



# City of Belle Isle

Universal Engineering Sciences 3532 Maggie Blvd., Orlando, FL 32811  
 Tel 407-581-8161 \* Fax 407-581-0313 \* [www.universalengineering.com](http://www.universalengineering.com)

## PERMIT CARD – PLEASE POST AT JOB SITE

THIS DOCUMENT BECOMES YOUR PERMIT WHEN PROPERLY VALIDATED

Per FBC 105.3.3: An enforcing authority may not issue a building permit for any building construction, erection, alteration, modification, repair or addition unless the permit either includes on its face or there is attached to the permit the following statement: **"NOTICE: In addition to the requirements of this permit, there may be additional restrictions applicable to this property that may be found in the public records of this county, and there may be additional permits required from other governmental entities such as water management districts, state agencies, or federal agencies."** The issuance of this permit does not grant permission to violate any applicable City, Orange County, State of Florida and/or Federal codes and/or ordinances. Separate permits are required for Signs, Roofing, Electrical, Gas, Plumbing and Mechanical services. This permit becomes VOID if the work authorized is not commenced within 6 months, or is suspended or abandoned for a period of 6 months after commencement. **WORK SHALL BE CONSIDERED SUSPENDED IF AN APPROVED INSPECTION HAS NOT BEEN MADE WITHIN A 6 MONTH PERIOD.** PERMISSION IS GRANTED TO DO THE FOLLOWING WORK ACCORDING TO THE CONDITIONS HEREON AND THE APPROVED PLANS AND SPECIFICATIONS, SUBJECT TO COMPLIANCE WITH THE ORDINANCES OF THE CITY OF BELLE ISLE, FLORIDA.

<p><b>Scope of Work:</b> ELECTRICAL: low voltage for cameras, access controls, and barriers for existing HOA community entrance gate  <b>comments:</b> NONE</p> <p><b>Project Information</b>  <b>Address:</b> HOA Entrance Gate @ Belle Vista Ave, Belle Isle, FL 32812  <b>Parcel ID:</b> 20-23-30-0668-00-008  <b>Property Owner:</b> Belle Vista on Lake Conway HOA  <b>Phone Number:</b> none</p> <p>*****  <b>Company Name:</b> Hidden Eyes LLC dba Envera Systems  <b>Contractor Name:</b> Swain, Thomas  <b>License Number:</b> EF20000402  <b>Address:</b> 2833 Cattlemen Rd, Sarasota, FL 34232  <b>Phone Number:</b> 561 910 5831</p>	<p style="text-align: right;"><b>Permit Number: 2016-08-013</b></p> <p style="text-align: right;"><b>Date of Application: 08/10/2016</b>  <b>Date Permit Issued: 08/10/2016</b></p> <p><b>WARNING TO OWNER:</b> "YOUR FAILURE TO RECORD A NOTICE OF COMMENCEMENT MAY RESULT IN YOU PAYING TWICE FOR IMPROVEMENTS TO YOUR PROPERTY. IF YOU INTEND TO OBTAIN FINANCING, CONSULT WITH YOUR LENDER OR AN ATTORNEY BEFORE RECORDING YOUR NOTICE OF COMMENCEMENT." ON THE JOB INSPECTION(S) MUST BE MADE BEFORE PROCEEDING WITH SUBSEQUENT WORK. THIS CARD MUST BE DISPLAYED OUTSIDE AND BE PROTECTED FROM THE WEATHER WHILE BEING VISIBLE FROM THE STREET UNTIL THE FINAL INSPECTIONS HAVE BEEN APPROVED.</p>
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## BUILDING FEATURES

<b>IMPACT FEES</b>	
School	\$
Traffic	\$
<b>ZONING FEES</b>	
Zoning Fee	\$
<b>UNIVERSAL ENG - BUILDING FEES</b>	
Cert of Occ	\$
Demo	\$
Building	\$
Fence	\$
Driveway	\$
Shed	\$
Window(s)	\$
Door(s)	\$
PrePower	\$
Electrical	\$280.50
Temp Pole	\$
Plumbing	\$
Mechanical	\$
Gas	\$
Roofing	\$
Boat Dock	\$
Screen Encl	\$
Swimming Pool	\$
Sign	\$
<b>SURCHARGE FEES</b>	
Surcharge Fee	\$4.21
Surcharge Fee	\$4.21
<b>TOTAL FEES \$288.92</b>	
<b>Date Paid</b>	8-12-16
<b>CC# Check #</b>	MC 6117
<b>Amount Paid</b>	288.92
The person accepting this permit shall conform to the terms of the application on file and construction shall conform to the requirements of the Florida Building Code (FS 553).	

BUILDING INSPECTOR USE ONLY			
IF APPLICABLE:			
Have Zoning Approval Conditions Been Met? YES NO		Have Stormwater Approval Conditions Been Met? YES NO	
Silt fencing in place? YES NO		Turbidity Barrier in place? YES NO	
<input type="checkbox"/> <b>BUILDING</b>			
1 <sup>st</sup>	(Footing/Foundation)		
Survey specific foundation plan must be onsite before slab pour. Approved Plan on Site? ____			
2 <sup>nd</sup>	(Slab)		
3 <sup>rd</sup>	(Lintel)(Wall Reinforcing on Masonry Building)		
4 <sup>th</sup>	(Exterior Framing)(Roof/Wall Sheathing)		
5 <sup>th</sup>	(Framing) (To be made after Plumbing/ Mechanical/ Electrical Rough-Ins & Windows/Doors Installed)		
6 <sup>th</sup>	(Insulation to be Made After Roof Installed)		
7 <sup>th</sup>	(Drywall)		
8 <sup>th</sup>	(Sidewalk/Driveway)		
9 <sup>th</sup>	(Other)		
10 <sup>th</sup>	(Final – After MEP and Other Applicable Finals)		
<input type="checkbox"/> <b>ROOFING</b>			
1 <sup>ST</sup>	ROOFING Deck Nailing/Dry-in/Flashing _____		
2 <sup>nd</sup>	ROOFING Covering In-Progress _____		
3 <sup>rd</sup>	ROOFING Covering Final _____		
<input type="checkbox"/> <b>PLUMBING</b> (Pool-Piping, Solar, Irrigation, Water Treatment Equip, Etc...)			
<input type="checkbox"/>			
1 <sup>ST</sup>	(Underground)	2 <sup>nd</sup>	(Sewer)
3 <sup>rd</sup>	(Rough-In/Tub Set)	4 <sup>th</sup>	(Final)
<b>CHECK APPROPRIATE BOX</b>			
<input type="checkbox"/> <b>GAS</b> __Natural__ LP <input type="checkbox"/> <b>MECHANICAL</b> <input type="checkbox"/> <b>ELECTRICAL</b> <input type="checkbox"/> <b>LOW VOLTAGE</b>			
1 <sup>st</sup>	(Rough-In)	2 <sup>nd</sup>	(Final)

Inspection requests are to be emailed to [BDscheduling@UniversalEngineering.com](mailto:BDscheduling@UniversalEngineering.com); a confirmation email will be sent back to you upon scheduling. **Next-Day Inspection requests must be made by 4pm.** Please include the following in your request: Permit #, project address, type of inspection, date of the requested inspection, a contact name & a contact phone number. AM or PM may be requested but cannot be guaranteed.

For a copy of your permit, or to check inspection results, please visit <https://universalengineering.sharefile.com>

login ID = [cobi@universalengineering.com](mailto:cobi@universalengineering.com)

password = universal13

**CITY OF BELLE ISLE  
Permit Application Review Sheet**

Permit Number	2016-08-013
Property Owner	Belle Vista on Lake Conway HOA
Address	Gate @ Belle Vista Ave
Nature of Improvement	LOW VOLTAGE cameras, access control
Received Application	barriers for existing gate
Sent for Stormwater Review	
Stormwater Approved	✓
Sent for Zoning Review	
Zoning Approved	✓
Applied for Variance	
Variance Approved	
Sent to BO for Review	8-11-16
Building Official Approved	
Comments	
1.	Susan 8-10-16 W/O # 70791
2.	Sent email need WOC
3.	8-10-16 [Signature]
4.	
5.	
6.	
7.	
8.	
9.	
10.	
11.	
12.	



### APPLICATION FOR ELECTRICAL PERMIT

**WARNING TO OWNER:** YOUR FAILURE TO RECORD A NOTICE OF COMMENCEMENT MAY RESULT IN YOUR PAYING TWICE FOR IMPROVEMENTS TO YOUR PROPERTY. A NOTICE OF COMMENCEMENT MUST BE RECORDED AND POSTED ON THE JOB SITE BEFORE THE FIRST INSPECTION. IF YOU INTEND TO OBTAIN FINANCING, CONSULT WITH YOUR LENDER OR AN ATTORNEY BEFORE RECORDING YOUR NOTICE OF COMMENCEMENT.

DATE OF APPLICATION: 8-10-16 PERMIT NUMBER 2016-08-013  
 The undersigned hereby applies for a permit to make electrical installations as indicated below. PLEASE PRINT  
 Project Address ISLE VISTA AVE - GATE & ROAD to gated community Belle Isle FL  32809  32812  
 Property Owner BELLE VISTA ON LAKE CONWAY HOMEOWNERS ASSN INC Phone \_\_\_\_\_  
 Property Owner's Mailing Address 6972 LAKE GLORIA BLVD City ORLANDO  
 State FL Zip Code 32809-3200 Parcel Id Number: 20-23-30-0668-00-008  
 To obtain this information, please visit <http://www.ocpaf.org/Searches/ParcelSearch.aspx>

Class of Building: Old  New  Type of Building: Residential  Commercial  Other   
 Type of Work: New  Alteration  Addition  Repair  Low Voltage New  Existing

INDICATE THE QUANTITY OF ALL EQUIPMENT TO BE INSTALLED

Dishwasher _____	Exhaust Fan _____	Disposal _____	Water Heater _____
Hood Fan _____	Dryer _____	Paddle Fan _____	Outlets _____
Fixtures _____	Spa _____	Pool _____	Switches _____
Electric Signs _____	Meter Reset _____	Low Voltage <u>X</u> _____	Stoves _____
Pumps _____	Motors _____	Air Conditioning (tons) _____	Furnace (KW) _____

N/A

Temporary Construction Pole N/A One (1) New Meter Service N/A Amperage/Voltage/Phase \_\_\_\_\_

Meter Service Upgrade from N/A to N/A = N/A  
 Amperage/Voltage/Phase Amperage/Voltage/Phase Difference in Size

Relocate Existing Meter Service (No Service Size Change) N/A

EXISTING GATE Structure

Other: INSTALLATION OF LOW VOLTAGE SECURITY CAMERA SYSTEM AND ACCESS CONTROL SYSTEM WITH UNDERGROUND CONDUIT RUNS. WE WILL

POUR CONCRETE FOR THE INSTALL OF THE BARRIER GATES. 3 outdoor 2 linc plate cameras

PERMIT FEE BASED ON METER SERVICE SIZE SCHEDULE ..... \$ \_\_\_\_\_  
 (IF NO METER SERVICE WORK BEING DONE, USE VALUATION OF JOB FOR PERMIT FEE)

VALUATION OF JOB (VALUATION OF ALL MATERIALS, LABOR, AND FIXTURES INSTALLED) \$ 30,960.36

Building Official: [Signature] Date 8-10-16  
 Verified Contractor's Licenses & Insurance are on file [Signature] Date 8-10-16  
need NOC

Permit Fee = \$ 187.00  
 Review Fee = \$ 93.50  
 3% FL Surcharge = \$ 8.42  
 TOTAL Permit = \$ 288.92

I hereby certify that the above is true and correct to the best of my knowledge.

I hereby make Application for Permit as outlined above, and if same is granted I agree to conform to all Florida Building Code Regulations and City Ordinances regulating same and in accordance with plans submitted. The issuance of this permit does not grant permission to violate any applicable Town and/or State of Florida codes and/or ordinances.

LICENSE HOLDER SIGNATURE [Signature] LICENSE # EF20000402

LICENSE HOLDER NAME THOMAS E SWAIN COMPANY NAME HIDDEN EYES LLC DBA ENVERA SYSTEMS

Street Address 2833 CATTLEMEN ROAD

City SARASOTA State FL Zip Code 34232 Phone Number 561 910 5831

Email Address PERMITS@ENVERASYSTEMS.COM

NOTE: The Building Permit Number is required if the Electrical Installation is associated with any construction or alteration where a Building Permit has been issued.

4-21  
4-21  
8.42

151.16  
30.65  
150.-  
187.2 + 93.50 = 280.70

Building Permit Number \_\_\_\_\_

Prepared by and return to:  
Envera Systems  
4171 W Hillsboro Blvd Ste 7  
Coconut Creek, FL 33073  
Permit No: \_\_\_\_\_  
PIN No: 20-23-30-0668-00-008

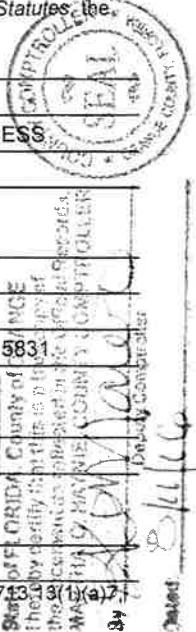
DOCH 20160416239  
08/11/2016 01:46:36 PM Page 1 of 1  
Rec Fee: \$10.00  
Martha O. Haynie, Comptroller  
Orange County, FL  
MB - Ret To: ENVERA SYSTEMS



### NOTICE OF COMMENCEMENT

The undersigned hereby gives notice that improvement will be made to certain real property, and in accordance with Chapter 713, Florida Statutes, the following information is provided in this Notice of Commencement.

1. **DESCRIPTION OF PROPERTY:** FRONT ENTRANCE - ISLE VISTA AVE, ORLANDO FL 32812  
BELLE VISTA ON LAKE CONWAY 69/12 TRACT H (PRIVATE ROADWAY)
2. **GENERAL DESCRIPTION OF IMPROVEMENT:** INSTALLATION OF LOW VOLTAGE SECURITY CAMERA SYSTEM AND ACCESS CONTROL SYSTEM WITH UNDERGROUND CONDUIT RUNS. INSTALLATION OF BARRIER GATES.
3. **OWNER INFORMATION:**
  - a. Name and address: Belle Vista On Lake Conway Homeowners Assn Inc, 6972 Lake Gloria Blvd Orlando, FL 32809-3200
  - b. Interest in property: Fee Simple
  - c. Name and address of fee simple titleholder (if different than Owner): \_\_\_\_\_
4. **CONTRACTOR INFORMATION:** Hidden Eyes LLC d/b/a Envera Systems, 2833 Cattlemen Road, Sarasota, FL 34232. 561 910 5833
5. **SURETY INFORMATION:**
  - a. Name and address: N/A
  - b. Phone number: \_\_\_\_\_ Amount of bond: \$ \_\_\_\_\_
6. **LENDER INFORMATION:**
  - a. Name and address: N/A
  - b. Phone number: \_\_\_\_\_
7. Persons within the State of Florida designated by Owner upon whom notices or other documents may be served as provided by Section 713.13(1)(a), Florida Statutes:
  - a. Name and address: \_\_\_\_\_
  - b. Phone number: \_\_\_\_\_
8. In addition to himself or herself to receive a copy of the Lienor's Notice as provided in Section 713.13(1)(b), Florida Statutes, Owner designates:
  - a. Name and address: \_\_\_\_\_
  - b. Phone number: \_\_\_\_\_
9. Expiration date of this Notice of Commencement (expiration date is one(1) year from date of recording unless specified): \_\_\_\_\_



**WARNING TO OWNER: ANY PAYMENTS MADE BY THE OWNER AFTER THE EXPIRATION OF THE NOTICE OF COMMENCEMENT ARE CONSIDERED IMPROPER PAYMENTS UNDER CHAPTER 713, PART I, SECTION 713.13, FLORIDA STATUTES, AND CAN RESULT IN YOUR PAYING TWICE FOR IMPROVEMENTS TO YOUR PROPERTY. A NOTICE OF COMMENCEMENT MUST BE RECORDED AND POSTED ON THE JOB SITE BEFORE THE FIRST INSPECTION. IF YOU INTEND TO OBTAIN FINANCING, CONSULT WITH YOUR LENDER OR AN ATTORNEY BEFORE COMMENCING WORK OR RECORDING YOUR NOTICE OF COMMENCEMENT.**

[Signature]  
Signature of Owner or Lessee, or Owner's or Lessee's Authorized Officer/Director/Partner/Manager

APRIL KAISEN  
Print Signatory's Name and Title/Office Name  
Manager, Leland Management

State of Florida  
County of ORANGE  
The foregoing instrument was acknowledged before me this 4 day of Aug, 2016 by APRIL KAISEN  
as MANAGER for Belle Vista and is personally known  OR Produced Identification

[Signature]  
Signature - Notary Public

Verification pursuant to Section 92.525, Florida Statutes.  
Under penalties of perjury, I declare that I have read the foregoing and that the facts stated in it are true to the best of my knowledge and belief.



[Signature]  
Signature of Natural Person Signing Above

Date: 8/10/2016

I Thomas Edward Swain do hereby grant permission to Erick DeDiss / Anson Hillier to act as my agent in all aspects in order to obtain a building permit from the Universal Engineering Sciences \_\_\_\_\_ for the property located at Front Entrance Isle Vista Ave Orlando, FL 32812

This will allow my agent to answer any and all questions on my behalf and to sign any and all documents for me; however, I accept fully responsibility to ensure that my project meets all zoning and building code compliance.

Sincerely,



Thomas Edward Swain

Hidden Eyes, LLC d/b/a Envera Systems

EF20000402

State of Florida  
County of Sarasota

The foregoing instrument was acknowledged before me this 8 day of Aug, 2016, by Thomas E. Swain, who is personally known to me and who did not take an oath.



Notary Signature





### Sarasota County Business Tax Receipt

**2015-16**

THIS TAX DOES NOT ASSURE QUALITY OF WORK OR CONFIRM THAT REGULATORY OR ZONING REQUIREMENTS HAVE BEEN MET, IT IS THE OWNER'S RESPONSIBILITY TO ENSURE COMPLIANCE.

