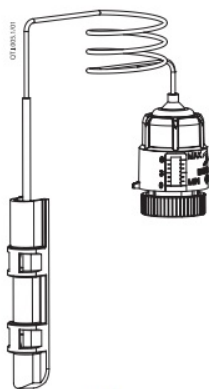




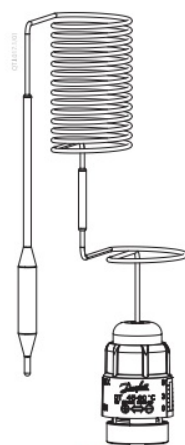
Danfoss QTL Thermostatic Actuator User Guide

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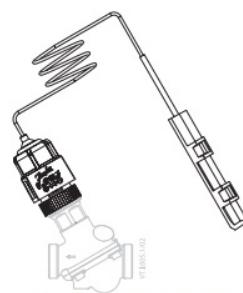
Danfoss QTL Thermostatic Actuator



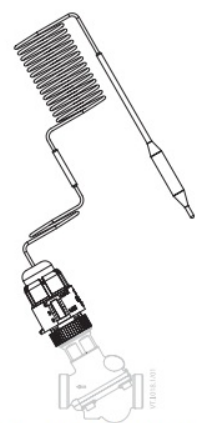
QT



QTL



QT + AB-QM (DN 10-32)



QTL + AB-QM (DN 10-20)

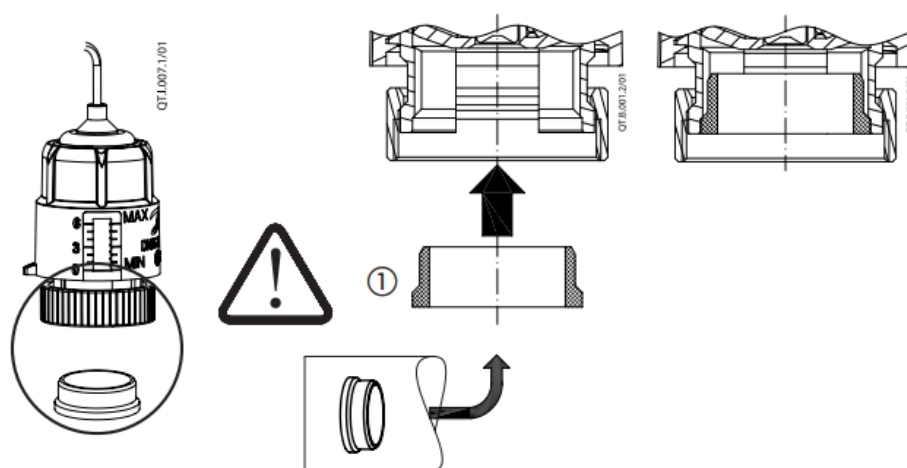
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Assembly ①

Insert adapter ① into thermostat neck

1



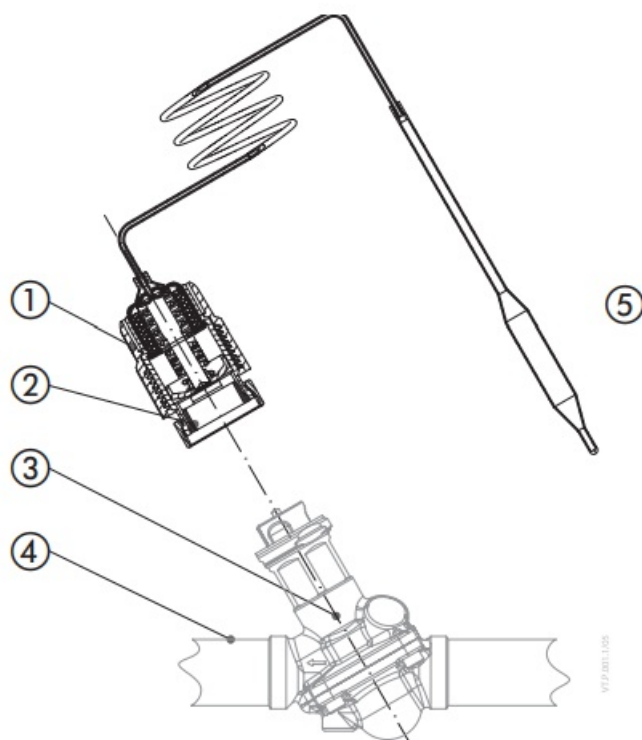
Design ②

Mount AB-QM valve ③ on 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 desired setting on AB-QM (see instruction for AB-QM)

