

Danfoss

QT,QTL Thermostatic Actuator



Danfoss QT,QTL Thermostatic Actuator User Guide

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Danfoss QT, QTL Thermostatic Actuator



Specifications

- Product Name: Thermostatic Actuator QT / QTL
- Model Number: 73693940
- Compatible with: AB-QM (DN 10-32) for QT and AB-QM (DN 10-20) for QTL

Product Usage Instructions

Assembly:

Insert the adapter into the thermostat neck.

Design:

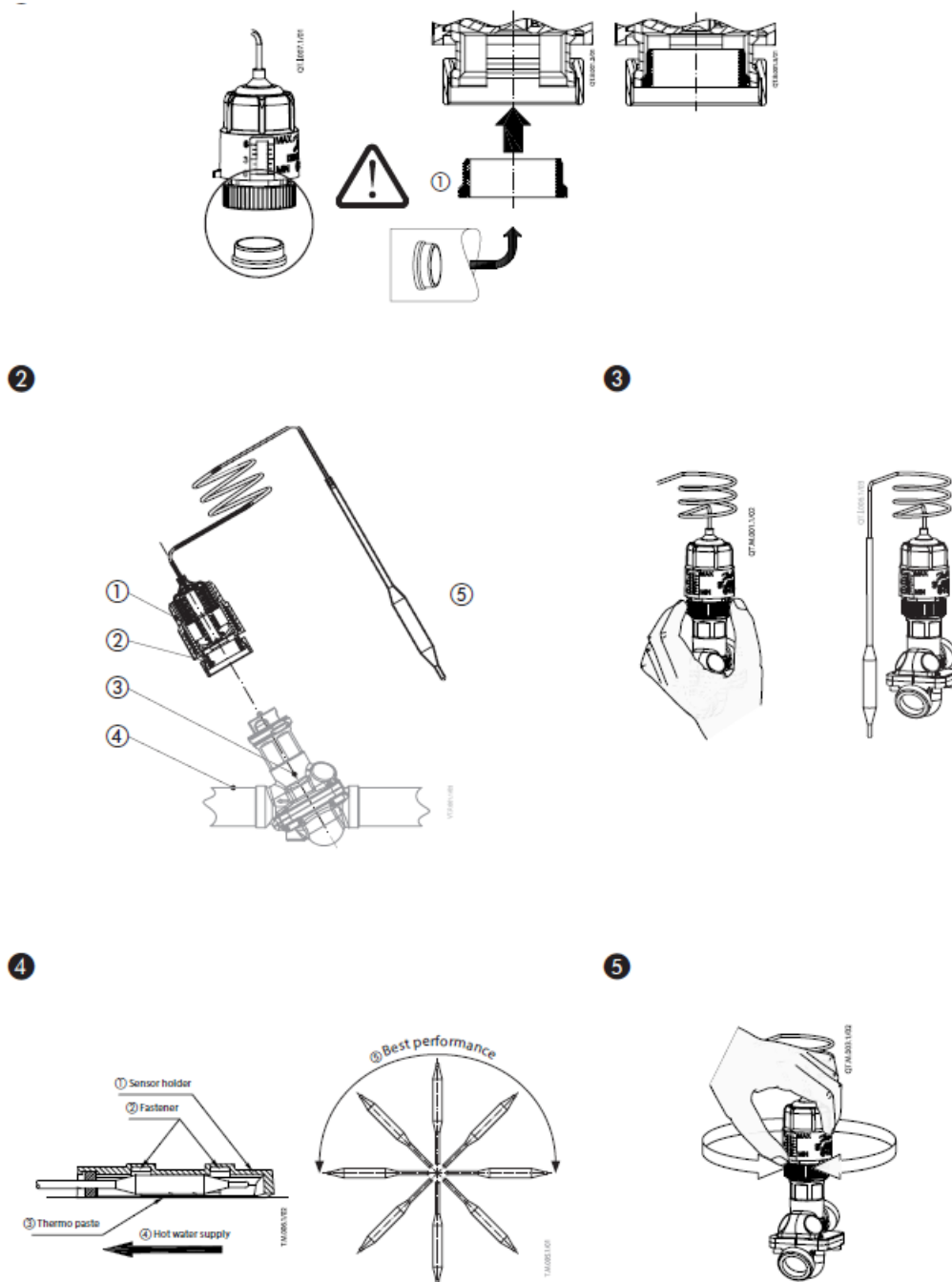
1. Mount the AB-QM valve on the hot-water pipe as per the AB-QM instructions.
2. Set the desired setting on AB-QM.