**Account No.**  
**990010092907**

**Business Type:** CONTRACTOR - LICENSED

**Business Address:** HIDDEN EYES LLC  
2833 CATTLEMEN RD  
SARASOTA uninc FL 34232

**PAID:** 5544512.0001 8/11/2015 \$23.62

SWAIN TOM

2833 CATTLEMEN RD  
SARASOTA FL 34232

All businesses in Sarasota County are responsible for complying with the Sarasota County mandatory recycling ordinance.

**Sarasota County Tax Collector**  
**Barbara Ford-Coates**  
101 S. Washington Blvd., Sarasota, FL 34236  
(941) 861-8300, option 3  
[www.SarasotaTaxCollector.com](http://www.SarasotaTaxCollector.com)  
[Info@SarasotaTaxCollector.com](mailto:Info@SarasotaTaxCollector.com)

**Valid until 9/30/2016**

RICK SCOTT, GOVERNOR



KEN LAWSON, SECRETARY

**STATE OF FLORIDA**  
**DEPARTMENT OF BUSINESS AND PROFESSIONAL REGULATION**  
**ELECTRICAL CONTRACTORS LICENSING BOARD**

LICENSE NUMBER	
EF2000402	

The ALARM SYSTEM CONTRACTOR I  
Named below IS CERTIFIED  
Under the provisions of Chapter 489 FS  
Expiration date: AUG 31, 2016

SWAIN, THOMAS EDWARD  
ENVERA SYSTEMS  
2833 CATTLEMEN RD  
SARASOTA FL 34240



ISSUED: 12/02/2015      DISPLAY AS REQUIRED BY LAW      SEQ # L1512020000630

(For the protection of our professional license holders, this license contains hidden security features to prevent counterfeiting. Unauthorized reproduction is strictly prohibited and will be prosecuted to the fullest extent of the law.)

The Department of Business and Professional Regulation (DBPR), issues licenses for many licensed businesses and practitioners in the State of Florida.

DBPR is changing the way you interact with state government. Many of DBPR's services are available online at [www.MyFloridaLicense.com](http://www.MyFloridaLicense.com). We encourage you to utilize these services to make address changes, licensing changes or to renew your license.

Name changes require legal documentation verifying the name change, which must be mailed to the DBPR. An original, a certified copy or a duplicate copy of an original or certified copy of a document that shows the legal name change will be accepted, unless the DBPR has a question about the authenticity of the document.

If applicable, the DBPR will send a renewal notice to your last known address or email address of record. If you have not received your renewal notice, please call our Customer Contact Center at 850.487.1395 or online at [www.MyFloridaLicense.com/contactus](http://www.MyFloridaLicense.com/contactus).

Please refer to your profession's governing statutes and Administrative codes for further information regarding renewals. These may be accessed from our website.

AC# 01323673

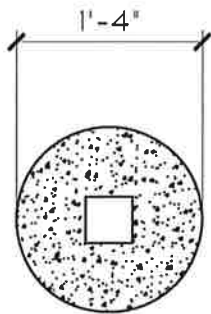


CAMERA ATTACHED TO  
POLE w/ MIN. (4) 1/4"x1"  
2024-T4 SELF-TAPPING  
SCREWS SPACED @ 1"  
O.C. (U.N.O. IN MANUF.  
SPECS.)

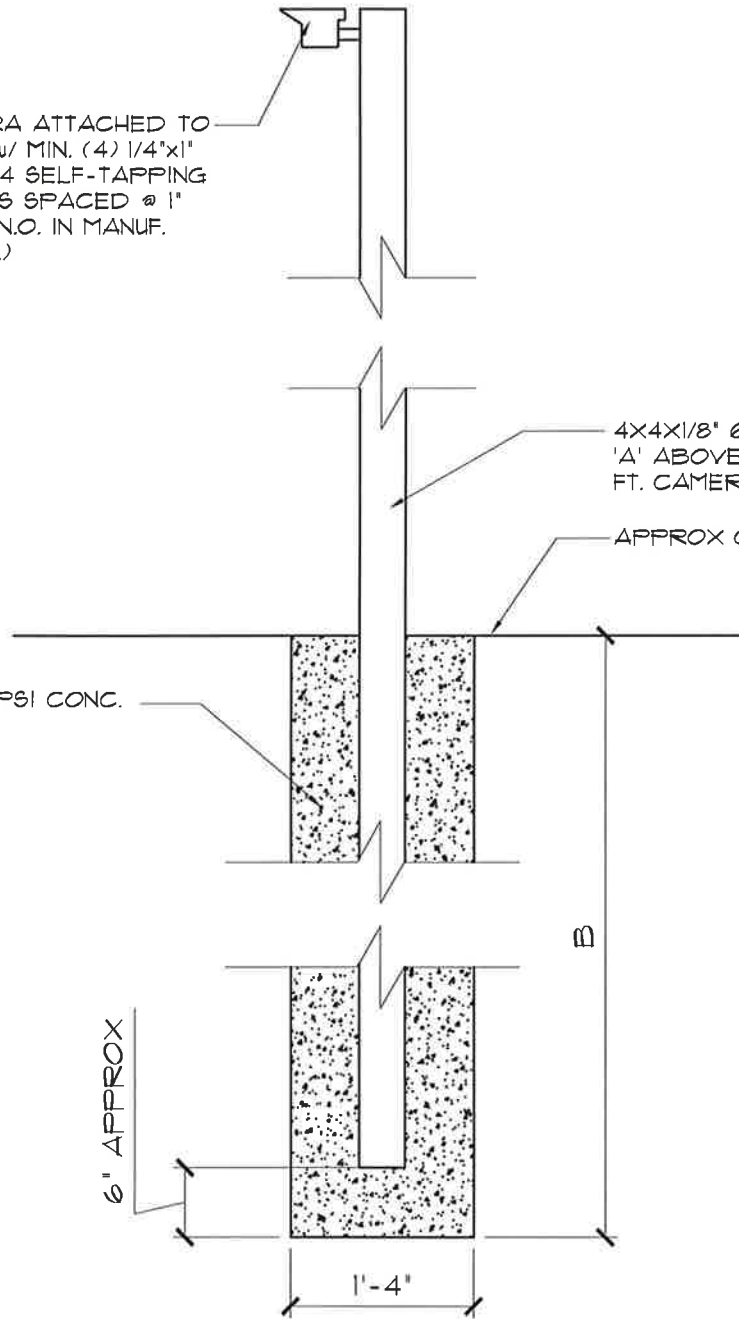
4X4X1/8" 6063-T6 ALUM POST  
'A' ABOVE GRADE w/ 0.09 SQ.  
FT. CAMERA EXPOSURE

APPROX GRADE

3000 PSI CONC.



PLAN VIEW



SECTION

DIMENSION LEGEND

'A'	'B'
A < 8'	3'-0"
8' < A < 12'	3'-8"
12' < A < 16'	4'-4"

NOTE

SOIL TYPE DESIGN AS SAND,  
SILTY SAND, CLAYEY SAND,  
SILTY GRAVEL, AND CLAYEY  
GRAVEL.



THIS STRUCTURE IS DESIGNED TO WITHSTAND VUL 170 MPH WINDS FOR EXPOSURE 'C', CATEGORY II PER THE FLORIDA BUILDING CODE (REF. ASCE-7-10) AND IS CERTIFIED AS SUCH.

Engineering By:

DBSS, INC.

CA#27371

PHONE: 321.251.6006

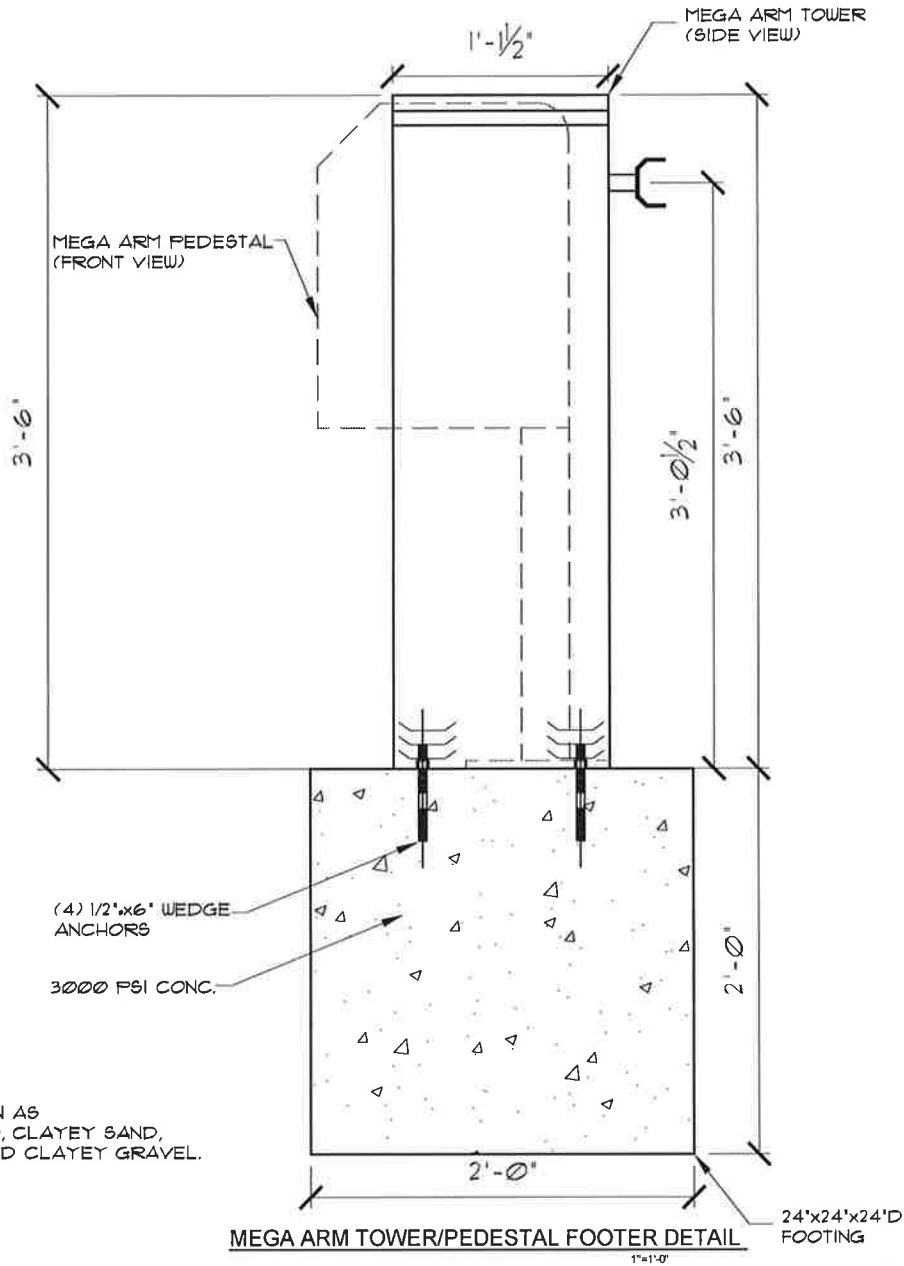
3662 AVALON PARK EAST BLVD.

SUITE 2072

ORLANDO, FL. 32828

ENVERA SYSTEMS  
CAMERA POLE MOUNT

Job: ENVERA  
checked: SSPE  
drawn: TM  
date: 06.10.2016  
scale: AS NOTED



NOTE  
 SOIL TYPE DESIGN AS  
 SAND, SILTY SAND, CLAYEY SAND,  
 SILTY GRAVEL, AND CLAYEY GRAVEL.

MEGA ARM TOWER/PEDESTAL FOOTER DETAIL

1"=1'-0"



THIS STRUCTURE IS DESIGNED TO WITHSTAND WIND 170 MPH WINDS FOR EXPOSURE "C" PER THE FLORIDA BUILDING CODE (REF. ASCE-7-10) AND IS CERTIFIED AS SUCH.

Engineering By:  
 DBSS, INC.  
 CA#27371  
 PHONE: 321.251.6006  
 3662 AVALON PARK EAST BLVD.  
 SUITE 2072  
 ORLANDO, FL. 32828

ENVERA SYSTEMS  
 MEGA ARM/ TOWER DETAILS

job: ENVERA  
 checked: SSPE  
 drawn: SF  
 date: 06.30.2016  
 scale: AS NOTED

MD



## CAT5DB-0

### SCOPE

This establishes the specifications for a four pair unshielded, 100 Ohm enhanced Category 5 data cable, used for LAN applications up to 350 MHz. A water swellable tape is applied longitudinally under a polyethylene jacket. SUITABLE FOR DIRECT BURIAL. The cable is particular suited for bi-directional transmission protocols including 622 ATM, gigabitethernet, and Wideband networking. It is also suitable for 100 Base TX, 100 Base VG and 155 ATM.

### REFERENCE DOCUMENTS:

NEC Article 800  
 UL Subject 444, Type CM or MP  
 TIA/EIA 568-A-5 Category 5e Draft 11

### REQUIREMENTS

This document contains values for all important electrical and mechanical parameters, and as such is the basis for all incoming inspection and acceptance.

### ELECTRICAL

Mutual Capacitance 14pF/ft., nominal  
 Capacitance unbalance 330pF/100m maximum @1KHz.  
 Velocity of propagation 70% nominal  
 Characteristic impedance: 100+/- 15% (Measured from 1MHz to 100 MHz)  
 Rated for 300 volts  
 Maximum attenuation per 100 meeters:

dB	MHz	dB	MHz
1.8 @	.772	9.1 @	20.00
2.0 @	1.00	10.2 @	25.00
4.1 @	4.00	11.4 @	31.25
5.7 @	8.00	16.4 @	62.5
6.4 @	10.00	21.0 @	100.00
8.1 @	16.00	44.9 @	350.00



Minimum NEXT, per 100 meeters (worst pair-to-pair):

dB		MHz		dB		MHz
67.7	@	.772		46.5	@	20.00
66.0	@	1.00		45.0	@	25.00
57.0	@	4.00		43.6	@	31.25
52.5	@	8.00		39.1	@	62.50
51.0	@	10.0		36.0	@	100.00
48.0	@	16.0		27.2	@	350.00

Minimum PS-NEXT, per 100 meeters:

dB		MHz		dB		MHz
64.7	@	.772		43.5	@	20.00
63.0	@	1.00		42.0	@	25.00
54.0	@	4.00		40.6	@	31.25
49.5	@	8.00		36.1	@	62.50
48.0	@	10.0		33.0	@	100.00
45.0	@	16.00		24.2	@	350.00

Minimum ELFEXT, per 100 meters (worst pair-to-pair):

dB		MHz		dB		MHz
63.8	@	1.00		37.7	@	20.00
51.7	@	4.00		35.8	@	25.00
45.7	@	8.00		33.9	@	31.25
43.8	@	10.00		27.8	@	62.50
39.7	@	16.0		23.8	@	100.00
				12.9	@	350.00

Minimum PS-ELFEXT, per 100 meters:

dB		MHz		dB		MHz
60.8	@	1.00		34.7	@	20.00
48.7	@	4.00		32.8	@	25.00
42.7	@	8.00		30.9	@	31.25
40.8	@	10.00		24.8	@	62.50
36.7	@	16.0		20.8	@	100.00
				9.9	@	350.00



**Minimum Return Loss:**

dB	@	MHz		dB	@	MHz
20	@	1.00		25	@	20.00
23.0	@	4.00		24.3	@	25.00
24.5	@	8.00		23.6	@	31.25
25	@	10.00		21.5	@	62.50
25	@	16.0		20.1	@	100.00
				16.3	@	350.00

Conductor D.C.R. 28.6 ohms/mft maximum at 20c  
 D.C.R. Unbalance: 5% maximum  
 Propagation delay skew. 45ns/100m maximum

**MECHANICAL**

Conductor: 24AWG Solid bare copper  
 Insulation material: Polyolefin  
 Number of unshielded pairs: 4  
 Color Code : Pair #1 White/Blue – Blue, Pair #2 White/Orange – Orange  
 Pair #3 White/Green – Green , Pair #4 White/Brown – Brown  
 (Pairs are twisted w/staggered left hand lays)

Jacket Material = Polyethylene

BLACK

Jacket O.D. 0.225 in., nominal

Temperature Ratings: Insulation 0c to 60c  
 Operation -20c to 60c

Voltage Rating: 300 volts

- 1.) NEXT = Near End Cross Talk – measurement of noise between any two active pairs in a four pair cable.
- 2.) PS-NEXT = Power Sum Next is the measurement of noise between all pairs in a four pair cable.
- 3.) ELFEXT = Equal Level Far End Cross Talk - between any two active pairs in a four pair cable.
- 4.) PS-ELFEXT = Power Sum Next – between all pairs in a four pair cable.



**600 VOLT TRAY CABLE  
STRANDED MULTI CONDUCTOR  
INDUSTRIAL / PROCESS CONTROL CABLE**

**DESCRIPTION:** U.L. Listed \* ASTM bare copper conductors \* PVC insulation with nylon \* cabled or twisted pair construction \* Sunlight and moisture resistant PVC Jacket \* Water Blocked Construction \* 100% Overall Aluminum Polyester foil shield \* Tinned Copper Drain Wire \* Rip cord under Jacket

**APPLICATIONS:** These cables are suitable for installation in wet or dry locations. Cable jackets are sunlight resistant, impervious to moisture and vapor penetration, and non-propagating. The cable can be used in raceways, outdoor applications and direct burial applications.

**RATINGS:** UL Standard 1277 \* UL Standard 83 \* UL 1581 Vertical Tray Flame Test comparable to IEEE 383 \* NEC type TC Listed, which is approved for cable tray use in Class 1, Division 2 areas, per NEC articles 340, 318, 501, and for Class 1 circuits as permitted in Article 725 \* Bare Copper Constructions are NEC Type FPL listed, which is approved for use in **POWER LIMITED FIRE** Protective signaling circuits, per NEC Article 760 \* Temperature range 90 deg.C dry 75 deg. C wet locations.

