Larson Electronics LLC
9419 E US HWY 175, Kemp, TX 75143
Phone: 800.369.6671

www.LarsonElectronics.com
Email: sales@LarsonElectronics.com
Fax: 903.498.3364

EXP-EXTRM-20FT-PKG-V8

C1D1 Explosion Proof Extraction Room Equipment Package - Designed for 20' Container Extraction Rooms - (2) Exhaust Fans

Product ID: 278354

Please see last page for supporting documentation for this product(certificates, CAD files & drawings, IES files, wiring diagrams, etc).



Larson Electronics LLC manufactures a wide variety of products, including custom built to spec designs. The pictures displayed for this unit are a general representation of form factor for the product line and may not accurately represent this exact configuration in every detail due to custom builds and changes between similar products in our standard catalog. The specifics for this configuration are listed in the specification table and supporting documentation (CAD files, Dimensional Drawing, Name Plate Diagram, Wiring Diagram, etc.). This means that specific details (receptacles, plugs, wires, connections, mounting brackets, external finishes, etc.) may not be accurately represented in images vs specifications. Please review specifications and do not order based solely on images.

EXP-EXTRM-20FT-PKG-V8 Explosion Proof Extraction Room Package

EXP-EMG-EXT-LE6-1L Explosion Proof Exit Sign
Quantity: 1
Listing: NRTL Listed for United States & Canada
Lamp Type: LED
Dimensions: 14.8"L x 12"H x 8"
Voltage: 120-277V AC
Watts: 1.1
Lighting Configuration: Back Illuminated Sign Panel
Battery Backup Runtime: 3 Hours
Battery Backup: Nickel Cadmium Battery Pack
Faceplate Color: Copper Free Aluminum Housing
Materials: Red or Green
Mounting: Ceiling Mount, Pendant Mount or Wall Mount
Wiring: 3/4" NPT Wiring Hub

Exit Sign - Ratings/Approvals
Class I, Divisions 1 & 2, Groups A, B, C, D
Class I, Zones 1 & 2, Groups IIB+H2
Class II, Divisions 1 & 2, Groups E, F, G
Class III Divisions 1 & 2
3 Hour Emergency Runtime
Self-Testing Unit

EPL-48-2L-LED Explosion Proof LED Fixture
Quantity: 2
Listing: NRTL Listed for United States - Canada
Dimensions: 11.25"W x 52"L x 8.5"H
Weight: 45 lbs
Voltage: Universal 120-277V AC 50/60 Hz or 11-25V AC/DC
Total Watts: 56 Watts (28 Watts Per Lamp)
Total Lumens: 7,000 (3,500 Per Lamp)
LED Lamp Life Expectancy: 50,000+ Hours
Luminous Efficacy: 125 Lumens per Watt

LED Fixture - Ratings/Approvals
Class I Divisions 1 & 2, Groups C and D
Class II, Divisions 1 & 2, Groups E, F, G
NRTL Certified to UL 595 Marine Type (Saltwater)
NRTL Certified to UL 844
NRTL Certified to UL 1598 Marine Type
NRTL Certified Canadian Standards
Listed for Paint Spray Booths
California Title 24 Compliant
IP67 Rated - Waterproof

Color Temp: 5600K, 4500K or 3000K
Color Rendering Index: >80
Beam Angle: 150°
Power Efficiency: 90%
Power Factor: >0.95
Ambient Operating Temp Range: -30°C to +85°C
Operating Temp Rating: T6 Rated
Minimum Operating Temp: -30°C
Maximum Case Temp: +90°C
Housing Material: Cast Aluminum End Caps, Aluminum Reflectors - Copper Free
Lens Material: Hardened Borosilicate Glass Tubes
Gasket Material: Buna Rubber O-Rings
Mounting: Surface Standard
Wiring Hub: 1/2" NPT

T6 Temperature Rating
NEMA 4X
LEL Listed LED Lamps
Approved for Confined Spaces
Silicone Free
Factory Sealed Fixture
BAA Compliant
Made in the USA

