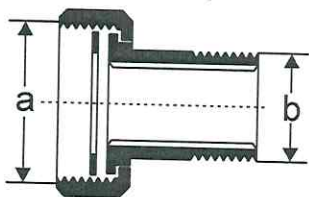


Fig. 3. External threaded connection

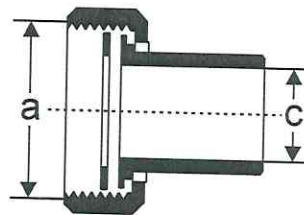


Fig. 4. Welding connection

Two connection sets are necessary

connection	pipe size	DN	order no.	connection set	description	a	b	c
external thread	R $\frac{1}{2}$ "	15	ACS-15T		threaded connection (consisting of 1 union nut, 1 tailpiece, and 1 gasket)	G $\frac{3}{4}$ "	R $\frac{1}{2}$ "	-
	R $\frac{3}{4}$ "	20	ACS-20T			G1"	R $\frac{3}{4}$ "	-
	R1"	25	ACS-25T			G1 $\frac{1}{4}$ "	R1"	-
	R1 $\frac{1}{4}$ "	32	ACS-32T			G1 $\frac{1}{2}$ "	R1 $\frac{1}{4}$ "	-
welding	$\frac{1}{2}$ "	15	ACS-15W		welding connection (consisting of 1 union nut, 1 tailpiece, and 1 gasket)	G $\frac{3}{4}$ "	-	16Ø
	$\frac{3}{4}$ "	20	ACS-20W			G1"	-	20Ø
	1"	25	ACS-25W			G1 $\frac{1}{4}$ "	-	27Ø
	1 $\frac{1}{4}$ "	32	ACS-32W			G1 $\frac{1}{2}$ "	-	32Ø

SPARE PARTS

Table 1. Valve inserts

k_{vs}	order no.
0.25	0903809
0.40	0903810
0.63	0903811
1.0	0903812
1.6	0903813
2.5	0903814
4.0	0903815
6.3	0903816
10.0	0903817

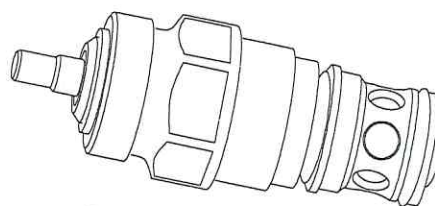


Fig. 5. Typical valve insert

Table 2. Adapter for Salina

valve type to be replaced	new valve model	k_{vs}	order no. of valve adapter kit
V5872B1003	V5825B1001	0.25	AK15-15
V5872B1011	V5825B1019	0.40	AK15-15
V5872B1029	V5825B1027	0.63	AK15-15
V5872B1037	V5825B1035	1.0	AK15-15
V5872B1045	V5825B1043	1.6	AK15-15
V5872B1052	V5825B1050	2.5	AK20-15
V5872B1060	V5825B1068	4.0	AK20-25
V5872B1078	V5825B1076	6.3	AK25-25
V5872B1086	V5825B1084	10.0	n.a.

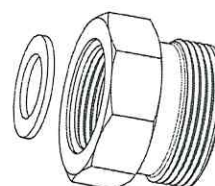


Fig. 6. Valve adapter

NOTE: The valve adapter kit contains all of the components required to replace one V5872B valve with the V5825B.

Honeywell

Manufactured for and on behalf of the Environmental and Combustion Controls Division of Honeywell Technologies Sàrl, Rolle, Z.A. La Pièce 16, Switzerland by its Authorized Representative:

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Germany

Phone: (49) 7031 63701

Fax: (49) 7031 637493

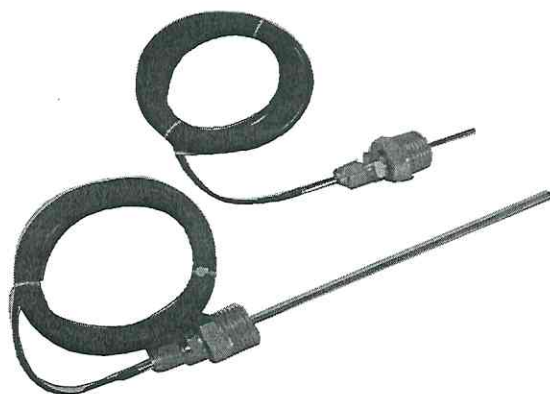
<http://ecc.emea.honeywell.com>

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EN0B-0403GE51 R0709

T7425A,B IMMERSION TEMPERATURE SENSOR

PRODUCT DATA



GENERAL

The T7425A,B Immersion Temperature Sensor is used in heating, cooling or domestic hot water applications requiring fast response temperature measurement.

