

# Thermostat

## B0 - B63

Thermostat for refrigerators and freezers

## Description

Electromechanical thermostat 077B is used to control the temperature in refrigerators, upright and chest freezers, liquid coolers, bottle coolers and small commercial refrigeration appliances. The thermostat can be used as an evaporator thermostat or a room thermostat.

The thermostats are available with normal function, fixed cut-in and cut-out temperature, constant or variable cut-in temperature for automatic defrost, and with a push button for semi-automatic defrost. All thermostats have NC (Normally closed) main contacts; i.e. they cut out the compressor current circuit on decreasing temperature.

077B thermostats are available as a standard thermostat range, as a service kit range and as customer specified versions adapted to specific appliances. Service kit thermostats are created with specifications and accessories that allow universal application in the aftermarket, for thermostat servicing on all types of refrigeration and freezing appliances.

## Features & Benefits

- Product identification data laser printed on product
  - Easy and lasting product identification
- NC (Normally Closed) main contacts
  - Cut-out of compressor on falling temperatures
- Terminals with spade connectors 6.3 x 0.8 mm, 4.8 x 0.8 mm or combinations
  - Fits into the majority of household and light commercial refrigerators and freezers
- Electrical loads of 6/36 A or 8/40 A (FLA/LRA), designed for a minimum of 300.000 cycles at full load
  - Reliable and lasting switching function
- Service thermostat code no. delivered in Multipack
  - Service thermostats include relevant accessories and installation guides

## Applications

Thermostat 077B is used to control the temperature in refrigerators, upright and chest freezers, liquid coolers, bottle coolers and small commercial refrigeration appliances.

The thermostat can be used as an evaporator thermostat or a room thermostat.

The Service Thermostat version have a wider regulating range than standard thermostats, and are optimized for servicing on all refrigerating and freezing appliances independent of the make of thermostats.

077B thermostats are available with normal function, fixed cut-in and cut-out temperature, constant or variable cut- in temperature for automatic defrost, and with a pushbutton for semi-automatic defrost.

The thermostats can be supplied with the following supplementary functions:

- Auxiliary contact
- Change-over contact
- Signal contact
- Signal contact + series contact
- Signal contact + super freeze-function and indication of same
- Enclosed Brake Device contacts for appliances charged with flammable refrigerants
- Low torque spindle stop turn

## Ordering

### Product code numbers

#### Packing format definitions

- Single pack contains 1 item.
- Multipack contains several items, individually packed, so that customers can purchase 1 item and receive all relevant documentation.
- Industrial pack contains several items that are not individually packed. Industrial packs cannot be broken down, and will only contain documentation on pack level, not on item level.
- Pallet pack contains several items on a pallet.

#### Service kits

Ordering data is provided in two separate tables, one with relevant selection criteria in °C and a second table with relevant selection criteria in °F.

Type	Warm cut-out [°C]	Warm cut-in [°C]	Cold cut-out [°C]	Cold cut-in [°C]	Capillary tube length [mm]	Packing format	Quantity per packing format	Code number
B0	-14.5	-9.5	-24.5	-18.0	1200	Industrial pack	75	077B7287
B0	9.5	12.5	1.5	5.0	650	Industrial pack	80	077B7292
B0	6.5	10.8	0.0	5.0	1220	Industrial pack	66	077B1781
B0	-21.0	-15.5	-33.0	-26.0	1000	Industrial pack	100	077B1764
B0	3.0	8.5	-18.0	-9.5	1200	Multi pack	40	077B7105
B0	-12.0	-8.0	-34.0	-27.5	800	Industrial pack	100	077B1763
B0	-7.7	-1.7	-16.7	-8.8	1300	Industrial pack	90	077B1799
B0	-17.3	-15.5	-30.5	-28.0	1000	Industrial pack	100	077B1794
B0	12.9	14.9	0.8	3.8	800	Industrial pack	100	077B1797
B0	-14.0	-8.5	-32.0	-24.0	1200	Industrial pack	100	077B1726
B0	-16.0	-10.5	-26.0	-19.5	1000	Industrial pack	100	077B0023
B0	9.8	14.8	1.7	7.7	700	Industrial pack	90	077B1790
B0	9.5	12.5	1.5	5.0	1200	Industrial pack	75	077B7111
B0	8.3	11.3	-2.5	-0.5	1000	Industrial pack	100	077B1777
B0	6.0	11.5	-8.5	-1.0	2000	Multi pack	40	077B7008
B0	-15.0	-7.5	-33.1	-22.0	2000	Industrial pack	80	077B0102
B0	10.0	13.2	2.0	6.0	1200	Industrial pack	100	077B1721
B0	6.0	9.8	-29.0	-20.5	1000	Industrial pack	100	077B1796
B0	-21.0	-13.0	-30.5	-20.4	800	Industrial pack	100	077B0024
B0	6.0	11.5	-8.5	-1.0	2000	Industrial pack	80	077B1745
B0	-5.5	2.0	-25.0	-13.5	1300	Multi pack	40	077B7001
B0	1.4	5.8	-10.0	-4.1	900	Industrial pack	110	077B0160
B0	-11.0	-2.8	-23.0	-11.0	1200	Multi pack	40	077B7050
B0	2.7	7.2	-5.0	0.6	160	Industrial pack	100	077B1782
B0	5.0	10.5	-4.5	3.0	1200	Industrial pack	65	077B7114
B0	-7.0	-3.4	-12.0	-8.0	900	Industrial pack	60	077B7291
B0	-20.1	-16.4	-25.6	-21.5	960	Industrial pack	90	077B1277
B0	6.5	10.8	0.0	5.0	1220	Industrial pack	66	077B1780
B0	16.0	19.0	5.0	9.0	927	Industrial pack	90	077B1785
B0	-18.0	-13.8	-37.0	-30.0	1000	Industrial pack	90	077B1725
B0	-20.7	-15.7	-28.8	-22.8	622	Multi pack	40	077B7066
B0	9.0	15.2	0.5	8.0	1200	Multi pack	40	077B7108
B0	9.0	15.2	0.5	8.0	1200	Industrial pack	100	077B0027
B0	9.0	12.5	3.5	7.5	1016	Industrial pack	100	077B1329
B0	11.9	15.8	6.4	10.8	623	Industrial pack	90	077B0995
B0	-5.0	2.5	-24.5	-13.5	1200	Industrial pack	100	077B1701
B0	-24.0	-18.0	-30.0	-23.0	1200	Industrial pack	80	077B1776