EPL-SW1 Explosion Proof Tumbler Switch
Quantity: 1
Listing: NRTL Listed for United States - Canada
Switch Voltage Rating: 120-277V AC
Switch Current Rating: 20 Amps- 1 HP @ 120V AC & 2 HP @ 240V AC
Grounding: Single Internal Housing Ground Screw
Configuration: Feed Through, Front Switch
Hub Qty: (2) Feed Through
Hub Size: 3/4" NPT Feed Through
Unit Materials: Box/Receptacle- Malleable Iron, Sealing Chamber-Aluminum
Finish: Triple-coat—Zinc Electroplate, Chromate, Epoxy powder coat
Insulation: Integral Bushings in Conductor Openings
Mounting: External Mounting Lugs on Body
Unit Dimensions: 3.00"W x 4.69"D x 6.13"L
Switch Type: Single Pole

Tumbler Switch - Ratings/Approvals
Class I, Divisions 1 & 2 Groups B, C, D
Class II, Division 1 & 2 Groups E, F, G
Class III
NEMA 4
NEMA 7 Groups C & D
NEMA 9 Groups E, F, G

EPF-RME-24-1HP Explosion Proof Ventilation Fan
Quantity: 2
Listing: NRTL Listed for United States
Type: Explosion Proof Roof Mounted Exhaust Fan
Propeller Dimensions: 24" - Diameter
Weight: -
Voltage: Multi-Voltage - 115-230V AC 1 Phase
Motor: 1 HP Fully Enclosed Explosion Proof
Rotations Per Minutes (RPM): 1,750
Peak CFM (@ 0" SP): 7,820
Max Sound Levels @ 5`: 80.1 (sones), (db)
Materials: Non-Sparking Aluminum, Spun Aluminum
Mounting: Roof/Ceiling Mount
Wiring: Hard-Wire

Ventilation Fan - Ratings/Approvals
Class I, Divisions 1 & 2 Group D
Class II, Divisions 1 & 2 Groups F & G
Rated for Hazardous Environments
Built-in Bird Screen

EXP-SNR-TG-EC-ITS-ALG-HC200 Hydrocarbon Sensor
Quantity: 1
Listing: NRTL Listed for United States - Canada
Gas Type: Hydrocarbon (Methane, Butane, Propane, Pentane)
Transmitter Type: Electrochemical Without Arms
Sensor Holder: Integral Holder
Output: Analog
PPM Detection Range: 0-200 ppm
Sensor Sensitivity: 120 Lm/W
Operational Temp Range: >-25ºC to +55ºC
Operational RH Range: 0-95% Non-Condensing
Housing: Cast Aluminum
Output Range: Scalable 4-20 mA
Voltage: 120-240V AC Stepped down to 24V DC

Hydrocarbon Sensor - Ratings/Approvals
Class I, Divisions 1 & 2, Groups B, C, D
Alcohol Sensor
LCD Graphic Display
Non-Intrusive Magnetic Operation
Internal Data Logger

Special Orders - Special Requirements
Contact us for special requirements
Intl: 1-903-270-1187
Toll Free: 1-800-369-6671
Fax: 1-903-498-3364
E-mail: sales@larsonelectronics.com

The EXP-EXTRM-20FT-PKG-V8 from Larson Electronics is an Explosion Proof Extraction Room Package that includes everything needed to convert a twenty foot container into a Class I, Division 1 explosion proof extraction room. The EXP-EXTRM-20FT-PKG-V8 includes one C1D1 exit signs, two surface mount 48" C1D1 LED light fixtures, one C1D1 3/4" feed through, single pole switch, two C1D1 3/4" feed through, two 24" C1D1 exhaust fans, and one C1D1 hydrocarbon sensor that can be used to operate one of the