TYPES

OS no.	Description	Sensing range
T7425A1005	sensor element: NTC20k Ω sensor length: 75 mm	-20...+140 °C (-4...+284 °F)
T7425A1013	sensor element: NTC20k Ω sensor length: 220 mm	-20...+140 °C (-4...+284 °F)
T7425A1021	sensor element: NTC20k Ω sensor length: 300mm	-20...+140 °C (-4...+284 °F)
T7425B1011	sensor element: PT1000 sensor length: 75 mm	-20...+300 °C (-4...+572 °F)
T7425B1029	sensor element: PT1000 sensor length: 220 mm	-20...+300 °C (-4...+572 °F)

FEATURES

- Fast response time
- Operating range of
-20...+140 °C (T7425A) or
-20...+300 °C (T7425B)
- Easy installation
- Adjustable well length
- Stainless steel body material

SPECIFICATIONS

Nominal value

T7425A (NTC20k Ω)	20 k Ω at 25 °C
T7425B (PT1000)	1000 Ω at 0 °C

Accuracy

T7425A (NTC20k Ω)	0.3 K +1% • t - 25 °C (t in °C)
T7425B (PT1000)	IEC751 Class B 0.3 K +0.5% • t (t in °C)

Sensitivity

T7425A (NTC20k Ω)	$\approx$ -934.5 Ω / K at 25 °C (non-linear)
T7425B (PT1000)	$\approx$ 3.85 Ω / K

Response time

$\tau_{0.5}$ = 2 seconds (T7425A)
$\tau_{0.5}$ = 2.5 seconds (T7425B)

Well

Pressure rating	PN16 (nominal)
-----------------	----------------

Maximum medium velocity

75 mm length	20 m/s
220 mm length	10 m/s
300 mm length	7 m/s

Medium

Mineral and synthetic oil, glycol-water mixture, domestic hot water, swimming pool water

Material

Stainless steel, 1.4571

Dimensions

$\varnothing$ 4 mm, length ~ 75/220/300 mm

Outlet size

R1/2"

Tightening torque

10 $\pm$ 2 Nm, 10-mm wrench

Cable

Length	2.5 m
--------	-------

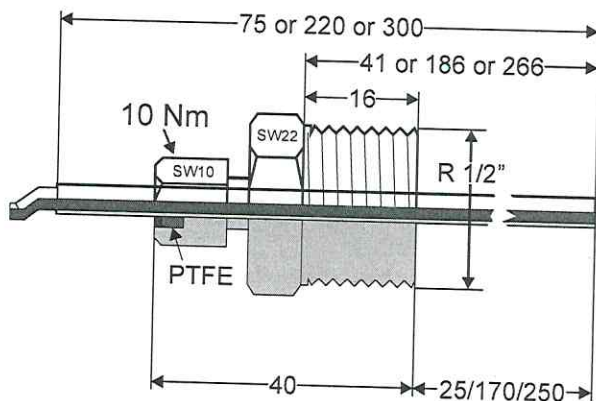
Protection class

IP 65

ELECTRICAL CONNECTION

The wiring of the temperature sensor must be in accordance with the overall wiring circuit diagram. The terminals are not polarized; thus, even if the wires are connected in reverse, no malfunction will occur.

DIMENSIONS

**Honeywell****Control Products**

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Böblinger Straße 17
D-71101 Schönaich
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<http://europe.hbc.honeywell.com>

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EN0B-0117GE51 R0902
107157280

Manufacturing location certified to **DIN EN ISO 9001/14001**

Axis industries

Rubisafe 3 termometro techninis aprašas

Paskirtis:

Termometras skirtas temperatūros matavimui naudojant kartu su šilumos mazgo valdikliu Rubisafe 3.

