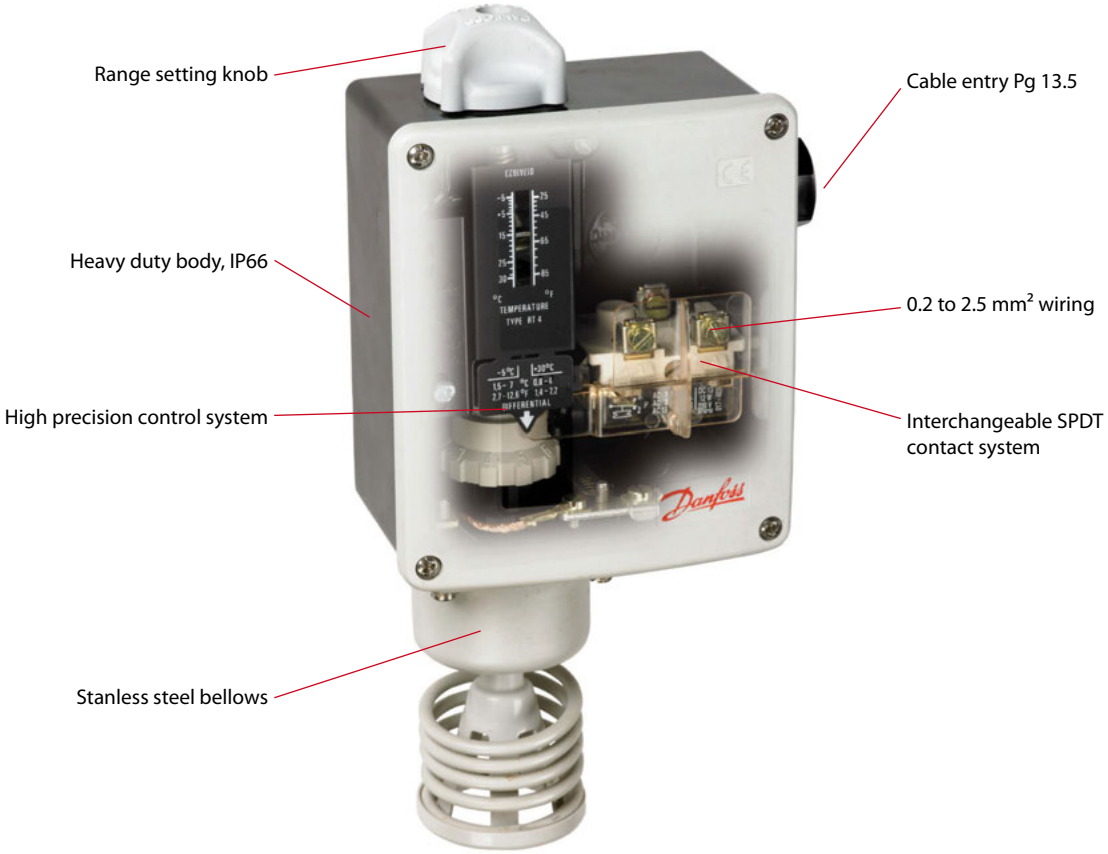
RT – Pressure controls and temperature controls

The RT series includes temperature controls and pressure controls for general applications within industrial and marine refrigeration. An RT temperature controls is fitted with a single-pole changeover switch. The position of the contacts depends on the sensor temperature and the set scale value. An RT pressure control contains a pressure operated single-pole changeover contact, the position of which depends on the pressure in the inlet connection and the set scale value.

Features



Applications	Advantages	Facts
· General applications within industrial and marine refrigeration	· Wide regulating range · Suitable for alternating and direct current · Interchangeable contact system · Special versions with gold plated contact surfaces for PLC applications · Versions for neutral zone regulation · Waterproof versions, enclosure IP66 · High stability and accuracy · Long operating life time	· Enclosure: IP66 to EN 60529 / IEC 60529, except for versions with ext. reset which are to IP54 · Insulation 400 V · Ambient temperature: −50 - 70 °C for housing · Cable connection: Pg 13.5. · Cable diameter: 6 → 14 mm. · Pressure controls for fluorinated refrigerants and R717 (NH_3)