included exhaust fans.
The EXP-EXTRM-20FT-PKG-V8 includes everything needed to outfit a 20` container with all of the necessary equipment to make the container an explosion proof extraction room. For more information on extraction rooms and explosion proof safety, please click here.
PLEASE NOTE: This extraction room explosion proof equipment package does NOT include conduit, junction boxes, seal offs, unions, or flex couplers that may be needed for installation due to potential differences in layouts. Larson Electronics can provide all of those things at an additional cost.
C1D1 Exit Sign Information: The EXP-EXTRM-20FT-PKG-V8 includes (1) EXP-EMG-EXT-LE6-1L C1D1 explosion proof exit signs. The EXP-EMG-EXT-LE6-1L Explosion Proof LED Exit Sign with emergency battery back up from Larson Electronics is Class I, Divisions 1 & 2, Groups A, B, C, D, Class I, Zones 1 & 2, Groups IIB+H2, IIA, Class II, Divisions 1 & 2, Groups E, F, G and Class III, Divisions 1 & 2 rated for hazardous areas. Equipped with a 1.1 watt LED lamp, a 3 hour runtime and self diagnostic system, this failsafe exit sign helps show workers within hazardous environments where the exit is during power failures. This single sided exit sign is an ideal emergency exit marking solution for hazardous locations where failsafe reliability is a must.
The EXP-EMG-EXT-LE6-1L is an effective option for operators who wish to ensure their hazardous workspaces employ the most up to date and reliable means of marking emergency exit-ways available. Under normal conditions this emergency exit lamp uses normal external power to illuminate its 1 watt LED array. In the case of power outages or in any situation where power is interrupted, this unit automatically switches to a battery backup which will power the unit for three hours or until power is restored. This fixture has three mounting options and is multi-voltage capable.
Exit Sign Features: The EXP-EMG-EXT-LE6-1L features a backlit LED array that each contain eight LEDs, drawing a total of 1.1 watts. This explosion proof emergency LED fixture features brown-out, short circuit and voltage surge protection and has a low voltage disconnect which prevents damage to the battery caused by a deep discharge. This self-testing LED fixture will run for a minimum of 3 hours after a power failure thanks to the maintenance-free 3.6 volt NiCad battery. After emergency use, the battery takes 24 hours to completely recharge.



Click Photo to Enlarge


Click Photo to Enlarge

This emergency exit marking fixture is explosion proof and carries an integral battery backup power supply. When external power is cut due to outages or accidents this lamp automatically switches to its battery backup which will power the lamp for three hours, longer than the requirements specified in the NFPA 101. The EXP-EMG-EXT-LE6-1L sign panel is back illuminated by LEDs and as a result draws only 1.1 watt of power and has an extreme LED luminary lifespan rated at 15 years. This fixture is approved for outdoor use and is resistant to saltwater making it suitable for use in marine environments.
Exit Sign Emergency Operation: The EXP-EMG-EXT-LE6-1L features a backup battery that will run the fixture for at least 90 minutes following a power outage or any other loss of power. The included emergency backup battery is a 3.6 volt NiCad rechargeable unit. These batteries are maintenance-free and have a life expectancy of 15 years while being able to operate in a wide variety of conditions including in temperatures ranging from 0°C to +40°C. This unit also features a low voltage disconnect. This means that if the fixture detects that the battery`s terminal voltage has fallen below a certain level, the low voltage circuit will disconnect the emergency lighting load until normal power is restored. This prevents the battery from experiencing a deep discharge and becoming damaged.

