



SILENT KNIGHT

by Honeywell

SK-2 & SK-2E Fire Alarm Control Panel

**A flexible, powerful, cost-effective
panel for fire protection applications.**

The SK-2 and SK-2E (SK-2/E) are two zone conventional fire alarm control panels (FACPs) that bring the latest in microprocessor technology to conventional fire controls. The SK-2 is a 120 VAC FACP and the SK-2E is a 240 VAC FACP. These FACPs provide reliable fire signaling protection for small- to medium-sized commercial, industrial, and institutional buildings.

For more information about the SK-2/E system, or to locate your nearest source, please call 1-800-328-0103.

Description

The two zone SK-2/E is a 24 VDC FACP that provides two Class B initiating device circuits and one Class B notification appliance circuit (NAC).

The SK-2/E NAC protocol includes the ability to silence audible devices while strobes continue to flash, using only a single pair of wires. The SK-2/E is also compatible with conventional input devices such as two- and four-wire smoke detectors, pull stations, waterflow devices, tamper switches and other normally-open contact devices.

Activation of a compatible smoke detector or any normally-open fire alarm initiating device activates audible and visual signaling devices, illuminates an indicating LED, sounds the piezo sounder at the FACP, activates the FACP alarm relay, and operates an optional module used to notify a remote station or initiate an auxiliary control function.

The SK-2/E is compatible with System Sensor® I³ detectors providing advanced features such as drift compensation, maintenance alert, and freeze warning. Automatic synchronization of audio/visual devices is provided, using three selections for manufacturer protocol.

Features

- Two Style B (Class B) initiating device circuits (IDCs)
- One Style Y (Class B) notification appliance circuit (NAC)
- Support for synchronization of standard ANSI audible signals and ADA compliant strobes per NFPA 72

- Selectable for System Sensor, Wheelock, and Gentex protocols
- Selective silence feature allows manual silence of horns while strobes continue to flash on the same NAC
- Silent or audible walk test operation mode
- Alarm verification selectable per zone
- Program each zone for supervisory or fire with separate red and yellow LEDs
- Disable switches provided per zone
- Program NACS for
 - Silence inhibit
 - Auto silence
 - Strobe synchronization
 - Temporal or steady signal
 - Silenceable or nonsilenceable
 - Disable
- Form C alarm and trouble relays
- 3A total usable current
- Optional dress panel (PN SK-DP2/4)

Electrical Specifications

SK-2 Primary AC: 120 VAC @ 50/60 Hz, 2.3A

SK-2E Primary AC: 240 VAC @ 50 Hz, 1.15A

Wiring: 14 AWG (2.0 mm²) with 600 V insulation min

Initiating Device Circuits (IDCs)

Operating Voltage: 22 VDC nominal; power-limited

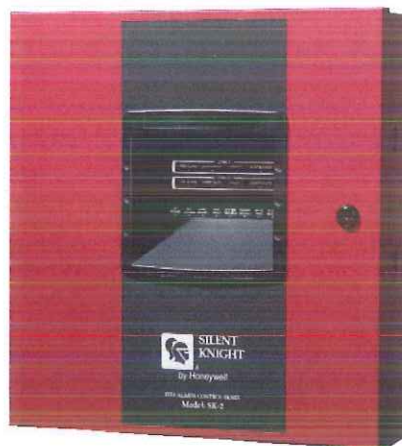
Standby Current: 4 mA

Alarm Current: 15 mA min

Short-circuit Current: 40 mA max

Loop Resistance: 100 Ω max

EOL Resistor: 4.7K Ω , 1/2 watt



SK-2

NACs

2.5A @ 24 VDC with standard transformer, power-limited
Signaling Current: 2.5A max with standard transformer
EOL Resistor: 4.7K Ω , 1/2 watt

Form C Relays

Types: Trouble and alarm
Contact Ratings: 2A @ 30 VAC, resistive

Auxiliary Output

Resettable
Operating Voltage: 24 VDC nominal
Current: 500 mA max, power-limited

SK-2 & SK-2E

Fire Control Panel

Engineering Specifications

The contractor shall provide a completely electrically supervised fire alarm control panel Silent Knight Model SK-2/E. The system shall contain a fire alarm control panel capable of operating and supervising smoke detection devices, alarm notification devices, and an on-board annunciator. It shall be compatible with a digital communicator accessory.