B0	-12.0	-5.0	-26.0	-16.3	800	Industrial pack	100	077B1766
B0	-9.0	-0.4	-17.5	-6.8	1822	Industrial pack	80	077B1331
B0	7.0	10.5	1.0	5.0	1500	Industrial pack	90	077B1696
B0	-1.0	5.0	-22.0	-13.0	1000	Industrial pack	90	077B1719
B0	-11.0	-2.0	-21.0	-9.7	1000	Industrial pack	100	077B1730
B0	-2.9	10.6	-15.5	2.4	610	Industrial pack	90	077B7275
B0	-9.0	5.0	-17.0	-0.1	1000	Industrial pack	90	077B1720
B0	-3.0	3.5	-11.8	-4.5	1000	Industrial pack	100	077B0020
B0	-15.0	-7.0	-30.0	-19.0	800	Industrial pack	90	077B1767
B0	-20.8	-12.0	-40.0	-26.0	1200	Industrial pack	75	077B7285
B0	-19.4	-15.6	-29.3	-24.5	1000	Industrial pack	75	077B7276
B0	9.5	12.5	1.5	5.0	1200	Industrial pack	90	077B7288
B0	10.5	15.0	4.5	10.0	778	Industrial pack	90	077B1783
B0	-15.0	-7.4	-32.5	-21.0	950	Industrial pack	90	077B7289
B0	-14.8	-5.3	-26.0	-14.0	600	Industrial pack	100	077B1713
B0	-22.5	-16.0	-29.0	-21.0	1000	Industrial pack	100	077B1637
B0	-15.0	-9.5	-24.5	-18.0	1200	Multi pack	40	077B7102
B0	0.1	5.3	-26.6	-17.8	1200	Industrial pack	100	077B1772
B0	0.0	5.0	-15.0	-8.0	1000	Industrial pack	100	077B1739
B0	-19.0	-14.0	-30.0	-24.0	900	Industrial pack	100	077B1759
B0	-23.1	-15.6	-28.2	-19.7	980	Industrial pack	90	077B1369
B0	-8.5	4.0	-22.5	-6.0	1000	Industrial pack	75	077B7322
B0	12.5	15.9	-2.7	2.2	600	Industrial pack	90	077B1756
B0	11.9	15.0	-2.5	2.0	1650	Industrial pack	70	077B1778
B0	-1.0	5.0	-36.0	-26.0	1000	Industrial pack	100	077B1800
B0	-14.0	-7.0	-30.0	-19.5	700	Industrial pack	100	077B1761
B0	5.0	10.5	-4.5	3.0	1200	Industrial pack	100	077B0028
B0	-23.5	-16.7	-29.5	-21.8	623	Multi pack	40	077B7068
B0	-24.8	-18.8	-29.1	-22.4	980	Industrial pack	90	077B1216
B0	5.2	10.5	-8.5	-1.0	2000	Industrial pack	80	077B0155
B0	8.1	12.9	2.2	7.8	778	Industrial pack	90	077B1784
B0	3.8	9.2	-3.3	3.3	450	Industrial pack	80	077B1663
B0	-16.0	-8.0	-25.5	-15.2	1000	Industrial pack	100	077B0022
B0	-22.7	-16.0	-35.0	-26.0	800	Industrial pack	80	077B7179
B0	0.8	11.6	-8.3	4.8	1200	Industrial pack	96	077B1155
B0	-5.0	2.5	-24.5	-13.5	1200	Industrial pack	100	077B0033
B0	-25.0	-20.0	-35.0	-28.5	1000	Industrial pack	100	077B1760
B0	-7.7	-1.7	-16.7	-8.8	1300	Multi pack	40	077B7242
B0	-29.6	-22.8	-33.9	-26.3	980	Industrial pack	90	077B1352
B0	3.0	8.5	-18.0	-9.5	1200	Multi pack	40	077B7100
B0	-5.0	2.5	-24.5	-13.5	2000	Industrial pack	80	077B0923
B0	3.0	8.5	-18.0	-9.5	1200	Industrial pack	100	077B1736
B0	-20.5	-15.0	-30.0	-23.0	1000	Industrial pack	100	077B1768
B0	9.5	12.5	1.5	5.0	1200	Multi pack	40	077B7101
B0	-17.5	-14.4	-24.5	-20.9	623	Industrial pack	90	077B1227
B0	-15.0	-7.8	-32.5	-21.0	2300	Multi pack	40	077B7005
B0	9.5	12.5	1.5	5.0	1200	Industrial pack	75	077B7318
B0	-2.0	7.1	-9.5	1.0	1300	Industrial pack	90	077B0007
B0	-15.0	-9.5	-24.5	-18.0	1200	Industrial pack	75	077B7112
B0	3.0	8.5	-18.0	-9.5	1200	Industrial pack	75	077B7110
B0	-23.0	-15.0	-32.0	-21.9	800	Industrial pack	100	077B0025
B0	11.7	16.0	-2.9	3.2	1000	Industrial pack	90	077B1741
B0	-1.2	3.3	-21.4	-14.3	1000	Industrial pack	80	077B7314
B0	-14.5	-9.5	-24.5	-18.0	1200	Industrial pack	100	077B1765
B0	9.5	12.5	1.5	5.0	650	Industrial pack	60	077B7293
B0	-1.0	6.5	-23.0	-11.0	1200	Industrial pack	100	077B1773
B0	-28.3	-22.2	-32.4	-25.6	980	Industrial pack	90	077B1367
B0	-12.0	-8.0	-34.0	-27.5	1200	Industrial pack	100	077B1307
B0	5.0	10.5	-4.5	3.0	1200	Multi pack	40	077B7109
B0	-11.0	-2.0	-21.0	-9.7	1000	Industrial pack	100	077B0021