Exit Sign Wiring: The EXP-EMG-EXT-LE6-1L explosion proof emergency self-testing LED fixture is **NOT** a factory sealed fixture. Operators will bring their own wiring to a junction box and complete their connects. The operator will also provide their own seal off for this fixture. The EXP-EMG-EXT-LE6-1L operates on 120/277V AC at 60Hz.
Exit Sign Mounting: The EXP-EMG-2L-LE6 is designed to be surface mounted to flat surfaces such as walls. The unions connecting the upper lamps to the lower indicator light enclosure allow for both horizontal and vertical adjustment. This gives operators the ability to adjust the light to their specific mounting location for ideal light coverage during a power failure or power outage.
LED Light Fixture Features: The EXP-EXTRM-20FT-PKG-V8 includes (2) EPL-48-2L-LED C1D1 surface mount LED light fixtures. The Larson Electronics EPL-48-2L-LED Explosion Proof LED Light Fixture is United States and Canada approved Class I Divisions 1 & 2 and Class II Divisions 1 and 2 for areas where flammable chemical/petrochemical vapors exist or have the potential to exist. This explosion proof LED light has a T6 temperature rating and carries a paint spray booth light certification, making it ideal for applications such as paint booths, oil rigs, offshore applications, petrochemical, manufacturing, chemical storage, water treatment centers, and food processing plants.
This four foot, two lamp LED fixture is ideal for operators seeking a top quality explosion proof light that will reduce operating costs, improve lighting quality and reduce downtime incurred from frequent servicing intervals. The EPL-48-2L-LED is equipped with Larson Electronics specially designed LED T-series bulbs which produce 7,000 lumens, resulting in 30% more foot candles of illumination at 8 feet as compared to standard T8 lamps when measured with an Extech light meter. Our LED-T series bulbs are visibly brighter than standard T8`s and have consistently surprised many of our customers with their unexpectedly high light output levels.
We now offer our second generation LED tube lamps with this fixture which have increased this hazardous location light`s performance. This two lamp explosion proof LED linear fixture is lighter in weight, has a slimmer profile, and produces more light than traditional explosion proof fluorescent fixtures. The four foot long LED tube design bulbs included with this unit are rated at 50,000 hours of service life, which is over twice as long as standard T8 bulbs.
This fixture carries a T6 temperature rating and is approved for Class I, Division 1, Groups C and D, Class I, Division 2, Group A, B, C and D, and Class II, Division 1 and 2, Groups E, F and G environments where flammable or combustible gases, vapors, dusts, fibers, and flying exist or stand the potential to exist. This LED linear fixture is approved for use in confined spaces. Click here to read the NEC description for explosion proof and hazardous locations.
LED Benefits: Unlike gas burning and arc type lamps that have glass bulbs, LEDs have no filaments or fragile housings to break during operation and/or transportation. Instead of heating a small filament or using a combination of gases to produce light, light emitting diodes (LEDs) use semi-conductive materials that illuminate when electric current is applied, providing instant illumination with no warm up or cool down time before re-striking. Because there is no warm up period, this light can be cycled on and off with no reduction in lamp life.
LED lights run at significantly cooler temperatures than traditional metal halide and high pressure sodium lights and contain no harmful gases, vapors, or mercury, making them both safer and more energy efficient. No extra energy is wasted in cooling enclosed work areas due to external heat emissions from bulb type lights, and the operator risks associated with traditional lighting methods, such as accidental burns and exposure to hazardous substances contained in the glass bulbs, are eliminated. In addition, LEDs are also safer for the environment as they are 100% recyclable, which eliminates the need for costly special disposal services required with traditional gas burning and arc type lamps.
The 28-watt LED lamps produce 30% more illumination than standard T8 bulbs while offering lower amp draw and increased reliability. Each lamp produces 3,500 lumens at 125 lumens per watt, for a combined 7,000 total lumen light output. An EPL-48-2L-T8 explosion proof fluorescent light, with a combined total of 64 watts, draws 0.54 amps at 120 volts AC. This LED version of the same light, with a total of 56 watts, draws only 0.47 amps at 120 volts AC. The EPL-48-2L-LED is universal voltage, not

multi-tap, and operates on any voltage from 120V to 277V AC 50/60hz without any modifications. We also make a 12/24V AC/DC version for low voltage applications for AC or DC power.

