

TECHNICAL SPECIFICATIONS



FS4BI Series

R-410A, Ultra High Efficiency Air Conditioner, 24.5 SEER Residential System 2-3-4 Ton Capacities

The iQ Drive® Air Conditioning System features fully variable speed compressor technology and variable speed indoor and outdoor motors. The system provides variable cooling capacity as needed modulating over a 5 degree F° temperature range. It operates near the nominal rated capacity at the thermostat set point and modulates as temperature difference between set point and room temperature changes. The system may run at additional 18% capacity to provide rapid cooling. The system has a built-in humidity control that will activate humidifier equipment (if supplied), and reduces blower speed if indoor relative humidity is greater than set point (default set at 60%).



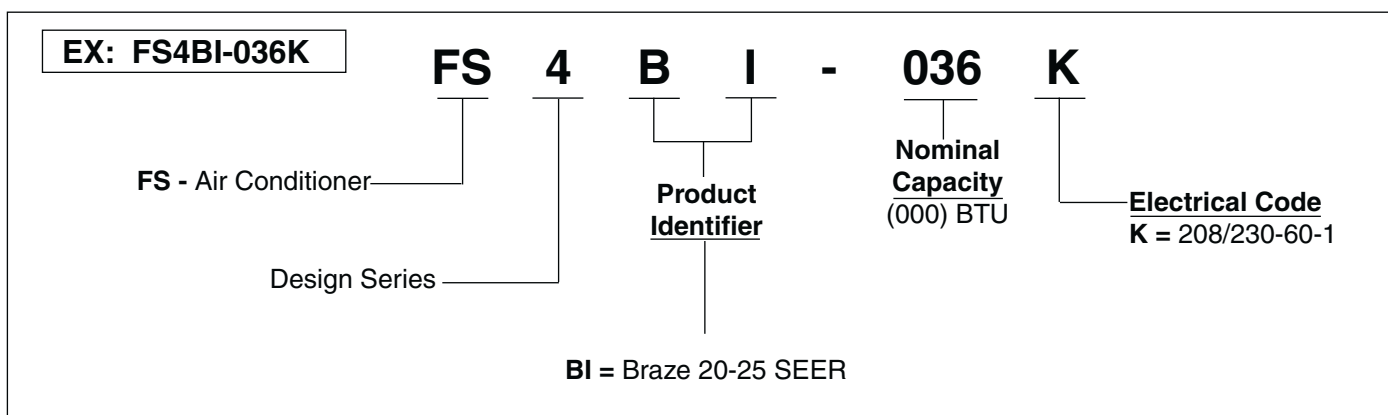
WARRANTY

- **Warranty**
 - This product offers a 10-year all-parts warranty.
 - This product offers a 10 year Quality Pledge to replace the entire unit, if the unit's major component (heat exchanger or compressor) fails within the first 10 years of operation, to the original owner. All split system products must be installed with a matched indoor air handler or indoor coil to qualify.
 - Consumer product registration required for both 10 year All Parts Warranty and Quality Pledge within a limited period of time after the installation. See current warranty document or visit our consumer web site for warranty details.

FEATURES and BENEFITS

- **iQ Drive** – Inverter driven Panasonic rotary compressor which provides fully variable operation.
- **R-410A Refrigerant** – Environmentally friendly non-ozone depleting refrigerant.
- **Designed using galvanized steel** – with a polyester urethane coat finish. The 950 hour salt spray finish resists corrosion 50% better than comparable units.
- **Copper Tube / Aluminum Fin Coils** – Both indoor and outdoor coils are designed to optimize heat transfer, minimize size and cost, and increase durability and reliability.
- **Permanently Lubricated Motor** – A heavy duty brushless motor for long lasting reliability and quiet operation. Requires no maintenance and is completely protected from rain and snow.
- **Compressor Sound Blanket** – Engineered to significantly reduce unwanted compressor noise.
- **Swept-Wing Fan Blade** – Engineered to provide quiet operation. The specific energy absorbing hub is designed to reduce noise while operating through various frequencies.
- **Full Port Service Valves** – Full port brass ball valves provide low pressure drop and ease of service. The valves are actuated by 1/4 turn full open to full close.
- **Louvered Condenser Guard** – Durable metal guard protects the coil from yard hazards and extreme weather.
- **Removable Top Grille Assembly** – Allows ease of service from the top without disconnecting fan motor leads.
- **High Pressure Switch** – Protects against abnormally high system pressures. Auto-reset feature prevents nuisance service visits.
- **Low Pressure Switch** – Protects against loss of system refrigerant charge.
- **Liquid Line Filter Drier** – Included with unit, field installed.
- **One Piece Top/Orifice** – Designed for maximum airflow and quiet operation.
- **Easy Compressor and Control Access** – Designed to make servicing easier for the contractor, access panels are provided to all controls and the compressor from the side of the unit.
- **Highest Efficiency with the lowest Sound Levels** – Up to 24.5 SEER with sound ratings of 59-72dB depending upon operating conditions.

