



SR-200
HFC-227ea Fire Suppression System



sr-200

Leading the fight against fire



sr-200 System Components

Summary of Agent Physical Properties



Chemical Structure
 Chemical Name
 Molecular Weight
 Boiling Point at 1.013 Bar (ate)
 Freezing Point
 Critical Temperature
 Critical Pressure
 Critical Volume
 Critical Density
 Specific Heat, Liquid @ 25°C
 Specific Heat, 25°C Vapor at constant pressure 1 atm and 25°C
 Heat of Vaporization at Boiling Point
 Thermal Conductivity of Liquid @ 25°C
 Viscosity, Liquid at Centipoise 25°C
 Relative Dielectric Strength @ 1 atm
 Solubility of Water in Agent @ 21°C
 Saturated Vapor Density @ 20°C (68°F)
 Ozone Depletion (ODP)
 Atmospheric Lifetime
 No Observed Adverse Euect Level (NOAEL)
 Lowest Observed Adverse Euect Level (LOAEL)

CF3CHF2CF3
 1,1,1,2,3,3,3 - Heptafluoropropane
 170 g/mol
 -16.4 °C (1.9 °F)
 -131 °C (-204 °F)
 101.7 °C (214 °F)
 29.1 BAR (422 psi)
 274 cc/mole (0.0258 cu.ft./lb)
 621 kg/m³ (38.76 lb/ft³)
 1.184 kJ/kg°C
 0.808 kJ/kg°C
 132.6 kJ/kg
 0.069 W/m°C
 0.184
 2
 0.06% by weight
 31.18 kg/m³ (1.95 lb/ft³)
 0
 36.5 yrs
 9%
 >10.5%

No	Part No	Capacity (L)	Valve Outlet Size	Cylinder Height A (mm) ±5	Cylinder Diameter (O/D) B (mm)
1	32L SPS 227-CS-032-33	32	DN33	522.4	324
2	52L SPS 227-CS-052-33	52	DN33	782.4	324
3	100L SPS 227-CS-100-33	100	DN33	963	406
4	120L SPS 227-CS-120-49	120	DN49	1126	406
5	150L SPS 227-CS-150-49	150	DN49	1372	406
6	180L SPS 227-CS-180-49	180	DN49	1268	462
7	200L SPS 227-CS-200-49	200	DN49	1398	462

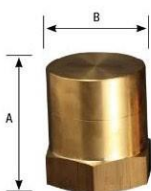


ELECTROMAGNETIC RELEASE DEVICE		
Material	Body	Brass, Stainless Steel
	Actuating Pin	Stainless Steel
Nominal Voltage	24V DC	
Nominal Current	1.2A	
Valve Connection	M 42 x 1.5	
Approval	VdS	
Approval No.	G302023 Type B04420103	
Part No.	ING 013	



MANUAL/PNEUMATIC RELEASE DEVICE FOR SERIES B0480		
	Body	Brass
Material	Lever	Stainless Steel
	Safety Pin	Stainless Steel
Min. Actuating Pressure	15 Bar	
Max. Working Pressure	20 Bar	
Valve Connection	M 42 x 1.5	
Pneumatic Connection	1/8" BSP	
Approval	VdS	
Approval No.	G302023 Type B04420065	
Part No.	ING 012	