Energy Consumption Comparison

	T5HO	T8	LED
Wattage	108 watts	64 watts	56 watts
Amp Draw @ 120V AC	0.90 amps	0.54 amps	0.47 amps
Amp Draw @ 220V AC	0.49 amps	0.29 amps	0.25 amps
Amp Draw @ 240V AC	0.45 amps	0.27 amps	0.23 amps
Amp Draw @ 277V AC	0.39 amps	0.24 amps	0.20 amps
Amp Draw @ 12V DC	9 amps	5.34 amps	4.67 amps
Amp Draw @ 24V DC	4.5 amps	2.67 amps	2.34 amps
Lamp Life Expectancy	20,000 hours	24,000 hours	50,000 hours
Operation cost per year (12hs/day @ 12c/kWh)	$56.77	$33.64	$29.43

Our EPL-48-2L-LED LED light fixture is U.S. and Canada approved for use in paint spray booths. Please note, according to the NEC, using threaded rigid pipe does not require additional seal offs with this fixture. An EYM and seal off is necessary for flex conduit or other non-rigid pipe implementations.



Surface Mount (Standard)



Click Photo to Enlarge



Click Photo to Enlarge



Click Photo to Enlarge

EPL-48-2L-LED Mounting: Each bracket is cinched to the bracket mounting peg on each side of the light. The angle of the bracket is set by tightening two cap screws on either side of the bracket. The cap screws act as a set screw. The bracket itself is mounted via a single bolt hole at the top the bracket. There are two brackets, one on each end of the light. Once the brackets are mounted to a surface (ceiling, floor or wall), the light fixture can be removed from the brackets by loosening the cap screws that hold the bracket to the mounting peg.

C1D1 Switch Features: The EXP-EXTRM-20FT-PKG-V8 includes (1) EPL-SW1 3/4" feed through single pole switch. This explosion proof tumbler switch is ideal for operators seeking a high quality explosion proof switch rated for use in hazardous areas designated Class I Division 1 and Class II Division 1. This explosion proof switch is rated at 20 amps-120-277V AC and 1 HP at 120V AC and 2 HP at 240V AC. The entire unit is constructed of malleable iron and contains an internal sealing chamber constructed of copper free aluminum. This unit is easily wall mounted via integral mounting tabs at two corners of the housing and provides two 1/2" hub openings located on the top and the bottom of the housing for running electrical conductors in a feed through configuration. A bushing seal at each conductor opening prevents damage to wiring insulation.



Click Photo to Enlarge



Click Photo to Enlarge

This unit is rated to handle electrical loads of 120-277V AC up to 20 amps and is suitable for use in environments where combustible dusts and particulates may be present. The EPL-SW1 explosion proof switch cover and housing box is constructed of malleable iron with all arcing devices contained within an explosion proof labyrinth switch for the highest protection possible. This design does not require external sealing fittings. Each 3/4" hub opening is fitted with an integral bushing to prevent fraying or damage to insulation. Two external mounting lugs provide simple and secure mounting of the unit to walls and flat surfaces. The unit box, switch, and face plate are all included with the product.

C1D1 Switch Circuit Breaking Protection: This unit`s receptacle is designed to safely contain any arcs between the internal contacts that may be created within the receptacle housing.

C1D1 Switch Inter-Compatibility: These units are compatible with Crouse Hind™ plugs under catalogue number ""ENP5151" and Hubble-Killark Acceptor® plugs under catalogue number "UGP-20231,UGP-20232 ". Due to possible manufacturer changes we cannot guarantee interchangeability although we have made every effort to ensure cross compatibility correctness.

C1D1 Exhaust Fan Features: The EXP-EXTRM-20FT-PKG-V8 includes (2) EPF-RME-24-1HP 24" C1D1 ventilation fans. One of the included fans is intended to be operated with the hydrocarbon sensor that is also included. When the sensor detects too high of a concentration of butane or propane, it powers on the second fan.

The EPF-RME-24-1HP explosion proof fan is rated for Class I, Group D and Class II, Groups F & G hazardous environments. This single-phase explosion proof ventilation fan has a 1 HP fully enclosed motor that can spin the propeller at a rate of 1,750 rotations per minute (RPM). Capable of achieving 7,820 cubic feet per minute (CFM), the explosion proof exhaust fan features a built-in bird screen.