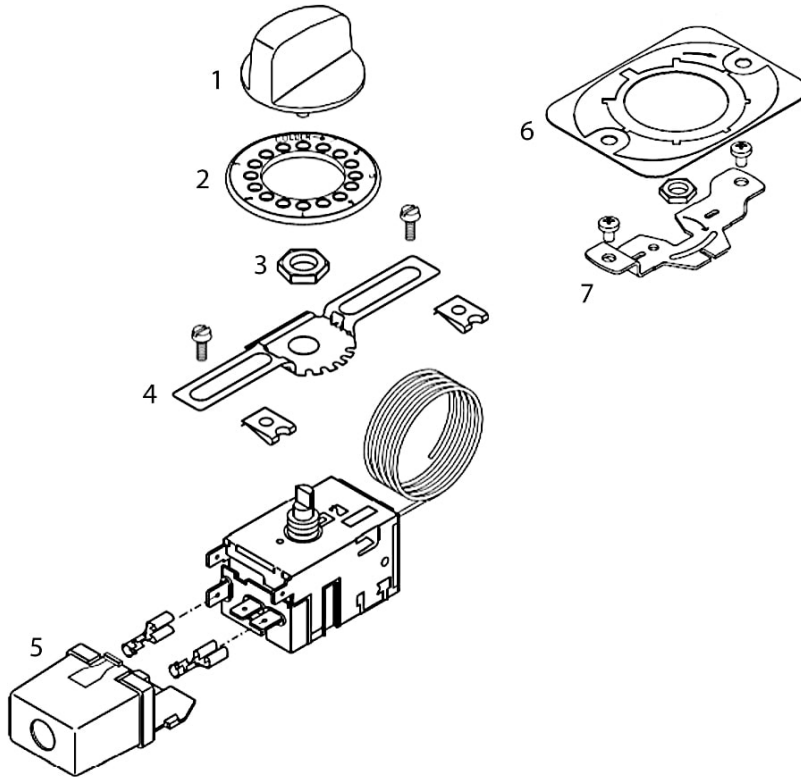
B0	6.0	15.0	-8.5	4.0	800	Industrial pack	100	077B1751
B0	0.1	5.3	-26.6	-17.8	1200	Multi pack	40	077B7049
B0	-5.0	4.0	-23.0	-12.0	1200	Industrial pack	100	077B0156
B0	2.7	13.0	-5.6	6.8	1219	Industrial pack	100	077B1789
B0	-10.0	-3.0	-21.0	-12.0	800	Industrial pack	100	077B1769
B0	0.4	5.9	-4.5	1.8	620	Industrial pack	96	077B1191
B0	-23.0	-17.0	-30.0	-23.0	1200	Industrial pack	100	077B0026
B0	-19.5	-11.5	-26.0	-16.5	1000	Industrial pack	100	077B1636
B0	-8.4	-5.1	-23.1	-18.6	1220	Industrial pack	100	077B1087
B02	-1.0	3.5	-13.0	-7.0	1200	Industrial pack	100	077B0220
B02	-1.0	3.5	-11.0	-5.5	1500	Multi pack	40	077B7004
B02	-18.4	-11.5	-27.8	-19.1	210	Industrial pack	100	077B0374
B3	-17.0	-10.0	-34.5	-24.0	2300	Multi pack	40	077B7007
B4	-7.5	0.0	-22.0	-12.0	1300	Multi pack	40	077B7002
B4	-13.0	-4.0	-22.0	-11.0	1000	Industrial pack	80	077B4047
B04	-11.0	-6.0	-33.6	-25.0	1372	Industrial pack	66	077B1400
B04	7.5	12.1	-3.5	2.5	2000	Industrial pack	75	077B0408
B5	-5.1	12.5	-13.7	6.9	400	Industrial pack	100	077B5034
B5	-5.3	6.3	-9.4	3.5	900	Industrial pack	100	077B5033
B6	-12.2	5.0	-24.4	5.0	1300	Industrial pack	80	077B3607
B6	-13.1	5.0	-28.9	5.0	1300	Industrial pack	80	077B7124
B6	-5.3	5.0	-12.0	5.0	900	Industrial pack	75	077B7339
B6	-5.0	3.5	-21.0	3.5	900	Industrial pack	100	077B6172
B6	-5.6	3.5	-15.0	3.5	1600	Industrial pack	90	077B6047
B6	-5.9	2.9	-10.6	2.9	1067	Multi pack	40	077B7061
B6	-13.1	5.0	-28.9	5.0	1300	Industrial pack	80	077B7352
B6	-11.0	4.5	-26.0	4.5	900	Industrial pack	100	077B3687
B6	-10.0	3.5	-20.0	3.5	1000	Industrial pack	100	077B6020
B6	-12.2	5.0	-24.4	5.0	1300	Industrial pack	80	077B3660
B6	-1.5	4.2	-6.0	4.2	1087	Industrial pack	90	077B6857
B6	-1.3	5.5	-8.1	5.5	1080	Industrial pack	100	077B3627
B6	4.4	8.9	-5.6	8.9	495	Industrial pack	100	077B3684
B6	-5.0	4.0	-10.0	4.0	1000	Industrial pack	90	077B3399
B6	-1.6	4.0	-12.0	4.0	1830	Industrial pack	80	077B6887
B6	-13.0	4.5	-26.0	4.5	700	Industrial pack	100	077B3688
B6	-12.5	3.5	-23.0	3.5	1000	Industrial pack	100	077B6021
B6	-15.0	3.5	-22.0	3.5	1000	Industrial pack	100	077B3656
B6	-5.6	2.8	-12.8	2.8	1842	Multi pack	40	077B7062
B6	-13.1	5.0	-28.9	5.0	1300	Industrial pack	90	077B3606
B6	-17.0	5.0	-28.0	5.0	700	Industrial pack	100	077B3686
B6	-13.0	4.5	-26.0	4.5	1200	Industrial pack	100	077B3689
B6	-13.0	4.0	-29.0	4.0	700	Industrial pack	100	077B3669
B6	-8.4	2.4	-15.7	2.4	1842	Industrial pack	80	077B6926
B6	-11.0	4.0	-22.0	4.0	825	Industrial pack	100	077B3683
B6	-4.6	5.4	-9.3	5.4	1067	Multi pack	40	077B7060
B6	-1.5	4.2	-6.0	4.2	1087	Multi pack	40	077B7067
B6	-5.9	2.9	-10.6	2.9	1067	Industrial pack	100	077B3626
B6	-1.3	5.5	-8.1	5.5	1080	Industrial pack	90	077B6863
B6	-2.4	5.0	-6.1	5.0	800	Industrial pack	90	077B7290
B6	-12.5	3.5	-23.0	3.5	1600	Industrial pack	100	077B3670
B6	-4.0	4.5	-10.5	4.5	900	Multi pack	40	077B7274
B6	-4.6	5.4	-9.3	5.4	1067	Industrial pack	90	077B3264
B6	-4.4	6.2	-9.9	6.2	1067	Multi pack	40	077B7063
B6	-2.0	5.3	-6.6	5.3	1830	Industrial pack	80	077B3259
B6	-12.2	5.0	-24.4	5.0	1300	Industrial pack	80	077B7353
B6	-1.3	5.5	-8.1	5.5	1080	Industrial pack	90	077B3531
B20	-17.0	-10.0	-34.5	-24.0	2300	Multi pack	40	077B7006
B20	-16.0	-11.0	-26.0	-20.0	1200	Industrial pack	90	077B2828
B20	-17.0	-10.0	-34.7	-24.0	2000	Industrial pack	80	077B2077
B20	-23.0	-17.0	-30.0	-22.7	1200	Industrial pack	100	077B2021