Technical data and ordering: RT temperature controls

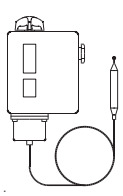
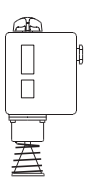
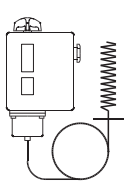
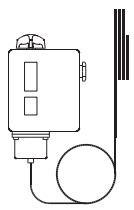
Charge type	Type	Sensortype	Regulation range [°C]	Differential Δ t		Reset	Max. sensor temp. [°C]	Capillary tube length [m]	Code no.
				Lowest temp. setting [°C]	Highest temp. setting [°C]				
State Vapour [1]	RT 10	A	-60 – -25	1.7 – 7	1 – 3	aut.	150	2	017-507766
	RT 9	A	-45 – -15	2.2 – 10	1 – 4.5	aut.	150	2	017-506666
	RT 3	A	-25 – +15	2.8 – 10	1 – 4	aut.	150	2	017-501466
	RT 17	B	-50 – -15	2.2 – 7	1.5 – 5	aut.	100	-	017-511766
	RT 11	B	-30 – 0	1.5 – 6	1 – 3	aut.	66	-	017-508366
	RT 4	B	-5 – +30	1.5 – 7	1.2 – 4	aut.	75	-	017-503666 017-503766[4]
	RT 13	A	-30 – 0	1.5 – 6	1 – 3	aut.	150	2	017-509766
Adsorption [2]	RT 2	A	-25 – +15	5 – 18	6 – 20	aut.	150	2	017-500866
	RT 8	A	-20 – +12	1.5 – 7	1.5 – 7	aut.	145	2	017-506366
	RT 12	A	-5 – +10	1 – 3.5	1 – 3	aut.	65	2	017-508966
	RT 23	A	+5 – +22	1.1 – 3	1 – 3	aut.	85	2	017-527866
	RT 15	A	+8 – +32	1.6 – 8	1.6 – 8	aut.	150	2	017-511566
	RT 24	A	+15 – +34	1.4 – 4	1.4 – 3.5	aut.	105	2	017-528566
	RT 140	C	+15 – +45	1.8 – 8	2.5 – 11	aut.	240	2	017-523666
	RT 102	D	+25 – +90	2.4 – 10	3.5 – 20	aut.	300	2	017-514766
	RT 34	B	-25 – +15	2 – 10	2 – 12	aut.	100	-	017-511866
	RT 7	A	-25 – +15	2 – 10	2.5 – 14	aut.	150	2	017-505366
	RT 14	A	-5 – +30	2 – 8	2 – 10	aut.	150	2	017-509966
	RT 101	A	+25 – +90	2.4 – 10	3.5 – 20	aut.	300	2	017-500366
Partial [3]	RT 107	A	+70 –150	6 – 25	1.8 – 8	aut.	215	2	017-513566

[1] The sensor must be located colder than temperature control housing and capillary tube.
[2] The sensor can be located warmer or colder than temperature control housing.
[3] The sensor must be located warmer than temperature control housing and capillary tube.
[4] With built-in heating coil - reduces the thermal differential.

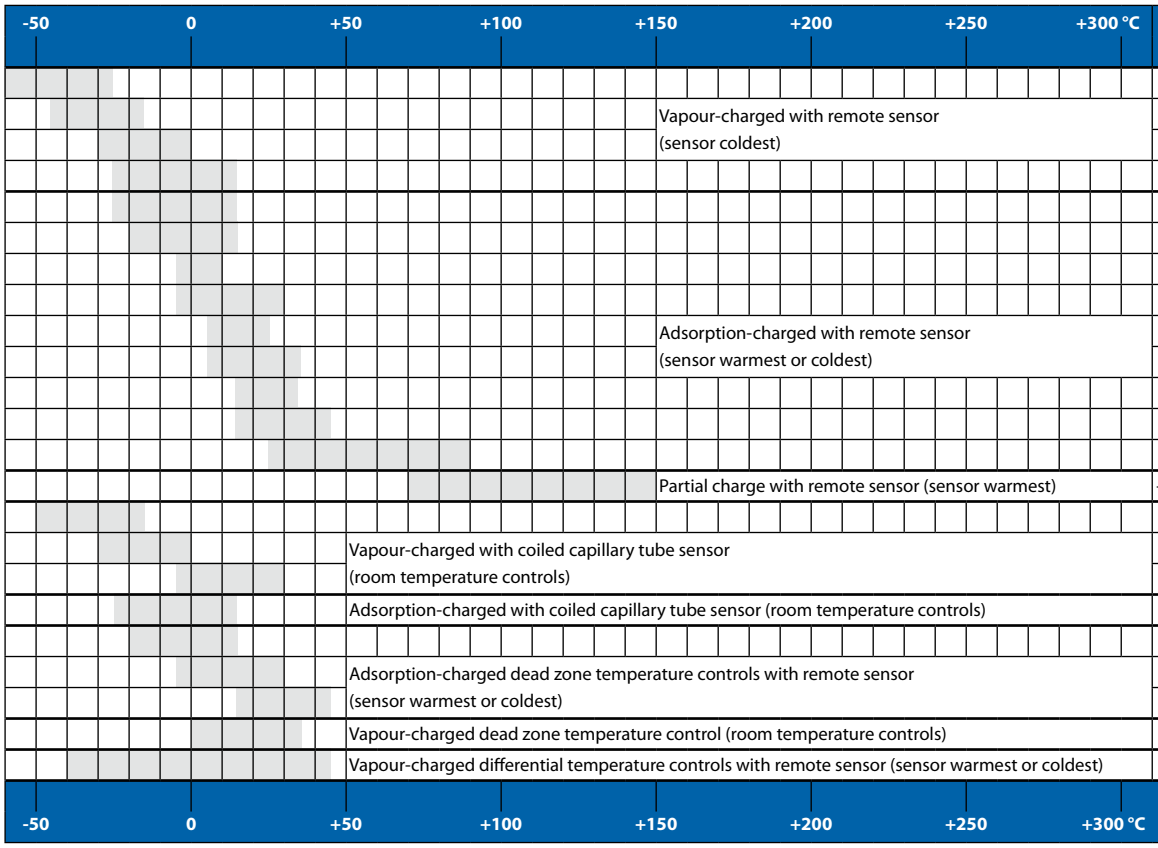
Temperature controls with adjustable neutral zone