Mounting:

QT/QTL should be mounted on the AB-QM by hand with a maximum allowed torque of 5 Nm.

Sensor Installation:

1. Install the AB-QM on the return pipe.
2. Place the sensor warmer than the thermostat head.



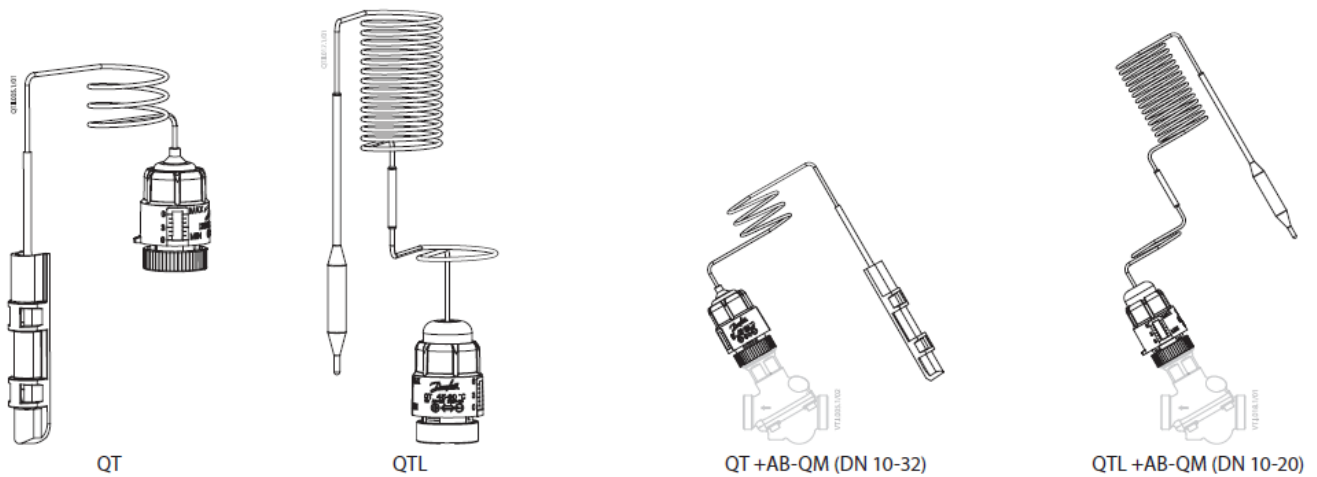
Setting:

- Set the AB-QM to the desired setting before mounting the thermostat.
- Adjust the QT/QTL thermostat setting knob as needed for optimal performance.

Important Notes:

- Apply thermo paste (included in the box) for proper heat transfer between the heating water pipe and the thermostat sensor.
- The sensor can be mounted in any direction.
- Refer to the tables provided in the manual for sensor settings based on AB-QM flow settings.

Thermostatic actuator QT / QTL



Assembly

Insert adapter ① into the thermostat neck

Design

Mount AB-QM valve ③ on the hot-water pipe (see instruction for AB-QM)

1. Setting knob
2. Adapter
3. AB-QM valve
4. Hot-water pipe
5. Temperature sensor

Set the desired setting on AB-QM (see instructions for AB-QM)

Mounting

QT/QTL should be mounted on the AB-QM by hand. The maximum allowed torque is 5 Nm.