Jutiklių techninės charakteristikos

Lentelė 1

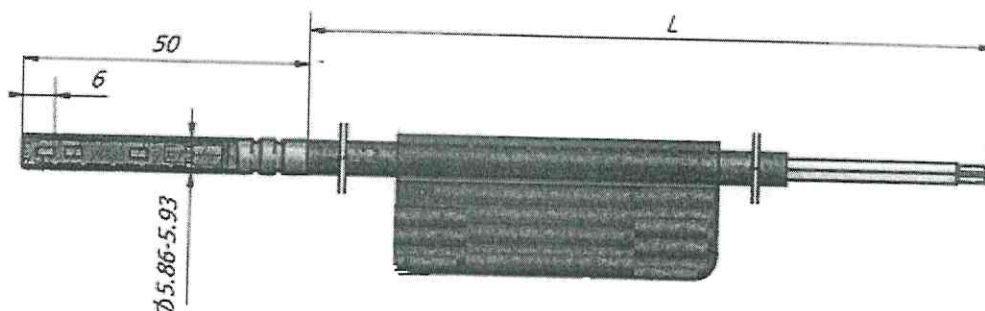
Parametras	reikšmė
Matavimo ribos	nuo -55°C iki +125°C;
Mažiausia padalos reikšmė	0.5 °C;
Tikslumas	0.5 °C nuo -10°C iki +85°C;
Keitimo trukmė	200 ms. – 500 ms.
Sąsajos tipas	skaitmeninė, trilaidė sąsaja (maksimalus kabelio ilgis iki 100m.);

Komplektuotė

Termometras gali būti dviejų tipų:

1. Termometras skirtas vandens temperatūros matavimui;
2. Termometras skirtas lauko temperatūros matavimui.

Termometras skirtas vandens temperatūros matavimui komplektuojamas su 1,5 m ilgio laidu. Versija skirta lauko temperatūros matavimui komplektuojama IP 55 apsaugos klasę atitinkančioje dėžutėje. Šioje versijoje kabelis nekomplektuojamas.