DISCHARGE NOZZLE



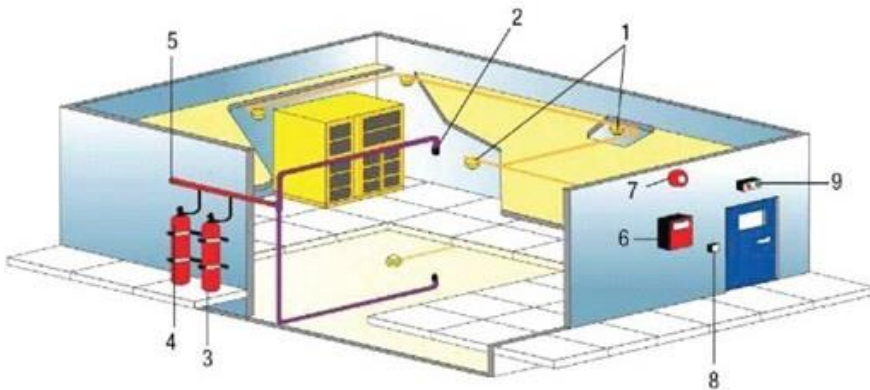
Customized modification available

Material	Brass			
	Part No.	Sizes	Dim. A(mm)	Dim. B(mm)
Available Nozzle Sizes	SPS-SR-007-15MM	1/2"	49	31.75
	SPS-SR-007-20MM	3/4"	54	38.1
	SPS-SR-007-25MM	1"	60	44.45
	SPS-SR-007-32MM	1 1/4"	70	57.15
	SPS-SR-007-40MM	1 1/2"	74	63.5
	SPS-SR-007-50MM	2"	79	76.2
Approval	VdS			
Approval No.	G311027			



Selection: Valve
 Material: Carbon Steel
 Part No: SPS-SR-SELECTION 32
 Part No: SPS-SR-SELECTION 40
 Part No: SPS-SR-SELECTION 50
 Part No: SPS-SR-SELECTION 65
 Part No: SPS-SR-SELECTION 80
 Part No: SPS-SR-SELECTION 100

System Design and Operation



1. Smoke / heat detector
2. Nozzle
3. Slave cylinders
4. Master cylinder
5. Manifold
6. Control panel
7. Alarm bell
8. Manual Call Point (break glass)
9. Discharge Flashing Light

DESIGN CALCULATIONS

The required agent quantity is based on the volume of protected area at the lowest expected ambient temperature and concentration required. To obtain the minimum agent quantity required, use the following equation:

$$W = (V/S) \times (C/100 - C)$$

W = weight of Agent required

V = volume of protected area

S = specific vapour volume

S = $0.1269 + 0.000513 T$

C = Required HFC-227ea Design Concentration (% by volume) at Design Temperature (t).

T = Design temperature in protected area (°C)

FM-200 Control Panel



Hochiki Conventional Releasing Control Panel

Part Number: HCVR-3

Supply Voltage: 115VAC (50hz/60hz) or 230VAC (50hz/60hz)

Power Supply DC Rating: 24VDC 3 Amps total including battery charging

Mains Supply Fuse: 1.6 Amps 250VAC, slow-blow, 5 x 20mm

Standby Current: 86 mA

Alarm Current: 620 mA

Operating Humidity: 93% (noncondensing)

Operating Temperature: -5°C to +40°C

Technical

Mains supply: 230V AC, 50Hz +10% - 15%

Mains supply fuse: 1.6 Amp (F1.6A L250V)

Power supply rating (1 & 2 area units): 3 Amp total including battery charge 28V +/- 2V

Power supply rating (3 & 4 area units): 5.25 Amps including battery charge 28V +/- 2V

Maximum ripple current: 200 millivolts

Battery charge voltage: 27.6VDC nominal

Battery charge current: 0.7A maximum

Battery fuse: 20mm, 3.15A glass

Ordering Information

Product Code	Zones	Areas	Size (mm)
K21021M3	2	1	385x520x110
K21042M3	4	2	385x520x110
K21083M4	8	3	385x700x145
K21084M4	8	4	385x700x145



Kentec Multi-Area Releasing Control Panels

DETECTION SYSTEM Components



Hochiki Photoelectric Smoke Detector

Part Number	SOC-24VN
Light Source	GaAlAs Infrared Emitting Diode
Nominal Rated Voltage	24 VDC
Working Voltage	8 - 35.0 VDC
Maximum Voltage	42 VDC
Supervisory Current	59µA @ 24 VDC
Surge Current	160µA max. @ 24VDC
Alarm Current	150mA max. @24 VDC
Air Velocity Range	0-4000 fpm
Maximum Humidity	95% RH Non-Condensing
Ambient Temperature	32°F to 120°F (0°C to 49°C)
Color & Case Material	Bone PC/ABS Blend
Sensitivity Test Feature	Automatic Sensitivity window verification test
Mounting	Refer to NS Conventional Detector Base Data Sheet