The fire alarm control panel shall have a power limited supply, two Class B initiation circuits which shall accommodate heat detectors, smoke detectors, and manual pull stations. Smoke detection shall be achieved with either 2- or 4-wire detectors that are compatible with the system. The initiation inputs shall be programmable as 1) verification zones in which detectors are automatically reset one time before signaling an alarm condition; or 2) combination waterflow supervisory zones that allows the FACP to distinguish between an alarm switch (waterflow device) and a supervisory switch (tamper) installed on the same circuit. The FACP shall have one 2.5 amp programmable notification output. It shall have dedicated relays for alarm and trouble and a resettable power output rated at 500 mA.

The FACP shall have an on-board annunciator to indicate alarm, supervisory, trouble, and maintenance conditions. The annunciator must include LEDs for AC, GENERAL TROUBLE, ALARM SILENCE, WALK TEST, EARTH FAULT, AND LOW BATTERY. The annunciator shall also contain LEDs to annunciate fire alarms, troubles, supervisory, and maintenance by zone. The FACP must be fully operational from the annunciator and include buttons for ACKNOWLEDGE, ALARM, SILENCE, RESET, and WALK TEST. The annunciator must also have separate DISABLE switches for each zone and notification circuit.

Electrical Specifications (cont)

Battery

Type: Sealed lead acid only
Charging Circuit: 27.6 VDC @ 0.8A
max normal flat charge
Charging Capacity: 7 AH
Size: 18 AH max allowed in FACP.
Larger batteries can housed
in an RBB accessory cabinet

Compatible Initiating and NAC Devices

See SK document PN 52612.

Mechanical Specifications

Cabinet Backbox Dimensions:
14.5" W x 15" H x 3" D
(36.83 W x 38.10 H x 7.62 D cm)

Cabinet Door:
14.677" W x 15.342" H x 0.375" D
(37.28 W x 38.97 H x 0.95 D cm)

Cabinet Color: Red

Telephone Requirements:
FCC Part 15 and Part 68 approved
Type of Jack: RJ31X (two required)

Installation

The SK-2/E can be surface mounted

using two key slots at the top of the backbox and two additional 0.25" diameter holes at the bottom, or semi-flush mounted using optional Trim Ring P/N TR-1-R

Approvals

NFPA 72; UL Listed;
CSFM 7165-0559: 145;
MEA 297-01-E-3

Ordering Information

SK-2
120 VAC Two Zone Conventional FACP

SK-2E
240 VAC Two Zone Conventional FACP

Accessories

SK-DP2/4

Dress Panel. Allows access to the panel controls but restricts access to system wiring.

SK-4XTM

Transmitter Module. Provides a supervised output for local energy municipal box transmitter and alarm

and trouble reverse polarity.

RBB

Remote Battery Box Accessory Cabinet. Use if back up batteries are too large to fit into FACP cabinet. Dimensions: 16"W x 10"H x 6"D (406 mm W x 254 mm H x 152 mm D)

Digital Communicator Accessories

5104B

Six-Zone fire control communicator

5129

Four channel slave fire communicator



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HFS-T IntelliKnight Plug-in Temperature Sensor with Plug-in Detector Base

The HFS-T is an Intelligent sensor with a plug-in detector base that utilizes a state-of-art thermistor sensing circuit for fast response. This addressable thermal sensor is for use with Silent Knight Model 5600 IntelliKnight Fire Alarm Control Panel (FACP).

Heat sensors are an essential component in virtually any Silent Knight installation. The IntelliKnight 5600 panel recognizes each detector by its specific address, so precious seconds are not wasted in determining location of an alarm.

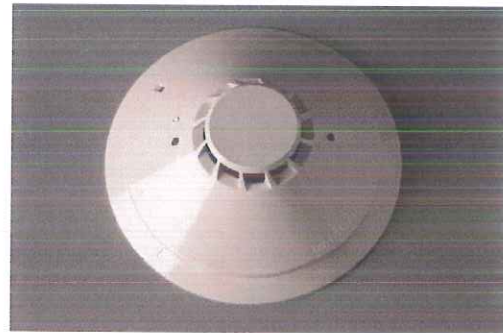
For more information about the IntelliKnight Model 5600 system, or to locate your nearest source, please call 800-328-0103.