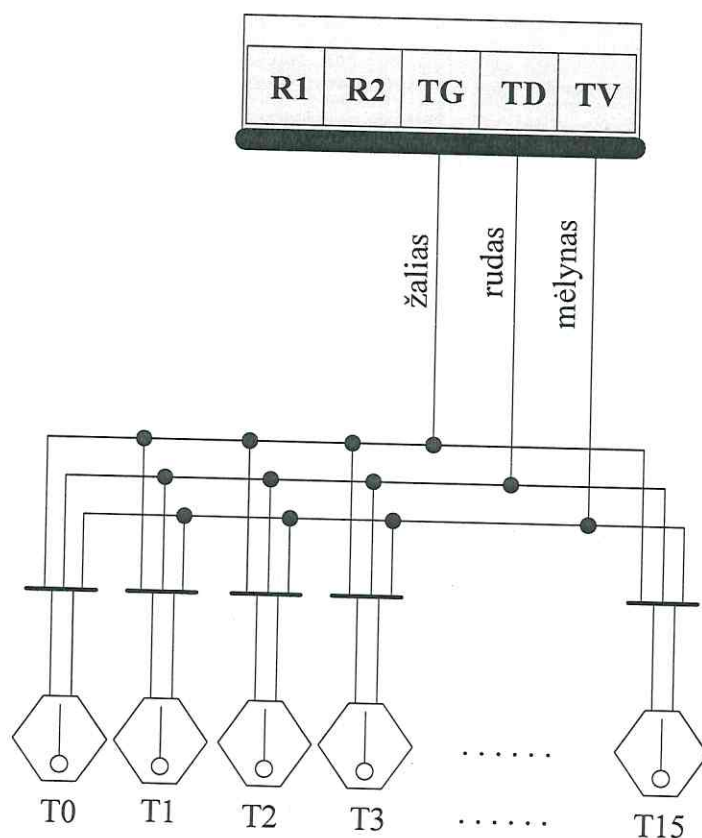
Pagrindiniai jutiklių matmenys

Pav. 1 Rubisafe termometro matmenys

Termometro prijungimas

Lentelė 2

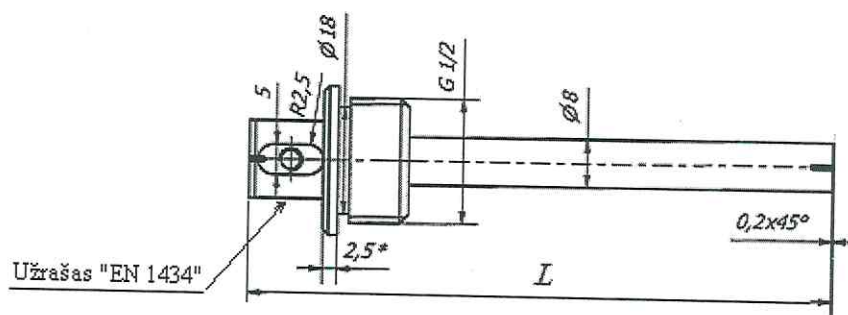
Spalva	Paiškinimas
Mėlynas	maitinimas +5V
Rudas	duomenys
Žalias	maitinimas, bendras laidas



Pav. 2 Temperatūros daviklių pajungimo prie Rubisafe 3 schema

Jutiklių montavimas.

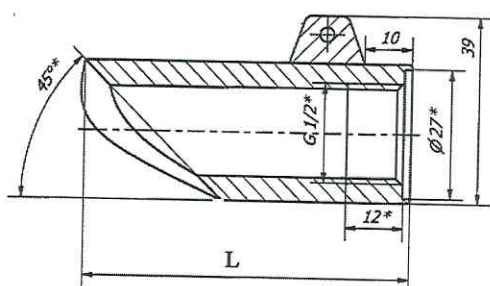
Temperatūros jutikliai montuojami naudojant atitinkamo ilgio apsauginius lizdus (Pav. 3 pav.)



Vamzdžio sąlyginis skersmuo, mm	Apsauginio lizdo bendras ilgis L, mm
DN20...DN100	100
DN125...DN150	135
DN200	225

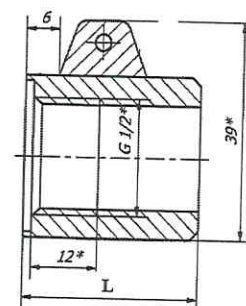
Pav. 3 Apsauginis lizdas

ir atitinkamo tipo bei ilgio įvirinamas įvorių (4. pav. ir 5 pav.).



Vamzdžio sąlyginis skersmuo, mm	L, mm
DN20	79,3
DN25	69
DN32, DN40	59
DN50	49

Pav. 4 Įvorė (kai vamzdžio DN < 65 mm)

