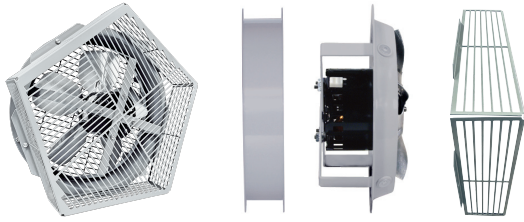


# KB650B & KB650S THIN FANS



B Series Thin Fan with front Guard, rear Grille and Mounting Sleeve.

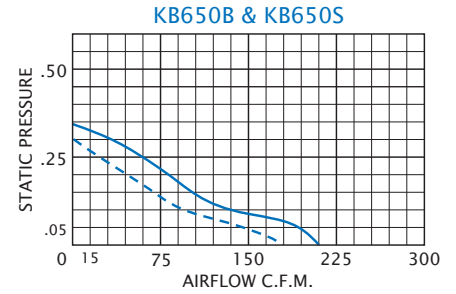


S Series Thin Fan with Filter Holder and Filter.

## ACCESSORIES AND OPTIONS

- Automatic Speed Control
- Filters
- Filter Holders
- Grille
- Guard
- Mounting Sleeve
- Special external paint finishes
- Special line cord or connectors

## PERFORMANCE GRAPH



Airflow vs. static pressure curves are shown for 60 Hz (solid line) and 50 Hz (broken line) inputs. Static pressure is in inches of water.

## STANDARD FEATURES

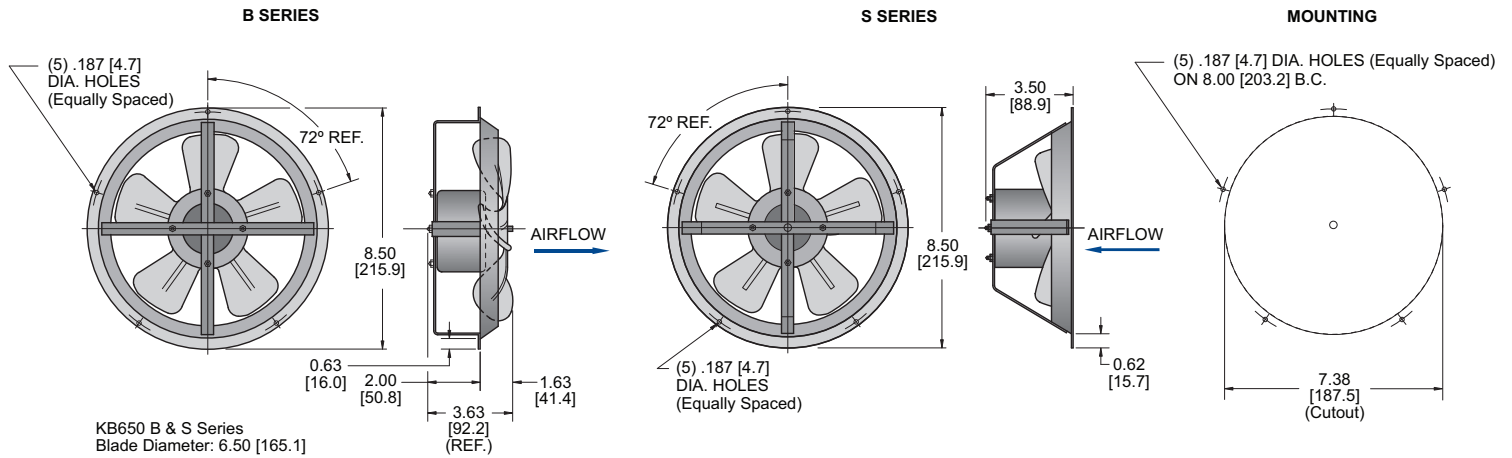
- Extremely compact
- Capacity: 210 CFM
- Versatile mounting configurations
- Each model can pressurize or exhaust
- Rugged construction with baked powder finish
- UL/CSA ball bearing motors
- 12-inch [300mm] (minimum) power and ground leads
- Complete line of accessories