**KVNTC1806S-0**

No. of Cond	AWG Size & Stranding	Nom. Insulation Thickness		Nom. Jacket Thickness		Nom. O. D.		Nom. Capacitance			
		inch	mm	inch	mm	inch	mm	pF/ft		pF/m	
								*	*	**	**
6	18 (16x30)	.38	.13	.040	1.02	.575	14.61	32	105	58	190

\*Capacitance between conductors.  
\*\* Capacitance between one conductor and the others connected to the shield



**600 VOLT TRAY CABLE  
STRANDED MULTI CONDUCTOR  
INDUSTRIAL / PROCESS CONTROL CABLE**

**DESCRIPTION:** U.L. Listed \* ASTM bare copper conductors \* PVC insulation with nylon \* cabled or twisted pair construction \* Sunlight and moisture resistant PVC Jacket \* Rip cord under Jacket

**APPLICATIONS:** These cables are suitable for installation in wet or dry locations. Cable jackets are sunlight resistant, impervious to moisture and vapor penetration, and non-propagating. The cable can be used in raceways, outdoor applications and direct burial applications.

**RATINGS:** UL Standard 1277 \* UL Standard 83 \* UL 1581 Vertical Tray Flame Test comparable to IEEE 383 \* NEC type TC Listed, which is approved for cable tray use in Class 1, Division 2 areas, per NEC articles 340, 318, 501, and for Class 1 circuits as permitted in Article 725 \* Bare Copper Constructions are NEC Type FPL listed, which is approved for use in **POWER LIMITED FIRE** Protective signaling circuits, per NEC Article 760 \* Temperature range 90 deg.C dry 75 deg. C wet locations.

**KVNTC1812-0**

No. of Cond	AWG Size & Nom. Capacitance Stranding	Nom. Insulation		Nom.Jacket Mils		Overall Diam.Inch				
		Thickness	Thickness	Thickness	Thickness	pl/ft	pl/m	pl/ft	pl/m	
12	18 (7x30)	.46	.15	.040	.046	14.61	32	105	58	190

\*Capacitance between conductors.

\*\* Capacitance between one conductor and the others connected to the shield



## Data Communications Composite Cable Specification

### KVNTC1802P71PS

**Description:** Two element composite cable, 1 pair 18 AWG unshielded and 1 pair 18 AWG shielded with an overall water blocking tape, and a polyvinylchloride jacket for data communications and security applications. The cable is manufactured in the USA and listed (UL) CM c(UL)us, 105°C .

#### Element 1: 18 AWG, 1 Pair PVC Insulated Unshielded Component

1. **Conductor**
  - 1.1 AWG & Stranding: 18 AWG, Class B, 7 Strand
  - 1.2 Material: Annealed Tinned Copper
2. **Insulation**
  - 2.1 Material: Polyvinylchloride (SR-PVC)
  - 2.2 Wall Thickness: 0.010"
3. **Color Code**
  - 3.1 Code: White x Green
4. **Assembly**
  - 4.1 Lay Length: 2.25" LHL Nominal
  - 4.2 Binder: N/A
  - 4.3 Shield: N/A
  - 4.4 Drain Wire: N/A
  - 4.5 Fillers: N/A

#### Element 2: 18 AWG, 1 Pair PVC Insulated Shielded Component

1. **Conductor**
  - 1.1 AWG & Stranding: 18 AWG, Class B, 7 Strand
  - 1.2 Material: Annealed Tinned Copper
2. **Insulation**
  - 2.1 Material: Polyvinylchloride (SR-PVC)
  - 2.2 Wall Thickness: 0.010"
3. **Color Code**
  - 3.1 Code: Black x Red
4. **Assembly**
  - 4.1 Lay Length: 2.25" LHL Nominal
  - 4.2 Binder: N/A
  - 4.3 Shield: Aluminum/Mylar Tape - 100% coverage
  - 4.4 Drain Wire: 20 AWG, 7str Tinned Copper
  - 4.5 Fillers: N/A

---

# Data Communications Composite Cable Specification

## Overall Cable:

### 5. Assembly - Elements 1 & 2

5.1 Cable Lay Length:	2.25" LHL Nominal
5.2 Cable Binder:	Water Blocking Tape
5.3 Cable Shield:	N/A
5.4 Cable Drain Wire:	N/A
5.5 Rip Cord:	Yes

### 6. Jacket

6.1 Material:	Polyvinylchloride (PVC)
6.2 Wall Thickness:	0.025"
6.3 Diameter:	0.219"
6.4 Color:	Gray
6.5 Weight:	40 lbs./Mft.

### 7. Markings

- 7.1 Type: Cable shall be permanently identified via surface inkjet print
- 7.2 Legend: 18AWG 2PR (UL) CL3 OR CM C(UL)US 105°C "SUITABLE FOR WET LOCATIONS"  
"ROHS"
- 7.3 Sequential Footage Markers: Yes

### 8. Standards

- 8.1 UL listed as Type CL3 OR CM c(UL)us, 105°C
- 8.2 All materials used in the manufacture of this cable are RoHS compliant

**ALL SPECIFIED PARAMETERS ARE NOMINAL AND SUBJECT TO VERIFICATION**

# ADPRO® FastTrace™ 2 Hybrid Tx

Network Video and Audio  
Event Recorder / Transmitter

## Description

The ADPRO FastTrace 2 Hybrid Tx by Xtralis is the latest H.264 single- and multi-site video security system supporting up to 16 analogue and/or IP/Megapixel cameras. It has been designed, developed and manufactured by Xtralis, the leader in video security technologies.

When used in conjunction with the ADPRO VideoCentral Platinum management software, the unique combination of video alarm verification, remote site monitoring and control, and evidential quality event recording (H.264), it provides the most flexible multi-site video security system available.

The ADPRO FastTrace 2 Hybrid Tx delivers optimised image quality, efficient bandwidth and hard disk utilisation, in addition to:

- H.264 compression
- Up to 30 ips NTSC/25 ips PAL per camera
- Analogue: CIF/QCIF/2CIF/4CIF – SIF/QSIF/2SIF/4SIF
- Scalable up to 4, 8, 12 or 16 analogue; 4 or 8 analogue and 8 IP or 16 IP (H.264 IP cameras: Axis, Sony 5th generation, Samsung, Sanyo, Arecont, ACTi, Brickcom)
- Fully integrated with ADPRO range of security solutions

## Features

- The ADPRO FastTrace 2 Hybrid Tx utilises H.264 compression technology which optimises bandwidth utilisation while providing the highest quality video with the lowest bandwidth.
- Dual codec (analogue cameras) or use of Dual stream (IP cameras) for independent event recording and viewing quality settings (per camera).
- One audio input per video input for synchronised audio recording on event.
- The intuitive web interface gives authorised users remote access to live and recorded video over the network, either multicast or unicast.
- Provides extremely fast searches through large amounts of event recorded video with unique post-record metadata motion search capability. Results are presented on a timeline in seconds without large video data transfers across the network.
- The ADPRO FastTrace 2 Hybrid Tx can be managed and configured from the intuitive FastTrace 2 internet browser interface.
- Integrates (optional) on-board video analytics capabilities (up to 4 channels) for indoor loitering detection and outdoor perimeter detection (sterile zone detection).

## Video Alarm Verification

- Live and event recorded video transmission, two-way audio, remote camera control and flexible integration capabilities provide full remote site surveillance and control, eliminating the need for on-site guards.
- Event-based video transmission pushes video on alarm from the remote site to the ADPRO VideoCentral Platinum remote video and alarm management software and ADPRO M3000 command and control software.
- Rapid assessment of event video alarm images enables the cause of alarms to be viewed quickly and efficiently, allowing for real time intervention as necessary and minimising nuisance alarm responses.
- Use ADPRO FastTrace 2 Hybrid Tx and the ADPRO VideoCentral Platinum remote video and alarm management software or ADPRO M3000 command and control software for centralised management of multiple remote sites to improve efficiency and reduce personnel costs.
- An SDK interface is available to support direct integration to 3rd party receiving software. See the ADPRO Advantage Programme for further information.



## Key Benefits

- H.264 best-in-class video compression, highest quality video with lowest bandwidth
- Dual codec (analogue cameras) or use of Dual stream (IP cameras) for totally independent recording and viewing quality settings (per camera)
- Resolutions:
  - Analogue (PAL/NTSC): CIF/SIF, QCIF/QSIF, 2CIF/2SIF, 4CIF/4SIF
  - IP: up to HD/MP resolution (depending on the camera)
- Intuitive Web interface for viewing live or recorded video and system configuration
- Automatic video alarm transmission to ADPRO VideoCentral Platinum and ADPRO M3000 software
- CMS control override function
- Two-way audio capability, one bi-directional half-duplex audio channel available per video channel with optional audio switcher
- Extremely fast post-record metadata motion search capability
- 10 custom settings for live viewing
- Local on-board input/outputs and extended input/outputs with up to 128 total input/outputs via optional Ethernet PoE modules
- Camera supervision for contrast, no video signal and camera tamper (moved or defocused)
- Alarm transmission capability:
  - Primary IP/3G (optional\*)
  - Backup 3G (optional\*)
  - Support for Dynamic IP addresses (DNS)
- Communication channel supervision via automatic Site Pulse watchdog signal
- Time synchronisation via NTP time servers
- Integrated PTZ telemetry support with PTZ presets on alarm (RS485, via Coax)
- Small desktop case - 19" rack mount possibility
- SDK to interface to 3rd party receiving software
- High Level Interface to ADPRO Presidium intelligent video analytics platform
- Can be upgraded to a unit with extended continuous recording capabilities via licencing
- On-board optional video analytics extensions for:
  - Indoor Loitering Detection: detects loitering persons, even when they remain static for a long time
  - Outdoor Perimeter Detection: designed for outdoor sterile zone monitoring

\* 3G-modem not included - For more information, please contact your Xtralis representative.

# ADPRO® FastTrace™ 2 Hybrid Tx

Network Video and Audio  
Event Recorder / Transmitter

## Specifications

<b>Video Input</b>	4, 8, 12 or 16 analogue; 4 or 8 analogue and 8 IP or 16 IP (H.264 IP cameras: Axis, Sony 5th generation, Samsung, Sanyo, Arecont, ACTi, Brickcom). The latest list of compatible IP cameras and their respective integrated functionality is available on our website.
<b>Video Output</b>	SVGA – Multiple matrix type views
<b>Video Compression</b>	H.264
<b>Video Resolution</b>	Analogue (PAL/NTSC): CIF/SIF, QCIF/QSIF, 2CIF/2SIF, 4CIF/4SIF IP: up to HD/MP resolution (depending on camera)
<b>Images/Second</b>	Analogue/IP: PAL/NTSC: up to 25/30 ips
<b>Bandwidth Consumption</b>	6 ips CIF, 70 kb/sec; 12 ips 4CIF, 400 kb/sec
<b>Bandwidth Management</b>	Configurable variable or constant bitrate Configurable bandwidth limiter
<b>Hard Disks</b>	500 GB onboard storage for event recording. Disk supervision and HDD Information page
<b>Audio Input</b>	1 per camera
<b>Audio Output</b>	Standard 1 line level output, Optional: up to 1 per camera via audio switcher(s)
<b>Motion Detection</b>	4 zones adjustable per camera
<b>System</b>	PC platform - Linux OS
<b>Audio Compression</b>	OggVorbis Codec 16 Kbps
<b>Command Inputs</b>	On the box (max. 20, depending on the model) or via Ethernet I/O module with PoE (up to 128)
<b>Relay Outputs</b>	On the box (max. 8, depending on the model) or via Ethernet I/O module with PoE (up to 128)
<b>Network Protocols</b>	TCP, UDP, TELNET, HTTP, SMTP, RTSP, RTP, NTP
<b>Application Update</b>	Local and remote
<b>Web Server</b>	Integrated
<b>Com Ports</b>	USB-RS232 for serial comms USB-RS232/RS485 (or Basic on the box I/O-RS485 port) for PTZ control
<b>Ethernet</b>	10/100/1000 Base-T, auto detection, full duplex, RJ45
<b>Recording Support</b>	1 SATA hard disk (500 GB) for event recording (up to 16,000 event recordings per day, 15 seconds per event recording)
<b>Recording Type</b>	Event (see also recording support), Input, Motion Detection, Alarm Over IP
<b>Remote Visualisation</b>	Web client; Windows XP, Vista, Windows 7, Server 2003
<b>PTZ Cameras</b>	Via RS485 or via coax, extensive list available
<b>Management</b>	Web browser interface, ADPRO VideoCentral Platinum and ADPRO M3000
<b>Power Supply</b>	90-260 VAC, 50/60 Hz
<b>Operating Temperature</b>	5 – 40 °C (41°F – 104°F) Ethernet I/O module : 0 – 40 °C (32°F – 104°F)
<b>Humidity</b>	20 – 93 % rh – non-condensing Ethernet I/O module : <= 93 % rh – non-condensing
<b>Ordering Information</b>	<b>Basic</b> <ul style="list-style-type: none"> <li>Per 4 or 8 analogue and/or per 8 IP video inputs</li> <li>Model: 19" rack</li> </ul> <b>Options (ordering with the basic system)</b> <ul style="list-style-type: none"> <li>Basic on the box I/O card (8 monitored inputs, 4 relay Outputs)</li> <li>Extension on the box I/O card (12 monitored inputs, 4 relay outputs)</li> <li>Audio output switcher, interface for PTZ over coax.</li> <li>USB-RS232 cable, USB-RS485 cable.</li> </ul>
<b>Warranty</b>	Twenty four (24) months on all components

## ADPRO FastTrace 2 Hybrid Tx - 19 inch Rack



<b>Dimensions</b>	W: 445 mm (17.52") H: 132 mm (5.20") L: 300 mm (11.8")
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## ADPRO VideoCentral Platinum Live Multi-screen



## Web-Browser Interface



## Ethernet I/O with PoE

Din Rail installation  
4...16 digital inputs  
4...16 relay outputs  
NC/NO  
3 LEDs for operational status of ADPRO FastTrace 2 Hybrid Tx  
Watchdog and sounder



www.xtralis.com

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UK and Europe +44 1442 242 330 Middle East +962 6 569 1083

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**ADPRO®**  
by **xtralis™**



### **FSP350-70PFL**

Dimensions : 140 x 150 x 86mm

Application : For standard, advanced workstation, server and industrial power system.

Watt : 350W



#### Description

FSP350-70PFL is an industrial level of switching power supply. The power supply comes to offer the total power capacity up to 350 Watts, and uses unique active PFC (Power Factor Correction) circuit design with its high-load electrical components, makes it to be perfectly used in an industrial environment. In addition, with its full range of input and output electrical features, the power supply is ideally the best choice for server, workstation, communication or any other automation applications to use. The product also complies with the latest safety and EMC standards, which is perfectly to meet various regulations worldwide.

#### Application

For standard, advanced workstation, server and industrial power system.

#### Features

- 80 Plus Bronze
- Low Ripple & Noise
- Output over voltage protection
- Short circuit protection on all outputs
- Resettable power shut down
- 100% burn-in under high ambient temperature(50°C)
- Vacuum-impregnated transformer
- MTBF:100K hours at 25°C
- 100% Hi-pot tested
- Line input fuse protection

**Model Name** FSP350-70PFL

**Wattage** 350W

**Dimension** 140mm (L) x 150 mm (W) x 86mm (H)

**Product Highlight** Efficiency Level 80 Plus Bronze

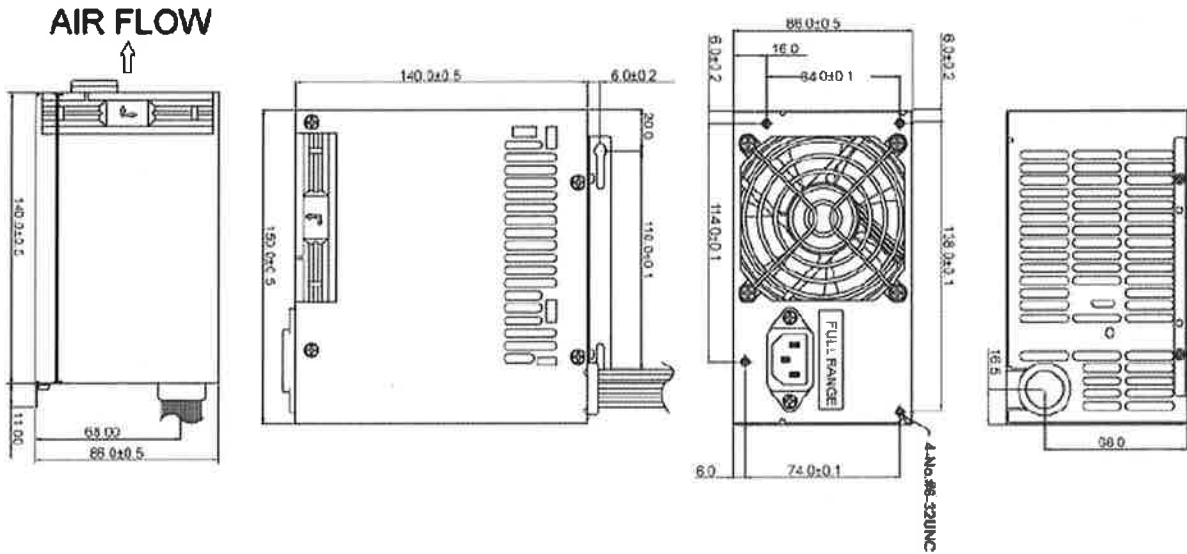
	Altitude	2000M
	PMBus	For standard, advanced workstation, server and industrial power system.
<b>General Specification</b>	Efficiency	85% 230VAC
	Voltage Regulation	+3.3V, +12V, +5V, +5SB: $\pm 5\%$ -12V, -5V: $\pm 10\%$
	PWOK Delay Time	500ms > PWOK > 100ms
<b>Input Electrical Specification</b>	Input Frequency	47 ~ 63 Hz
<b>Output Specification</b>	Input Current	115V@ 7.0 Amps-rms maximum 230V@ 3.5 Amps-rms maximum
	Hold-up time	115V/60Hz 15mSec. Minimum@100% Load, 230V/50Hz 15mSec. Minimum@100% Load
	Output Voltage Regulation	+3.3Vdc output : +3.7 Vdc minimum, + 4.8Vdc maximum +5Vdc output : +5.7 Vdc minimum, + 7Vdc maximum +12Vdc output : +13.3 Vdc minimum, + 16Vdc maximum
	Ripple & Noise	115V-rms/230V-rms 5V 20ms Maximum 115V-rms/230V-rms 12V 20ms Maximum 3.3V:50mV p-p 5V:50mV p-p 12V1:120mV p-p 12V2:120mV p-p -12V:120mV p-p 5Vsb:50mV p-p -5V:100mV p-p
<b>Environmental Requirement</b>	Temperature Range	Operating : 0 to +50°C Storage :-20 to +80°C
	Humidity	Operating : 85% to % RH, Non-condensing Storage : 95% to % RH, Non-condensing
	MTBF	The power supply have a minimum predicted MTBF(MIL-HDBK-217) of 100,000 hours of continuous operation at 25°C, maximum-output load, and nominal AC inout voltage
<b>Safety</b>		CE,FCC,TUV,UL/cUL,CCC

Output Voltage and Current Rating

	<b>+3.3V</b>	<b>+5V</b>	<b>+12V1</b>	<b>+12V2</b>	<b>-12V</b>	<b>-5V</b>	<b>+5Vsb</b>
<b>Ripple-Noise(R-P) mV</b>	50mV	50mV	120mV	120mV	120mV	100mV	50mV
<b>Regulation Load %</b>	$\pm 5\%$	$\pm 5\%$	$\pm 5\%$	$\pm 5\%$	$\pm 10\%$	$\pm 10\%$	$\pm 5\%$
<b>Output Max.(A)</b>	21A	16A	17A	17A	0.5A	0.3A	3A
<b>Output Min.(A)</b>	0.5A	0.5A	0.5A	0.5A	0A	0A	0.1A

Notes

- 5V, 3.3V, 12V, -12V Will gave the regulation to 10% when all load take off.
- The +3.3V, +5V total output shall not exceed 105 watts.
- The total output shall not exceed 350 watts.
- -5V Option, 5vsb peak $\leq$ 10ms.