B20	-23.0	-15.0	-32.0	-22.0	800	Industrial pack	100	077B2020
B20	-19.3	-14.3	-30.4	-23.8	800	Industrial pack	90	077B2829
B20	-18.0	-11.0	-26.0	-17.5	700	Industrial pack	100	077B2831
B20	-20.5	-15.0	-30.0	-23.0	1000	Industrial pack	100	077B2825
B20	-23.4	-17.0	-34.5	-26.0	800	Industrial pack	100	077B2820
B20	-21.0	-11.0	-27.0	-15.5	800	Industrial pack	100	077B2832
B26	-21.0	-15.0	-29.0	-22.0	1200	Industrial pack	80	077B2670
B045	-3.0	7.0			1000	Industrial pack	100	077B0455
B045	6.5	11.0			450	Industrial pack	90	077B1472
B045	1.0	5.0			600	Industrial pack	100	077B1473
B045	-2.5	0.5			800	Industrial pack	100	077B1469
B52	-11.2	8.5	-21.5	2.4	790	Industrial pack	100	077B5272
B52	-9.5	8.9	-20.0	2.5	800	Industrial pack	90	077B5271
B62	-9.0	4.5	-27.0	4.5	900	Industrial pack	100	077B3642
B62	-11.0	5.0	-27.0	5.0	2000	Industrial pack	70	077B6725
B62	-10.0	3.5	-20.0	3.5	1000	Industrial pack	100	077B6220
B62	-11.0	3.5	-26.0	3.5	900	Industrial pack	100	077B3679
B62	-9.0	4.5	-27.0	4.5	1650	Industrial pack	90	077B3643
B62	-11.0	3.5	-27.5	3.5	1600	Multi pack	40	077B7003
B62	-12.5	3.5	-21.0	3.5	1010	Industrial pack	90	077B3691
B62	-15.0	4.5	-33.0	4.5	900	Industrial pack	100	077B3641
B62	-11.0	3.5	-27.0	3.5	2000	Industrial pack	60	077B6476
B62	-7.0	4.0	-30.0	4.0	700	Industrial pack	100	077B3678
B62	-11.0	3.5	-26.0	3.5	1200	Industrial pack	100	077B3652
B62	-13.0	4.5	-26.0	4.5	1200	Industrial pack	100	077B3690
B62	-14.7	3.5	-26.0	3.5	1000	Industrial pack	100	077B6222
B62	-12.5	3.5	-23.0	3.5	1000	Multi pack	40	077B7104
B62	-12.0	4.5	-26.0	4.5	1000	Industrial pack	90	077B3647
B62	-11.0	3.5	-27.5	3.5	1200	Industrial pack	100	077B6208
B62	-11.0	5.0	-30.0	5.0	1000	Industrial pack	100	077B3663
B62	-12.5	3.5	-23.0	3.5	1000	Industrial pack	100	077B6221
B62	-12.0	4.0	-28.0	4.0	660	Industrial pack	100	077B3682
B63	-12.5	3.5	-21.0	3.5	1010	Industrial pack	90	077B6335
B63	-10.0	5.0	-30.0	5.0	1500	Industrial pack	90	077B6321
B63	-11.3	3.5	-25.0	3.5	755	Industrial pack	90	077B6334
B63	-13.0	4.0	-25.0	4.0	2250	Industrial pack	45	077B6331

## Accessories code numbers

Danfoss offers a wide range of accessories in various colours, including items like dial plates, washers and knobs. In the list you will find a selection, but for specialized items contact your local Danfoss representative.

Figure: Accessories



Type designation	Item no.
Dial plate	6
Screw M4 x 6	7
Handknob, white	1
Mounting plate, low	4
Washer, white	2
Handknob, white Countersunked	1
Nut	3
Mounting plate	4
Washer, black, White print 0-7	2
Washer, white, Black print 0-7	2
Terminal cover	5
Washer, white, Black print 0-9	2
Handknob, Black Countersunked	1
Dial plate	6
Washer, black	2
Mounting plate	4
Mounting plate	4



077B8973  
**Washer, white, Black print 0-7, Thermostat accessory**

Type designation: Washer, white, Black print 0-7, Quantity per packing format: 480

Related products

- 077B0007
- 077B0020
- 077B0021
- 077B0022
- 077B0023
- 077B0024
- 077B0025
- 077B0026
- 077B0027
- 077B0028
- 077B0033
- 077B0037
- 077B0047
- 077B0048
- 077B0052
- 077B0065
- 077B0069
- 077B0074
- 077B0077
- 077B0082
- 077B0102
- 077B0122
- 077B0153
- 077B0155
- 077B0156
- 077B0158
- 077B0160
- 077B0161
- 077B0184
- 077B0188



077B8960  
**Handknob, white, Thermostat accessory**

Type designation: Handknob, white, Quantity per packing format: 480

Related products

- 077B0007
- 077B0020
- 077B0021
- 077B0022
- 077B0023
- 077B0024
- 077B0025
- 077B0026
- 077B0027
- 077B0028
- 077B0033
- 077B0037
- 077B0047
- 077B0048
- 077B0052
- 077B0065
- 077B0069
- 077B0077
- 077B0082
- 077B0102
- 077B0122
- 077B0153
- 077B0155
- 077B0156
- 077B0158
- 077B0160
- 077B0161
- 077B0184
- 077B0188
- 077B0202