The explosion proof fan is constructed of non-sparking and spun aluminum, resulting in a lightweight unit. The 24" diameter propeller on this explosion proof high pressure ventilation fan resists sparking, further increasing the safety of the hazardous environment in which the fan is being utilized.

C1D1 Exhaust Fan Voltage: The EPF-RME-24-1HP is multi-voltage capable and can operate on voltages ranging from 115-230V AC.

C1D1 Exhaust Fan Wiring: The explosion proof exhaust fan is a hard-wired unit that should be installed according to national, state and local electrical and mechanical codes.

C1D1 Exhaust Fan Mount: Operators may mount the fan on ceilings or roofings during installation.

C1D1 Hydrocarbon Sensor Features: The EXP-EXTRM-20FT-PKG-V8 includes (1) EXP-SNR-TG-EC-ITS-ALG-HC200 C1D1 alcohol sensor. This sensor is intended to be paired with one of the included ventilation fans to turn the fan on when a high concentration of butane or propane is detected within the extraction room. This hydrocarbon sensor can be set to either detect butane or propane. It CANNOT detect both at once. The operator selects their choice on the unit itself.

The EXP-SNR-TG-EC-ITS-ALG-HC200 Explosion Proof Alcohol Sensor from Larson Electronics is a toxic gas sensor that is configured to detect hydrocarbon vapors of Methane, Butane, Propane, or Pentane within a 0-200ppm (parts per million) concentration, and includes an electrochemical transmitter, an integral sensor holder and non-digital output. An LCD graphics display shows gas concentrations in large, easy to read numbers and also provides operators with alarm indication and menus

to set up operating parameters. A backlight is available for use when 3-wire mode is used. This sensor also includes an internal data logger which stores measured gas values at intervals chosen by the user, which can be pulled up on the LCD screen at any point, or downloaded using an interface. This hydrocarbon sensor has non-intrusive operation, allowing operators to calibrate, view data, set up alarms and complete other tasks with a magnetic tool, eliminating the need to open the sensor`s enclosure. All program settings are password protected. Also included with this sensor is a scalable 4-20 mA programmable output range, three internal alarm relays transmitter, and analog output set to user defined values for loop testing without needing to apply gas to the sensor.
The EXP-SNR-TG-EC-ITS-ALG-HC200 is fitted with a hydrocarbon gas sensor, which plugs directly to the transmitter. This gas sensor is used to detect a wide variety of hydrocarbon gases, which can be calibrated by the user based on application. This gas detector contains a sensor, amplifier and memory module in one unit, allowing it to be calibrated independently and plugged into any detector for immediate use with no adjustments needed.



Click Photo to Enlarge



Click Photo to Enlarge

At Larson Electronics, we do more than meet your lighting needs. We also provide replacement, retrofit, and upgrade parts as well as industrial grade power accessories. Our craftsmen can custom build any lighting system and/or accessories to fit the unique demands of your operation. A commitment to honesty, quality, and dependability has made Larson Electronics a leader in the lighting and electronics business since 1973. Contact us today at 800-369-6671 or message sales@larsonelectronics.com for more information about our custom options tailored to meet your specific industry needs.

Larson Electronics LLC
9419 E US HWY 175, Kemp, TX 75143
Phone: 800.369.6671

www.LarsonElectronics.com
Email: sales@LarsonElectronics.com
Fax: 903.498.3364

Frequently Asked Questions (FAQ)

