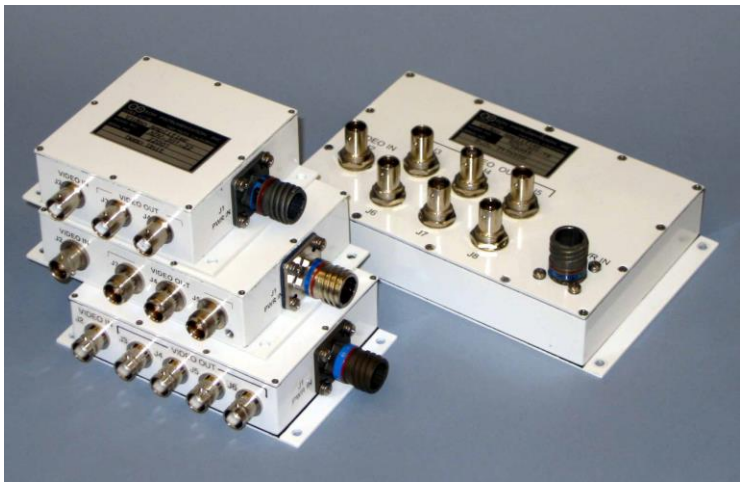
15531 Cabrito Road
Van Nuys, CA 91406

www.eoninstrumentation.com
818-781-2185

3800 Oceanic Drive, #112
Oceanside, CA 92056

Product Data Sheet
(10/18/2017)

Compact 3G-SDI Video Splitter/Amplifier



Model Numbers:
ADV-301-22D (1 in 2 out)
ADV-301-23D (1 in 3 out)
ADV-301-24D (1 in 4 out)
ADV-301-16D (1 in 6 out)

General

The ADV-301-xxD Compact series includes several different models, all qualified to MilSpec EMI, Environmental and Power requirements. Each model inputs one 3G-SDI digital video signal and distributes to two or more outputs. Each output is amplified to unity gain with respect to the input signal level. The Splitter/Amplifiers support 270Mbps, 1483/1485 and 2967/2970Mbps or automatic re-clocking rates. Power input is 18 – 36 VDC. Input and output BNC connectors are 75 ohms as specified in the table below.

Other Eon Splitter/Amplifier series are configured to process 3G and HD-SDI, DVID, HDMI, Display Port, as well as analog (10hz – 30Mhz) video in fixed or switchable configurations. Please contact Eon's website for information and who to contact about existing or customized video products including rugged military splitters, converters, selectors, cameras, monitors and recorders.

Configuration

See the four attached Outline and Mounting Drawings for the Standard Series.

Specifications for Standard Compact Video Amp/Splitter Series

Signal Input/Output: Single Ended
Gain: Unity
Finish (except for screws and connectors): CARC White Paint, Black Lettering
Base Conformal Coat
Input Voltage: 18-36 VDC
Power Dissipation: 1.5-6.0 Watts depending on configuration
Weight: 0.6-1.5 lbs (nominal)

Meets (Qual by Similarity, Data available upon request):

Power: Mil-Std-704D, 1275

Environmental: Mil-Std-810G

Temperature:

Storage: -55 to +85C

Functional: -15 to +55C

Short Time Operating: +70C

Altitude: Non-Pressurized Area, Cl 1 per MIL-E-5400T (0-50,000Ft)

Humidity: DO-160C, Cat A

MIL-STD-810E Method 507.3, Procedure III (Aggravated), 10ea 24 hr cycles

Salt Fog: MIL-STD-810E Method 509.3, Procedure I

Sand and Dust: MIL-STD-810E Method 510.3, Procedure I

Acceleration: Operational: +/-6.5G's, Non-operational: +/-9 G's

Endurance Sine on Random Vibration:

MIL-STD-810F Method 514.5 Category 13 and IF-3AA0-08002B.

Rapid Decompression: MIL-STD-810E Method 500.3 para II-3.3 Procedure III

Functional and Crash Safety Shock Testing:

DO-160C Section 7 Impulse, 6 G's Operational, 15 G's Crash Safety.