## TECHNICAL DATA

Model	Volts/ Hz	CFM@ 0" S.P.	Cutoff S.P.	RPM Nominal	Amps		Watts	Weight	
					Run.	L.R.		Lbs.	Kg.
KB650B	115/60	210	0.34	1600	0.35	0.4	30	4	1.8
KB650B	115/50	180	0.3	1450	0.35	0.4	30	4	1.8
KB650S	115/60	210	0.34	1600	0.35	0.4	30	4	1.8
KB650S	115/50	180	0.3	1450	0.35	0.4	30	4	1.8

## DIMENSIONS inches [metric]



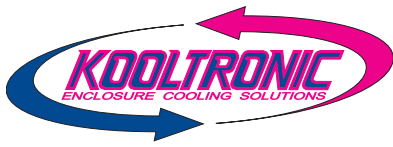
## HOW TO ORDER

**FANS:** Specify model number, adding suffix B or S. Example: KB650S. Unavailable in 230 VAC.

**ACCESSORIES:** Specify model number.

Dimensions, inches [mm], are for reference only and subject to change.

kb650.qxd (9/16/24) (CDR: 20597)



# KB650B & KB650S THIN FANS

## DESCRIPTION

These uniquely compact and versatile fans are designed specifically for cooling electronics and are unsurpassed for their economy of space. Delivering 210 CFM, these powerful fans provide a large volume of air to ensure a broad distribution of the cooling effect throughout an enclosure. Complementing these fans is a complete line of accessories.

KOOLTRONIC Thin Fans are designed for mounting in virtually any position, internally or externally. With or without accessories, these fans can be mounted directly to a panel or door of the electronics enclosure. Often they can be mounted in the base or top of the enclosure, leaving side walls and all or most of the panel space free.

Each fan, whether a B Series or an S Series, can be used to either pressurize or exhaust the enclosure. Because of the numerous combinations of choices available, virtually any requirement can be met.

## STANDARD FEATURES

**RUGGED CONSTRUCTION:** Precision-engineered heavy gauge steel construction of all cabinets and blowers insures fans stand up under tough applications.

**BAKED POWDER FINISH:** Durable, baked-on gray powder finish is standard. Other finishes are available.

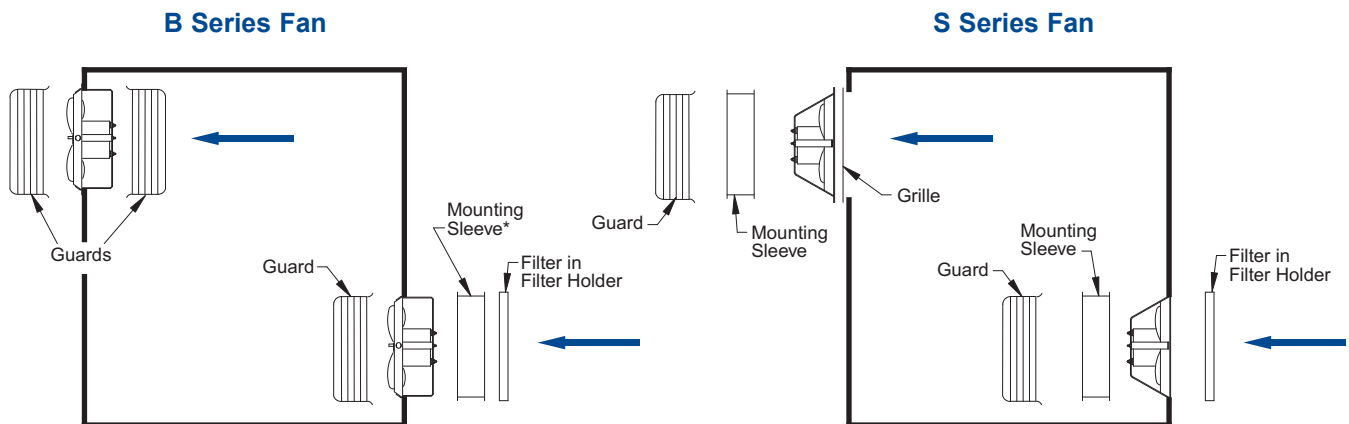
**BALL-BEARING MOTORS:** All motors, whether permanent split capacitor or shaded pole, are UL/CSA Recognized and include automatic-reset thermal overload protection. Designed for low temperature rise, KOOLTRONIC motors are also cooled by fans' intake air, for maximum motor life. All motors meet Federal Specification CC-M-1807A, and include double-sealed or double-shielded precision ball bearings which meet Federal specification FF-B-171A. Special permanent lubricants perform over a broad temperature range: -20°F [-28.9°C] to 250°F [121.1°C].