Description

Model HFS-T is a fixed temperature sensor with 135°F (57°C) fixed temperature alarm. The sensor transmits an analog representation of temperature over a communication line to the control panel. Sensitivity is continuously monitored and reported to the FACP.

Point ID capability allows each detector's address to be set with rotary address switches.

This detector is intended for use with model 5600 Intelligent system.



HFS-T

Features

- Sleek, low-profile design
- Rotary address switches for fast installation
- Innovative thermistor sensing circuit
- Superior EMI resistance for reliability
- Variety of mounting options to meet any application
- Plug-in mounting provides ease of installation
- Tamper-proof feature available on mounting bases
- Plug-In base included
- ETL and UL Listed

Mounting Information:

4" (102 mm) square box with or without plaster ring;
Minimum Depth – 1.5 inches (38 mm)

4" Octagon Box; Minimum Depth – 1.5 inches (38 mm)

3½" Octagon Box; Minimum Depth – 1.5 inches (38 mm)

Single Gang Box; Minimum Depth – 1.5 inches (38 mm)

Specifications

Physical

Height: 2.0" (51 mm)

Diameter: 6.1" (155 mm)

Shipping Weight: 4.8 oz (137 g)

Electrical

Operating Voltage: 15 to 32 Volts DC Peak

Standby Current: 300µA @ 24 VDC

LED Current: 6.5 mA @ 24 VDC

Environmental

Operating Temperature

HFS-T: -4° – 100°F (20°C– 38°C)

Humidity: 10% – 93% noncondensing

Thermal Ratings

HFS-T: Fixed temperature setpoint 135°F (57°C)

Compatibility

The HFS-T, Honeywell Fire Systems sensor, is compatible with the model 5600 Intelligent fire control panel.

You cannot use Hochiki or SK device type protocols on the 5600 SLC loop.

