

kanmor® - Data Brochure

Indoor Sensor 076e

D076e

12/08

The kanmor Indoor Sensor 076e includes a 10 kΩ thermistor which provides accurate measurement of the indoor temperature. The 076e can be mounted directly on the wall or mounted to an electrical box using the enclosed Wall Plate 008e. The small size of the 076e makes this sensor visually appealing and less noticeable on the wall.

Definitions

The following defined terms and symbols are used throughout this manual to bring attention to the presence of hazards of various risk levels, or to important information concerning the life of the product.



Warning symbol: Indicates presence of hazards which can cause severe personal injury, death or substantial property damage if ignored.

Installation - Indoor Sensor 076e

STEP ONE — GETTING READY

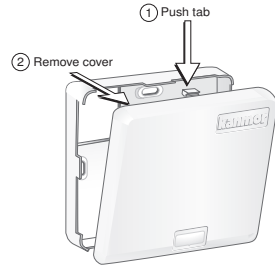
Check the contents of this package. If any of the contents listed are missing or damaged, please contact your wholesaler or kanmor sales representative for assistance.

Type 076e includes: • One Indoor Sensor 076e • One Wall Plate 008e • One Data Brochure D 076e

STEP TWO — REMOVING THE FRONT COVER

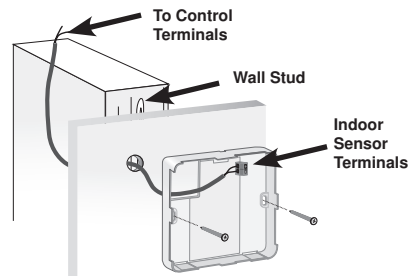
Note: The temperature sensor (thermistor) is built into the 076e enclosure.

To remove the 076e front cover, place a small screwdriver or similar object into the small hole located in the top of the 076e enclosure. Push the screwdriver against the plastic flap and pull the top of the front cover so that it pivots around the bottom edge of the mounting base.



STEP THREE — MOUNTING THE INDOOR SENSOR

The Indoor Sensor should be installed on an interior wall of the desired zone to be controlled. Do not mount the 076e in a location that may be affected by localized heat sources or cold drafts. It may be necessary to install a draft barrier and / or insulation behind the enclosure in order to prevent air from blowing through the wiring hole and affecting the sensor reading.



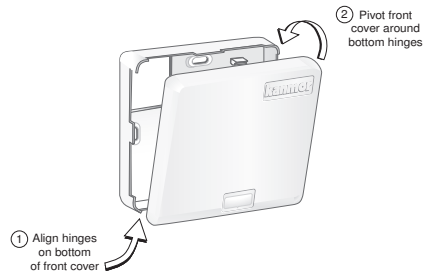
For surface mounting, mount the Indoor Sensor directly to the wall using two #6-25 mm (1") screws. The screws are inserted through the mounting holes and must be securely fastened to the wall. If possible, at least one of the screws should enter a wall stud.

▲ STEP FOUR ————— WIRING THE INDOOR SENSOR

Run two conductor 1 mm² or similar wire between the Indoor Sensor and the terminals on the kanmor control. Ensure that all wires are stripped to a length of 10 mm. Insert the wires through the hole provided in the back of the indoor sensor enclosure and connect them to the indoor sensor terminal block. Do not run the wires parallel to telephone or power lines. If the indoor sensor wires are located in an area with strong sources of electromagnetic noise, shielded cable or twisted pair should be used or the wires can be run in a grounded metal conduit. If using shielded cable, one end of the shield should be connected to the *Com* terminal on the control and the other end should remain free. The shield must not be connected to earth ground. Follow the sensor testing instructions on page 6 of this brochure and connect the wires to the control.

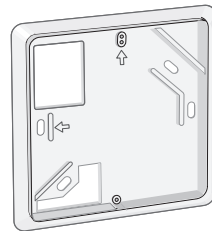
STEP FIVE ————— INSTALLING THE FRONT COVER

The Indoor Sensor 076e front cover is installed by aligning the hinges on the bottom of the front cover with the bottom of the sensor mounting base. The front cover is then pivoted around the bottom hinge and pushed against the mounting base until it snaps firmly into place.