## Specifications

<b>Model Name</b>	FSP350-70PFL
<b>Wattage</b>	350W
<b>Dimension</b>	140mm (L) × 150 mm (W) × 86mm (H)
<b>Product Highlight</b>	Efficiency Level 80 Plus Bronze
	Altitude 2000M
	PMBus For standard, advanced workstation, server and industrial power system.
<b>General Specification</b>	Efficiency 85% 230VAC
	Voltage Regulation +3.3V, +12V, +5V, +5SB: ±5%
	-12V, -5V: ±10%
	PWOK Delay Time 500ms > PWOK > 100ms
<b>Input Electrical Specification</b>	Input Frequency 47 ~ 63 Hz
	Input Current 115V@ 7.0 Amps-rms maximum
	230V@ 3.5 Amps-rms maximum
<b>Output Specification</b>	Hold-up time 115V/60Hz 15mSec. Minimum@100% Load,
	230V/50Hz 15mSec. Minimum@100% Load
	Output Voltage Regulation +3.3Vdc output : +3.7 Vdc minimum, + 4.8Vdc maximum
	+5Vdc output : +5.7 Vdc minimum, + 7Vdc maximum
	+12Vdc output : +13.3 Vdc minimum, + 16Vdc maximum
	Ripple & Noise 115V-rms/230V-rms 5V 20ms Maximum
	115V-rms/230V-rms 12V 20ms Maximum
	3.3V:50mV p-p
	5V:50mV p-p
	12V1:120mV p-p
	12V2:120mV p-p
	-12V:120mV p-p
	5Vsb:50mV p-p
	-5V:100mV p-p
<b>Environmental Requirement</b>	Temperature Range Operating : 0 to +50°C
	Storage :-20 to +80°C

Humidity            Operating : 85% to % RH, Non-condensing  
 Storage : 95% to % RH, Non-condensing

MBTF                The power supply have a minimum predicted MTBF(MIL-HDBK-217) of 100,000 hours of continuous operation at 25°C, maximum-output load, and nominal AC inout voltage

**Safety**            CE,FCC,TUV,UL/cUL,CCC

Output Voltage and Current Rating

	<b>+3.3V</b>	<b>+5V</b>	<b>+12V1</b>	<b>+12V2</b>	<b>-12V</b>	<b>-5V</b>	<b>+5Vsb</b>
<b>Ripple-Noise(R-P) mV</b>	50mV	50mV	120mV	120mV	120mV	100mV	50mV
<b>Regulation Load %</b>	±5%	±5%	±5%	±5%	±10%	±10%	±5%
<b>Output Max.(A)</b>	21A	16A	17A	17A	0.5A	0.3A	3A
<b>Output Min.(A)</b>	0.5A	0.5A	0.5A	0.5A	0A	0A	0.1A

Notes

- 5V, 3.3V, 12V, -12V Will gave the regulation to 10% when all load take off.
- The +3.3V, +5V total output shall not exceed 105 watts.
- The total output shall not exceed 350 watts.
- -5V Option, 5vsb peak<=10ms.

<http://www.fsp-group.com.tw/index.php?do=proinfo&id=359>



See Color In Almost Complete Darkness Without IR LEDs

- HT7246iHR** 2.8 -12mm DC auto iris varifocal lens, dark grey housing
- HT7247iHR** 9 - 22mm DC auto iris varifocal lens, dark grey housing
- HT7250iHR** 5 - 50mm DC auto iris varifocal lens, dark grey housing

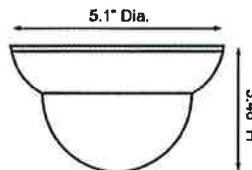
**Features**

- 650 lines of color resolution
- Amplify existing light with no distance limitations
- No problems caused by objects that reflect or absorb IR light sources
- Minimum illumination 0.00002 lux (Intensifier3™ @ 512x)
- Chameleon Cover™: Snap-on cover converts the housing from standard dark grey to decorator white and can be painted to match any décor
- 12VDC / 24VAC dual voltage operation
- Full OSD operation
- 3-axis wall or ceiling mount
- Vandal resistant
- Weather resistant operation
- IP66 compliant
- Relay outputs for motion detection
- 5 year warranty



Shown with Included paintable, snap-on Chameleon Cover™

**Now with Presets:**  
Outdoor, Indoor, Elevator,  
Lobby, Hallway & Dark



**Specifications**

Image Sensor	1/3" Sony Super-HAD II" CCD
Resolution	650 TV lines
Minimum Illumination	CDS Off: 0.15 lux CDS On: 0.00002 lux
Effective Pixels	768 (H) x 494 (V)
Total Pixels	811 (H) x 508 (V)
TV System	NTSC, PAL
Scanning Frequency	15.734kHz (H) & 59.94Hz (V)
Scanning System	2:1 interface
Synchronization	Internal
S/N Ratio	More than 52dB
Video Output	CVBS: 1.0Vp-p / 75 Ohm
Electronic Shutter Speed	1/60 sec. - 1/120,000 sec.
OSD	Available
WDR	On / Off (level adjustable)
Backlight Compensation	BLC / HLC / Off
Day & Night	Color / BW / Auto
Gain Control	High / Low / Off
White Balance	ATW / Outdoor / Indoor / Manual / AWC (1,700°K - 11,000°K)
Intensifier3™	Auto / Off (selectable x2 - x512)
Motion Detection	On / Off (8 programmable zones)

Privacy Masking	On / Off (12 programmable zones)
Speco DNR	On / Off (level adjustable)
Digital Zoom	On / Off (1x - 16x)
DIS	On / Off
Sharpness	On / Off (level adjustable)
Flip / Mirror	On / Off
Power Supply	12VDC / 24VAC (dual voltage) (power supply not included)
Power Consumption	12VDC, 250mA / 24VAC, 100mA
Operating Temperature	-4° F - 140° F
Dimensions	3.46" (H) x 5.1" (Dia.)
Weight	1 lb.

**Optional Accessories**



Speco Technologies is constantly developing and improving products.

We reserve the right to modify product design and specifications without notice and without incurring any obligation.

Rev. 7/25/12

For more information contact Speco Technologies  
200 New Highway, Amityville, NY 11701 • Toll Free: 1-800-645-5516 • Fax: 631-957-9142 or 631-957-3880  
[www.specotech.com](http://www.specotech.com)

## Intensifier3® Series Indoor/Outdoor Bullet Camera

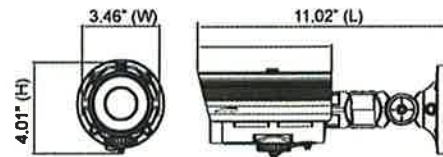
See Color In Almost Complete Darkness Without IR LEDs

<b>HTINTB8</b>	2.8 - 12mm auto iris varifocal lens, dark grey housing
<b>HTINTB8W</b>	2.8 - 12mm auto iris varifocal lens, white housing
<b>HTINTB9</b>	5 - 50mm auto iris varifocal lens, dark grey housing
<b>HTINTB9W</b>	5 - 50mm auto iris varifocal lens, white housing
<b>HTINTB10</b>	9 - 22mm auto iris varifocal lens, dark grey housing
<b>HTINTB10W</b>	9 - 22mm auto iris varifocal lens, white housing

### Features

- 1/3" Sony Super HAD II™ CCD
- 650 lines of color resolution
- Amplify existing light with no distance limitations
- No problems caused by objects that reflect or absorb IR light sources
- Minimum illumination 0.00002 lux (Intensifier3® @ 512x)
- Full OSD operation
- Now with Presets: Outdoor, Indoor, Elevator, Lobby, Hallway & Dark
- Anti-moisture glass and circuitry eliminates fog or condensation under any weather condition external controls for zoom & focus
- S/N Ratio more than 52dB (weight on)
- EZ mount system simplifies installation
- Relay outputs for motion detection
- Weather resistant operation
- IP66 compliant
- 12VDC / 24VAC dual voltage operation
- 5 year warranty

**INT 3**



### Specifications

Image Sensor .....	1/3" Sony Super HAD II™ CCD
Resolution .....	650 TV lines
Minimum Illumination .....	CDS off: 0.15 lux / CDS on: 0.00002 lux
Effective Pixels .....	768 (H) x 494 (V)
Total Pixels .....	811 (H) x 508 (V)
TV System .....	NTSC
Scanning Frequency .....	15.734kHz (H) & 59.94Hz (V)
Scanning System .....	2:1 interlace
Synchronization .....	Internal
S/N Ratio .....	More than 52dB
Video Output .....	CVBS: 1.0Vp-p / 75 ohms
Electronic Shutter Speed .....	1/60 sec. – 1/120,000 sec.
OSD .....	Available
WDR .....	On / Off (level adjustable)
Backlight Compensation .....	BLC / HLC / Off
Day/Night .....	Color / BW / Auto
AGC .....	High / Low / Off

White Balance .....	ATW / Outdoor / Indoor / Manual / AWC (1,700°K – 11,000°K)
Intensifier3® .....	Auto / Off (selectable 2x - 512x)
Motion Detection .....	On / Off (8 programmable zones)
Privacy Masking .....	On / Off (12 programmable zones)
Speco DNR .....	On / Off (level adjustable)
Digital Zoom .....	On / Off (1x - 16x)
DIS .....	On / Off
Sharpness .....	On / Off (level adjustable)
Flip/Mirror .....	On / Off
Power Consumption .....	12VDC, 400mA / 24VAC, 170mA
Power Supply .....	12VDC / 24VAC dual voltage operation (power supply not included)
Operating Temperature .....	-4° F – 140° F
Dimensions .....	3.46" (W) x 4.01" (H) x 11.02" (L)
Weight .....	3 lbs.



Speco Technologies is constantly developing and improving products. We reserve the right to modify product design and specifications without notice and without incurring any obligation.  
Rev. 2/22/13

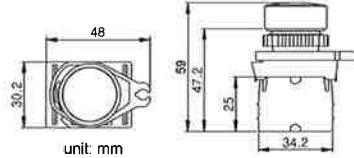
### Optional Accessories



# MC2 $\varnothing$ 22mm Push Buttons & Control Switches

## Momentary Push Buttons

- Momentary Push
- Single Normally Open contact
- Flush Mount Accessory and Water Proof Protector available

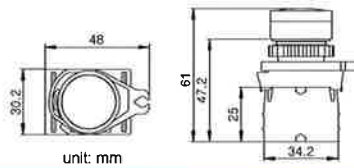


MC2 - **P** **R** - **A**

CONTACT BLOCK	
<b>A</b>	NO Contact
<b>B</b>	NC Contact
COLOR	
<b>R</b>	RED
<b>Y</b>	YELLOW
<b>G</b>	GREEN
<b>B</b>	BLUE
<b>K</b>	BLACK
STYLE	
<b>P</b>	Momentary Push Button

## Illuminated Push Buttons

- Momentary Push
- Single Normally Open contact included
- AC/DC LED configuration in various colors
- Flush Mount Accessory and Water Proof Protector available

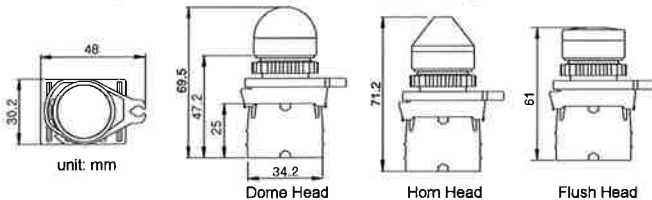


MC2 - **LPS** **R** - **A** **D**

LED	
<b>D</b>	12~30V DC/AC LED
<b>L</b>	110~220V AC LED
CONTACT BLOCK	
<b>A</b>	NO Contact
<b>B</b>	NC Contact
COLOR	
<b>R</b>	RED
<b>Y</b>	YELLOW
<b>G</b>	GREEN
<b>B</b>	BLUE
<b>C</b>	CLEAR
STYLE	
<b>LPS</b>	Illuminated Push Button

## Pilot Lamps

- LED illumination with clear visibility
- AC/DC LED configuration in various colors



MC2 - **PI** **D** **R** - **D**

LED	
<b>D</b>	12~30V DC/AC LED
<b>L</b>	110~220V AC LED
COLOR	
<b>R</b>	RED
<b>Y</b>	YELLOW
<b>G</b>	GREEN
<b>B</b>	BLUE
<b>C</b>	CLEAR
HEAD STYLE	
<b>D</b>	Dome Head
<b>H</b>	Horn Head
<b>F</b>	Flush Head
STYLE	
<b>PI</b>	Pilot Lamp

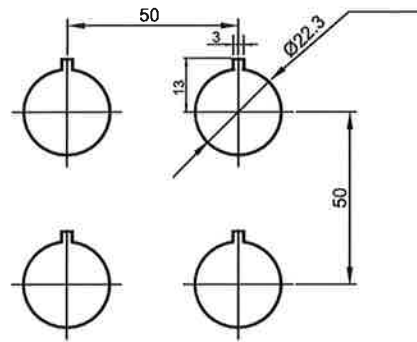
## Buzzers

- Selectable Continuous and Intermittent Sound
- LED Illumination
- AC/DC 12~30V rated

### MC2-B-D



## Ø22 Push Button Mounting Hole Layout & Panel Cutout



## Contact Blocks

Model	NO Contact	MC22-UA	NC Contact	MC22-UB
Appearance				
Contact Capacity	110 VAC 10A / 220 VAC 5A			
Approval				

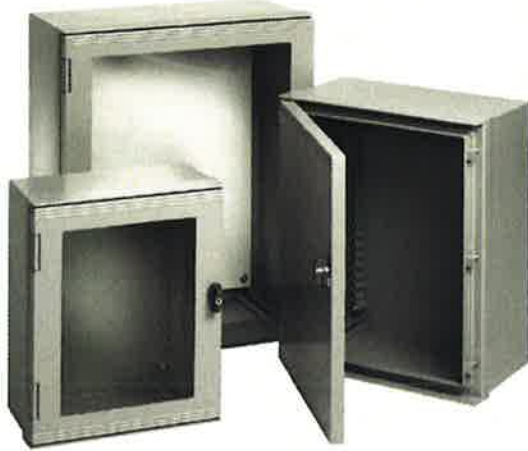
## LEDs

Model	DC/AC LED	MC22-UA	AC LED	MC22-UB
Appearance				
Operating Voltage	DC/AC 12~30V		AC 110~220V	
Current Consumption	4~10mA		4~10mA	
LED Life	50,000 hours			
Approval				

## Specifications

Control Switches		Push Buttons	Illuminated Push Buttons	Pilot Lamps	Selector Switches	Emergency Stops	Double Push Buttons	Buzzer		
Model		MC2-P	MC2-LP	MC2-PI	MC2-S	MC2-E	MC2-2P	MC2-B-D		
Life	Mechanical	50,000 times (20 times/min)						Rated Voltage	AC/DC 12~30V	
	Electrical	100,000 times (20 times/min)						Current	60mA	
		Sound Level							85dB @ 0.1m 75dB @ 1m	
Protection Degree		IP52					IP50	IP40		
Initial Contact Resistance		20MΩ maximum								
Insulation Resistance		Min.100MΩ						Min.50MΩ		
Operation Frequency		Max. 30 times/min						2~3 times/sec		
Impact	Endurance	Min. 500m/s <sup>2</sup>								
	No movement	Min. 100m/s <sup>2</sup>								
Vibration		10~55Hz with 3mm pick to pick								

Operating Temperature: -15~40°C    Operating Humidity: 45~85%RH    Storage Temperature: -40~70°C

**ULTRX™, TYPE 4X**

**INDUSTRY STANDARDS**

Mounting brackets required to meet UL/CSA external mounting requirements.