Mode HFS-T

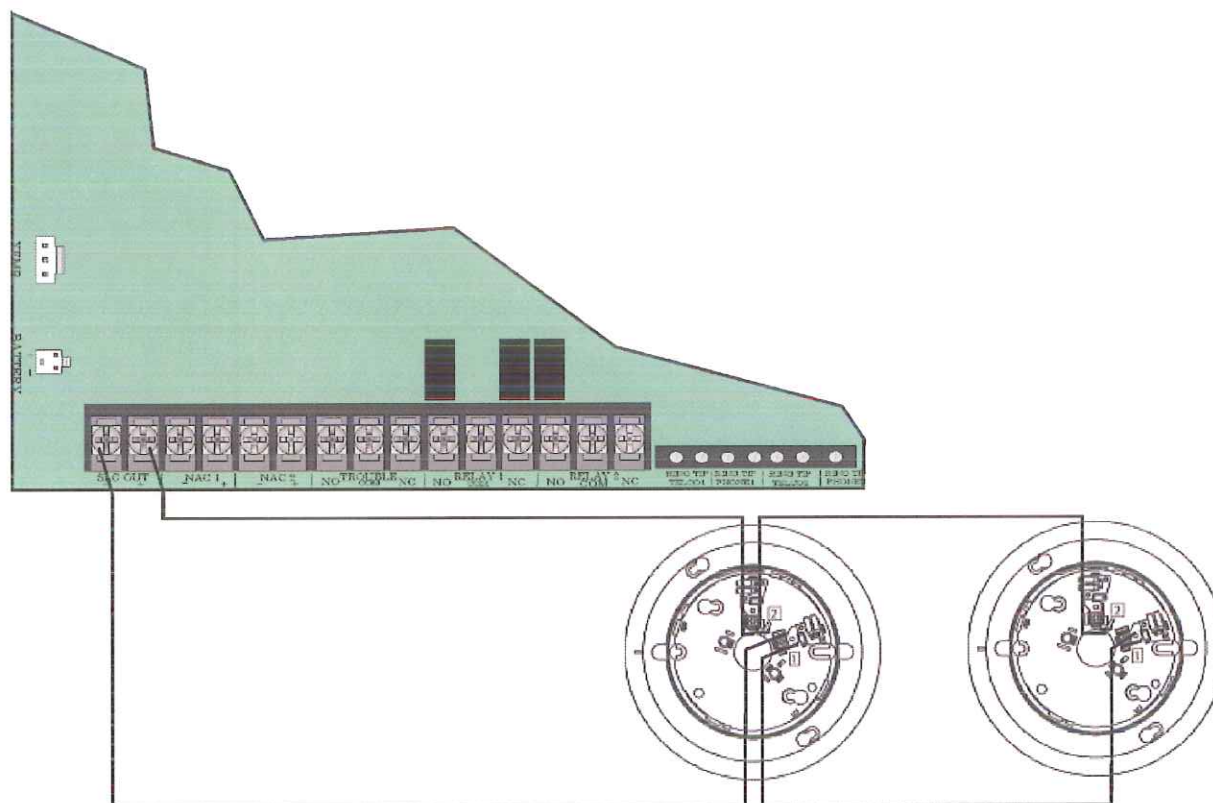
Temperature Sensor with

Plug-in Detector Base

Engineering Specifications

The heat detector shall be a HFS-T intelligent fixed temperature heat detector. The detector shall be UL listed per UL 521.

The detector shall provide a trouble signal in the event that the sensor head is removed or improperly installed. The detector shall be capable of local testing via direct heat method. Terminal connections shall be of the strip and clamp method suitable for 12-18AWG wiring.



Heat Connection to Panel



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Strobes and Horn/Strobes



Our ADA-compliant strobes and horn/strobes ensure everyone is alerted to fire danger.

The Americans with Disabilities Act (ADA) guarantees equal access for people with disabilities. This means you have a legal obligation to alert everyone in your building to potential fire danger—including people with hearing loss.

Silent Knight strobes and horn/strobes comply with the requirements of the ADA and help alert the hearing impaired with a bright, flashing strobe. Each unit is fully compatible with Silent Knight fire systems, ensuring that quality is maintained throughout your system.

These products feature leading-edge technology and are an excellent value. Available from Silent Knight, the industry leader in the design and manufacture of quality fire systems. For more information on our strobes and horn/strobes, please call 1-800-446-6444, or in Minnesota, call (612) 493-6435.

Strobes and Horn/Strobes

Silent Knight's series of low profile strobes or horn/strobe combinations offer dependable audible and visual alarms. With a minimum operating current and a minimum flash rate of 1Hz, Silent Knight horns and horn/strobes are the lowest current drawing models available.

Horn/strobe models are easily field-changeable from temporal 3 (ANSI) to a continuous tone by removal of a jumper plug.

The horns and horn/strobes are intended for wall mounting and are shipped with a 4" mounting plate. Single gang plates are available.

Features

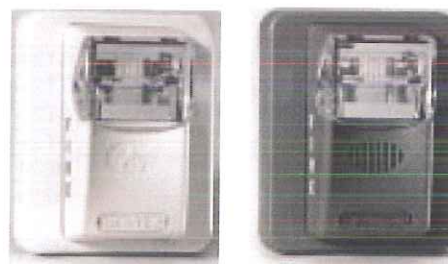
- Quick and easy installation!
- Low current draw—15/75 candela strobe draws only 57mA at 24 VDC
- Lower installation cost—hang more signals per power source
- Separate horn and strobe capabilities for flexibility of use
- Tamper-proof re-entrant grille
- Temporal 3 (ANSI) or continuous tone

- Optional control module provides synchronization and ability to silence horn using only two power wires
- Sleek, low profile
- Available in red or off-white
- Wall mount only
- UL 464, 1971, and 1638 Listed
- Models with rating of 15/75 cd and higher meet or exceed requirements for ADA 4.28.3

Specifications

Per model details on reverse side.

Input terminals:	18-12 AWG
Candela rating:	15-110 cd (depending on model)
Current draw:	
Strobe:	47-100 mA (per candela rating)
Horn:	30 mA
Decibel rating:	92 dB at 10 feet (anechoic room) 85 dB at 10 feet (UL reverberant room)



Operating voltage:	24 VDC
Operating temperature:	32° to 120°F (0° to 49°C)
Dimensions:	
With plate:	5.4 x 3.2 x 3.4 (HxWxD)
Without plate:	5.6 x 4.5 x 3.4 (HxWxD)
Mounting:	Single-, double-gang, or 4" sq. box (Optional single gang plate requires single-gang box.)
Color:	Red or off-white



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Strobes and Strobe/Horns



Engineering Specifications

The visible and audible/visible signal shall be Silent Knight model ST or HS or approved equal and shall be listed by Underwriters Laboratories Inc. per UL 1971 and/or UL 1638 for the ST and also UL 464 for the HS. The notification application shall also be listed with the California State Fire Marshal (CFSM) and the Bureau of Standards and Appeals (NYC).