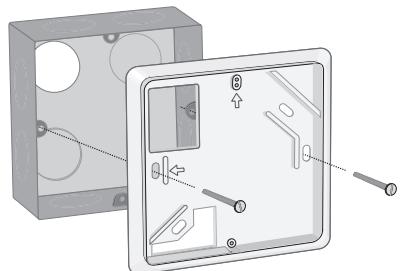
Installation - Wall Plate 008e

The kanmor Wall Plate 008e allows for installation of a small enclosure Room Temperature Unit (RTU), thermostat, or Indoor Sensor on to an electrical box. The wall plate can be mounted vertical or horizontal and is designed to allow wiring to feed through in both positions. Included with the wall plate are screws for mounting to the electrical box.



STEP ONE ————— MOUNTING THE PLATE

The Wall Plate is mounted onto an electrical box using the supplied screws. Ensure that at least one of the arrows molded in the plastic points upwards. Also ensure that the electrical box is properly insulated and protected from cold drafts. All required wiring must be pulled through the existing top left hand hole of the wall plate.



Sensor Testing Instructions

⚠ A good quality test meter capable of measuring up to 5,000 k Ω (1 k Ω = 1000 Ω) is required to measure the sensor resistance. In addition to this, the actual temperature must be measured with either a good quality digital thermometer, or if a thermometer is not available, a second sensor can be placed alongside the one to be tested and the readings compared.

First measure the temperature using the thermometer and then measure the resistance of the sensor at the control. The wires from the sensor must not be connected to the control while the test is performed. Using the chart below, estimate the temperature measured by the sensor. The sensor and thermometer readings should be close. If the test meter reads a very high resistance, there may be a broken wire, a poor wiring connection or a defective sensor. If the resistance is very low, the wiring may be shorted, there may be moisture in the sensor or the sensor may be defective. To test for a defective sensor, measure the resistance directly at the sensor location.

Do not apply voltage to a sensor at any time as damage to the sensor may result.

Temperature	Resistance		Temperature		Resistance		Temperature		Resistance		
	$^{\circ}\text{C}$	Ω	$^{\circ}\text{F}$	$^{\circ}\text{C}$	Ω	$^{\circ}\text{C}$	$^{\circ}\text{F}$	$^{\circ}\text{C}$	Ω	$^{\circ}\text{C}$	
-50	-46	490,813	20	-7	46,218	90	32	7,334	160	71	1,689
-45	-43	405,710	25	-4	39,913	95	35	6,532	165	74	1,538
-40	-40	336,606	30	-1	34,558	100	38	5,828	170	77	1,403
-35	-37	280,279	35	2	29,996	105	41	5,210	175	79	1,281
-30	-34	234,196	40	4	26,099	110	43	4,665	180	82	1,172
-25	-32	196,358	45	7	22,763	115	46	4,184	185	85	1,073
-20	-29	165,180	50	10	19,900	120	49	3,760	190	88	983
-15	-26	139,402	55	13	17,436	125	52	3,383	195	91	903
-10	-23	118,018	60	16	15,311	130	54	3,050	200	93	829
-5	-21	100,221	65	18	13,474	135	57	2,754	205	96	763
0	-18	85,362	70	21	11,883	140	60	2,490	210	99	703
5	-15	72,918	75	24	10,501	145	63	2,255	215	102	648
10	-12	62,465	80	27	9,299	150	66	2,045	220	104	598
15	-9	53,658	85	29	8,250	155	68	1,857	225	107	553

Technical Data

INDOOR SENSOR 076e

Literature	D 076e.
Packaged weight	72 g (0.16 lb.), Enclosure G, white PVC plastic.
Dimensions	73 x 73 x 21 mm (2-7/8" H x 2-7/8" W x 13/16").
Approvals	CSA C US, CE approved.
Operating Range	-50 to 60°C (-60 to 140°F).
Sensor	NTC thermistor, 10 kΩ @ 77°F (25°C ±0.2°C), β=3892.
Included	008e