UL 508A Listed; Type 3, 3R, 4, 4X, 12, 13; File No. E61997  
 cUL Listed per CSA C22.2 No 94; Type 3, 3R, 4, 4X, 12, 13; File No. E619977  
 Enclosure flammability evaluated per UL 508A  
 Window flammability evaluated per UL 508A

NEMA/EEMAC Type 3, 3R, 4, 4X, 12, 13  
 CSA File No. 42186: Type 3, 3R, 4, 4X, 12, 13  
 IEC 60529, IP66  
 Meets NEMA Type 3RX requirements

**APPLICATION**

Providing outstanding protection against corrosion and the elements, the clean lines and molded, embossed design of ULTRX™ fiberglass enclosures make them the most stylish and aesthetically pleasing of their class. These enclosures feature hidden hinges, a padlocking capability for security, and flexible internal mounting options.

**SPECIFICATIONS**

- Compression-molded fiberglass material has excellent temperature and chemical resistance qualities and exhibits outstanding physical properties, including high-impact resistance
- Fiberglass is easily punched, drilled, filed or sawed
- Seamless foam-in-place gasket assures water-tight and dust-tight seal
- Enclosure may be rotated 180 degrees for left and right hinging
- Molded-in drip shields are standard with each enclosure
- Impact-resistant polycarbonate window is permanently bonded in place
- Fiberglass mounting brackets and stainless steel attachment screws are provided with each enclosure
- Unique hinge design allows for standard 180 degree door opening with a maximum opening of 270 degrees
- Door hinges are replaceable
- Type 316 stainless steel quarter-turn latch. Optional keylocking or padlocking handle available.
- Molded-in DIN bosses
- Molded bosses on door provide additional mounting provisions
- Integral mounting rails provide infinite panel adjustment front to back
- Optional data pocket is high-impact thermoplastic

**FINISH**

Exterior surface painted light-gray acrylic enamel for enhanced UV protection. Optional steel panels are painted white. Optional stainless steel, aluminum, conductive and composite panels are unpainted.

**ACCESSORIES**

See also *Accessories*.  
 H2OMIT™ Vent Drains, Type 4X  
 H2OMIT™ Thermoelectric Dehumidifier  
 HOL-SEALERS™ Non-Metallic Hole Seals  
 Panels for Type 3R, 4, 4X, 12 and 13 Enclosures  
 Rack Angles (Type RA)

**MODIFICATION AND CUSTOMIZATION**

Hoffman excels at modifying and customizing products to your specifications. Contact your local Hoffman sales office or distributor for complete information.

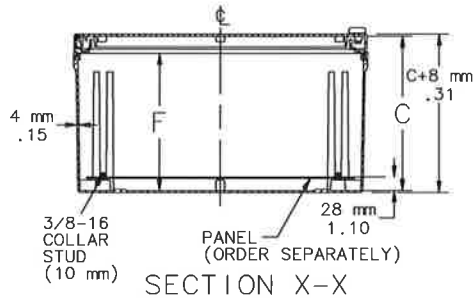
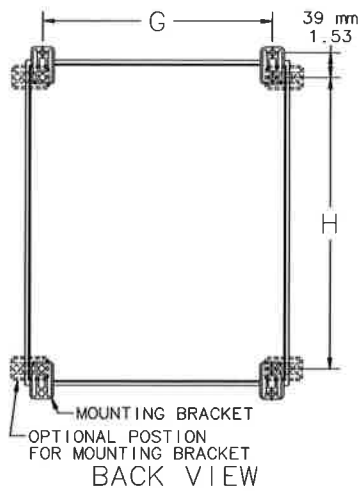
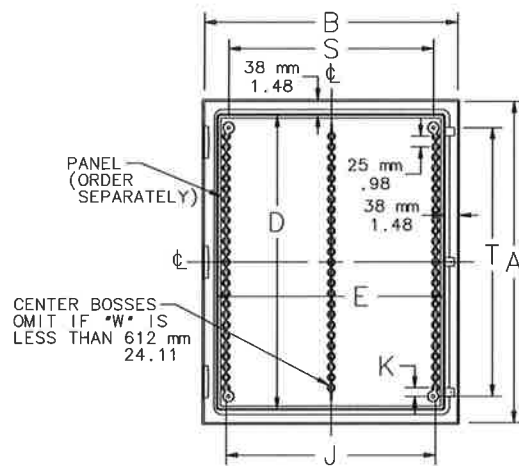
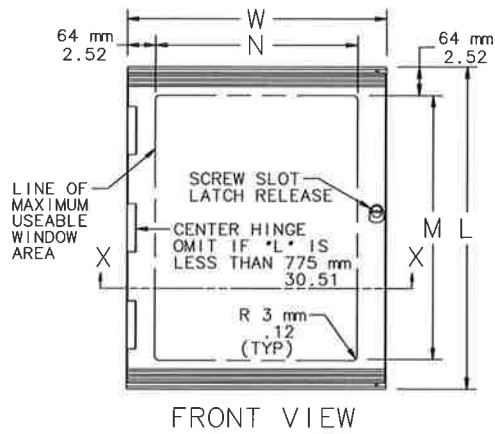
**BULLETIN: UX1**
**Standard Product**

Catalog Number	Door Style	External Dimensions		Internal Dimensions		Panel	Conductive Panel	Panel Size D x E	Mounting G x H	Window Size M x N					
		L x W	A x B x C	A x B x C	Panel					Conductive Panel	F	J	K	S	T
		mm/in.	mm/in.	mm/in.	mm/in.			mm/in.	mm/in.	mm/in.	mm/in.	mm/in.	mm/in.	mm/in.	mm/in.
UU504020	Solid	513 x 413	496 x 396 x 220	432 x 330	359 x 459	A20P16	A20P16G	432 x 330	359 x 459	—	186	297	19	286	387
		20.20 x 16.26	19.53 x 15.59 x 8.66	17.00 x 12.99	14.13 x 18.07	—	7.32	11.69	0.75	11.26	15.24				
UU504020W	Window	513 x 413	496 x 396 x 220	432 x 330	359 x 459	A20P16	A20P16G	432 x 330	359 x 459	386 x 286	186	297	19	286	387
		20.20 x 16.26	19.53 x 15.59 x 8.66	17.00 x 12.99	14.13 x 18.07	15.20 x 11.26	7.32	11.69	0.75	11.26	15.24				
UU606020	Solid	625 x 612	608 x 595 x 220	533 x 533	559 x 572	A24P24	A24P24G	533 x 533	559 x 572	—	186	500	21	489	489
		24.61 x 24.09	23.94 x 23.43 x 8.66	20.98 x 20.98	22.01 x 22.52	—	7.32	19.68	0.83	19.25	19.25				
UU606020W	Window	625 x 612	608 x 595 x 220	533 x 533	559 x 572	A24P24	A24P24G	533 x 533	559 x 572	498 x 486	186	500	21	489	489
		24.61 x 24.09	23.94 x 23.43 x 8.66	20.98 x 20.98	22.01 x 22.52	19.61 x 19.13	7.32	19.68	0.83	19.25	19.25				
UU605025	Solid	625 x 513	608 x 496 x 270	533 x 432	457 x 570	A24P20	A24P20G	533 x 432	457 x 570	—	239	400	21	387	489
		24.61 x 20.20	23.94 x 19.53 x 10.63	20.98 x 17.00	17.99 x 22.44	—	9.41	15.75	0.83	15.24	19.25				
UU605025W	Window	625 x 513	608 x 496 x 270	533 x 432	457 x 570	A24P20	A24P20G	533 x 432	457 x 570	498 x 386	239	400	21	387	489
		24.61 x 20.20	23.94 x 19.53 x 10.63	20.98 x 17.00	17.99 x 22.44	19.61 x 15.20	9.41	15.75	0.83	15.24	19.25				
UU504030	Solid	513 x 412	496 x 395 x 321	432 x 330	355 x 455	A20P16	A20P16G	432 x 330	355 x 455	—	287	300	19	286	387
		20.20 x 16.22	19.53 x 15.55 x 12.64	17.00 x 12.99	13.98 x 17.91	—	11.30	11.81	0.75	11.26	15.24				
UU504030W	Window	513 x 412	496 x 395 x 321	432 x 330	355 x 455	A20P16	A20P16G	432 x 330	355 x 455	386 x 286	287	300	19	286	387
		20.20 x 16.22	19.53 x 15.55 x 12.64	17.00 x 12.99	13.98 x 17.91	15.20 x 11.26	11.30	11.81	0.75	11.26	15.24				
UU606030	Solid	625 x 612	608 x 595 x 321	533 x 533	555 x 568	A24P24	A24P24G	533 x 533	555 x 568	—	287	500	21	489	489
		24.61 x 24.09	23.94 x 23.43 x 12.64	20.98 x 20.98	21.85 x 22.36	—	11.30	19.68	0.83	19.25	19.25				
UU606030W	Window	625 x 612	608 x 595 x 321	533 x 533	555 x 568	A24P24	A24P24G	533 x 533	555 x 568	498 x 486	287	500	21	489	489
		24.61 x 24.09	23.94 x 23.43 x 12.64	20.98 x 20.98	21.85 x 22.36	19.61 x 19.13	11.30	19.68	0.83	19.25	19.25				
UU756030	Solid	775 x 612	758 x 595 x 321	686 x 533	555 x 718	A30P24	A30P24G	686 x 533	555 x 718	—	287	500	21	489	641
		30.51 x 24.09	29.84 x 23.43 x 12.64	27.01 x 20.98	21.85 x 28.27	—	11.30	19.68	0.83	19.25	25.24				

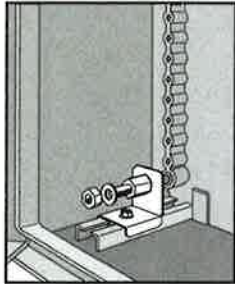
Catalog Number	Door Style	External Dimensions L x W mm/in.	Internal Dimensions A x B x C mm/in.	Panel	Conductive Panel	Panel Size D x E mm/in.	Mounting G x H mm/in.	Window Size M x N mm/in.	F mm/in.	J mm/in.	K mm/in.	S mm/in.	T mm/in.
UU756030W	Window	775 x 612 30.51 x 24.09	758 x 595 x 321 29.84 x 23.43 x 12.64	A30P24	A30P24G	686 x 533 27.01 x 20.98	555 x 718 21.85 x 28.27	648 x 486 25.51 x 19.13	287 11.30	500 19.68	21 0.83	489 19.25	641 25.24
UU1008030	Solid	1025 x 825 40.35 x 32.48	1008 x 808 x 321 39.68 x 31.81 x 12.64	A40P30	A40P30G	940 x 737 37.01 x 29.02	768 x 968 30.24 x 38.11	— —	287 11.30	700 27.56	23 0.91	692 27.24	895 35.24
UU1008030W	Window	1025 x 825 40.35 x 32.48	1008 x 808 x 321 39.68 x 31.81 x 12.64	A40P30	A40P30G	940 x 737 37.01 x 29.02	768 x 968 30.24 x 38.11	898 x 698 35.35 x 27.48	287 11.30	700 27.56	23 0.91	692 27.24	895 35.24
UU606040	Solid	625 x 612 24.61 x 24.09	608 x 595 x 421 23.94 x 23.43 x 16.57	A24P24	A24P24G	533 x 533 20.98 x 20.98	555 x 568 21.85 x 22.36	— —	387 15.24	500 19.68	21 0.83	489 19.25	489 19.25
UU606040W	Window	625 x 612 24.61 x 24.09	608 x 595 x 421 23.94 x 23.43 x 16.57	A24P24	A24P24G	533 x 533 20.98 x 20.98	555 x 568 21.85 x 22.36	498 x 486 19.61 x 19.13	387 15.24	500 19.68	21 0.83	489 19.25	489 19.25
UU756040	Solid	775 x 612 30.51 x 24.09	758 x 595 x 421 29.84 x 23.43 x 16.57	A30P24	A30P24G	686 x 533 27.01 x 20.98	555 x 718 21.85 x 28.27	— —	387 15.24	500 19.68	21 0.83	489 19.25	641 25.24
UU756040W	Window	775 x 612 30.51 x 24.09	758 x 595 x 421 29.84 x 23.43 x 16.57	A30P24	A30P24G	686 x 533 27.01 x 20.98	555 x 718 21.85 x 28.27	648 x 486 25.51 x 19.13	387 15.24	500 19.68	21 0.83	489 19.25	641 25.24

Purchase panels separately.

Note: When installing enclosures in a right-hand hinge application that involves vibration, Hoffman recommends the use of pad-locking or key-locking quarter-turn latch accessories for door securement (UUHPL, UUHKL).



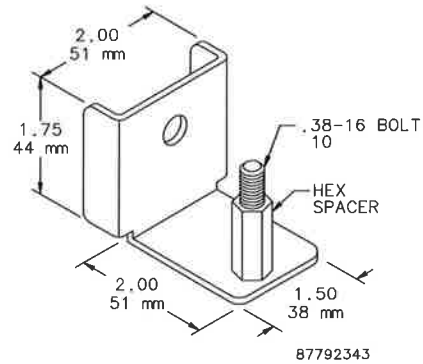
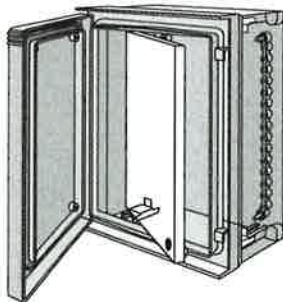
C2553-C

**PANEL BRACKET KIT**


Panel Bracket Kit is used with steel panels and permits panel adjustment from front to rear. Fits all ULTRX sizes. Mounts on integrally molded body rail. Brackets are plated steel. All mounting hardware is included. *Note: Front mounting position is approximately 140mm/5.5 in. back on 400mm enclosures.*

**BULLETIN: UX1Y**

Catalog Number	Description	Pkg. Qty.
UUPB	ULTRX Panel Bracket Kit	4

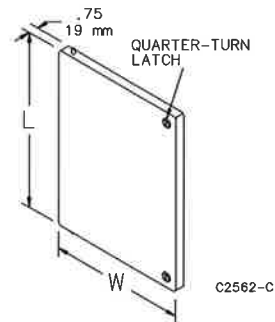
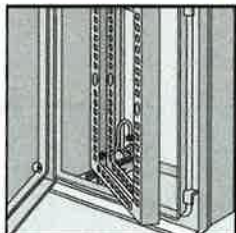

**SWING-OUT PANEL**


Installs front-mounted panels in ULTRX fiberglass enclosures. The front-mounted swing panel complements window-door units and is suited for any application requiring a display of gauges, dials or any type of control equipment monitor. Made of 14 gauge plated steel. Easy installation; no drilling required. Fully adjustable front to rear. Panel and mounting hardware included. *Note: Front mounting position is approximately 140mm/5.5 in. back on 400mm enclosures.*

**BULLETIN: UX1Y**

Catalog Number	Fits A x B mm/in.	L mm/in.	W mm/in.
UU5040SP	513 x 413	432	330
UU6050SP	20.20 x 16.26	17.00	12.99
UU6060SP	625 x 513	536	432
	24.61 x 20.20	21.10	17.00
UU7560SP	625 x 612	540	535
	24.61 x 24.09	21.25	21.08
UU10080SP	775 x 612	687	535
	30.51 x 24.09	27.05	21.08
	1025 x 825	935	737
	40.35 x 32.48	36.80	29.00

Use UU6060SP with DATACOM ULTRX Fiberglass Type 4X WiFi Cabinet.


**GROUNDING DEVICE**


Grounding Device provides a means to attach a grounding conductor to an ULTRX Swing-Out Panel or Swing-Out Frame. Includes all installation hardware and instructions.

**BULLETIN: UX1Y**

Catalog Number	Description
UUGK	ULTRX Grounding Device

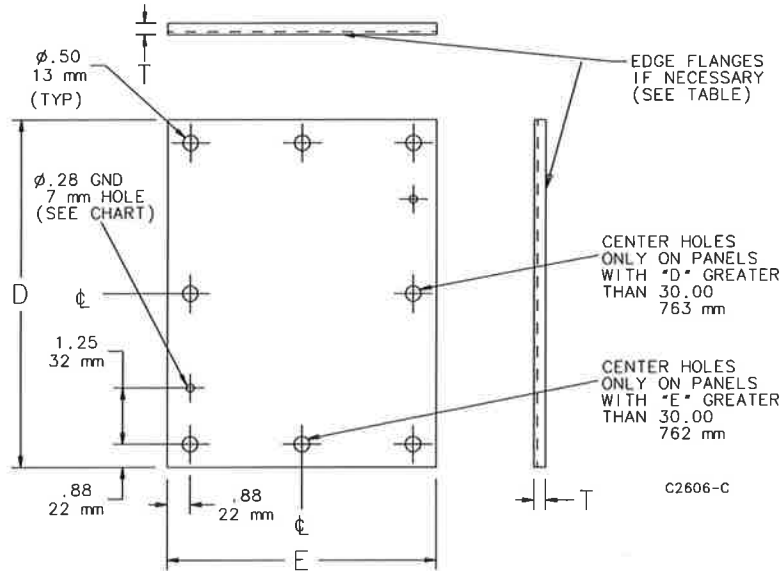
**PANELS FOR TYPE 3R, 4, 4X, 12 AND 13 ENCLOSURES**

Steel panels are 12 gauge with a white finish. Panel mounting hardware is furnished with all enclosures which accept these panels.