077B8940  
**Mounting plate, Thermostat accessory**

Type designation: Mounting plate, Quantity per packing format: 500

Related products

- 077B0007
- 077B0020
- 077B0021
- 077B0022
- 077B0023
- 077B0024
- 077B0025
- 077B0026
- 077B0027
- 077B0028
- 077B0033
- 077B0037
- 077B0047
- 077B0048
- 077B0052
- 077B0065
- 077B0069
- 077B0074
- 077B0077
- 077B0082
- 077B0102
- 077B0122
- 077B0153
- 077B0155
- 077B0156
- 077B0158
- 077B0160
- 077B0161
- 077B0184
- 077B0188



077B8970  
**Washer, white, Thermostat accessory**

Type designation: Washer, white, Quantity per packing format: 480

Related products

- 077B0007
- 077B0020
- 077B0021
- 077B0022
- 077B0023
- 077B0024
- 077B0025
- 077B0026
- 077B0027
- 077B0028
- 077B0033
- 077B0037
- 077B0047
- 077B0048
- 077B0052
- 077B0065
- 077B0069
- 077B0074
- 077B0077
- 077B0082
- 077B0102
- 077B0122
- 077B0153
- 077B0155
- 077B0156
- 077B0158
- 077B0160
- 077B0161
- 077B0184
- 077B0188



077B8842

**Mounting plate, Thermostat accessory**

Type designation: Mounting plate, Quantity per packing format: 500

Related products

- 077B0007
- 077B0020
- 077B0021
- 077B0022
- 077B0023
- 077B0024
- 077B0025
- 077B0026
- 077B0027
- 077B0028
- 077B0033
- 077B0037
- 077B0047
- 077B0048
- 077B0052
- 077B0065
- 077B0069
- 077B0074
- 077B0077
- 077B0082
- 077B0102
- 077B0122
- 077B0153
- 077B0155
- 077B0156
- 077B0158
- 077B0160
- 077B0161
- 077B0184
- 077B0188



077B8901

**Terminal cover, Thermostat accessory**

Type designation: Terminal cover, Quantity per packing format: 100

Related products

- 077B0007
- 077B0020
- 077B0021
- 077B0022
- 077B0023
- 077B0024
- 077B0025
- 077B0026
- 077B0027
- 077B0028
- 077B0033
- 077B0037
- 077B0047
- 077B0048
- 077B0052
- 077B0065
- 077B0069
- 077B0074
- 077B0077
- 077B0082
- 077B0102
- 077B0122
- 077B0153
- 077B0155
- 077B0156
- 077B0158
- 077B0160
- 077B0161
- 077B0184
- 077B0188



077B8976

**Washer black, White print 0-7, Thermostat accessory**

Type designation: Washer black, White print 0-7, Quantity per packing format: 480

Related products

- 077B0007
- 077B0020
- 077B0021
- 077B0022
- 077B0023
- 077B0024
- 077B0025
- 077B0026
- 077B0027
- 077B0028
- 077B0033
- 077B0037
- 077B0047
- 077B0048
- 077B0052
- 077B0065
- 077B0069
- 077B0074
- 077B0077
- 077B0082
- 077B0102
- 077B0122
- 077B0153
- 077B0155
- 077B0156
- 077B0158
- 077B0160
- 077B0161
- 077B0184
- 077B0188




077B8941

**Mounting plate, low, Thermostat accessory**

Type designation: Mounting plate, low, Quantity per packing format: 500

Related products

- 077B0007
- 077B0020
- 077B0021
- 077B0022
- 077B0023
- 077B0024
- 077B0025
- 077B0026
- 077B0027
- 077B0028
- 077B0033
- 077B0037
- 077B0047
- 077B0048
- 077B0052
- 077B0065
- 077B0069
- 077B0074
- 077B0077
- 077B0082
- 077B0102
- 077B0122
- 077B0153
- 077B0155
- 077B0156
- 077B0158
- 077B0160
- 077B0161
- 077B0184
- 077B0188




077B8974

**Washer, white, Black print 0-9, Thermostat accessory**

Type designation: Washer, white, Black print 0-9, Quantity per packing format: 480

Related products

077B0007	077B0020	077B0021	077B0022
077B0023	077B0024	077B0025	077B0026
077B0027	077B0028	077B0033	077B0037
077B0047	077B0048	077B0052	077B0065
077B0069	077B0074	077B0077	077B0082
077B0102	077B0122	077B0153	077B0155
077B0156	077B0158	077B0160	077B0161
077B0184	077B0188		




077B8971

**Washer, black, Thermostat accessory**

Type designation: Washer, black, Quantity per packing format: 480

Related products

077B0007	077B0020	077B0021	077B0022
077B0023	077B0024	077B0025	077B0026
077B0027	077B0028	077B0033	077B0037
077B0047	077B0048	077B0052	077B0065
077B0069	077B0074	077B0077	077B0082
077B0102	077B0122	077B0153	077B0155
077B0156	077B0158	077B0160	077B0161
077B0184	077B0188		




077B8925

**Mounting plate, Thermostat accessory**

Type designation: Mounting plate, Quantity per packing format: 500

Related products

077B0007	077B0020	077B0021	077B0022
077B0023	077B0024	077B0025	077B0026
077B0027	077B0028	077B0033	077B0037
077B0047	077B0048	077B0052	077B0065
077B0069	077B0074	077B0077	077B0082
077B0102	077B0122	077B0153	077B0155
077B0156	077B0158	077B0160	077B0161
077B0184	077B0188		



077B8963

**Handknob, black Countersunked, Thermostat accessory**

Type designation: Handknob, black Countersunked, Quantity per packing format: 480

Related products

077B0007	077B0020	077B0021	077B0022
077B0023	077B0024	077B0025	077B0026
077B0027	077B0028	077B0033	077B0037
077B0047	077B0048	077B0052	077B0065
077B0069	077B0077	077B0082	077B0102
077B0122	077B0153	077B0155	077B0156
077B0158	077B0160	077B0161	077B0184
077B0188	077B0202		