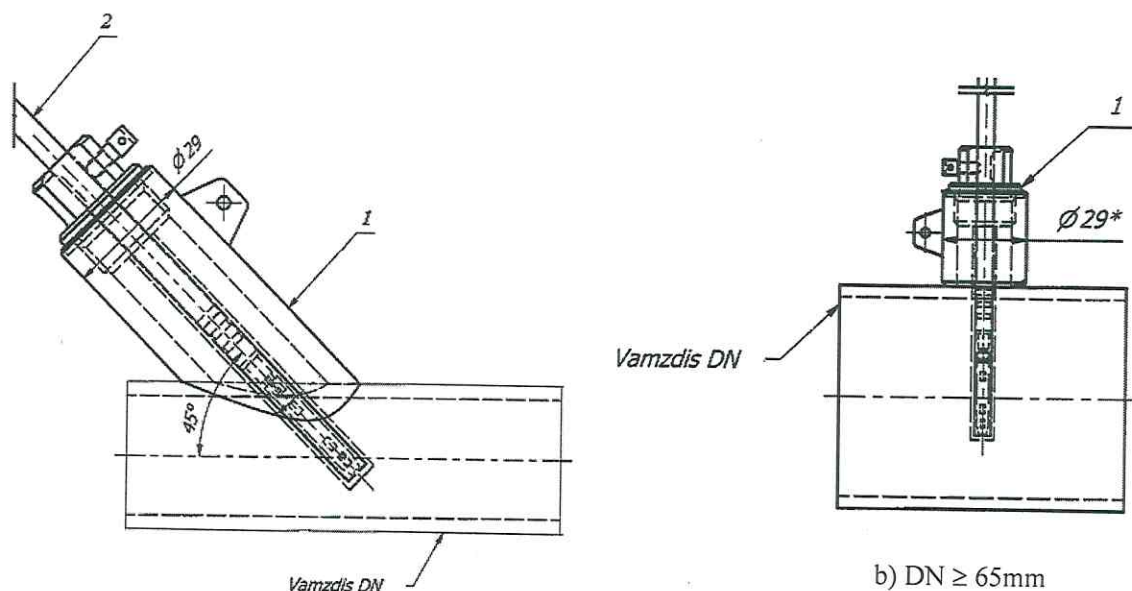


Vamzdžio sąlyginis skersmuo, mm	L, mm
DN65, DN80, DN125, DN150	32
DN100	18
DN200	90

Pav. 5 Įvorė (kai vamzdžio DN ≥ 65 mm)

Montuojant į sąlyginio skersmens DN < 65 mm vamzdžius, naudojamas montavimo būdas 45° kampu vamzdžio ašies atžvilgiu (6a pav). Tam naudojamos montavimo įvorės, kurių ilgis parenkamas pagal vamzdžio sąlyginį skersmenį (4 pav). Montuojama taip, kad temperatūros jutiklis būtų pasviręs pasroviui.

Montuojant į sąlyginio skersmens DN ≥ 65 mm vamzdžius, naudojamas montavimo būdas statmenai vamzdžio ašies atžvilgiu (6b pav). Tam naudojamos montavimo įvorės, kurių ilgis parenkamas pagal vamzdžio sąlyginį skersmenį (Pav. 4 pav).



Pav. 6 Temperatūros jutiklių montavimo būdas, priklausomai nuo vamzdžio sąlyginis skersmuo DN

Montuojant, pirmiausiai įvirinama atitinkama įvorė (1), po to veržliniu raktu įsukama apsauginis lizdas kartu susandarino žiedu (tarpine), galiausiai į apsauginę gilzę, įstumiant iki galo, įstatomas temperatūros jutiklis (2) ir iki galo prisukamas jį toje padėtyje fiksuojantis varžtas.

Užsakymo informacija

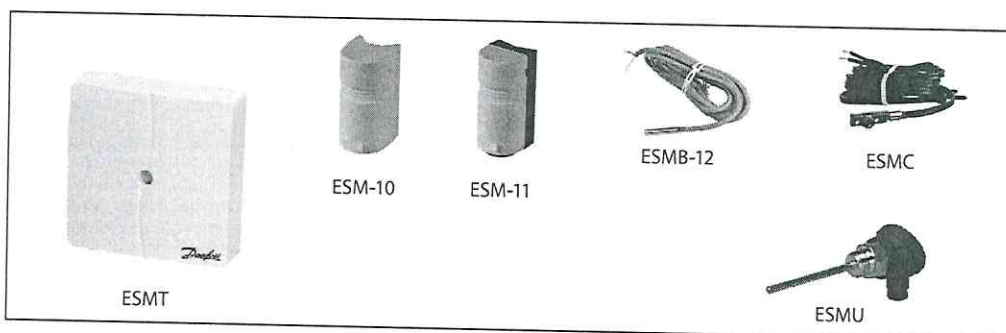
Lentelė 3

Kodas	Paskirtis
REPD04008	Naudojamas vandens temperatūros matavimui šilumos mazge (Laido ilgis 1,5 m)
REPD04009	Naudojamas lauko temperatūros matavimui, komplektuojamas IP55 dėžutėje, be kabelio.

Aprašymas

Temperatūros jutikliai (Pt 1000) ESMT; ESM-10, ESM-11, ESMB-12, ESMC, ESMU

Pritaikymas



- Platininiai jutikliai, 1000 Ω esant 0 °C temperatūrai.

Visi temperatūros jutikliai yra dvilaidžiai įrenginiai, jungiant laidus poliarizkumas nesvarbus. Paviršinis jutiklis ESM-11 yra su spyruokliuojančiu

matavimo kontaktu. Taip užtikrinamas geras šilumos perdavimas nuo visų dydžių vamzdžio paviršiaus. Jutiklyje yra EN 60751 charakteristikas tenkinantis platininis elementas.