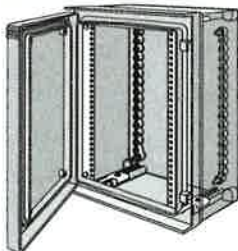
**BULLETIN: DWS12, PNLWM**

Catalog Number	Panel Gauge	Flange		Panel Size D x E (in.)	Panel Size D x E (mm)	Number of Holes	Edge Flanges
		Thickness T (in.)	Thickness T (mm)				
A20P16	12	—	—	17.00 x 13.00	432 x 330	4	0
A24P20	—	0.75	19	21.00 x 17.00	533 x 432	4	2
A24P24	—	0.75	19	21.00 x 21.00	533 x 533	4	2
A24P24WD	—	0.75	19	21.00 x 21.00	533 x 533	4	—
A30P24	—	0.75	19	27.00 x 21.00	686 x 533	4	2
A40P30	—	0.75	19	37.00 x 29.00	940 x 737	4	4

Catalog number with "WD" is wood.



**RACK ANGLES (TYPE RA)**

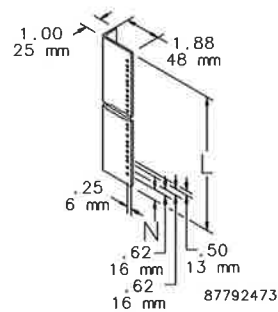


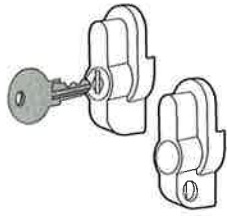
Pairs of full-length rack-mounting angles are available for mounting 1-in. (483-mm) rack-mounted equipment. Type RA angles are 14 gauge steel with .281-in. (7-mm) diameter mounting holes, spaced per EIA standard RS-310-D (universal spacing). Use Clip Nut Package (AN1032) to provide tapped holes at desired locations. Angles and mounting hardware are plated steel. Mounting hardware is furnished.

**BULLETIN: UX1Y**

Catalog Number	Fits A x B mm/in.	L mm/in.	H mm/in.	Rack Units	Pkg. Qty.
UURA6060	610 x 610	552	10	12	2
	24.00 x 24.00	21.75	.38		
UURA7560	762 x 610	705	19	15	2
	30.00 x 24.00	27.75	.75		

Use UURA6060 with DATACOM ULTRX Fiberglass Type 4X WIFI Cabinet.



**KEYLOCK KIT AND PADLOCK KIT**


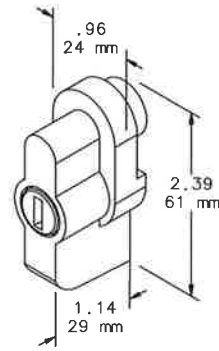
Keylock Kit or pushbutton-style Padlock Kit is easily inserted in latch hole to prevent unauthorized personnel from gaining access to enclosure contents. Each kit is fully assembled for easy installation in the field. Type 316 stainless steel construction.

**BULLETIN: UX1Y**

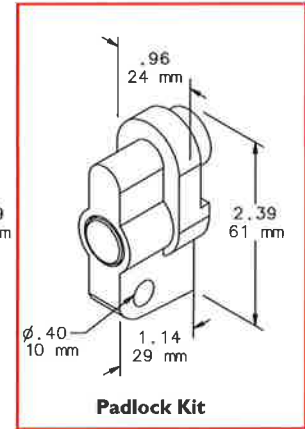
Catalog Number	Description
UUHKL	Keylock Kit
UUHPL	Padlock Kit

UUHKL: Internal key components are not stainless steel.

UUHPL: Handles maintain UL 508A, Type 3, 4, 4X and 12 when properly installed on a Hoffman enclosure. Set up for 1/4-in. or 3/8-in. padlock.

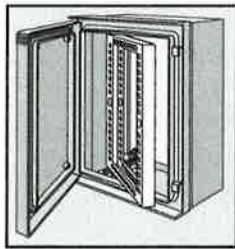


**Keylock Kit**



**Padlock Kit**

87792346

**SWING FRAME**


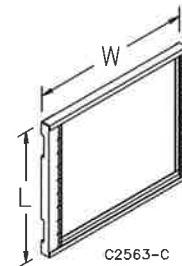
Swing Frame provides 19-in. rack-mounting capabilities with U-Style (Type RA) mounting hole pattern. Quarter-turn latch has 100-degree swing. Adjustable mounting provision. 14 gauge plated steel. Includes mounting hardware. Swing frame maintains enclosure rating if properly installed in a Hoffman enclosure.

*Note: Front mounting position is approximately 140mm/5.5 in. back on 400mm enclosures.*

**BULLETIN: UX1Y**

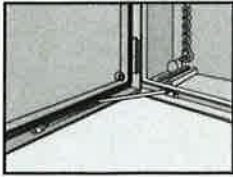
Catalog Number	Fits A x B mm/in.	L mm/in.	W mm/in.	Rack Units
UU6060SF	610 x 610 24.00 x 24.00	540 21.25	535 21.08	11
UU7560SF	762 x 610 30.00 x 24.00	687 27.05	535 21.08	14

Use UU6060SF with DATACOM ULTRX Fiberglass Type 4X WiFi Cabinet.



C2563-C

**DOOR STOP KIT**



Door Stop Kit limits door to 120-degree opening. Field installable on all sizes of ULTRX enclosures. Type 304 stainless steel construction.

**BULLETIN: UX1Y**

Catalog Number	Description
UUDS	Door Stop Kit

**ULTRX™ KEY INSERT**

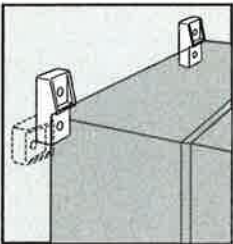


Inserts can be substituted for the standard quarter-turn latch. Inserts are Type 316 stainless steel.

**BULLETIN: UX1Y**

Catalog Number	Insert Type
UUL3DB	Double-bit 3 mm
UULSC	Screw driver slot

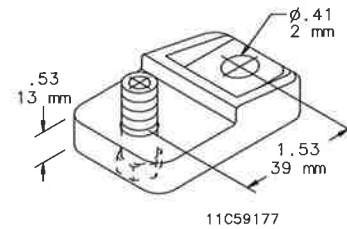
**ULTRX™ MOUNTING BRACKET KIT**



Kit is field-installable. Corrosion-resistant fiberglass material. Type 316 stainless steel mounting hardware is included. Four mounting brackets per kit.

**BULLETIN: UX1Y**

Catalog Number	Description	Kit Qty.
UUMF	Mounting Bracket Kit	4



**SCREW INSERT KIT**

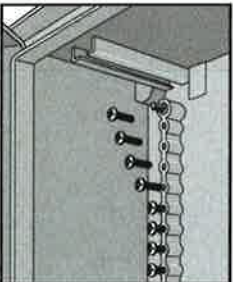


Brass threaded inserts (10-32) with plated screws. Used on door bosses and DIN bosses.

**BULLETIN: UX1Y**

Catalog Number	Description	Kit Qty.
UUMH2	Screw Insert Kit	4 inserts and 4 screws

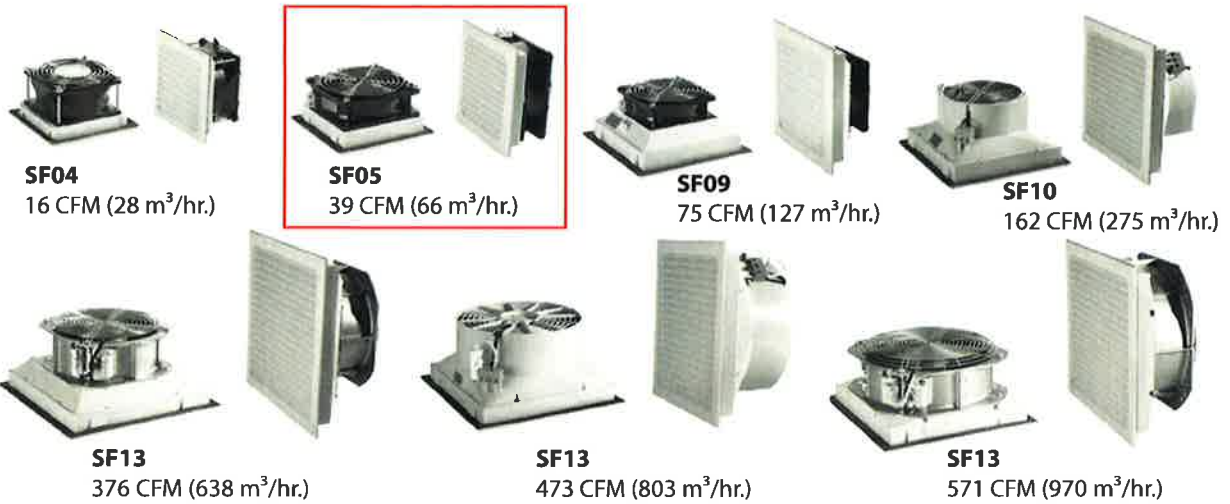
**SELF-TAPPING SCREWS**



Plated screws (1/4-15 x .88) mount panels and accessories to DIN bosses on back of enclosure.

**BULLETIN: UX1Y**

Catalog Number	Description	Pkg. Qty.
UUMH1	Self-Tapping Screws	10

**SF SIDE-MOUNT**

**INDUSTRY STANDARDS**

UL/cUL recognized; File No. 235470

CE, CSA (entire fan assembly excluding VDC models)  
 Type 12, IP54 standard  
 Type 12, IP 55 optional

**APPLICATION**

- Industrial automation
- Automotive assembly
- Package handling equipment
- Food and beverage process controls
- Wind energy systems

**FEATURES**

- Click-fit design quickly installs into enclosure wall; no tools or screws required
- Simple snap-open grille for easy filter replacement
- Enclosure side wall mounting
- Reverse airflow option on SF13 models available to push/pull air through higher static pressure
- Standard foam-in-place gasket
- Similar cut-out sizes as other filter fan manufacturers
- Terminal wire connections
- Optional thermostat available to save energy and extend service life

**SPECIFICATIONS**

- Size range from 4 in. (102 mm) to 13 in. (325 mm)
- Free air flow from 16 CFM (28 m³/hr.) to 571 CFM (920 m³/hr.)
- Service life hours from 40000 to 70000 hours
- Operating temperature range from -4 F/-20 C to 149 F/65 C

**FINISH**

- RAL 7035 light-gray, UV-resistant plastic standard
- RAL 9011 black, UV-resistant plastic optional

**ACCESSORIES**

- Replacement filters
- Thermostat
- Rain shroud

**NOTES**

Visit [www.PentairProtect.com](http://www.PentairProtect.com) to download 2D and 3D CAD drawings into the overall design of your electronic system.

**Performance Data SF05 39 CFM (66 m<sup>3</sup>/hr.) Side-Mount Filter Fan**

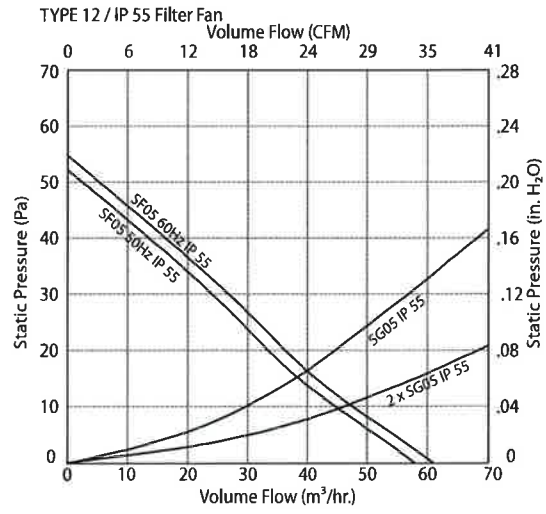
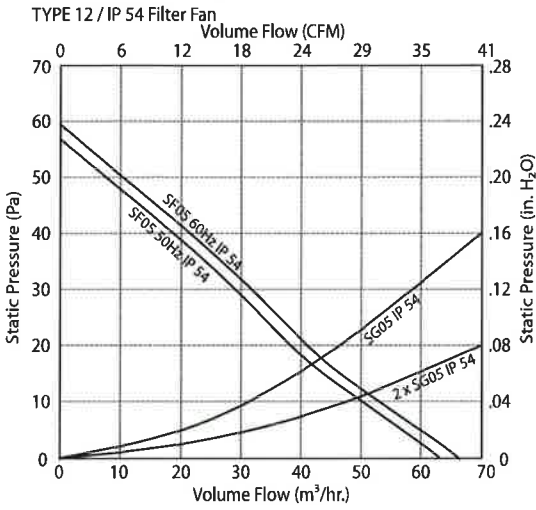
<b>ELECTRICAL DATA</b>				
<b>Rated Voltage</b>	<b>115</b>	<b>230</b>	<b>24</b>	<b>48</b>
Frequency (Hz)	50 / 60	50 / 60	—	—
Nominal Current Maximum (Amps)	0.23	0.11	0.17	0.08
Power Consumption Maximum (Watts)	20	20	4.1	3.5
Power Connection	Terminal Block			
<b>TYPE 12 / IP54 FILTER FANS</b>				
RAL 7035 Light Gray:				
Catalog Number	<b>SF0516414</b>	<b>SF0526414</b>	<b>SF0524414</b>	<b>SF0548414</b>
RAL 9011 Black:				
Catalog Number	<b>SF0516413</b>	<b>SF0526413</b>	<b>SF0524413</b>	<b>SF0548413</b>
Free Airflow (CFM / m <sup>3</sup> /hr.)	39 / 66	39 / 66	39 / 66	39 / 66
Airflow with 1 Exhaust Grille (CFM / m <sup>3</sup> /hr.)	26 / 44	26 / 44	26 / 44	26 / 44
Airflow with 2 Exhaust Grilles (CFM / m <sup>3</sup> /hr.)	30 / 51	30 / 51	30 / 51	30 / 51
<b>TYPE 12 / IP55 FILTER FANS</b>				
RAL 7035 Light Gray:				
Catalog Number	<b>SF0516514</b>	<b>SF0526514</b>	<b>SF0524514</b>	<b>SF0548514</b>
RAL 9011 Black:				
Catalog Number	<b>SF0516513</b>	<b>SF0526513</b>	<b>SF0524513</b>	<b>SF0548513</b>
Free Airflow (CFM / m <sup>3</sup> /hr.)	36 / 61	36 / 61	36 / 61	36 / 61
Airflow with 1 Exhaust Grille (CFM / m <sup>3</sup> /hr.)	24 / 40	24 / 40	24 / 40	24 / 40
Airflow with 2 Exhaust Grilles (CFM / m <sup>3</sup> /hr.)	28 / 47	28 / 47	28 / 47	28 / 47
<b>FILTER FAN UNIT CONSTRUCTION</b>				
Fan RPM	2650 / 3100	2650 / 3100	3050	3050
Sound Pressure (dBA)	42	42	42	42
Operating Temperature Range:				
Maximum (°F / °C)	131 / 55	131 / 55	149 / 65	149 / 65
Minimum (°F / °C)	14 / -10	14 / -10	-4 / -20	-4 / -20
Service Life (hours)	27,500	27,500	50,000	50,000
Unit Dimensions - H x W x D (in. / mm)	5.83 x 5.83 x 2.56 / 148 x 148 x 65			
Cutout Dimensions - H x W (in. / mm)	4.92 x 4.92 / 125 x 125			
Weight (lb. / kg)	1.19 / .54			
<b>TYPE 12 / IP54 EXHAUST GRILLES</b>				
RAL 7035 Light Gray:				
Catalog Number	SG0500404			
RAL 9011 Black:				
Catalog Number	SG0500403			
<b>TYPE 12 / IP55 EXHAUST GRILLES</b>				
RAL 7035 Light Gray:				
Catalog Number	SG0500504			
RAL 9011 Black:				
Catalog Number	SG0500503			
<b>ACCESSORIES</b>				
Replacement Filters:				
Type 12 / IP54 Catalog Number	10100060			
Type 12 / IP55 Catalog Number	10100064H			
Thermostat Catalog Number	TWR60			
Shroud Catalog Number	SH05GS35001, SH05GS61001, SH05SS04001			

Above airflow rates at 60 Hz; see performance curves for airflow at 50 Hz and more details.

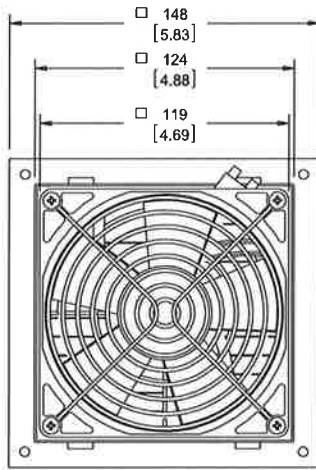
Unit depth is from the back edge of the grille to the back of the fan.

Exhaust Grilles sold separately.

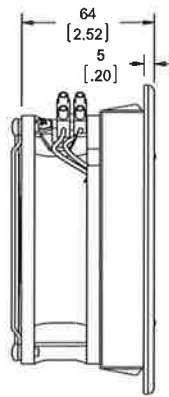
SF05 39 CFM (66 m<sup>3</sup>/hr.) Side-Mount Filter Fan Performance Curve



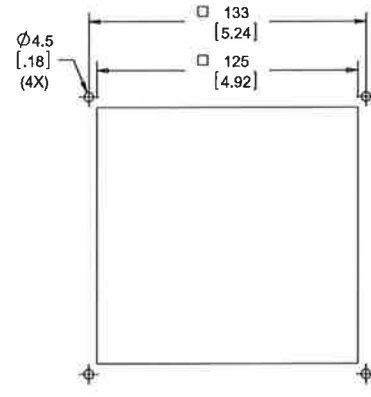
FILTER FAN



BACK VIEW

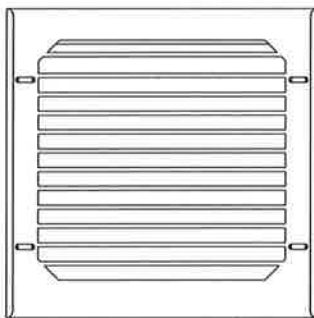


SIDE VIEW



CUTOUT

EXHAUST GRILLE



89051216

Visit [www.PentairProtect.com](http://www.PentairProtect.com) to download 2D and 3D CAD drawings into the overall design of your electronic system.