Charge	Type	Sensor type	Regulation range [°C]	Differential [°C]	Differential Δt		Max. sensor temp. [°C]	Capillary tube length [m]	Code no.
					Lowest temp. setting [°C]	Highest temp. setting [°C]			
Vapour	RT 16L	B	0 - +38	1.5 / 0.7	1.5 - 5	0.7 - 1.9	100	-	017L002466
Adsorption	RT 8L	A	-20 - +12	1.5	1.5 - 4.4	1.5 - 4.9	145	2	017L003066
	RT 14L	A	-5 - +30	1.5	1.5 - 5	1.5 - 5	150	2	017L003466
	RT 140L	C	+15 - +45	1.8 / 2	1.8 - 4.5	2.0 - 5	240	2	017L003166
	RT 101L	A	+25 - +90	2.5 / 3.5	2.5 - 7	3.5 - 12.5	300	2	017L006266

Type of sensor

A	B	C	D
			
Cylindrical remote sensor	Room sensor	Duct sensor	Capillary tube sensor

Overview RT temperature controls



Range °C	Type
-60 → -25	RT 10
-45 → -15	RT 9
-30 → 0	RT 13
-25 → +15	RT 3
-25 → +15	RT 2, 7
-20 → +12	RT 8
-5 → +10	RT 12
-5 → +30	RT 14
+5 → +22	RT 23
+8 → +32	RT 15
+15 → +34	RT 24
+15 → +45	RT 140
+25 → +90	RT 101, 102
+70 → +150	RT 107
-50 → -15	RT 17
-30 → 0	RT 11
-5 → +30	RT 4
-25 → +15	RT 34
-20 → +12	RT 8L
-5 → +30	RT 14L
+15 → +45	RT 140L
0 → +38	RT 16L
-30 → +40	RT 270

Technical data and ordering: RT pressure controls

Safety pressure controls with EN 12263 / DIN 32733 appr. and CE marked according to PED, Pressure Equipment Directive

Pressure	Type	Regulation range [bar]	Differential (fixed) Δp [bar]	Reset	Max. working pressure [bar]	Max. test pressure [bar]	Code no. Connection 1/4 in. 6 mm flare	cutting ring ∅ 6 mm	G 3/8 A [1] + weld nipple ∅ 6.5/10 mm	G 1/2 A [1]
High	RT 36B[2]	0 – 2.5	0.2	man.	22	25	017-525866	-	-	-
	RT 36S[2]	0 – 2.5	0.2	man.	22	25	017-525966	-	-	-
High	RT 6W[2]	5 – 25	3	aut.	34	38	017-503166	-	-	-
	RT 6B[2]	10 – 28	1	man.	34	38	017-503466	-	-	-
	RT 6S[2]	10 – 28	1	man.	34	38	017-507566	-	-	-
High	RT30AW[3]	1 – 10	0.8	aut.	22	25	-	-	-	017-518766
	RT30AB[3]	1 – 10	0.4	man.	22	25	-	-	-	017-518866
	RT30AS[3]	1 – 10	0.4	man.	22	25	-	-	-	017-518966
High	RT6AW[3]	5 – 25	3	aut.	34	38	-	017-513166	017-503266	-
	RT6AB[3]	10 – 28	1.5	man.	34	38	-	017-513366	017-503566	-
	RT6AS[3]	10 – 28	1.5	man.	34	38	-	017-514666	017-507666	-

[1] G ext. thread, ISO 228-1.
[2] Pressure controls for fluorinated refrigerants.
[3] Pressure controls for R 717 (NH_3) and fluorinated refrigerants.