EMI: Mil-Std-461

Conducted Emissions, CE101

Conducted Emissions, CE102

Radiated Emissions, RE101

Radiated Emissions, RE102

Conducted Susceptibility, CS101

Conducted Susceptibility, CS114

RF Conducted Susceptibility, RFCS

Radiated Susceptibility, RS103

RF Radiated Susceptibility

Electrostatic Discharge, ESD

Lightning Induced Transient Susceptibility, LITS

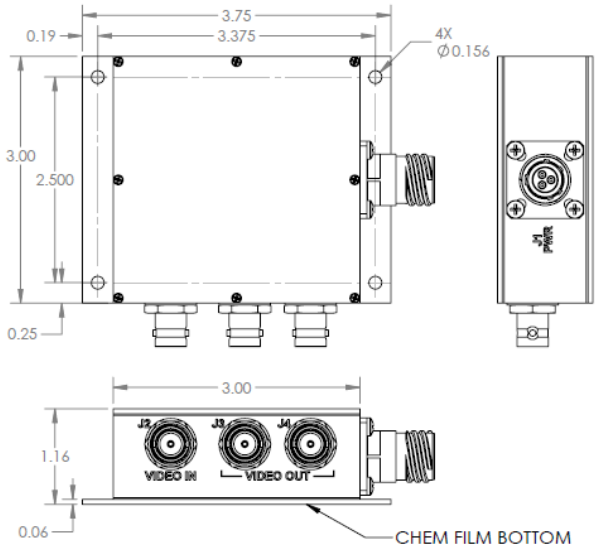
MTBF: 82,000 – 96,000Hrs

Digital Compact Series Summary

Name	Part Number	J1	J2	J3	J4	J5	J6	J7	J8
ADV-301-22D (1 in 2 out)	17900-300	D38999/ 20WA98PN	UCBBJE20-1	UCBBJE20-1	UCBBJE20-1	N/A	N/A	N/A	N/A
ADV-301-23D (1 in 3 out)	17500-300	D38999/ 20WA98PN	UCBBJE20-1	UCBBJE20-1	UCBBJE20-1	UCBBJE20-1	N/A	N/A	N/A
ADV-301-24D (1 in 4 out)	17700-300	D38999/ 20WA98PN	UCBBJE20-1	UCBBJE20-1	UCBBJE20-1	UCBBJE20-1	UCBBJE20-1	N/A	N/A
ADV-301-16D (1 in 6 out)	17800-300	D28999/ 20WA98PN	5222132-1	5222132-1	5222132-1	5222132-1	5222132-1	5222132-1	5222132-1

NOTES: Other compatible connector input and outputs and electrical configurations can be created

REVISIONS				
ZONE	REV.	ECO	DESCRIPTION	DATE
	TBD			TBD



J1 PWR IN P/N D38999/20FA98PN

PIN #	SIGNAL
A	+ 28 VDC IN
B	+28 VDC RETURN
C	CHASSIS GND

BNC VIDEO INPUT
TYCO/AMP P/N 5221244-1

CONN #	PIN	SIGNAL
J2	CENTER	VIDEO IN
	SHIELD	CHASSIS GND

BNC VIDEO OUTPUTS
TYCO/AMP P/N 5221244-1

CONN #	PIN	SIGNAL
J3-4	CENTER	VIDEO OUT
	SHIELD	CHASSIS GND

NOTES:
1. INPUT POWER: 28 VDC, 1.5 WATTS NOMINAL
2. FINISH: EXCEPT FOR SCREWS AND CHASSIS BOTTOM
   CARC WHITE PAINT, BLK LETTERING
   CARC PAINT IAW MIL-C-53072 AND MIL-T-704, TYPE G
   TOP COAT TO BE IAW MIL-C-22750 COLOR FED-STD-595 17925 (WHITE)
3. WEIGHT: 0.6 LB NOMINAL
4. VIDEO GAIN: UNITY GAIN AT 75 OHM IN/OUT IMPEDANCE

CAD-MAINTAINED DRAWING; CHANGES SHALL BE INCORPORATED VIA DESIGN ACTIVITY.

UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN INCHES [mm]
TOLERANCES:
.XXX": ±0.005" [±0.12mm]
.XX": ±0.02" [±0.5mm]
.X": ±0.1" [±2.5mm]
ANGLES: ±1.0°

MATERIAL:
FINISH:

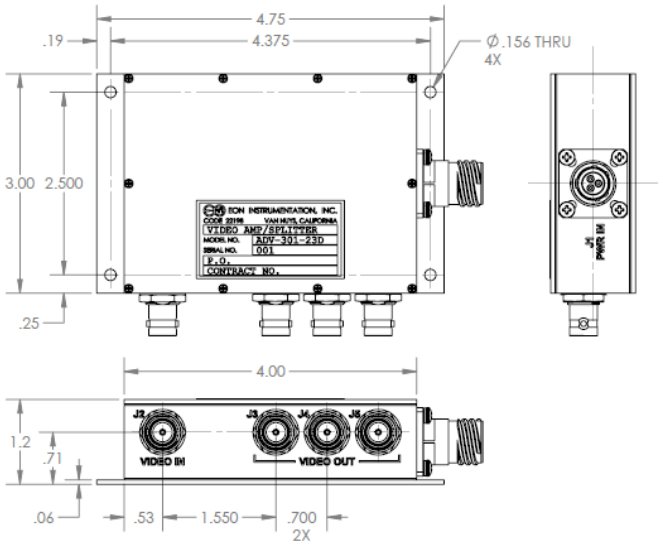
EON Instrumentation, Inc.
15531 Cabrito Road
Van Nuys, CA 91406
Tel: +1 (818) 781-2185