Užsakymas

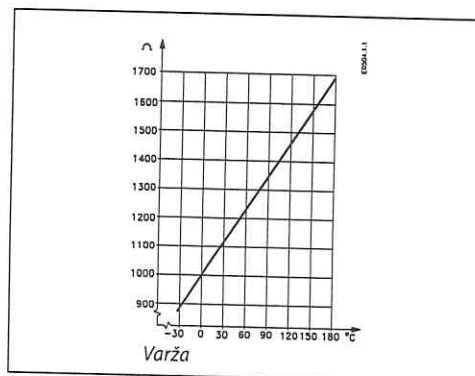
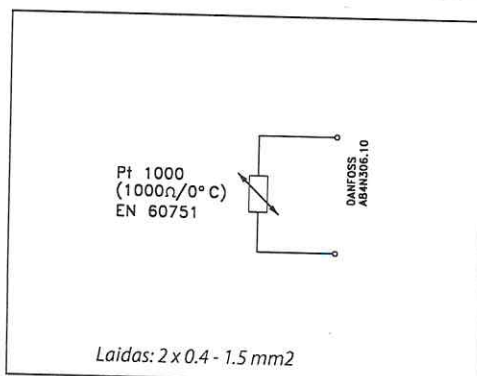
Temperatūros jutikliai

Tipas	Paskirtis	Code No.
ESMT	Lauko temperatūros jutiklis	084N1012
ESM-10	Kambario temperatūros jutiklis	087B1164
ESM-11	Paviršinis jutiklis	087B1165
ESMB-12	Universalus jutiklis	087B1184
ESMC	Paviršinis jutiklis	087N0011
ESMU-100	Panardinamas jutiklis, 100 mm, varis	087B1180
ESMU-250	Panardinamas jutiklis, 250 mm, varis	087B1181
ESMU-100	Panardinamas jutiklis, 100 mm, nerūdijantis plienas	087B1182
ESMU-250	Panardinamas jutiklis, 250 mm, nerūdijantis plienas	087B1183

Priedai ir atsarginės dalys

Tipas	Paskirtis	Kodas
Gilzė	Panardinama, nerūd. plienas 100 mm, ESMU – 100, Cu (087B1180)	087B1190
Gilzė	Panardinama, nerūd. plienas 250 mm, ESMU – 250, Cu (087B1181)	087B1191
Gilzė	Panardinama, nerūd. plienas 100 mm, ESMB-12, (087B1184)	087B1192
Gilzė	Panardinama, nerūd. plienas 250 mm, ESMB-12, (087B1184)	087B1193
Šilumai laidų pasta, 3.5 cm ³		041E0110
Plastmasinės sujungimo juostelės, pvz. ESM-11 (25 vnt.)		087B1167

Laidai



Aprašymas

Temperatūros jutikliai (Pt 1000) ESMT; ESM-10, ESM-11, ESMB-12, ESMC, ESMU

Bendri duomenys

Visuose temperatūros jutikliuose yra Pt 1000 elementas. Instrukcijos pridedamos prie gaminių.

Tipas	Temperatūros ribos	Korpusas	Laiko pastovioji	PN
ESMT	nuo -50 iki 50 °C	IP 54	≤ 15 min	-
ESM-10	nuo -50 iki 50 °C	IP 54	8 min	-
ESM-11	nuo 0 iki 100 °C	IP 32	3 s	-
ESMB-12	nuo 0 iki 100 °C	IP 54	20 s	-
ESMC	nuo 0 iki 100 °C	IP 54	10 s	-
ESMU-100/-250	nuo 0 iki 140 °C	IP 54	2 s (vandenyje) 7 s (ore)	25
Gilzė	nuo 0 iki 180 °C	-	Žr. "Spec. duomenys"	25