Sensor installation

- AB-QM is to be installed on the return pipe.
- In general, the sensor must always be placed warmer than the thermostat head.
- In case of a one-pipe system, the AB-QM needs to be installed after and as close as possible to the last radiator.
- QT should be mounted on the AB-QM by hand. The maximum allowed torque is 5 Nm.
- For proper heat transfer between a heating water pipe and the thermostat sensor, it is very important to apply thermal paste (included in the box) on the surfaces in contact.
- It is recommended to insulate the sensor if the thermostat is installed in a very cold place ($< 5\text{ }^{\circ}\text{C}$).
- The sensor itself can be mounted in any direction. It can be mounted above or below the sensor head.

Setting

- QT/QTL temperature setting depends on AB-QM flow setting.
- It is necessary to set the AB-QM to the desired setting before the thermostat is mounted. It is recommended to set AB-QM between 30 and 70 % flow setting.
- The QT/QTL thermostat is set to the desired setting by hand. When minimum or maximum setting is required, QT/QTL setting knob is to be moved slightly in opposite direction to ensure optimal performance of the thermostat.
- Please note that the attached tables are indicative and will vary depending on the application.
- They are to be used as guidance only. For exact temperature verification temperature needs to be measured at the reference point and the sensor setting adjusted accordingly.

AB-QM DN 10-20 (35-50 °C)

Temp. setting (°C)		QT Sensor setting (turns)						
		0	1	2	3	4	5	6
AB-QM (flow setting)	20 %	38.0	40.5	43.0	45.5	48.0	50.5	53.0
	30 %	37.0	39.5	42.0	44.5	47.0	49.5	52.0
	40 %	36.0	38.5	41.0	43.5	46.0	48.5	51.0
	50 %	35.0	37.5	40.0	42.5	45.0	47.5	50.0
	60 %	34.0	36.5	39.0	41.5	44.0	46.5	49.0
	70 %	33.0	35.5	38.0	40.5	43.0	45.5	48.0
	80 %	32.0	34.5	37.0	39.5	42.0	44.5	47.0
	90 %	31.0	33.5	36.0	38.5	41.0	43.5	46.0
	100 %	30.0	32.5	35.0	37.5	40.0	42.5	45.0

The factory setting of the thermostat is 4.

AB-QM DN 10-20 (45-60 °C)

Temp. setting (°C)		QT Sensor setting (turns)						
		0	1	2	3	4	5	6
AB-QM (flow setting)	20 %	48.0	50.5	53.0	55.5	58.0	60.5	63.0
	30 %	47.0	49.5	52.0	54.5	57.0	59.5	62.0
	40 %	46.0	48.5	51.0	53.5	56.0	58.5	61.0
	50 %	45.0	47.5	50.0	52.5	55.0	57.5	60.0
	60 %	44.0	46.5	49.0	51.5	54.0	56.5	59.0
	70 %	43.0	45.5	48.0	50.5	53.0	55.5	58.0
	80 %	42.0	44.5	47.0	49.5	52.0	54.5	57.0
	90 %	41.0	43.5	46.0	48.5	51.0	53.5	56.0
	100 %	40.0	42.5	45.0	47.5	50.0	52.5	55.0

The factory setting of the thermostat is 4.

AB-QM DN 10-20 (65-85 °C)

Temp. setting (°C)		QT Sensor setting (turns)						
		0	1	2	3	4	5	6
AB-QM (flow setting)	20 %	68.5	71.0	73.5	76.5	80.0	83.5	87.5
	30 %	67.0	70.0	72.5	76.0	79.0	82.5	86.5
	40 %	66.0	69.0	71.5	75.0	78.5	81.5	85.5
	50 %	65.0	68.0	71.0	74.5	77.5	81.0	85.0
	60 %	63.5	67.0	70.5	74.0	76.5	80.0	84.0
	70 %	62.0	65.5	69.0	72.5	75.5	79.0	83.5
	80 %	60.5	64.0	67.5	71.0	74.5	78.0	83.0
	90 %	58.5	62.5	66.0	69.5	73.5	77.5	82.0
	100 %	57.0	61.0	64.5	68.0	72.5	77.0	81.5

The factory setting of the thermostat is 4.