077B8961  
**Handknob, white  
 Countersunked, Thermostat  
 accessory**

Type designation: Handknob,  
 white Countersunked, Quantity  
 per packing format: 480

Related products

- 077B0007
- 077B0020
- 077B0021
- 077B0022
- 077B0023
- 077B0024
- 077B0025
- 077B0026
- 077B0027
- 077B0028
- 077B0033
- 077B0037
- 077B0047
- 077B0048
- 077B0052
- 077B0065
- 077B0069
- 077B0077
- 077B0082
- 077B0102
- 077B0122
- 077B0153
- 077B0155
- 077B0156
- 077B0158
- 077B0160
- 077B0161
- 077B0184
- 077B0188
- 077B0202



077B1470  
**Thermostat, B045**

Warm cut-in [°C]: 7.3, Warm cut-  
 out [°C]: 3.3, Capillary tube  
 length [mm]: 440

Related products

- 077B7354



077B1319  
**Thermostat, B0**  
 Product Type: B0, Warm cut-in  
 [°C]: 10.3, Warm cut-out [°C]: 0.1,  
 Cold cut-in [°C]: 1, Cold cut-out  
 [°C]: -12.6, Capillary tube length  
 [mm]: 610

Related products

- 077B7272



077B3347  
**Thermostat, B6**  
 Product Type: B6, Warm cut-in  
 [°C]: 6.2, Warm cut-out [°C]: -4.4,  
 Cold cut-out [°C]: -9.9, Cold cut-  
 out [°C]: -9.9, Capillary tube  
 length [mm]: 1067

Related products

- 077B7347



077B1708  
**Thermostat, B0**  
 Product Type: B0, Warm cut-in  
 [°C]: -15.6, Warm cut-out [°C]:  
 -19.4, Cold cut-in [°C]: -24.5, Cold  
 cut-out [°C]: -29.3, Capillary tube  
 length [mm]: 1000

Related products

- 077B7136



077B3661  
**Thermostat, B62**  
 Product Type: B62, Warm cut-in  
 [°C]: 2.9, Warm cut-out [°C]: -5.9,  
 Cold cut-out [°C]: -10.6, Cold cut-  
 out [°C]: -10.6, Capillary tube  
 length [mm]: 1200

Related products

- 077B7355

## Spare parts code numbers

077B thermostats are not serviceable, and no spare parts are available.

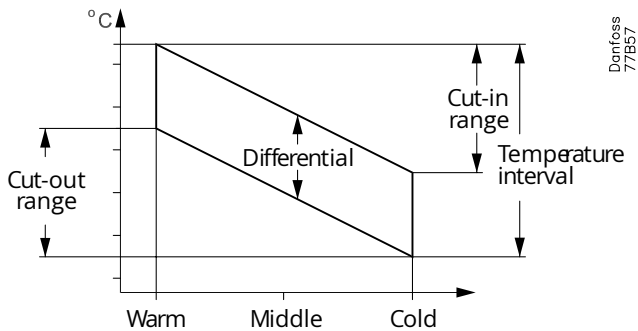
## Functions

### Thermostat function

The thermostat regulates by cutting off or cutting in current to the compressor. Depending on the temperature registered by the thermostat sensor, the thermostat controls the compressor by powering it (cut-in) or depowering it (cut-off). The thermostat can be used either as an evaporator thermostat or a room thermostat.

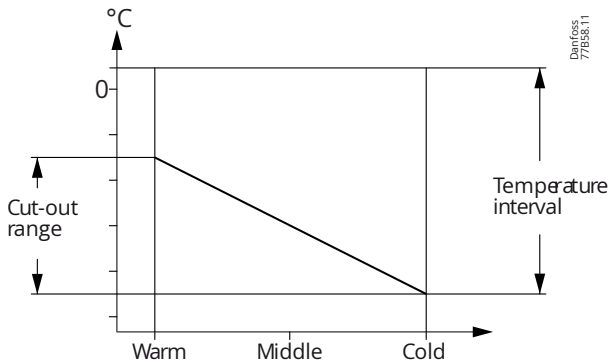
All normal function thermostats have a cut-out temperature range and a cut-in temperature range. The differential is defined as the difference between cut-in and cut-out temperatures. However, the temperature settings of fixed function thermostats are non-adjustable.

Figure: Cut-in, cut-out and differential for normal thermostats



On thermostats with constant cut-in temperature, B6 type, the terms “differential” and “cut-in temperature range” do not apply. The only relevant terms are “cut-out temperature range” and “temperature interval”.

Figure: Cut-out and temperature interval for thermostats with constant cut-in temperature



## Function and operation mode

The description covers the 077B types used as Service thermostats. Function and operation modes for the entire portfolio are described in the data sheet "Thermostats for refrigerators and freezers, 077B"

**Table: Function and operation mode B0, B02 and B04 versions**

Function	Operation mode	Type	Description
		B0	Without extra functionality
		B02	With auxiliary contact <b>Note:</b> Can't be used in combination with low torque cam.
		B02	With auxiliary contact
		B04	With changeover contact

Table: Function and operation mode B045 and B025 versions

Function	Operation mode	Type	Description
	<p>Danfoss 77B208.10</p> <p>Danfoss 90U22.12</p>	B045	With fixed setting
	<p>Danfoss 90U33.12</p>	B025	With fixed setting with changeover contact

Table: Function and operation mode B20, B25, B26 and B3 versions

Function	Operation mode	Type	Description
	<p>Danfoss 77B209.10</p> <p>Danfoss 90U27.12</p>	B20	With signal contact that cuts in on rising temperature
	<p>Danfoss 90U38.12</p>	B25	With serial stop contact and signal contact, cutting in on rising temperature
	<p>Danfoss 90U29.12</p>	B26	With contact for indication of super function and signal contact, cutting in on rising temperature
	<p>Danfoss 90U30.12</p>	B3	With signal contact, cutting out on rising temperature.