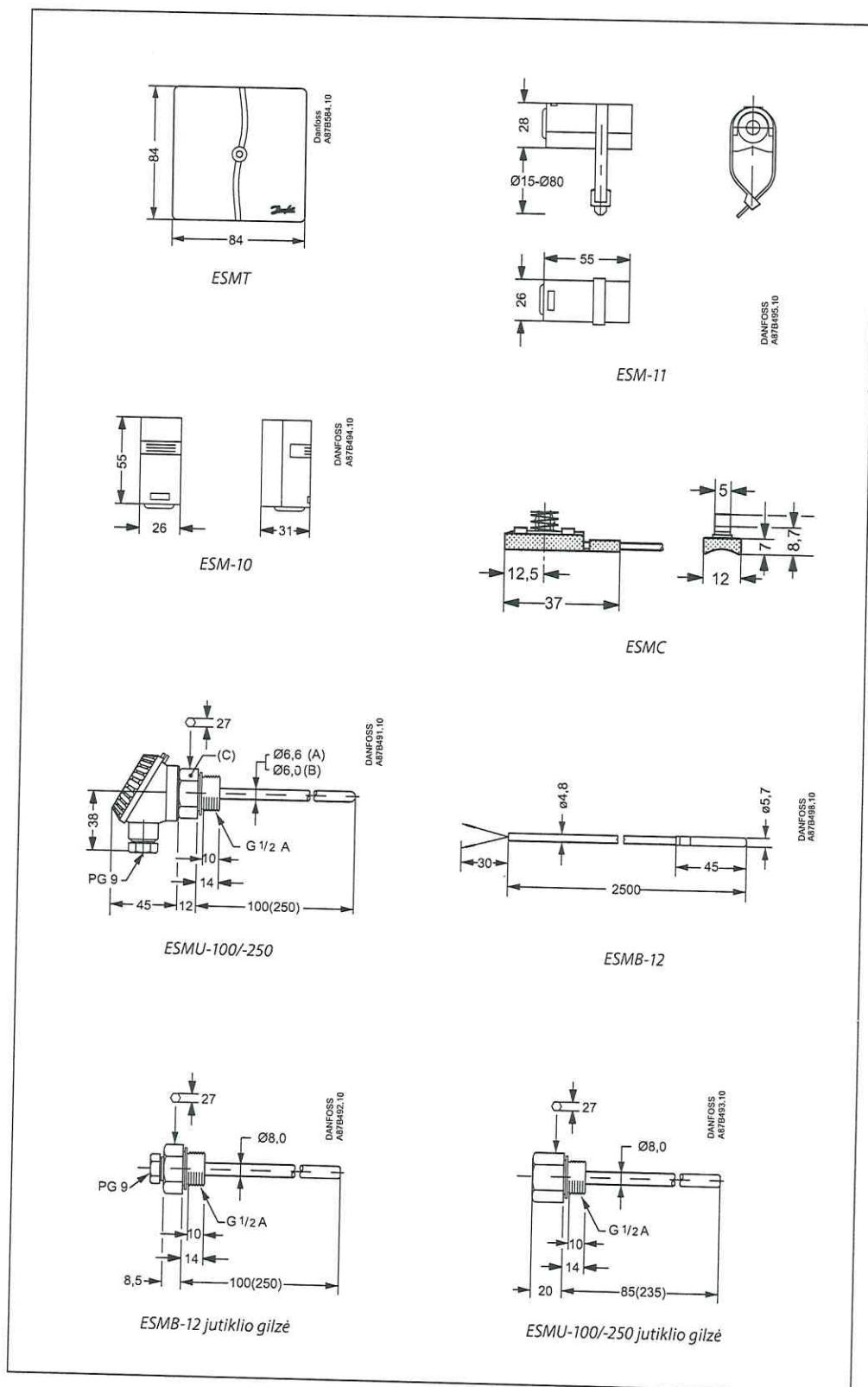
				Medžiagos
Pakuotė	ESMT	Dangtelis: ABS Pagrindas: PC (polikarbonatas)		xx
	ESM-10	Dangtelis: ABS Pagrindas: ABS		xx
	ESM-11	Dangtelis: ABS Pagrindas: PC (polikarbonatas)		xx
	ESMB-12	Korpusas: 18/8 nerūdijantis plienas Laidas: 2.5 m, PVC, 2 x 0.34 mm ²		x
	ESMC	Korpusas: Viršus: nirolas apačia: nikeliuotas varis Cu Laidas: 2 m, PCV, 2 x 0.2 mm ²		x
	ESMU-100/-250	Vamzdelis ir korpusas: AISI 316 Laidų jungtis: PA (Poliamidas)		x
	ESMU-100/-250 Cu	Vamzdelis: Varis (Cu) Korpusas: Žalvaris Laidų jungtis: PA (Poliamidas)		x
	Gilzė	Vamzdelis ir korpusas: AISI 316		
Elektriniai sujungimai	ESMT	Gnybtai 2 laidams pagrindo dalyje		
	ESM-10	Gnybtai 2 laidams pagrindo dalyje		
	ESM-11	Gnybtai 2 laidams pagrindo dalyje		
	ESMB-12	2-gyslis laidas (2 x 0,34 mm ²) sujungtas		
	ESMC	2-gyslis laidas (2 x 2,0 mm ²)		
	ESMU-100/-250	Gnybtai 2 laidams laidų jungtyje, PG9 laidui, tiekiamas su gaminiu		
Montavimas	ESMT/ESM-10	Montuojamas ant sienos varžtais (tiekiamas su gaminiu)		
	ESM-11/ESMC	Apkaba vamzdžiui DN 15-65 (tiekiamas su gaminiu)		
	ESMB-12	Ant vamzdžio ar lygaus paviršiaus, ar gilzėje		
	ESMU-100/-250	G 1/2 A ir vandeniui (tiekiamas su gaminiu)		
	Gilzė	G 1/2 A		