Limited Warranty and Product Return Procedure

Limited Warranty *The liability of kanmor Control Systems Ltd. ("kanmor") under this warranty is limited. The Purchaser, by taking receipt of any kanmor product ("Product"), acknowledges the terms of the Limited Warranty in effect at the time of such Product sale and acknowledges that it has read and understands same.*

The kanmor Limited Warranty to the Purchaser on the Products sold hereunder is a manufacturer's pass-through warranty which the Purchaser is authorized to pass through to its customers. Under the Limited Warranty, each kanmor Product is warranted against defects in workmanship and materials if the Product is installed and used in compliance with kanmor's instructions, ordinary wear and tear excepted. The pass-through warranty period is for a period of twenty-four (24) months from the production date if the Product is not installed during that period, or twelve (12) months from the documented date of installation if installed within twenty-four (24) months from the production date.

The liability of kanmor under the Limited Warranty shall be limited to, at kanmor's sole discretion: the cost of parts and labor provided by kanmor to repair defects in materials and/or workmanship of the defective product; or to the exchange of the defective product for a warranty replacement product; or to the granting of credit limited to the original cost of the defective product, and such repair, exchange or credit shall be the sole remedy available from kanmor, and, without limiting the foregoing in any way, kanmor is not responsible, in contract, tort or strict product liability, for any other losses, costs, expenses, inconveniences, or damages, whether direct, indirect, special, secondary, incidental or consequential, arising from ownership or use of the product, or from defects in workmanship or materials, including any liability for fundamental breach of contract.

The pass-through Limited Warranty applies only to those defective Products returned to kanmor during the warranty period. This Limited Warranty does not cover the cost of the parts or labor to remove or transport the defective Product, or to reinstall the repaired or replacement Product, all such costs and expenses being subject to Purchaser's agreement and warranty with its customers.

Any representations or warranties about the Products made by Purchaser to its customers which are different from or in excess of the kanmor Limited Warranty are the Purchaser's sole responsibility and obligation. Purchaser shall indemnify and hold kanmor harmless from and against any and all claims, liabilities and damages of any kind or nature which arise out of or are related to any such representations or warranties by Purchaser to its customers.

The pass-through Limited Warranty does not apply if the returned Product has been damaged by negligence by persons other than kanmor, accident, fire, Act of God, abuse or misuse; or has been damaged by modifications, alterations or attachments made subsequent to purchase which have not been authorized by kanmor; or if the Product was not installed in compliance with kanmor's instructions and/or the local codes and ordinances; or if due to defective installation of the Product; or if the Product was not used in compliance with kanmor's instructions.

THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, WHICH THE GOVERNING LAW ALLOWS PARTIES TO CONTRACTUALLY EXCLUDE, INCLUDING, WITHOUT LIMITATION, IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, DURABILITY OR DESCRIPTION OF THE PRODUCT, ITS NON-INFRINGEMENT OF ANY RELEVANT PATENTS OR TRADEMARKS, AND ITS COMPLIANCE WITH OR NON-VIOLATION OF ANY APPLICABLE ENVIRONMENTAL, HEALTH OR SAFETY LEGISLATION; THE TERM OF ANY OTHER WARRANTY NOT HEREBY CONTRACTUALLY EXCLUDED IS LIMITED SUCH THAT IT SHALL NOT EXTEND BEYOND TWENTY-FOUR (24) MONTHS FROM THE PRODUCTION DATE, TO THE EXTENT THAT SUCH LIMITATION IS ALLOWED BY THE GOVERNING LAW.

Product Warranty Return Procedure All Products that are believed to have defects in workmanship or materials must be returned, together with a written description of the defect, to kanmor through its Representative. If kanmor receives an inquiry from someone other than a kanmor Representative, including an inquiry from Purchaser (if not a kanmor Representative) or Purchaser's customers, regarding a potential warranty claim, kanmor's sole obligation shall be to provide the address and other contact information regarding the appropriate Representative.



Symbol for Separate Collection in European Countries

This symbol indicates that this product is to be collected separately. This product is designated for separate collection at an appropriate collection point. Do not dispose of as household waste. For more information, contact the local authorities in charge of waste management.

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