Table: Function and operation mode B5, B52 and B53 versions

Function	Operation mode	Type	Description
<p>Danfoss 774B03.10</p>	<p>Danfoss 90U23.12</p>	B5	With large differential and defrost
	<p>Danfoss 90U23.12</p>	B52	With large differential, automatic defrost and auxiliary contact
	<p>Danfoss 90U24.12</p>	B52	With large differential, automatic defrost and auxiliary contact
	<p>Danfoss 90U25.12</p>	B53	With large differential, automatic defrost and changeover contact

Table: Function and operation mode B6, B62 and B63 versions

Function	Operation mode	Type	Description
<p>Graph showing temperature (°C) vs. position (Pos.). The y-axis is labeled °C and has a 0 mark. The x-axis is labeled Pos. and has three points: Warm, Middle, and Cold. A horizontal line labeled 'Cut-in' is at a constant temperature level. A line labeled 'Cut-out' starts at a higher temperature at the 'Warm' position and decreases linearly towards the 'Cold' position.</p>	<p>Circuit diagram for B6 thermostat. It shows a heating element connected to terminals 3 and 4. A defrost heater is connected to terminals 3 and 4. The thermostat is connected to terminals 3 and 4. The Danfoss part number is 90UJ32.12.</p>	B6	With constant cut-in temperature and automatic defrost
	<p>Circuit diagram for B62 thermostat. It shows a heating element connected to terminals 3 and 4. A defrost heater is connected to terminals 3 and 4. An auxiliary contact is connected to terminals 3 and 6. The Danfoss part number is 90UJ23.12.</p>	B62	With constant cut-in temperature, automatic defrost and auxiliary contact. <b>NOTE:</b> Can't be used in combination with Low torque cam.
	<p>Circuit diagram for B62 thermostat. It shows a heating element connected to terminals 3 and 4. A defrost heater is connected to terminals 3 and 4. An auxiliary contact is connected to terminals 3 and 6. The Danfoss part number is 90UJ24.12.</p>	B62	With constant cut-in temperature, automatic defrost and auxiliary contact
	<p>Circuit diagram for B63 thermostat. It shows a heating element connected to terminals 3 and 4. A defrost heater is connected to terminals 3 and 4. A changeover contact is connected to terminals 3 and 6. The Danfoss part number is 90UJ25.12.</p>	B63	With constant cut-in temperature, automatic defrost and changeover contact

Table: Function and operation mode B24 and B34 versions

Function	Operation mode	Type	Description
		B24	With fixed settings and signal contact, cutting in on rising temperature
		B34	Fixed setting with signal contact that cuts out on rising temperature

Table: Function and operation mode B4 versions

Function	Operation mode	Type	Description
		B4	With push button defrost.

## Product details

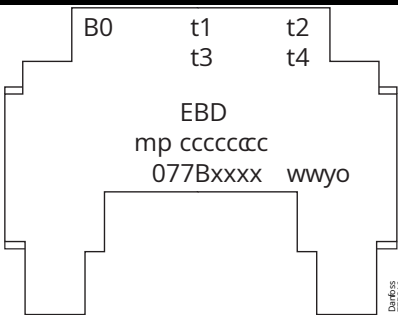
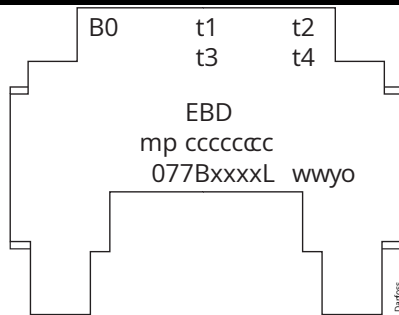
### General data

### Product identification

Relevant product data is available on the box label, and on the product laser engraving.

Figure: Box label for 077B thermostat, type B0	Figure: Laser engraving on 077B thermostat

Figure: Name plate

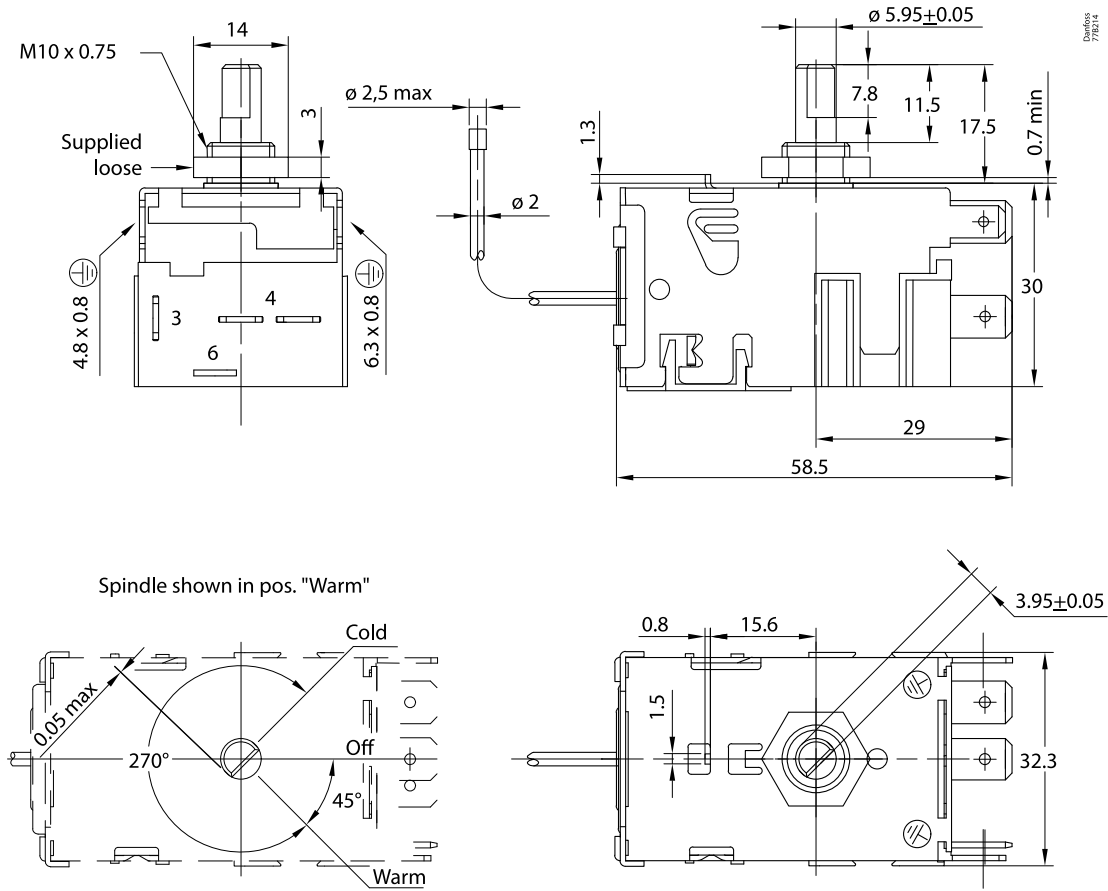
077B identification keys (E.g. B0)	077B identification keys (E.g. B0 with low diff. contact system)
	

t1	Cut-in temp. in pos. warm	077Bxxxx	Danfoss code number
t2	Cut-in temp. in pos. cold	077BxxxxL	Danfoss code number
t3	Cut-out temp. in pos. warm	ww	Week no.
t4	Cut-out temp. in pos. cold	y	Year (last digit)
mp	Manufacturing place	o	No. of order this week
EBD	EBD function (optional)		