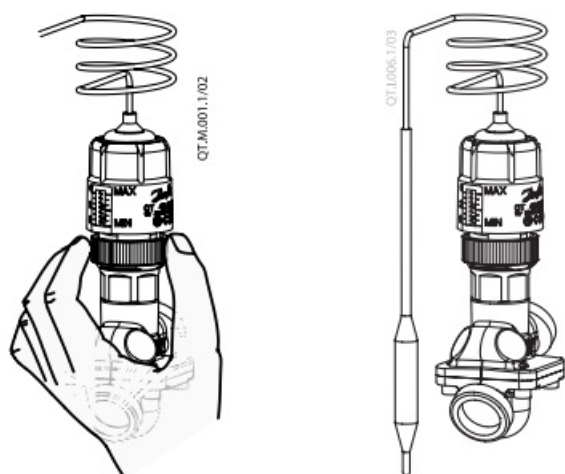
2



Mounting ③

QT/QL should be mounted on the AB-QM by hand. Maximum allowed torque is 5 Nm.

3



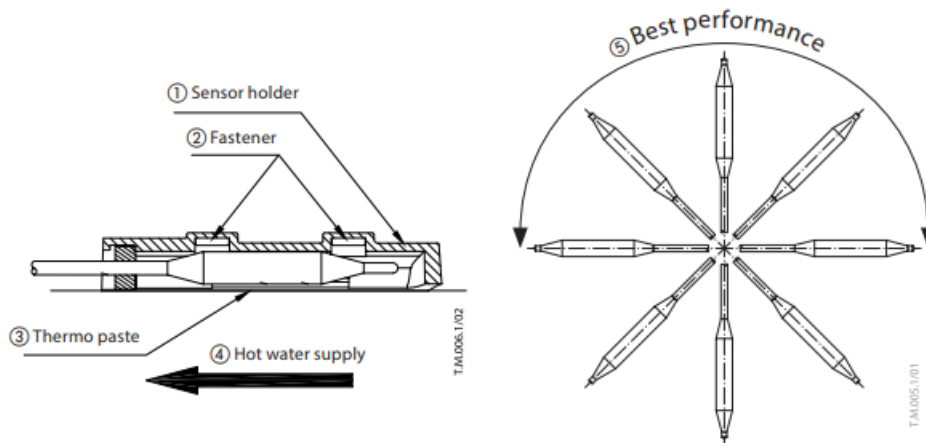
Sensor installation ④

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 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. 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 thermo 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 ($< 5\text{ }^{\circ}\text{C}$).

Sensor itself can be mounted in any direction. It can be mounted above or below sensor head.

4

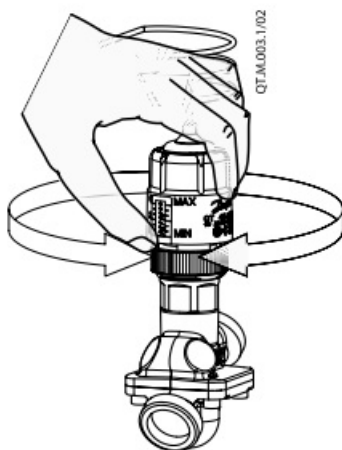


Setting ⑥

QT/QTL temperature setting depends on AB-QM flow setting. It is necessary to set the AB-QM to desired setting before the thermostat is mounted. It is recommended to set AB-QM between 30 and 70 % flow setting. 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 a guidance only. For exact temperature verification temperature needs to be measured at reference point and the sensor setting adjusted accordingly.

5



AB-QM DN 10-20 (35-50 °C)

Temp. setting (°C)		QT Sensor setting (turns)						
		0	1	2	3	4	5	6
	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

AB-QM (flow setting)	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

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
	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

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

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
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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

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
	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

AB-QM (flow setting)	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

Factory setting of the thermostat is 4.



Documents / Resources

	Danfoss QTL Thermostatic Actuator [pdf] User Guide QT, QTL, QTL Thermostatic Actuator, QTL, Thermostatic Actuator, Actuator
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