Hochiki ROR Heat Detector

Part Number	DSC-EA
Rated Voltage	24VDC
Working Voltage	15 - 30VDC
Maximum Switching Current	100mA max.
Heat Sensing Element	Air chamber composed with the diaphragm.
Operating Temp. Range	-10°C - +50°C (14°F - 122°F)
Storage Temp. Range	-30°C - +70°C (-22°F - 158°F)
Relative Humidity (at 40°C)	95% RH Non-Condensing
Dimensions	3.9" D x 1.3" H
Weight	3 oz.
Color	Bone
Applicable Standard	UL-521
Response Grade	Ordinary



Hochiki Fixed Heat Detector

Part Number	DCD 135/190
Response	135° ±7.5°F 190° ±7.5°F
Rated Voltage	17.7 - 30.0 VDC
Working Voltage	15.0 - 33.0 VDC
Maximum Voltage	42 VDC
Supervisory Current	40µA @ 24 VDC
Surge Current	160µA max. @ 24 VDC
Alarm Current	150µA max. @ 24 VDC
Ambient Temperature	32°F to 120°F (0°C to 49°C)
Contact Rating	N/O Contacts 150mA max. @ 24V
Color & Case Material	Bone PC/ABS Blend
Mounting	Refer to the NS Conventional Detector Base Data Sheet



Hochiki Flame Detector

Part Number	HF-24
Rated Voltage	17.6 - 27.7 VDC
Working Voltage	15 - 30 VDC
Normal Current	200µA @ 24 VDC
Alarm Current	250mA Maximum
Response to Ultraviolet	1850 - 3000 Angstrom
Ambient Temperature	14° to 122° Fahrenheit (-10°C to +50°C)
Mounting	HSC-4R and HSB-Series Bases
Color	Ivory ACS

DETECTION SYSTEM Components



Hochiki Manual Pull Station

Part Number: HPS-DAK-SR
 Contact: Form
 Contact Rating: 10A @ 120 VAC
 Temperature Range: -30°F- 150°F (-35°C-66°C)



Manual Pull Stations Series 3300

Part Number: 30-330001-001
 Switch rating: 2 Amp @ 240 Vac or 125 Vdc
 Operating Humidity: 0-95% RH
 Temperature Range: -40°F- 150°F (-40°C-66°C)
 Shipping Weight: 1.12 lbs. (510 g)



Hochiki Abort Switch

Part Number: HCVR-AS-R
 Switch Rating: 1A @ 30VDC
 Dimension: 3.81" W x 3.81" H x 2.32" D
 Finish Colour: Red



Series 1930 Suppression System Abort Station

Part Number: 30-193000-001
 Electrical Ratings: 2.5 Amps @ 120 Vdc
 Ambient Temperature: -13°F to 158°F (-25°C to 70°C)
 Shipping Weight: 2 lb. (.9 kg)



Canatech Electronic Sounder and Beacon

Part Number: CA-17ESB
 Voltage: 24V DC
 Current Consumption 24V DC (tone 3): 14.5mA
 Volume Control: 0 to - 20dB adjustment
 Ambient Temperature: -25°C ~ +80°C
 Material: ABSplastic
 Dimensions: 92.5mm(Dia.) x 110mm(H)
 Weight: 278g



Canatech Discharge Warning Box

Part Number: CA-DCW-FM200
 Voltage: 24VDC
 Ambient Temperature: - 25 - +70Deg
 Dimensions (mm): H150xW400xD85
 Material: BlackSteel
 Finish Colour: Red



Hochiki Fire Alarm Bell

Part Number: FBB-150I
 Rating: DC 24V, 8mA
 Sound Pressure: ≥90 dB (at distance of 1m from the front)
 Operating Temperature Range: -20°C - 60°C
 Material: Steel, 1.2mm thickness, Chrome-plated
 Color: Equivalent to Munsell 7.5R3.6/12.8
 Weight: Approx. 465g



fire protection