**POWER:** 115 VAC, 50/60 Hz is standard. For multiphase power, other voltages and frequencies or brushless DC applications, consult KOOLTRONIC. Unavailable in 230 VAC.

**LEADS:** 12" [304.8mm] (minimum) power and ground leads.

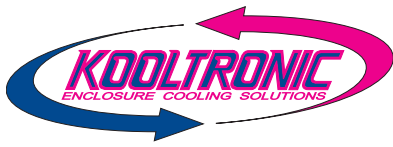
## TYPICAL ACCESSORY COMBINATIONS AND MOUNTING ORIENTATIONS

Arrows show direction of airflow. Boxes represent electronics/electrical enclosures, side view.



Upper fans exhaust cabinet. Lower fans pressurize cabinet. (Note that intake air is filtered.)

\*B Series Fans when mounted in intake orientation may require an additional Mounting Sleeve, except the KB805, which requires multiple sleeves (3) when mounted in the intake configuration shown. Check dimensions or contact Kooltronic.



# KB650B & KB650S THIN FANS

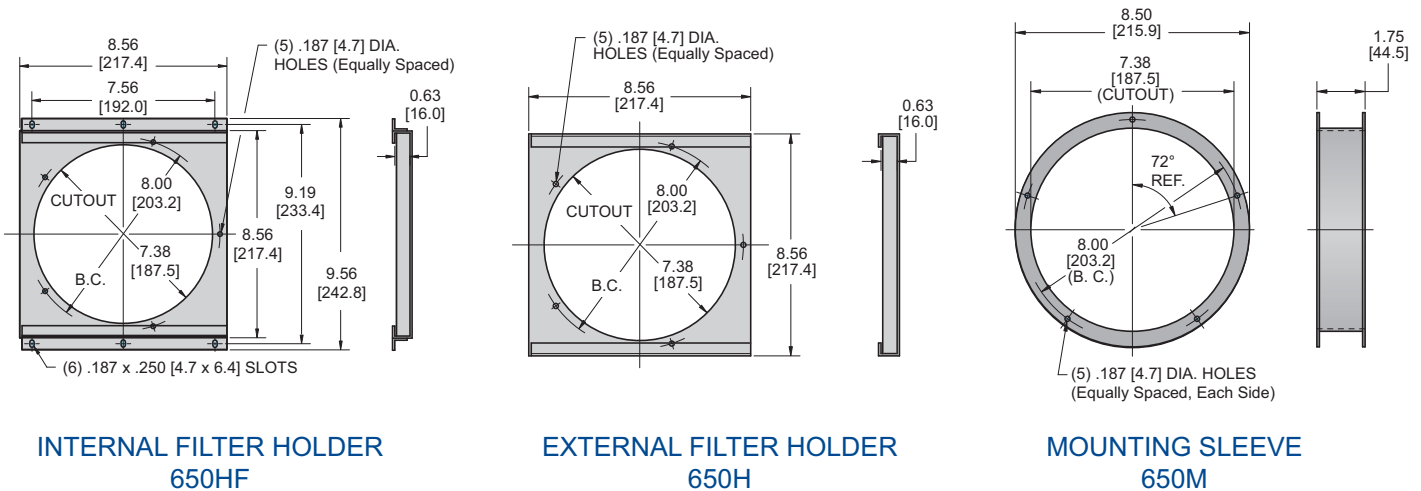
## MODEL NUMBER AND DIMENSIONS FOR THIN FAN ACCESSORIES

ACCESSORY	FAN MODEL (B or S):	KB650
<b>Filter</b>	<b>650F</b>	
Size (0.50" [12.7mm] thick)	8.38 x 8.38	[212.9mm x 212.9mm]
<b>External Filter Holder</b> (See dimensions below)	<b>650H</b>	
<b>Internal Filter Holder</b> (See dimensions below)	<b>650HF</b>	
<b>Grille</b>	<b>650X</b>	
Diameter	8.50	[215.9mm]
<b>Guard</b>	<b>655G</b>	
Diameter x Depth	8.43 x 2.69	[214.1mm x 68.4mm]
<b>Mounting Sleeve</b> (See dimensions below)	<b>650M</b>	

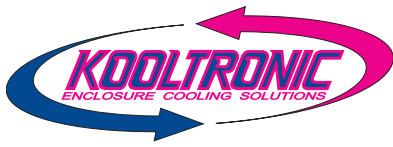
All B Series fans, except KB805, using the filter holder, filter and grille combination must use mounting sleeve.