## HubSat<sup>®</sup> 4D Passive UTP Transceiver Hub with Integral Camera Power

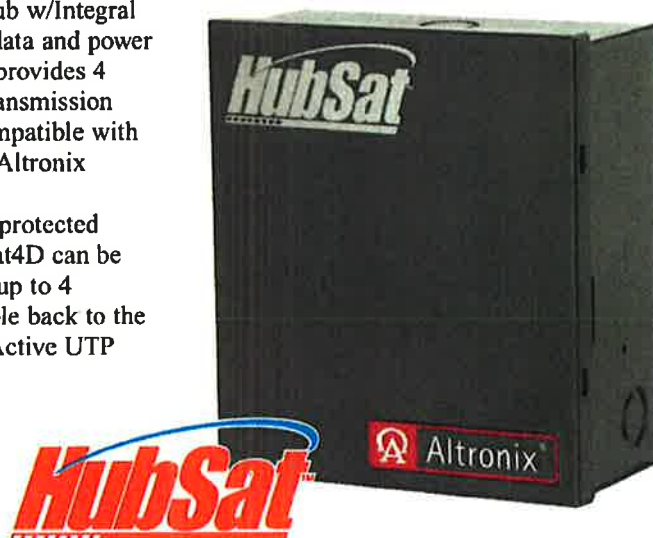
Rev. DSHubSat4D - E181

### Overview

Altronix new HubSat4D Passive UTP Transceiver Hub w/Integral Camera Power transmits UTP video, RS422/RS485 data and power over a single CAT-5 or higher structured cable. Unit provides 4 camera channels in a wall mount enclosure. Video transmission range is up to 750 ft. max. per channel. Units are compatible with AC and/or DC fixed or PTZ cameras when utilizing Altronix HubWayAv or HubWayDv Video Balun/Combiners.

In addition, the unit features 24VAC or 28VAC PTC protected outputs and surge suppression. Optionally, the HubSat4D can be used as an accessory module to transmit video from up to 4 cameras over a single CAT-5 or higher structured cable back to the HubWay, HubWayLD or HubWayLDH Passive and Active UTP Transceiver Hubs.

In addition, the HubSat4D powers these cameras locally to eliminate the possibility of voltage drop associated with long cable runs.



### Specifications

#### **Input:**

- 115VAC 50/60Hz, 1.25 amp.
- Primary fuse is rated at 3.5 amp/250V.

#### **Video:**

- Four (4) channels of video over twisted pair up to 750 ft.
- Four (4) 75 ohm video outputs.

#### **Data:**

- RS422/RS485 data inputs.

#### **Power:**

- Individually selectable 24VAC or 28VAC power outputs with OFF position.
- Unit provides up to 1 amp max. per channel not to exceed a total of 4 amp (100VA) maximum current.
- Class 2 Rated power limited outputs.
- PTC protected outputs.
- PTCs are rated @ 1 amp per channel.
- Surge suppression.

#### **Visual Indicators:**

- Four (4) individual power LED indicators.

#### **Features:**

- Wall mount enclosure.

#### **Accessories:**

- Video Balun/Combiners:
  - HubWayAv - for use with 24VAC cameras.
  - HubWayDv - for use with 12VDC cameras.
  - HubWayDvi - for use with 12VDC cameras without isolation.

#### **Shipping Weight (approximate):**

- HubSat4D: 8.0 lbs.
- HubSat42D: 8.5 lbs.
- HubSat43D: 8.7 lbs.

### Models

#### **HubSat4D**

Passive UTP Transceiver Hub with Integral Camera Power. Video Balun/Combiners not included.

#### **HubSat42D**

Passive UTP Transceiver Hub with Integral Camera Power includes four (4) HubWayAv Video Balun/Combiners.

#### **HubSat43D**

Passive UTP Transceiver Hub with Integral Camera Power includes four (4) HubWayDv Video Balun/Combiners.

### Agency Approvals



UL Listed for Commercial CCTV Equipment (UL 2044).



CUL Listed - CSA Standard C22.2 No.1-04, Audio, Video and Similar Equipment.



# ALTV244UL, ALTV244ULCB UL Listed AC CCTV Power Supply

Rev. DSALTV244UL - A24F

## Overview



- These Altronix AC Wall Mount CCTV Power Supplies provide 24VAC or 28VAC distributed via four (4) fuse or Class 2 Rated PTC protected power limited outputs for powering CCTV Cameras, heaters and other video accessories.

### ALTV244UL

- Four (4) fuse protected outputs.
- Outputs are rated @ 3.5 amp.

### ALTV244UL3

ALTV244UL w/3-wire Line Cord.

### ALTV244ULCB

- Four (4) Class 2 Rated PTC protected power limited outputs.
- Outputs are rated @ 2.5 amp.

### ALTV244ULCB3

ALTV244ULCB w/3-wire Line Cord.

## Specifications

- Input 115VAC, 50/60Hz, .9 amp.
- 24VAC @ 3.5 amp (85VA) or 28VAC @ 3 amp (85VA) supply current.
- Main fuse rated @ 5 amp/250V.
- Power ON/OFF switch.
- Surge suppression.
- AC power LED.
- Spare fuse(s) provided (all models w/primary and/or secondary fuses).
- Unit maintains camera synchronization.
- Ease of installation saves time and eliminates costly labor.

- Product weight:
  - ALTV244UL: 6.4 lbs.
  - ALTV244UL3: 6.7 lbs.
  - ALTV244ULCB: 6.5 lbs.
  - ALTV244ULCB3: 6.8 lbs.
- Shipping weight:
  - ALTV244UL: 7.0 lbs.
  - ALTV244UL3: 7.3 lbs.
  - ALTV244ULCB: 7.0 lbs.
  - ALTV244ULCB3: 7.3 lbs.

## Agency Approvals



UL Listed for Commercial CCTV Equipment (UL 2044).



Canadian Standard Association

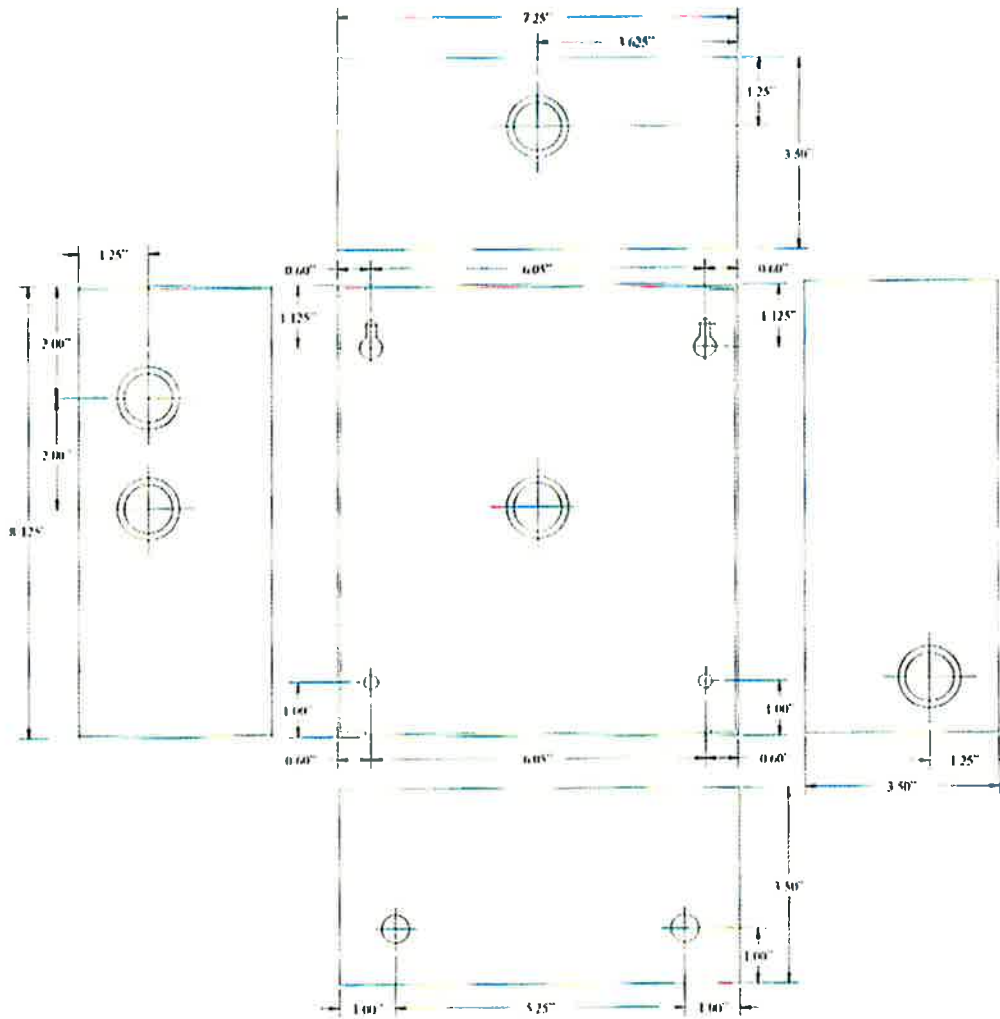


CUL Listed - CSA Standard C22.2 No.1-98, Audio, Video and Similar Equipment.



European Conformity

**Enclosure Dimensions**  
8.5"H x 7.5"W x 3.5"D





SMP3

### Overview

SMP3 power supply/charger converts a low voltage AC input into a 6VDC, 12VDC or 24VDC output. This unit has a wide range of applications for access control, security and CCTV system accessories that require additional power.

### Specifications

#### Input:

- 16VAC to 28VAC.

#### Output:

- 6VDC, 12VDC or 24VDC selectable output.
- 2.5 amp continuous supply current.
- Filtered and electronically regulated output.
- Short circuit and thermal overload protection.

#### Battery Backup:

- Built-in charger for sealed lead acid or gel type batteries.
- Automatic switch over to stand-by battery when AC fails.
- Maximum charge current 0.3 amp.
- Battery short circuit protection (circuit breaker).

#### Visual Indicators:

- AC input and DC output LED indicators.

#### Electrical:

- Operating temperature: -20° C to 49° C ambient.
- BTU/Hr.:
  - 6VDC: 7.68 BTU/Hr.
  - 12VDC: 15.35 BTU/Hr.
  - 24VDC: 30.71 BTU/Hr.
- System AC input VA requirement:
  - 6VDC/12VDC: 55.2VA.
  - 24VDC: 115VA.

#### Features:

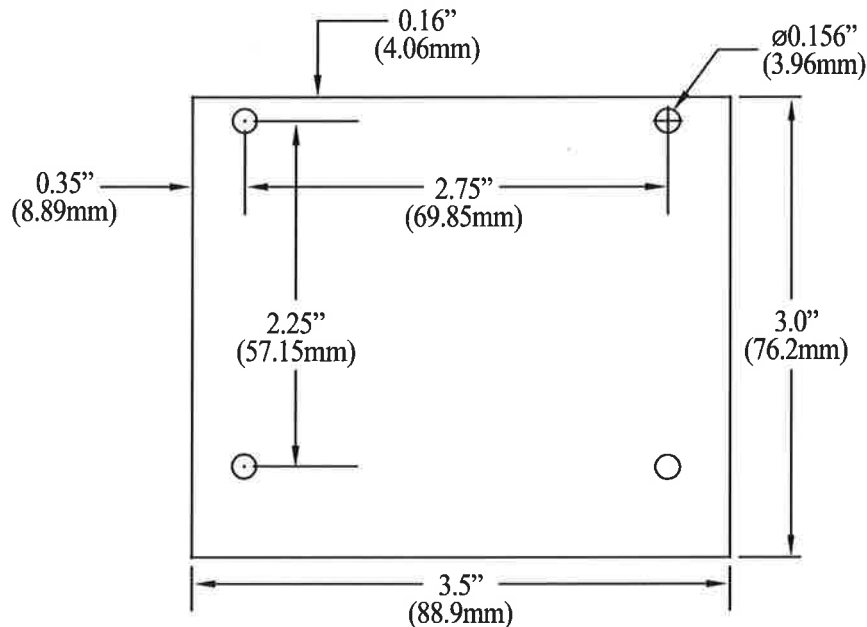
- Extremely compact design.
- Includes battery leads.
- Snap Track compatible (order Altronix model number ST3).

#### Mechanical:

- Board Dimensions (L x W x H approx.): 3.5" x 3" x 2" (88.9mm x 76.2mm x 50.8mm)
- Product weight (approx.): 0.25 lbs. (0.113 kg).
- Shipping weight (approx.): 0.35 lbs. (0.158 kg).

### Board Dimensions (W x L x H approximate):

3" x 3.5" x 2" (76.2mm x 88.9mm x 50.8mm)





# DTK-BU600Plus

## 600VA UPS with Surge Protection General Product Specifications

DITEK's BU600Plus combines robust surge protection with battery backup for optimal equipment coverage. The combination of surge protection and UPS enables your equipment to survive both the most common and the most noticeable power quality problems that users experience. The DITEK BU Uninterruptible Power Supply is a cost-effective solution for PCs, multiplexers, PC-based phone systems, POS terminals, or similar applications.



### DTK-BU600Plus

#### Application Features

- Cost-effective solution for computers, multiplexers, DVRs, or PC-based phone systems
- 20-30 minutes battery run time (typical)
- Automatic shutdown software included
- RJ45 Phone/modem line protection included
- Seven surge protected outlets, 3 with UPS power
- Four transformer-spaced outlets
- Sliding outlet covers for safety
- 6 foot power cord with 360° rotating plug
- Audible alarm for notification of power loss or low battery charge
- Diagnostic LEDs indicate status of surge protection, outlet wiring, and battery charge

#### Specifications

**Agency Approvals:** UL 1449 3<sup>rd</sup> Edition, UL497A, UL1363, UL1778, cUL

**Service Voltage:** 110VAC – 120VAC

**MCOV:** 127VAC

**Max Continuous Current:** 12 Amps

**Max Surge Current:** 135,000 Amps

**Protection Modes:** L-N, L-G, N-G

**EMI/RFI Noise Filtering:** Up to 40dB, 150kHz – 100MHz

**VPR:** 500V

**Dimensions:** 12.01" x 6.25" x 2.88"  
(305mm x 159mm x 73mm)

**Housing:** ABS

**Weight:** 8.2 lb. (3.7kg)

**Warranty:** 3 Year Limited Warranty (product and battery)

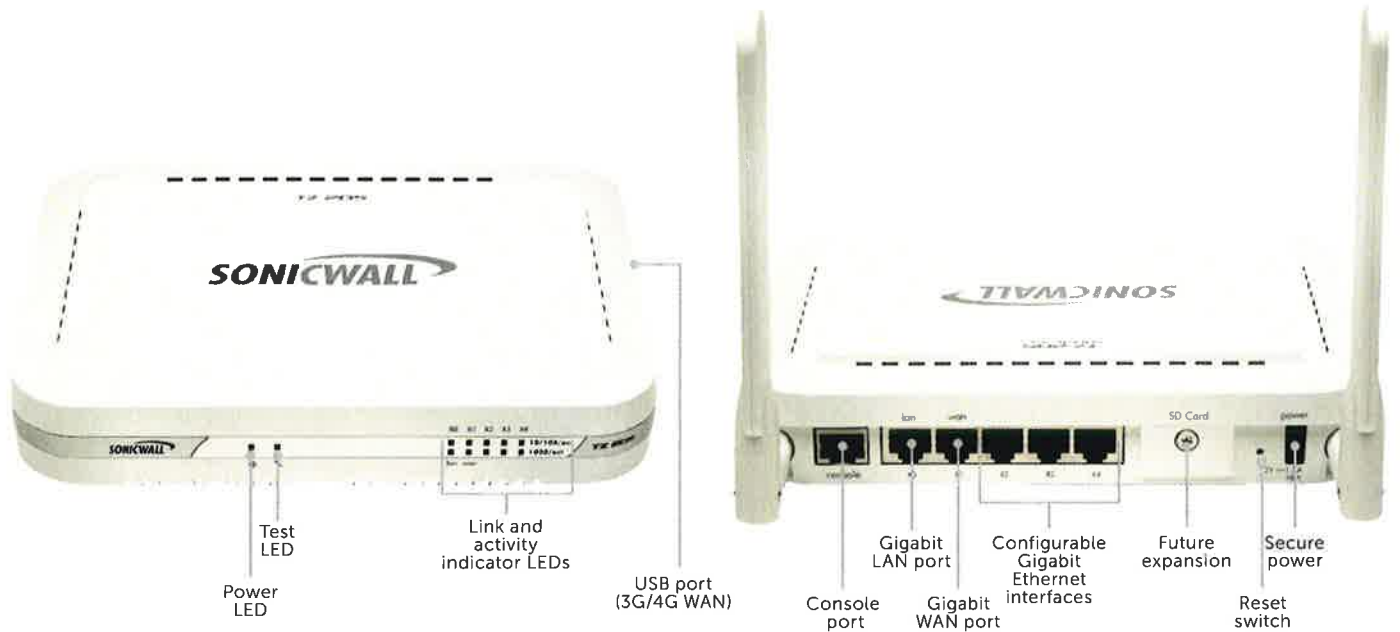
#### UPS Features / Model Selector

UPS Type: Standby

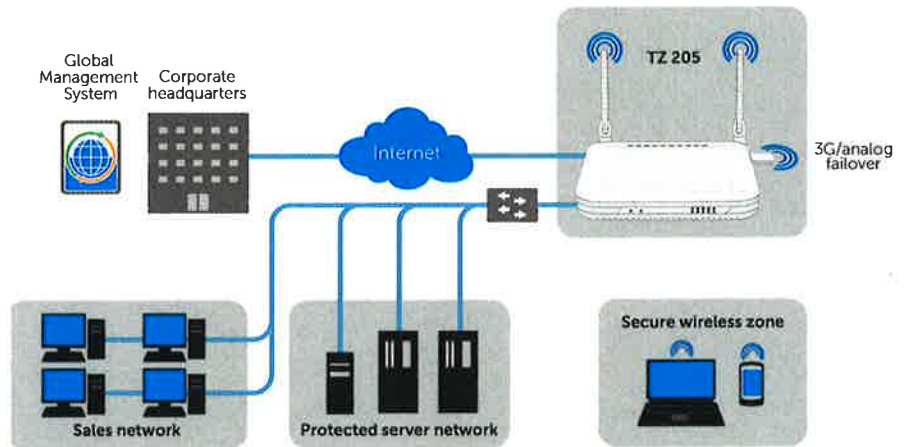
	DTK-BU600Plus
<b>Load Rating:</b>	600VA/330W
<b>Battery Run Time (Approx)</b>	12-22 Minutes
<b>Low Voltage Transfer to UPS</b>	95VAC
<b>High Voltage Transfer to UPS</b>	135VAC
<b>Transfer Time</b>	4 msec
<b>CAT 5 Protection</b>	Yes
<b>Shutdown Software</b>	Yes



## Dell SonicWALL TZ 205 small office/retail



Small businesses, retail deployments, government organizations, remote sites and branch offices can benefit from the powerful security and business-class performance of the new Dell SonicWALL TZ 205. Unlike consumer grade products, this powerful Unified Threat Management (UTM) firewall combines the most effective intrusion prevention, anti-malware and content/URL filtering with the broadest, most secure mobile platform support for laptops, smartphones and tablets. By providing full deep packet inspection (DPI) at very high performance levels, it eliminates the tradeoff between comprehensive security and performance.