AB-QM DN 25-32 (35-50 °C)

Temp. setting (°C)		QT Sensor setting (turns)						
		0	1	2	3	4	5	6
AB-QM (flow setting)	20 %	39.5	42.0	44.5	47.0	49.5	52.0	54.5
	30 %	38.0	40.5	43.0	45.5	48.0	50.5	53.0
	40 %	36.5	39.0	41.5	44.0	46.5	49.0	51.5
	50 %	35.0	37.5	40.0	42.5	45.0	47.5	50.0
	60 %	33.5	36.0	38.5	41.0	43.5	46.0	48.5
	70 %	32.0	34.5	37.0	39.5	42.0	44.5	47.0
	80 %	30.5	33.0	35.5	38.0	40.5	43.0	45.5
	90 %	29.0	31.5	34.0	36.5	39.0	41.5	44.0
	100 %	27.5	30.0	32.5	35.0	37.5	40.0	42.5

The factory setting of the thermostat is 4.

AB-QM DN 25-32 (45-60 °C)

Temp. setting (°C)		QT Sensor setting (turns)						
		0	1	2	3	4	5	6
AB-QM (flow setting)	20 %	49.5	52.0	54.5	57.0	59.5	62.0	64.5
	30 %	48.0	50.5	53.0	55.5	58.0	60.5	63.0
	40 %	46.5	49.0	51.5	54.0	56.5	59.0	61.5
	50 %	45.0	47.5	50.0	52.5	55.0	57.5	60.0
	60 %	43.5	46.0	48.5	51.0	53.5	56.0	58.5
	70 %	42.0	44.5	47.0	49.5	52.0	54.5	57.0
	80 %	40.5	43.0	45.5	48.0	50.5	53.0	55.5
	90 %	39.0	41.5	44.0	46.5	49.0	51.5	54.0
	100 %	37.5	40.0	42.5	45.0	47.5	50.0	52.5

The factory setting of the thermostat is 4.

AB-QM DN 25-32 (65-85 °C)

Temp. setting (°C)		QT Sensor setting (turns)						
		0	1	2	3	4	5	6
AB-QM (flow setting)	20 %	72.5	75.0	77.5	80.0	84.0	88.0	92.5
	30 %	70.0	73.0	75.5	78.0	82.0	86.0	90.5
	40 %	67.5	70.5	73.3	76.0	80.0	83.5	87.0
	50 %	65.0	68.0	72.0	74.0	77.5	80.5	85.0
	60 %	62.5	65.8	69.2	72.5	76.5	79.0	84.0
	70 %	60.0	64.5	68.5	71.5	75.5	78.0	83.0
	80 %	58.0	63.0	67.0	70.0	74.0	77.0	81.5
	90 %	56.5	61.0	65.0	69.0	72.5	76.5	80.5
	100 %	55.0	59.0	63.0	67.5	71.5	75.5	79.5

The factory setting of the thermostat is 4.

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FAQS

- **Q: What is the factory setting of the thermostat?**
A: The factory setting of the thermostat is 4
- **Q: Where should the sensor be placed in a one-pipe system?**
A: In a one-pipe system, the AB-QM needs to be installed after and as close as possible to the last radiator.

Documents / Resources



[Danfoss QT,QTL Thermostatic Actuator](#) [pdf] User Guide
QT, QTL, 73693940, QT QTL Thermostatic Actuator, QT QTL, Thermostatic Actuator, Actuator

References

- [Engineering Tomorrow | Danfoss](#)
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