Dimensions, inches [metric], are for reference only and are subject to change.

## DIMENSIONS (inches[metric])



Dimensions, inches [metric], are for reference only and are subject to change.



## KB650B & KB650S THIN FANS

### ACCESSORIES AND OPTIONS

**AUTOMATIC SPEED CONTROL:** The Kooltronic Fan and Blower Automatic Speed Control (Part Number KSC100) is a solid state "smart" controller packaged in a NEMA 1 type enclosure for remote mounting. The allowable input power supply range is 95 to 250 Volts, 47 to 63 Hz. It is furnished standard with an IEC 320 connector, a power supply fuse and a temperature sensor. Additional temperature sensors are optional.

The controller will operate single or multiple fans or blowers of compatible voltage and frequency up to a combined load of 6 Amps. The controller may be operated by either a control voltage signal of 0 to 10 VDC, a control current signal of 0 to 20 mA or one to three temperature sensors. With multiple temperature sensors the controller will respond to the highest sensed temperature.

The control circuit board is furnished with a terminal strip for field connecting the sensor and fan wires. A pressure type strain relief connector is furnished in the enclosure. If required by installation or by code, this connector can be replaced with a 1/2-inch [12.7mm] trade size conduit connector.

A wide variety of control logic options can be field programmed into the controller by means of a board mounted DIP switch. These include fan idle or starting speed at 30%, 40%, 50% or 60% of supply voltage, fan on or off below the idle setting, control temperature setting at 86°F (30°C), 95°F (35°C), 104°F (40°C), 113°F (45°C), and temperature differential settings of 7°F (4°C) and 18°F (10°C). The selectable fan on/off feature is operative when the temperature(s) drop below the control temperature setting.

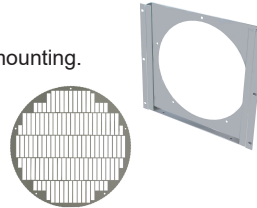
Consult factory for use with compatible Kooltronic fans or blowers.

**FILTERS:** All KOOLTRONIC filters consist of a multi-layer grid of sturdy corrugated aluminum, securely held in a one-piece aluminum frame. Filters are required wherever air is drawn into an electronics enclosure. A non-drying adhesive coating traps a high percentage of particulate matter. These filters are reusable, they may be washed and recoated with the appropriate filter recoating adhesive. Replacements are available for those which become damaged or otherwise non-serviceable. See previous page for dimensions.

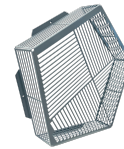


**FILTER HOLDERS:** Separate models are available for easy internal or external filter mounting.

**GRILLE:** Designed to provide flush-mounted, protective guarding. These painted, expanded metal grilles fit neatly over the blade side of S Series and model KB805B fans, without adding depth. Used with mounting sleeves, they can provide an alternative to wire guards.



**GUARD:** Made of heavy-gauge corrosion-protected wire, these guards comply with OSHA and UL safety standards. Individual guards fully protect both blade and motor sides of all B Series fans, except models KB802B and KB805B. In order to adequately protect the motor side of these and all S Series fans, a mounting sleeve is needed with the guard, to accommodate the fan's greater depth.



**MOUNTING SLEEVE:** Extends the fan's mounting flange, as needed for some installations, such as mounting the B Series fans on the outside of the cabinet. May also be used for guard attachment (see Guard), or with a grille to provide guarding. Made of sturdy formed and welded steel and painted to match the fan.



**SPECIAL EXTERNAL PAINT FINISHES\***

**SPECIAL LINE CORD OR CONNECTORS\***

\*Contact KOOLTRONIC for information.

KOOLTRONIC also designs and manufactures a variety of Fans to meet *unique* specifications. We invite your inquiries about our modification and custom-design capabilities.