Hardware description	SKU	Service description	SKU
TZ 205	01-SSC-6945	Comprehensive Gateway Security Suite 1-year	01-SSC-4838
TZ 205 Wireless-N	01-SSC-6947	Gateway Anti-Virus, Intrusion Prevention and Application Control 1-year	01-SSC-4799
TZ 205 TotalSecure 1-year	01-SSC-4890	Content/URL Filtering 1-year	01-SSC-4805
TZ 205 Wireless-N TotalSecure 1-year	01-SSC-4892	Comprehensive Anti-Spam Service 1-year	01-SSC-4832
		8x5 support 1-year	01-SSC-4811
		24x7 support 1-year	01-SSC-4817

# Specifications

Firewall	TZ 105 Series	TZ 205 Series	TZ 215 Series
SonicOS version	SonicOS 5.8.1 and later		
Stateful throughput <sup>1</sup>	200 Mbps	500 Mbps	500 Mbps
IPS throughput <sup>2</sup>	60 Mbps	80 Mbps	110 Mbps
GAV throughput <sup>3</sup>	40 Mbps	60 Mbps	70 Mbps
UTM throughput <sup>4</sup>	25 Mbps	40 Mbps	60 Mbps
Maximum connections <sup>5</sup>	8,000	12,000	48,000
Maximum UTM/DPI connections	8,000	12,000	32,000
New connections/sec	1,000	1,500	1,800
Nodes supported	Unrestricted		
Denial of service attack protection	22 classes of DoS, DDoS and scanning attacks		
SonicPoints supported	1	2	16
<b>VPN</b>			
3DES/AES throughput <sup>6</sup>	75 Mbps	100 Mbps	130 Mbps
Site-to-site VPN tunnels	5	10	20
Bundled GVC licenses (maximum)	0 (5)	2 (10)	2 (25)
Bundled SSL VPN licenses (maximum)	1 (5)	1 (10)	2 (10)
Encryption/Authentication/DH Group	DES, 3DES, AES (128, 142, 256-bit), MD5, SHA-1/DH Group 1, 2, 5, 14		
Virtual assist bundled (maximum)	—	1 (30-day trial)	2 (30-day trial)
Key exchange	IKE, Manual Key, Certificates (X.509), L2TP over IPsec		
Certificate support	Verisign, Thawte, Cybertrust, RSA Keon, Entrust and Microsoft CA for Dell SonicWALL-to-Dell SonicWALL VPN, SCEP		
VPN features	Dead Peer Detection, DHCP Over VPN, IPsec NAT Traversal, Redundant VPN Gateway, Route-based VPN		
Global VPN client platforms supported	Microsoft® Windows XP, Vista 32/64-bit, Windows 7 32/64-bit		
SSL VPN platforms	Microsoft Windows XP/Vista 32/64-bit/Windows 7, Mac OS X 10.4+, Linux FC3+/Ubuntu 7+/OpenSUSE		
Mobile Connect platform supported	Apple® iOS 4.2 or higher, Google® Android™ 4.0 or higher		
<b>Security services</b>			
Deep Packet Inspection services	Gateway Anti-Virus, Anti-Spyware, Intrusion Prevention, Application Intelligence and Control (TZ 215 only)		
Content Filtering Service (CFS)	HTTP URL, HTTPS IP, keyword and content scanning, ActiveX, Java Applet, and cookie blocking bandwidth management on filtering categories, allow/forbid lists		
Enforced Client Anti-Virus and Anti-Spyware	McAfee®		
Comprehensive Anti-Spam Service <sup>6</sup>	Supported		
Application Intelligence and Control	Application control		Application Traffic Visualization and Advanced Application Control
<b>Networking</b>			
IP address assignment	Static, (DHCP, PPPoE, L2TP and PPTP client), Internal DHCP server, DHCP relay		
NAT modes	1:1, many, many:1, many many, flexible NAT (overlapping IPs), PAT, transparent mode		
VLANs	5, PortShield	10, PortShield	20, PortShield
DHCP	Internal server, relay		
Routing	OSPF, RIP v1/v2, static routes, policy-based routing, multicast		
Authentication	XAUTH/RADIUS, Active Directory, SSO, LDAP, Novell, internal user database, Terminal Services, Citrix		
Local user database	150 users		
VoIP	Full H.323v1-5, SIP, gatekeeper support, outbound bandwidth management, VoIP over WLAN, deep inspection security, full interoperability with most VoIP gateway and communications devices		
<b>System</b>			
Zone security	Yes		
Schedules	Yes		
Object-based/group-based management	Yes		
DDNS	Dynamic DNS providers include: dyndns.org, yi.org, no-ip.com and changeip.com		
Management and monitoring	Local CLI, Web GUI (HTTP, HTTPS), SNMP v2; Global management with Dell SonicWALL GMS		
Logging and reporting	Analyzer, Scrutinizer, GMS, Local Log, Syslog, Solera Networks, NetFlow v5/v9 (TZ 215), IPFIX with Extensions (TZ 215), Real-time Visualization (TZ 215 only)		
Hardware failover	—	Active/Passive	Active/Passive
Anti-spam	RBL support, Allowed/Blocked Lists, Optional Dell SonicWALL Comprehensive Anti-Spam Service <sup>6</sup>		
Load balancing	Yes, Outgoing and Incoming		
Standards	TCP/IP, UDP, ICMP, HTTP, HTTPS, IPsec, ISAKMP/KE, SNMP, DHCP, PPPoE, L2TP, PPTP, RADIUS, IEEE 802.3		
WAN acceleration support <sup>7</sup>	Yes, with Dell SonicWALL WXA appliances		
<b>Built-in wireless LAN</b>			
Standards	802.11b/g/n	802.11a/b/g/n (3x3)	802.11a/b/g/n (3x3)
Wireless security standards	(WEP, WPA, WPA2, 802.11i, TKIP, PSK, 02.1x, EAP-PEAP, EAP-TTLS)		
Virtual Access Points (VAPs)	Up to 8		
Antennas	Double: detachable, external	Triple: 2 external detachable, 1 internal	Triple: detachable, external
Radio power—802.11b/802.11g/802.11n	18 dBm max/18 dBm @ 6Mbps, 15 dBm @ 54Mbps	15.5 dBm max/18 dBm max/17 dBm @ 6 Mbps, 13 dBm @ 54 Mbps	15.5 dBm max/18 dBm max/17 dBm @ 6 Mbps, 13 dBm @ 54 Mbps
Radio power—802.11a/802.11b/802.11g/802.11n	—	15.5 dBm max/18 dBm max/17 dBm @ 6 Mbps, 13 dBm @ 54 Mbps	15.5 dBm max/18 dBm max/17 dBm @ 6 Mbps, 13 dBm @ 54 Mbps
Radio power—802.11n (2.4GHz)/802.11n (5.0GHz)	19 dBm MCS 0, 12 dBm MCS 15	19 dBm MCS 0, 11 dBm MCS 15/17 dBm MCS 0, 12 dBm MCS 15	19 dBm MCS 0, 11 dBm MCS 15/17 dBm MCS 0, 12 dBm MCS 15
Radio receive sensitivity—802.11a/802.11b/802.11g	-90 dBm @ 11Mbps/-91 dBm @ 6 Mbps, -74 dBm @ 54 Mbps	-95 dBm MCS 0, -81 dBm MCS 15/-90 dBm @ 11Mbps/-91 dBm @ 6Mbps, -74 dBm @ 54 Mbps	-95 dBm MCS 0, -81 dBm MCS 15/-90 dBm @ 11Mbps/-91 dBm @ 6Mbps, -74 dBm @ 54 Mbps
Radio receive sensitivity—802.11n (2.4GHz)/802.11n (5.0GHz)	-89 dBm MCS 0, -70 dBm MCS 15	-89 dBm MCS 0, -70 dBm MCS 15/-95 dBm MCS 0, -76 dBm MCS 15	-89 dBm MCS 0, -70 dBm MCS 15/-95 dBm MCS 0, -76 dBm MCS 15
<b>Hardware built-in wireless LAN</b>			
Interfaces	(5) 10/100 fast ethernet, 1 USB, 1 console	(5) 10/100/1000 copper gigabit, 1 USB, 1 console	(7) 10/100/1000 copper gigabit, 2 USB, 1 console
Processor	Single-core	Dual-core	Dual-core
Flash memory/RAM	32 MB/256 MB	32 MB/256 MB	32 MB/512 MB
3G wireless/modem <sup>8</sup>	Supported with approved adapters <sup>9</sup>		
USB ports	1	1	2
Power input	100 to 240 VAC, 50-60 Hz, 1 A		
Max power consumption	5.2W/7.0W	6.4W/10.5W	9.0W/12.0W
Total heat dissipation	17.8 BTU/23.7 BTU	21.9 BTU/35.8 BTU	30.6 BTU/41.4 BTU
Certifications	VPNC, ICSA Firewall 4.1		
Certifications pending	EAL4+, FIPS 140-2 Level 2, IPv6 Phase 1, IPv6 Phase 2		
Form factor and dimensions	5.555 x 1.42 x 7.48 in (14.1 x 3.6 x 19 cm)	5.555 x 1.42 x 7.48 in (14.1 x 3.6 x 19 cm)	7.125 x 1.5 x 10.5 in (18.1 x 3.81 x 26.67 cm)
Weight	0.75 lbs/0.34 kg 0.84 lbs/0.38 kg	0.75 lbs/0.34 kg 0.84 lbs/0.38 kg	1.95 lbs/0.97 kg 2.15 lbs/0.97 kg
Major regulatory compliance	FCC Class A, CES Class A, CE, C-Tick, VCCI, Compliance MIC, NOM, UL, cUL, TUV/GS, CB, NOM, WEEE, RoHS		
Environment/humidity	40-105° F, 0-40° C / 5-95% non-condensing		
MTBF	28 years/15 years		

<sup>1</sup> Testing Methodologies: Maximum performance based on RFC 2544 (for firewall). Actual performance may vary depending on network conditions and activated services. <sup>2</sup> UTM/Gateway AV/Anti-Spyware/IPS throughput measured using industry standard Spirent WebAvalanche HTTP performance test and Ixia test tools. Testing done with multiple flows through multiple port pairs. <sup>3</sup> Actual maximum connection counts are lower when DPI services are enabled. <sup>4</sup> VPN throughput measured using UDP traffic at 1280 byte packet size adhering to RFC 2544. <sup>5</sup> 3G card and modem are not included. See <http://www.sonicwall.com/us/products/cardsupport.html> for supported USB devices. <sup>6</sup> The Comprehensive Anti-Spam Service supports an unrestricted number of users but is recommended for 250 users or less. <sup>7</sup> With Dell SonicWALL WXA Series Appliances.




Security Monitoring Services from Dell SecureWorks are available for this appliance Series. For more information, visit [www.dell.com/secureworks](http://www.dell.com/secureworks)



## iBootBar Specifications

<b>Physical</b>	Height:	1U 1.75 in (4.5 cm)
	Width:	19.0 in (48.25 cm)
	Depth:	6.00 in (15.25 cm)
	Weight:	7 lbs (3.25 Kg)
	Temperature	
	Operating:	0 to 40 o C
	Storage:	-10 to 85 o C
	Relative Humidity	0 to 95% Non-Condensing
<b>A/C Input</b>	<b>N15 Models</b>	NEMA 5-15 Linecord 115VAC 15 Amps combined total switched per Linecord Supplied with NEMA 5-15 Linecord, attached
	<b>N20 Models</b>	NEMA 5-20 Linecord 115VAC 20 Amps combined total switched per Linecord Supplied with NEMA 5-20 Linecord, attached
	<b>C10 Models</b>	IEC320 C14 Receptacle 100-240VAC 10 Amps total at 240VAC Max per Linecord Supplied with IEC320 C13 to CEE7 (SHUCO) Linecord
	<b>C20 Models</b>	IEC320 C20 Receptacle 100-240VAC 20 Amps total at 240VAC Max per Linecord Supplied with IEC320 C19 to CEE7 (SHUCO) Linecord
<b>Network</b>	10/100 Ethernet Web, Telnet, SNMP, SMTP Port Assignable for Web and Telnet. SSL Security on Web control	
<b>Serial Port</b>	D9 Serial, configured as DCE. to 115.2Kbps	
<b>Internal Modem</b>	56Kbps V.92 Global Compliance, Data or Tone Dial (DTMF) control	
<b>Switched Outlet</b>	<b>N15 Models</b>	8 x NEMA 5-15 Receptacle, 12 Amps Max per Receptacle, 15 Amps Max Total per Linecord
	<b>N20 Models</b>	8 x NEMA 5-15 Receptacle, 12 Amps Max per Receptacle, 20 Amps Max Total per Linecord

	<b>C10 Models</b> 8 x IEC 320-C13 10 Amps Max per Receptacle, 10 Amps Max Total per Linecord
	<b>C20 Models</b> 8 x IEC320-C13 10 Amps Max per Receptacle, 20 Amps Max Total per Linecord
<b>Compliance</b>	UL/cUL Listed CE Marked RoHS/WEEE Compliant FCC Part 15 Class B 

<http://dataprobe.com/ibootbar.html#specifications>

Access Control Solutions For A Changing World™

**Linear**<sup>®</sup>  
Building On Innovation.



eMerge is UL 294 Listed  
and Meets or Exceeds  
Industry Standards

**eMERGE™ 50**  
Browser Managed Security Platform

**eMERGE™ 5000**  
Browser Managed Security Platform

The Integrated Security Management Solutions  
With Embedded Software

# System Features

	eMerge 50	eMerge 5000
Access control readers	32	140
Maximum number of cameras	N/A	128
Maximum number of card holders	5,000	20,000
User photo	No	Yes
e-mail and SMS	Yes	Yes
NAS back-up	Yes	Yes
Burg interface (loops)	Yes	Yes
Video Management System (VMS)	No	Optional
Enterprise capable	Optional	Yes
Live Monitoring Bundle	No	Yes
Monitoring desktop, Floor plans, Alarm acknowledgement, Photo pop-up		
Badging	No	Optional
Elevator control	No	Yes
Threat levels	No	Yes
Application Programmable Interface (API)	Yes	Yes

## eMerge Modules:

eMerge 50	Network Controller – 1 Access Control Module, power supply and enclosure
eMerge 5000	Network Controller – 1 Access Control Module, power supply and enclosure
eMerge EXN	Expansion Node – card, power supply, and enclosure
eMerge MicroNode	Compact Expansion Node – for Version 3 and later systems
eMerge ACM	Access Control Module – 2 readers, 4 inputs, 4 outputs
eMerge INP	Supervised Input Module – 8 inputs
eMerge OUT	Relay Output Module – 8 outputs
eMerge TMP	Temperature Input Module – 8 inputs



eMerge is UL 294 Listed and Meets or Exceeds Industry Standards

## Hardware and Software Specifications

Check with Linear's Web site ([www.linearcorp.com](http://www.linearcorp.com)) for updated specifications, lists of supported devices, and software updates.

Readers:	The eMerge Access Control Module (ACM) supports card readers that use the Wiegand Reader Interface
Operating System:	Red Hat Linux
Database Engine:	PostgreSQL (ODBC Compliant, API Enabled)
DBMS compatibility:	SQL, ODBC
e-mail support:	POP, SMTP
Encryption:	SSL, SHA-1
Network:	NTP, TCP/IP
Web:	http, https, xml
Processor:	Intel XScale-IXP425
Memory:	CompactFlash (CF) 2 GB

## Readers, Keypads, and Accessories

Linear manufactures and supplies a complete range of proximity readers, keypads, power supplies, cards, and access credentials to complete your eMerge system. Visit [www.linearcorp.com](http://www.linearcorp.com) to view the latest available options.

## Part Number Cross Reference

Several eMerge parts changed part numbers with the Version 3 product release. See below for part number reference.

Old P/N	New P/N	Systems & Nodes
0587001	230219	eMerge 50 System v3.3
0589001	230227	eMerge 50 System 110V v3.3
0587003	230220	eMerge 5000 System v3.3
0589003	230228	eMerge 5000 System 110V v3.3
0587004	230221	eMerge Expansion Node (EXN) v3.3
N/A	230229	eMerge Expansion Node (EXN) 110V v3.3
N/A	230222	eMerge MicroNode

Old P/N	New P/N	Modules
0580100-L	same	eMerge Access Control Module (ACM)
0580110	same	eMerge Supervised Input Module (INP)
0580120	same	eMerge Relay Output Module (OUT)
0580130	same	eMerge Temperature Input Module (TMP)
0587008	230338	eMerge Combo Board v3.3