Position	Inscription	Explanation
Product engraving; Box label	B26 on laser engraving (pos. 1), B0 on label	Type of product
Box label	Thermostats	Product group
Product engraving; Box label	077B0007 (box), 077B2602 (laser engraving pos. 4)	Code number
Box label	12587723	Order no.
Box label	BN 2	Internal production line code
Box label	4791	Internal production time code
Box label	Made in Slovakia	Manufacturing site acc. to EN standards
Box label	Industrial pack	Packing format
Box label	1034534	Internal vendor code no.
Box label	90 pcs.	Quantity of products in pack
Box label	(Approval logos)	Approved by relevant approval authority (BEAB, CE, EAC, UL, ENEC, LLC-CDC)
Product engraving	BN (pos. 3)	Internal production line code
Product engraving	115349472 (pos. 2)	Customer code number (for thermostats made to order)
Product engraving	3691 (pos. 6)	Internal production code denoting time of production
Product engraving	(pos. 11)	Data Matrix, ECC 200

**Note:** Laser engravings are different depending on type and customer requirements.

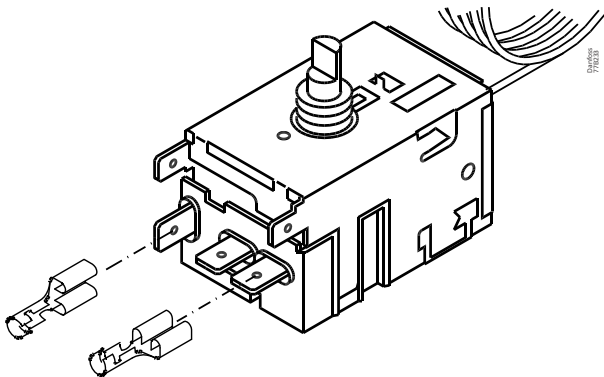
## Dimensions & weights



## Connections

077B thermostats are available with spade connectors in either 4.8 x 0.8 mm or 6.3 x 0.8 mm.

Figure: Spade tab connector layout



## Electrical specifications

The series contact cuts out when the spindle is turned to position “stop”. Both the main and signal contacts are cut out. The series contact withstands a max. load of 6/36 A or 8/40 A (FLA/LRA).

The auxiliary contact cuts out when the spindle is turned to position “stop”. The auxiliary contact can be used to cut out a heating element, for example, also in line with the main switch. The contact withstands 6/36 A 240 V AC / 50 Hz or 8/40 A 240 V AC / 50 Hz.

The signal contact is used to set off an alarm (audible or visual) when the sensor temperature exceeds 3 – 5 °C of the cut-in one. The signal contact withstands a max. load of 0.1 A NI (Resistive).

The reversing switch (changeover contact) is mainly used to control 3/2-way solenoid valves in dual temperature cabinets. The changeover contact withstands a max. load of 0.5 A NI (resistive) or 0.1 A (inductive).

The super function contact cuts in when the spindle is turned to position “super”. The compressor runtime is consequently unlimited. The super function contact withstands a max. load of 0.1 A NI (resistive).

Table: Relay contact configuration

Relay contacts	Functions	Type	Contact rating for Europe (250 V)	Contact rating for USA (240 V)
3-4	Main contact	B0, B02, B025, B04, B045, B2, B24, B25, B26, B3, B34, BB4, B5, B52, B53, B6, B62, B63	6 (6) A	FLA:6. RLA: 36
3-6	Auxiliary contact	B02, B52, B62	6 (6) A	FLA:6. RLA: 36
3-6	Signal contact	B2, B24, B25, B26	0.1 A	FLA:0.1. RLA: NI (Resistive)
3-6	Changeover contact	B025, B04, B53, B63	0.5 (0.1) A	FLA:0.1. RLA: 0.6
3-8	Super freezer contact	B26	0.1 A	FLA:0.1. RLA: NI (Resistive)
3-8	Series contact	B25	6 (6) A	FLA:6. RLA: 36

**Note:** Relay contact ratings are the same for all thermostats in 077B series, including Service thermostats.

## 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.

When you click on the link you will be directed to the latest version of the 'Declaration of Conformity'. Products developed and sold before this date of issue conform to the directives/standards in force at the time of their sale.

Approval type	Title	Certification body	Approval topic
UK Declaration	<a href="#">Danfoss UK.D 2022.03.A01</a>	Danfoss	LVD
Manufacturer's Declaration	<a href="#">Danfoss MD2012.2 EBD.A5</a>	Danfoss	Packaging
Manufacturer's Declaration	<a href="#">Danfoss MD2016. China RoHS.A03</a>	Danfoss	China RoHS
EU Declaration	<a href="#">Danfoss EU.D 2018.11. A3</a>	Danfoss	LVD
UA Declaration	<a href="#">Danfoss UA 2024-07-25 cooling sensors</a>	Danfoss	LVD
Electrical Safety Certificate	<a href="#">UL E31024</a>	UL - Underwriters Laboratories inc.	
Export Control Declaration	<a href="#">Electromechanical Thermostats 077B</a>	Danfoss	

### ISO certification

Danfoss Appliance Controls is certified by Bureau Veritas in ISO14001, ISO9001 and ISO45001.

## Contact details

### Online support

Danfoss offers a wide range of support along with our products, including digital information, software, mobile apps and expert guidance. See the possibilities below.



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