The notification appliance (combination audible/visible units only) shall produce a peak sound output of 90 dBA or greater as measured in an anechoic chamber. The signaling appliance shall also have the capability to silence the audible signal while leaving the visible signal energized with the use of a single pair of power wires. The user shall be able to select either continuous or temporal tone output with the temporal signal having the ability to be synchronized. The visible signaling appliance shall also maintain a minimum flash rate of 1Hz or greater regardless of power input voltage. The appliance shall be capable of meeting the candela requirements of ADA (75 cd) for the combination (UL 1971/UL1638) listed models. The appliance shall have an operating current of 57 mA or less at 24 VDC for the 15/75 cd model. The appliance shall be polarized to allow for electrical supervision of the system wiring. The unit shall be provided with terminals having barriers for input/output wiring and be able to mount to a single-, double-gang or 4" square box with the use of a supplied adapter plate. The unit shall have an input voltage range of 20-31 volts with either direct current or full wave rectified power.

Available Models

Description	Model	Candela Rating	Decibel Rating	Current	Listing
24 VDC Strobes	ST24 base model	—	—	—	—
	ST24-15	15 cd	—	47 mA	UL 1971
	ST24-15/75	15 or 75 cd	—	57 mA	UL 1971 (15) UL 163 (75)
	ST24-30	30 cd	—	57 mA	UL 1971
	ST24-60	60 cd	—	84 mA	UL 1971
	ST24-75	75 cd	—	86 mA	UL 1638
	ST24-110	110 cd	—	110 mA	UL 1638
24 VDC Strobe/Horns	HS24 base model	—	—	—	—
	HS24-15	15 cd	92 dBA	Strobe: 47 mA Horn: 30 mA	UL 1971
	HS24-15/75	15 or 15 cd	92 dBA	Strobe: 57 mA Horn: 30 mA	UL 1971 (15) UL 1638 (75)
	HS24-30	30 cd	92 dBA	Strobe: 57 mA Horn: 30 mA	UL 1971
	HS24-60	60 cd	92 dBA	Strobe: 84 mA Horn: 30 mA	UL 1971
	HS24-75	75 cd	92 dBA	Strobe: 86 mA Horn: 30 mA	UL 1638
	HS24-110	110 cd	92 dBA	Strobe: 110 mA Horn: 30 mA	UL 1638

Specify faceplate color: "R" for red or "W" for off-white (W). Specify "P" for plain (no lettering).



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PS-DA and PS-SA Conventional Pull-stations



Easy to Install and Operate

The PS-DA/PS-SA Pull Stations are non-coded manual pull stations which provide a Fire Alarm Control Panel (FACP) with a single alarm initiating input signal. The PS-DA/PS-SA pull stations includes both single-action and dual-action models equipped with key lock / reset. It was designed to meet multiple applications with the installer and end-user in mind. Its innovative design, durable construction, and multiple mounting options make the PS-DA and PS-SA simple to install, maintain, and operate.

Operation

The single-action pull-station is activated by a single pull-down of the alarm handle. The dual-action versions require pushing in the handle, then pulling the handle down for activation. The PS-DA/PS-SA manual pull stations are UL listed and meet the ADA requirement of a 5-lbs. maximum pull force to activate. Operating instructions are molded into the handle along with Braille text. Molded terminal numbers can be found adjacent to the wiring terminals.

Models:

PS-SA— Single action with 'pigtail' connections and a key lock reset. Pigtail wires are provided for connection to the Fire Alarm Control Panel's (FACP) initiation circuit.

PS-DA — Dual action model with screw terminal connections and a key lock reset.

PS-DAH — Same as PS-DA except with hex lock reset.

PS-DALOB — Same as PS-DA with "outdoor use" listing. Includes SB-I/O backbox and sealing gasket.