FSCM NO. 22198

	NAME	DATE
MODELED	N. FERNANDEZ	08/23/2016
DRAWN	N. FERNANDEZ	08/23/2016
CHECKED		
ENG APPR.		

PROJECT: ADV-301-22D
TITLE: OUTLINE & MOUNTING
SIZE A | DWG. NO. 17900-300 | REV TBD
SCALE: 3:4 | SHEET 1 OF 1

REVISIONS			
REV.	ECO	DESCRIPTION	DATE
IR	EC175-00	INITIAL RELEASE.	09/14/2016



J1 PWR IN
P/N D38999/20WA98PN

PIN #	SIGNAL
A	+ 28 VDC IN
B	+ 28 VDC RETURN
C	CHASSIS GND

BNC VIDEO INPUT
TROMPETER UCBBJE20-1

CONN #	PIN	SIGNAL
J2	CENTER	SDI VIDEO IN
	SHIELD	CHASSIS GND

BNC VIDEO OUTPUTS
TROMPETER UCBBJE20-1

CONN #	PIN	SIGNAL
J3-J5	CENTER	SDI VIDEO OUT
	SHIELD	CHASSIS GND

NOTES:
1. INPUT POWER 28 VDC, 3 WATTS NOMINAL
2. HOUSING MATERIAL: CASE: 6063-T52 ALUMINUM; COVERS: 5052-H32 ALUMINUM
3. FINISH: CHEM-FILM PER MIL-C-5541; BLACK LEGEND TEXT
4. WEIGHT: 1.0 LB NOMINAL

CAD-MAINTAINED DRAWING; CHANGES SHALL BE INCORPORATED VIA DESIGN ACTIVITY.

UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN INCHES [mm]
TOLERANCES:
.XXX": ±0.005" [±0.12mm]
.XX": ±0.02" [±0.5mm]
.X": ±0.1" [±2.5mm]
ANGLES: ±1.0°

MATERIAL: SEE NOTES
FINISH: SEE NOTES

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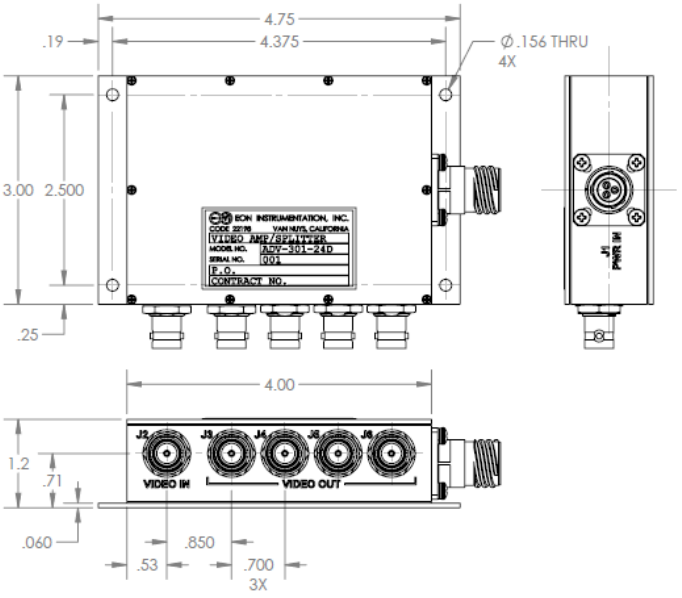
CAGE CODE 22198

