

PROTECTING YOUR SECURITY AND FIRE SYSTEMS INSTALLED OUTDOORS OR IN TOUGH ENVIRONMENTS

By: Bob Hullinger, President, Mier Products, Inc.

The installation of security and fire alarm systems in different kinds of environments calls for keeping a close eye on the temperature in which the electronics operate, and protection from the elements.

Often electronics need to be mounted outdoors, in an unheated warehouse, at an outside guard shack, or in a sweltering factory. It is critical that the installer provide the proper means of heating and cooling to keep the electronic components within required operating temperatures. This is often accomplished by using temperature controlled enclosures, which provide cooling and heating functions as well as protection from Mother Nature and vandalism.

Selecting the correct type and size of enclosure for the job is an important first step, which is determined by the sizes and number of components to be installed in it.

Knowledge of the heat-load the internal electronics generate, the heat limit in which they can safely operate, and the temperature extremes (high/low) of the surrounding environment are important as well. For example, a fan-cooled enclosure might be the right choice if the electronics can operate satisfactorily in temperature slightly above the ambient environment and

where humidity is not a factor. However, where humidity is a factor and/or when ambient temperature extremes are outside of operating parameters, an enclosure with proper air-conditioning and heating is needed.

Fan-cooled units merely bring air-flow through an enclosure, usually through a filter, circulating it over the electronic components to remove heat as it exits through a discharge opening in the enclosure. The aim is to keep the inside of the enclosure only slightly warmer than the

air surrounding the enclosure installation. Another feature of some outdoor fan-cooled enclosures is to keep direct water from entering. This is accomplished by the use of design features such as rain-channels, gaskets, seamless welds and shrouds over the openings. Another desirable feature in fan-cooled enclosures is a thermostat, which turns fans on only when the internal temperature exceeds the preset limits, saving energy.

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POWER OVER ETHERNET NetWay1

- > UL Listed for U.S. and Canadian installations
- > One (1) PoE compliant port rated at 15.4W max
- > Designed for surveillance and access control systems
- > Meets IEEE 802.3af standard
- > PoE shutdown feature
- > Safe and cost effective power distribution over CAT5/5E/6 LAN infrastructure



CAMERA POWER SUPPLIES

SAV4D

- > Four (4) PTC protected outputs
- > 5 amp total supply current

SAV9D

- > Nine (9) PTC protected outputs
- > 5 amp total supply current

SAV18D

- > Eighteen (18) PTC protected outputs
- > 5 amp total supply current

SAV182D

- > Eighteen (18) PTC protected outputs
- > 11 amp total supply current

SAV182D

- > Thirty-six (36) PTC protected outputs
- > 11 amp total supply current

Features:

- > UL Listed for U.S. and Canadian installations
- > 12 VDC outputs
- > 115 VAC/230 VAC selectable input
- > Field installable grounded line cord





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- 1-channel transmitter

SL-SK919TP1H

- 1-channel handheld transmitter
- 1, 2 and 4-channel models available



ELITE Series Vandal-Resistant

Dome Cameras

SL-2605NKEQ

- Day/Night operation
- 2.8 – 11.0 mm lens

SL-2606NJEQ

- 36 IR LEDs
- 3.5 – 9.8 mm lens

SL-2615NKEQ

- Digital Noise Reduction
- 2.8 – 11.0 mm lens

SL-2625NKEQ

- Wide Dynamic Range
- 2.8 – 11.0 mm lens



IR Bullet Cameras

SL-1323C12DQ

- 12 LEDs
- 4.3 mm lens, colour

SL-132CDW2Q

- 12 LEDs
- 2.9 mm lens, colour

SL-132CDWL6Q

- 24 LEDs
- 6.0 mm lens, colour

SL-132CDWL8

- 24 LEDs
- 8.0 mm lens, colour

- 420 TV lines
- Low current draw
- For indoor/outdoor applications (IP68)
- Low lux rating

(0.1 lux IRs OFF, 0 lux IRs ON)

SL-132CDWLD

- 24 LEDs
- 12.0 mm lens, colour

SL-132CDWLH

- 24 LEDs
- 16.0 mm lens, colour



Passive Video Baluns

SL-EVTPB1

- Range up to 2,000 feet (610 m)
- cUL Listed

SL-EVTPBPVTQ

- With screw terminals

SL-EVTPB1V1T

- With built-in surge suppression

SL-EVTPB1V1G

- With built-in ground loop isolator
- Active baluns also available



Digital Keypads

SL-SK1011SQ

- 1 relay, 100 users

SL-SK1131SQ

- 2 relays, 120 users, illuminated

SL-SK1123SQ

- 2 relays, Rugged design for indoor/outdoor use
- Illuminated, 110 users

SL-SK2113SQ

- Mullion-style, 100 users
- Outdoor, illuminated

SL-SK3123SQ

- Heavy-duty outdoor, 500 users



CCTV Power Supplies

DC Models Available:

SL-1SD2P4UL

- 2A, 4 output, UL listed

SL-1SD4P9UL

- 4A, 9 output, UL listed

SL-1SD6P16UL

- 6A, 16 output, UL listed

AC Models Available:

SL-1SA4P4UL

- 4A, 4 output, UL listed

SL-1SA4P9UL

- 4A, 9 output, UL listed

SL-1SA8P16UL

- 8A, 16 output, UL listed



Vandal-Resistant Ball-Mount Cameras

SL-EV122CDB3

- 420 TV lines
- 3.6 mm lens, grey

SL-EV122CDVH

- 420 TV lines
- 3.6 mm lens, white

SL-EV122CDVG

- 420 TV lines
- 4 – 9 mm lens, grey

SL-EV122CDVH

- 420 TV lines
- 4 – 9 mm lens, white

SL-2706N3GQ

- 540 TV lines
- 3.6 mm lens, grey

SL-2706N3WQ

- 540 TV lines
- 3.6 mm lens, white

SL-EV2706NFG

- 540 TV lines
- 4 – 9 mm lens, grey

SL-EV2706NFW

- 540 TV lines
- 4 – 9 mm lens, white



Locks and Egress Devices

SL-E941SA120 – Electromagnetic lock, 1,200-lb holding force

- 600, 300 and 80-lb versions are available
- “L” and “Z” brackets available

SL-SD996CNUQ – Universal Door Strike

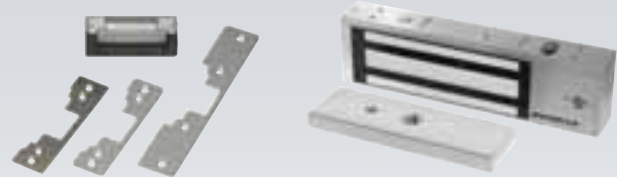
- Includes 3 faceplates, 12/24VDC, fail safe or fail-secure

SL-SD927PWCQ – “No Touch” Request-to-Exit Sensor

- White plate now available with French decals

SL-7202GCP – Request-to-Exit Plates

- Dozens of models available



Photobeam-Detectors

SL-E964Q165Q – Quad-Beams

- 165', 330', 495' & 660' outdoor range
- Laser-beam alignment

SL-E960D90Q – Twin-Beams

- 90', 190', 290' & 390' outdoor range
- Laser-beam alignment

SL-E96224B25 – Curtain Sensor

- Four beams, 22-inch length
- 2, 4, 6, 8, 10-beam models available

SL-E931S35RR – Outdoor Retro-Reflective Photobeam

- Range: up to 35 feet

SL-931CS22RR – Entry-Alert System

- Range: up to 22 feet
- Includes chime



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Some of the same determinations would need to be made if selecting an enclosure which offers both air conditioning and heating capabilities. There are many applications for these types of enclosures installed outside. A few examples include fire-panels mounted outside buildings: gate controls or camera systems mounted within guardhouses at gated communities: DVRs or camera systems mounted in remote areas within parks, arenas or airport perimeters and innumerable other applications. There are several uses of heat and AC units indoors as well, offering a satisfactory environment in dusty, unheated or extremely hot conditions such as factories, fast-food restaurants, or walk-in/drive-in freezers.

Popular sizes of such enclosures contain heating and air conditioning up to 2000 BTU cooling capabilities and heaters up to 500-watts with thermostat controls which permit the user to determine the ranges in which these systems operate. These popular sizes cover the demands of many security and fire panel applications, however, there are other sizes available.

The advantage of a unit with AC and heating is the ability to remove humidity, which is a threat to many electronic components. Components are often exposed to increasingly higher temperatures in the powerful electronic assemblies of today. Another contributing factor is the density in which electronics are placed — which makes it even more vital to cool these systems.

Along with the method of cooling or heating, the enclosure itself must be considered as it is an important part of the protection. Properly built temperature controlled enclosures are fabricated to a NEMA standard. Well-built fan-cooled enclosures should offer NEMA 3R protection, have air-intake filters and have shrouds to protect the air-intake and exhaust openings. NEMA 3R offers a degree of protection from falling rain, sleet, snow and dirt. Well-built air-conditioned and/or heated enclosures should offer NEMA 4 protection, which is a significant step above NEMA 3R. NEMA 4 enclosures are air-tight and provide a degree of protection from the falling rain, sleet, snow, dirt,



external ice build up, and windblown dust, and when used with an AC/heater will also offer a degree of protection from humidity as well.

Remember, in order to keep the NEMA rating and protection factor, it is crucial that the enclosures and their accessories be properly installed. Installers must use water-tight fittings on all openings cut into the enclosure (such as to run power), make sure the enclosure is sealed tightly, inspect and verify that no part of the enclosure or its door is bent nor bowed, shut the door tightly and completely against its gasket and make certain any other areas with gaskets have a tight fit.

Many of these enclosures are available with a window to allow users to view LCD screens, gauges or meters without removing the door. Please keep in mind that when units with windows are installed in direct sunlight the inside of the enclosure will be heated to a higher degree than a unit without a window. It is recommended that units with windows be installed in a shaded location.

Selection of the right cooling and heating enclosure will ensure proper operation and life of the system being installed.

For more information, visit www.mierproducts.com

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