PS-DA

PS-DASP — Same as PS-DA except with both English and Spanish operating instructions.

Features:

- UL Listed
- CSFM Listed
- Meets ADA requirements
- Operating instructions are molded into the handle along with Braille text.
- Made of durable Lexan
- Available in Spanish
- Key resettable
- Easy to Install and operate
- Single or dual action
- Surface mount box available



PS-DASP

Specification:

Dimensions:	
Height:	5-1/2" (13.97 cm)
Width:	4" (10.16 cm)
Depth:	1-7/16" (3.65 cm)

Operating temperature:	
	32°F to 120°F (0°C to 49°C)

Electrical:	
Switch Contact Rating:	0.25 A @ 30 VAC or VDC

Accessories:

SB-I/O	Surface Mount Back-box
BG-TR	Trim Ring

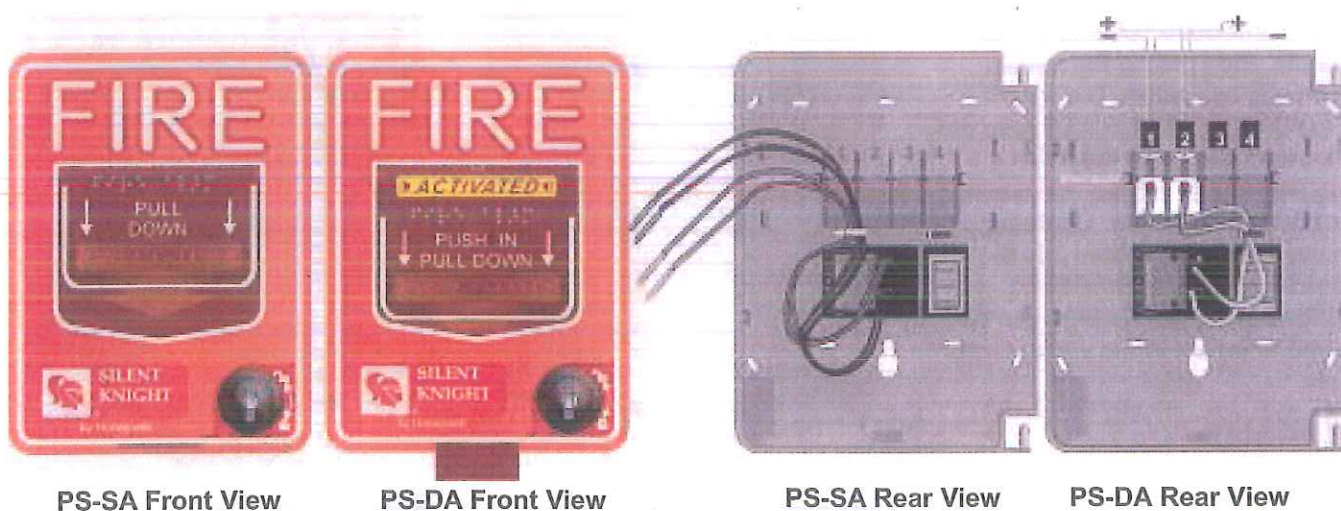
PS-DA and PS-SA Conventional Pull-Stations



Engineering Specification

Manual Fire Alarm Stations shall be non-code, with a key-operated reset lock in order that they may be tested, and so designed that after actual Emergency Operation, they cannot be restored to normal except by use of a key. An operated station shall automatically condition itself so as to be visually detected as activated. Manual stations shall be constructed of red colored LEXAN® (or polycarbonate equivalent) with clearly visible operating instructions provided on the cover. The word FIRE shall appear on the front of the stations in white letters, 1.00 inches (25.4 mm) or larger.* Stations shall be suitable for surface mounting on matching back-box SB-10; or semi-flush mounting on a standard single-gang, double-gang, or 4" (10.16 cm) square electrical box, and shall be installed within the limits defined by the Americans with Disabilities Act (ADA) or per national/local requirements. Manual Stations shall be Underwriters Laboratories listed.

***NOTE:** The words "FIRE/FUEGO" on the PS-DASP shall appear on the front of the station in white letters, approximately 3/4" high.



PS-SA Front View

PS-DA Front View

PS-SA Rear View

PS-DA Rear View



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