	NAME	DATE
DRAWN	NF / GJE	09/14/2016
CHECKED	JN / JW	09/14/2016
ENG APPR.	J. NORSEN	09/14/2016

PROJECT: ADV-301-23D
TITLE: OUTLINE & MOUNTING
SIZE A | DWG. NO. 17500-300 | REV IR
SCALE: 2:3 | SHEET 1 OF 1

REVISIONS			
REV.	ECO	DESCRIPTION	DATE
IR	EC175-00	INITIAL RELEASE.	05/10/2017



J1 PWR IN
P/N D38999/20WA98PN

PIN #	SIGNAL
A	PWR (+28VDC) IN
B	PWR RETURN
C	CHASSIS GND

BNC VIDEO INPUT
TROMPETER UCBBJE20-1

CONN #	PIN	SIGNAL
J2	CENTER	VIDEO IN
	SHIELD	CHASSIS GND

BNC VIDEO OUTPUTS
TROMPETER UCBBJE20-1

CONN #	PIN	SIGNAL
J3-J6	CENTER	VIDEO OUT
	SHIELD	CHASSIS GND

NOTES:
1. INPUT POWER: 28 VDC, 3 WATTS NOMINAL
2. HOUSING MATERIAL:
   - CASE: 6063-T52 ALUMINUM
   - COVERS: 5052-H32 ALUMINUM
3. FINISH: CHEM-FILM PER MIL-C-5541; BLACK LEGEND TEXT
   - OPTIONAL CARC PAINT IAW MIL-C-53072 AND MIL-T-704, TYPE G; TOP COAT IAW MIL-C-22750. BOTTOM SURFACE OF MOUNTING PLATE IS CHEM-FILM FINISH WHEN CHASSIS IS PAINTED.
4. WEIGHT: 1.0 LB NOMINAL

CAD-MAINTAINED. CHANGES SHALL BE INCORPORATED VIA DESIGN ACTIVITY.
UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN INCHES [mm]
TOLERANCES: .XXX": ±0.005" [±0.12mm] .XX": ±0.02" [±0.5mm] .X": ±0.1" [±2.5mm] ANGLES: ±1.0°
MATERIAL: SEE NOTES
FINISH: SEE NOTES
INTERPRET DRAWING IAW ASME Y14.100

APPROVALS:		DATE:
DRAWN:	GJE	05/04/2017
CHECKED:	JN	05/10/2017
ENG APPR.:	JN	05/10/2017

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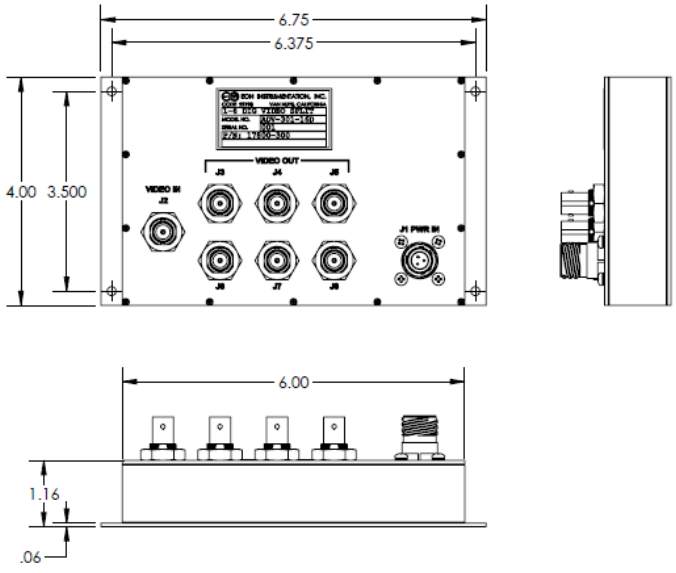
TITLE: ADV-301-24D OUTLINE & MOUNTING

SIZE	PART NO.	DWG. NO.	REV
A	17700-300	17700-300	IR

SCALE: 2:3 SHEET 1 OF 1

REVISIONS			
REV.	ECO	DESCRIPTION	DATE
IR	EC178-00	INITIAL RELEASE	3/15/2017



J1 PWR IN P/N D28999/20WA98PN

PIN#	SIGNAL
A	+28VDC IN
B	+28VDC RETURN
C	CHASSIS GND

J2 VIDEO IN P/N BNC 5222132-1

PIN#	SIGNAL
CENTER	VIDEO IN
SHIELD	GND

J3-J8 VIDEO OUT P/N BNC 5222132-1

PIN#	SIGNAL
CENTER	VIDEO OUT
SHIELD	GND

CAD-MAINTAINED DRAWING; CHANGES SHALL BE INCORPORATED VIA DESIGN ACTIVITY.

UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN INCHES [mm]
TOLERANCES: .XXX": ±0.005" [±0.12mm] .XX": ±0.02" [±0.5mm] .X": ±0.1" [±2.5mm] ANGLES: ±1.0°
MATERIAL: SEE NOTES
FINISH: SEE NOTES

CAGE CODE 22198

NAME	DATE
DRAWN: J. Crocker	03/15/2017
CHECKED:	
ENG APPR.:	

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PROJECT: ADV-301-16D
TITLE: Outline & Drawing

SIZE	DWG. NO.	REV
A	17800-300	IR

SCALE: 1:2 SHEET 1 OF 1