MODEL IDENTIFICATION CODES



DIMENSIONS

AIR CONDITIONER OUTDOOR SECTION

| FS4BI | 024K | 036K | 048K |
|-------|--------|--------|--------|
| H | 37 | 41 | 45 |
| W | 31 1/4 | 31 1/4 | 31 1/4 |
| D | 31 1/4 | 31 1/4 | 31 1/4 |

PHYSICAL AND ELECTRICAL SPECIFICATIONS / OUTDOOR UNITS

24.5 SEER — Ultra High Efficiency — Single Phase

| Model Number FS4BI- | | | 024K | 036K | 048K |
|---|------------------------|--------------|--------------|--------------|--------------|
| Electrical Data | Volts-Cycles-Phase (1) | | 208/230-60-1 | 208/230-60-1 | 208/230-60-1 |
| | Total Amps | | 13.0 | 18.0 | 22.0 |
| | Delay Fuse Max. (2) | | 25 | 35 | 45 |
| | Min. Circuit Ampacity | | 16.6 | 22.9 | 27.1 |
| Condenser Data | Coil | Area(ft²) | 20.3 | 22.8 | 25.4 |
| | | Rows-FPI | 1 - 22 | 1 - 22 | 1 - 22 |
| | | Tube Dia | 3/8" O.D. | 3/8" O.D. | 3/8" O.D. |
| | Fan Motor | Type | Brushless DC | Brushless DC | Brushless DC |
| | | Amps | 1.6 | 1.6 | 1.6 |
| | | HP | 0.5 | 0.5 | 0.5 |
| | Fan Blade | Dia-# Blades | 24" - 2 | 24" - 2 | 24" - 2 |
| | | SCFM | 3200 | 3400 | 3600 |
| | Compressor Data | RLA | 11.4 | 16.4 | 20.4 |
| Refrigerant suction line O.D. (all length of liquid line are 3/8" O.D.) | | 0-24 ft. | 3/4" | 7/8" | 7/8" |
| | | 25-39 ft. | 3/4" | 7/8" | 1 1/8" (3) |
| | | 40-75 ft. | 7/8" (3) | 1 1/8" (3) | 1 1/8" (3) |
| Refrigerant charge (R-410A) in ounces for outdoor unit, indoor unit and 15' lineset. | | | 160 | 168 | 188 |
| Weight | | Net | 170 | 175 | 180 |
| Approximate (lbs.) | | Ship | 180 | 185 | 190 |

(1) Operating Voltage Range: 187v min. — 253v max.

(2) HACR Type Circuit Breakers may be used.

(3) Requires Reducers.

NOTE: Refrigerant Tubing Limitations-The compressor manufacturer imposes a maximum equivalent line set length of 100ft. Furthermore, vertical elevation shall not exceed 50 ft.

ACCESSORIES

Controller/Thermostat

Sku 920340D

(Required to operate the IQ Drive System)

| COPPER WIRE SIZE — AWG (1% Voltage Drop) | | | | |
|---|-----|-----|----|----------------------------|
| Supply Wire Length-Feet | | | | Supply Circuit Ampacity |
| 200 | 150 | 100 | 50 | |
| 6 | 8 | 10 | 14 | 15 |
| 4 | 6 | 8 | 12 | 20 |
| 4 | 6 | 8 | 10 | 25 |
| 4 | 4 | 6 | 10 | 30 |
| 3 | 4 | 6 | 8 | 35 |
| 3 | 4 | 6 | 8 | 40 |
| 2 | 3 | 4 | 6 | 45 |
| 2 | 3 | 4 | 6 | 50 |

Wire Size based on N.E.C. for 60° type copper conductors.

SYSTEM COOLING CAPACITIES

24.5 SEER — Ultra High Efficiency — Single Phase

| Outdoor Unit Model Number FS4BI- | Indoor Unit | Range Cooling Capacity @95° OD BTUH | SEER | Nominal Capacity | EER @ Nominal Capacity | Range SCFM |
|-------------------------------------|-------------|---|------|---------------------|------------------------------|---------------|
| 024K | B4VM-E24K-B | 10,000 - 28,000 | 24.5 | 24,000 | 15.0 | 500 - 950 |
| 036K | B4VM-E36K-B | 15,000 - 40,000 | 22 | 35,000 | 14.0 | 680 - 1110 |
| 048K | B4VM-E48K-C | 16,000 - 54,000 | 22 | 47,000 | 13.0 | 680 - 1455 |

See current AHRI Directory for certified combinations and ratings.

www.ahridirectory.org

Higher Ambient Performance Matrix

| | | Outdoor Dry-bulb Temperature | | | | | | | | |
|-----|-------------------------------|------------------------------|---------------------------------|------|------------------------------|---------------------------------|------|------------------------------|---------------------------------|------|
| | | 95F° | | | 105F° | | | 115F° | | |
| Ton | CFM at Nominal Capacity | Total Capacity (Btu/h) | Sensible Capacity (Btu/h) | EER | Total Capacity (Btu/h) | Sensible Capacity (Btu/h) | EER | Total Capacity (Btu/h) | Sensible Capacity (Btu/h) | EER |
| 2 | 800 | 24,000 | 18,000 | 15.0 | 21,900 | 15,800 | 12.0 | 20,500 | 14,800 | 10.0 |
| 3 | 900 | 35,000 | 24,200 | 14.0 | 32,800 | 22,400 | 11.4 | 30,700 | 21,400 | 9.6 |
| 4 | 1500 | 47,000 | 34,400 | 12.6 | 44,000 | 33,100 | 11.0 | 41,400 | 31,600 | 9.4 |

NOTE: Each system was operated at its nominal capacity.
Indoor conditions were 80F° dry-bulb temperature and 67F° wet-bulb temperature (approx. 51% relative humidity).



GENERAL TERMS OF LIMITED WARRANTY

NORDYNE will furnish a replacement for any part of this product which fails in normal use and service within the first ten years of installation, in accordance with the terms of the warranty.

For complete details of the Limited Warranty, including applicable terms and conditions, see your local installer or contact the NORDYNE warranty department for a copy.

NORDYNE
COMPLETE COMFORT. GENUINE VALUE.

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