20FT CONTAINER EXTRACTION ROOM KIT



EXPLOSION PROOF EXIT SIGN - CLASS I, DIVISION 1 & 2 - IP65 - 120V/277VAC - EMEMERGENCY BATTERY BACK-UP	X1



24" EXPLOSION PROOF FAN - 7820 CFM - 1 HP - 115-230V - CLASS 1 GROUP D & CLASS 2 GROUPS F & G RATED	X2



EXPLOSION PROOF LED PAINT SPRAY BOOTH LIGHT - CLASS 1 DIV 1 - CLASS 1 DIV 2 - T6 - 7,000 LUMENS	X2



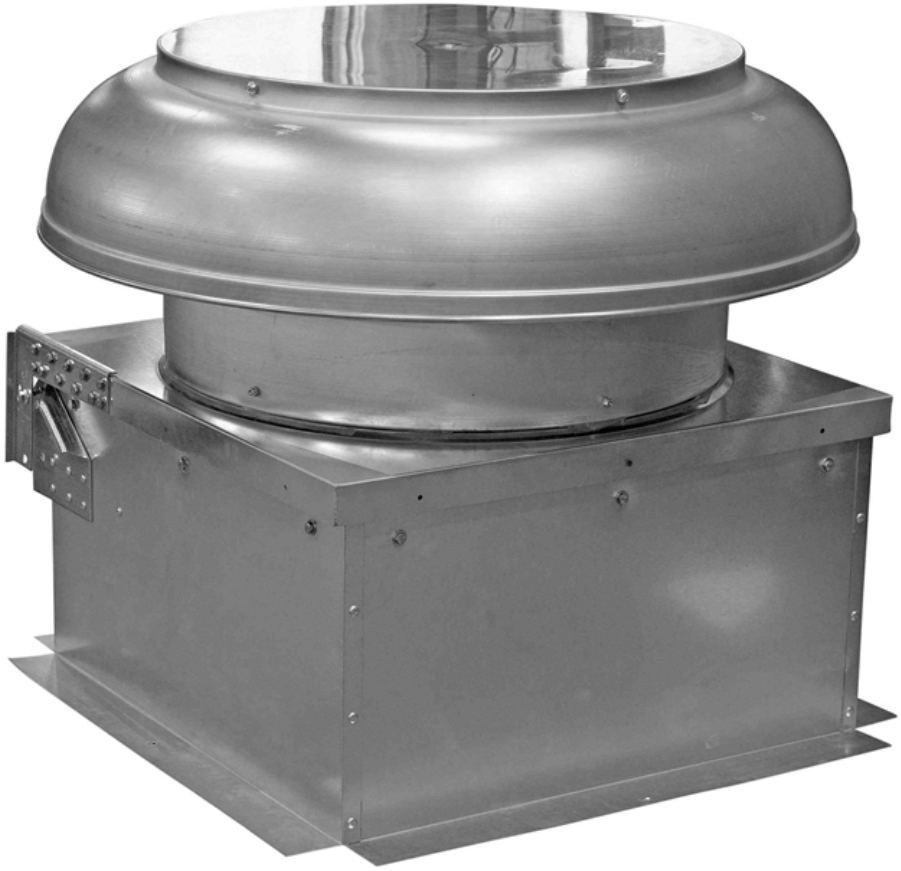
EXPLOSION PROOF HYDROCARBON GAS SENSOR	X1



EXPLOSION PROOF SWITCH - CLASS 1 DIV 1 AND CLASS 2 DIV 1	X1




CONTROL ASSEMBLY COVER
FOR HAZARDOUS LOCATIONS
ATTENTION



Larson Electronics LLC
9419 E US HWY 175, Kemp, TX 75143
Phone: 800.369.6671

www.LarsonElectronics.com
Email: sales@LarsonElectronics.com
Fax: 903.498.3364

EXP-EXTRM-20FT-PKG-V8

Product ID: 278354

Export Control Classification Number (ECCN): EAR99

Options:

EXP-EXTRM-20FT-PKG-V8-Exit Sign Color-Light Voltage-LED Color Temp

Example: EXP-EXTRM-20FT-PKG-V8-RED-1227-56K

Exit Sign Color	
RED	-RED
GREEN	-GRN

Light Voltage	
120-277V AC	-1227
11-25V AC/DC	-1224

LED Color Temp	
5600K	-56K
4500K	-45K
3000K	-30K

Links (Click on the below items to view):

- **Operations Manual**
- **HigResPic1**
- **HigResPic2**
- **HigResPic3**
- **HigResPic4**
- **HigResPic5**
- **HigResPic6**
- **HigResPic7**
- **ISO 9001 Certification**
- **Business Certificate**
- **Shipping Time Map**