x = PE (polietilenas) maišelis
xx = Kartono dėžė

Specifiniai duomenys

Jutiklio charakteristikos	Remiantis EN, Klasė 2 B	Maks. nukrypimas 2 K
Laiko pastovioji	ESMU (Cu) gilzėje	32 s (vandenyje) 160 s (ore)
	ESMB gilzėje	20 s (vandenyje) 140 s (ore)

Matmenys



		087B1182 ir 087B1183	087B1180 ir 087B1181
ESMU	(A)	Nerūdijantis plienas (AISI 316) Nerūdijantis plienas (AISI 316)	Varis (Cu)
	(B)		Žalvaris
	(C)		

Danfoss UAB

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El. p.: danfoss@danfoss.lt
<http://sildymas.danfoss.lt>

Danfoss UAB

Savanorių pr. 347-209
LT-49423, Kaunas
Tel.: (8-37) 352100
Faks.: (8-37) 353207

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Visi paminėti spaudinyje prekybiniai ženklai yra atitinkamų kompanijų nuosavybė. Danfoss ir Danfoss logotipas yra Danfoss A/S nuosavybė. Visos teisės rezervuotos.

**PRESSURE GAUGES WITH BOURDON TUBE
STANDARD VERSION
ACCORDING TO DIN EN 837-1**



**Diameter 80, 100
Connection position radial bottom
or centric back**

For normal demands in terms of reading accuracy and design. These pressure gauges are suitable for all gaseous and liquid media where not attack copper alloys and are not highly viscous or crystallize.



Type	4881	4421	4451	4461	Options
Diameter	80		100		
Symbol					Type 4451, but cl. 1,0 = Type 5321
Accuracy class	1,6 acc. to DIN 16005				cl. 1,0
Ranges	0...0,6 up to 0...600 bar acc. to DIN 16128 negative and/or positive overload pressure				
Application	Constant load: 3/4 x end of scale value Alternating load: 2/3 x end of scale value Short-time: 1,2 x end of scale value				
Case	Steel, black				
Ring	slip ring, steel black, screwed				
Window	flat instrument glass				
Dial	Al white, scale and printing black, red marker pointer				Special scale, Dual scale bar / mWs
Movement	CuZn-alloy				
Pointer	Al black acc. to DIN 16099				
Measuring element	Cu-alloy				
Pressure connection	CuZn-alloy				
Connection position	radial bottom	centric back	radial bottom	centric back	
Thread	G 1/2 B	G 1/2 B	G 1/2 B	G 1/4 B	others on request
Temperatures	Medium: max. +60°C, ambient: -40°C... +60°C				Special solder f. 130°C/140°C
Protection	IP43				
Orifice					
Approx. Weight (kg)	0,18 kg	0,19 kg	0,3 kg	0,26 kg	

Dimensioned drawing

Type	Dimensions in mm							
	ND	a	b	b1	D	G	h	SW
4881	80	15	40	-	79	G 1/2 B	72	22
4421	80	-	31	65	79	G 1/2 B	-	22
4451	100	18	42	-	100	G 1/2 B	83,5	22
4461	100	-	31	49	99	G 1/4 B	-	14
5321	100	18	42	-	100	G1/2 B	83,5	22