Technical data and ordering: RT pressure controls

Pressure controls for flourinated refrigerants

Pressure	Type	Regulation range [bar]	Differential Δp [bar]	Reset	Max. working pressure [bar]	Max. test pressure [bar]	Code no.	
							Connection	
							1/4 in. 6 mm flare	G 3/8 A [1]
Low	RT 1	-0.8 – 5	0.5 – 1.6	aut.	22	25	017-524566	-
	RT 1	-0.8 – 5	0.5	man.	22	25	017-524666	-
	RT 200	0.2 – 6	0.25 – 1.2	aut.	22	25	-	017-523766
High	RT 117L	10 – 30	1 – 4	aut.	42	47	-	017-529566

[1] G ext. thread, ISO 228-1.

Safety – Pressure controls for R717 (NH_3) and flourinated refrigerants

Pressure	Type	Regulation range [bar]	Differential Δp [bar]	Reset	Max. working pressure [bar]	Max. test pressure [bar]	Code no.	
							Connection	
							1/4 in. 6 mm flare	G 3/8 A [1]
Low	RT 1A	-0.8 – 5	0.5 – 1.6	aut.	22	25	017-501966	017-500166
		-0.8 – 5	0.5	man.	22	25	017-502766	017-500266
		-0.8 – 5	1.3 – 2.4	aut.	22	25	-	017-500766
High	RT 5A	4 – 17	1.2 – 4	aut.	22	25	017-505266	017-504666
		4 – 17	1.2	man.	22	25	017-506166	017-504766

[1] G ext. thread, ISO 228-1.

Pressure controls with adjustable neutral zone for R717 (NH_3) and fluorinated refrigerants

Pressure	Type	Regulation range [bar]	Differential Δp [bar]	Neutral zone Δp [bar]	Max. working pressure [bar]	Max. test pressure [bar]	Code no.	
							Connection	
							cutting ring ∅ 6 mm	G 3/8 A [1] + weld nipple ∅ 6.5/10 mm
Low	RT 1AL[2]	-0.8 – 5	0.2	0.2 – 0.9	22	25	017L001666	017L003366
	RT 200L[3]	0.2 – 6	0.25	0.25 – 0.7	22	25	-	017L003266
High	RT 5AL[2]	4 – 17	0.35	0.35 – 1.4	22	25	017L001766[4]	017L004066[4]
	RT 117L[3]	10 – 30	1	1 – 3	42	47	-	017L004266[4]

[1] G ext. thread, ISO 228-1.
[2] Pressure controls for R 717 (NH_3) and fluorinated refrigerants.
[3] Pressure controls for fluorinated refrigerants.
[4] Without nipple.

Differential pressure controls for R 717(NH_3) and fluorinated refrigerants

Type	Regulation range [bar]	Differential Δp [bar]	Operating range for LP bellows [bar]	Max. working pressure [bar]	Max. test pressure [bar]	Code no.	
						Connection	
						cutting ring ∅ 6 mm	G 3/8 A [1] + weld nipple ∅ 6.5/10 mm
RT 260A	0.5 – 4	0.3	-1 – 18	22	25	017D001466	017D002166
	0.5 – 4	0.3	-1 – 18	22	25	-	017D002266[2]
	0.5 – 6	0.5	-1 – 36	42	47	017D001566	017D002366
	1.5 – 11	0.5	-1 – 31	42	47	017D001666	017D002466
RT 252A	0.1 – 1.5	0.1	-1 – 9	22	13	017D001366	017D002566
RT 265[3]	1 – 6	0.5	-1 – 36	42	47	-	017D007266

[1] G ext. thread, ISO 228-1.
[2] Man. reset.
[3] Filter monitor: Alarm Δp = 0.8 bar, cut-out Δp = 1 bar (factory setting).

Differential pressure controls with adjustable neutral zone for R 717(NH_3) and fluorinated refrigerants

Type	Regulation range [bar]	Differential Δ p [bar]	Neutral zone [bar]	Operating range for LP bellows [bar]	Max. working pressure [bar]	Max. test pressure [bar]	Code no.
							Connection
							G 1/2 A [1] + weld nipple ∅ 6.5/10 mm
RT 262 AL	0.1 – 1.5	0.1	-1 – 0.33	-1 – 9	11	13	017D004366[2]

[1] G ext. thread, ISO 228-1.
[2] Differential pressure control for R 717 (NH_3) and fluorinated refrigerants.