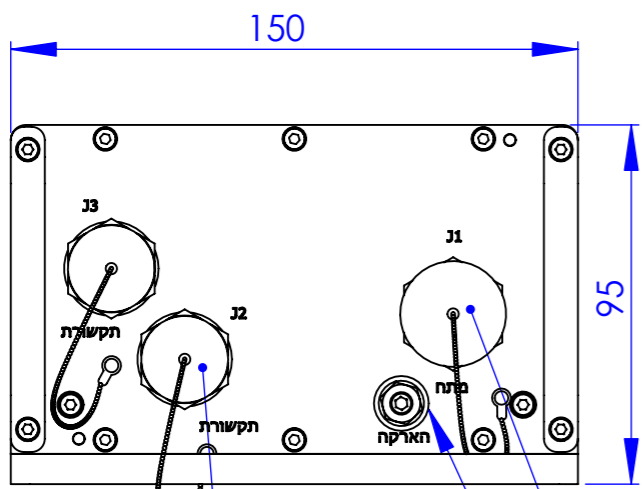


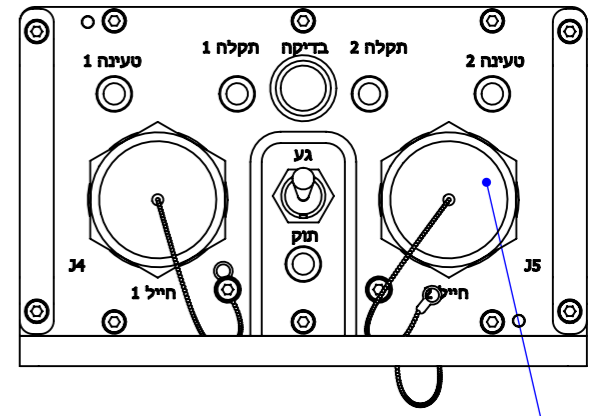
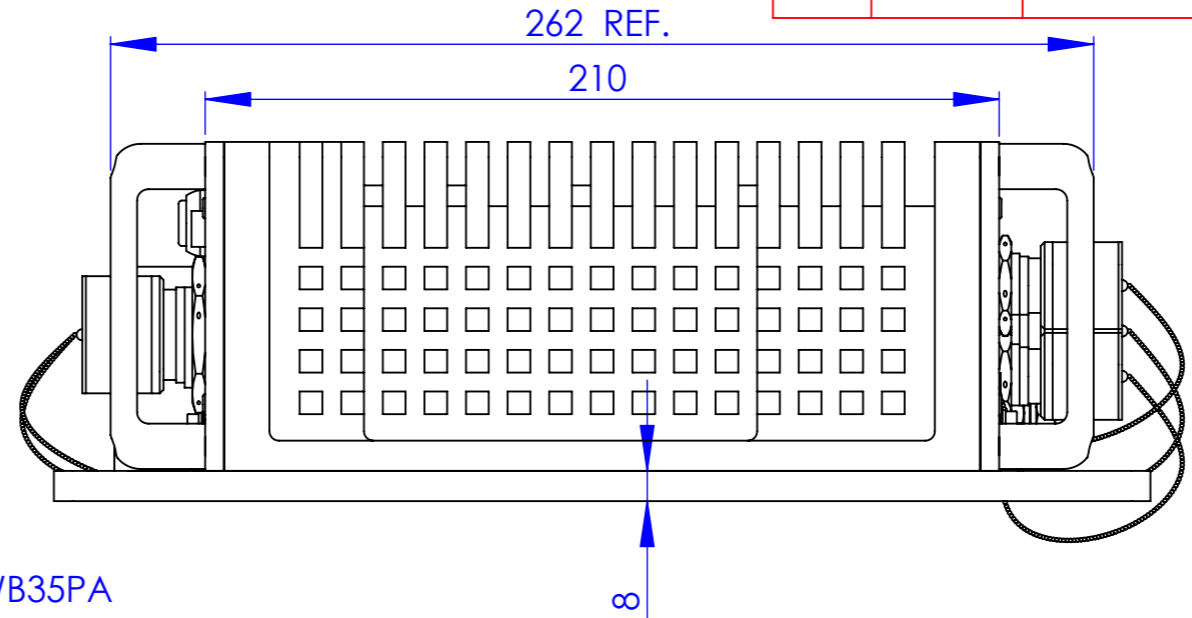
REV.	CHANGE ORDER No.	CHANGES	DATE	APPROVAL
X	XXXX	XXXXX	XXXXX	XXXXX



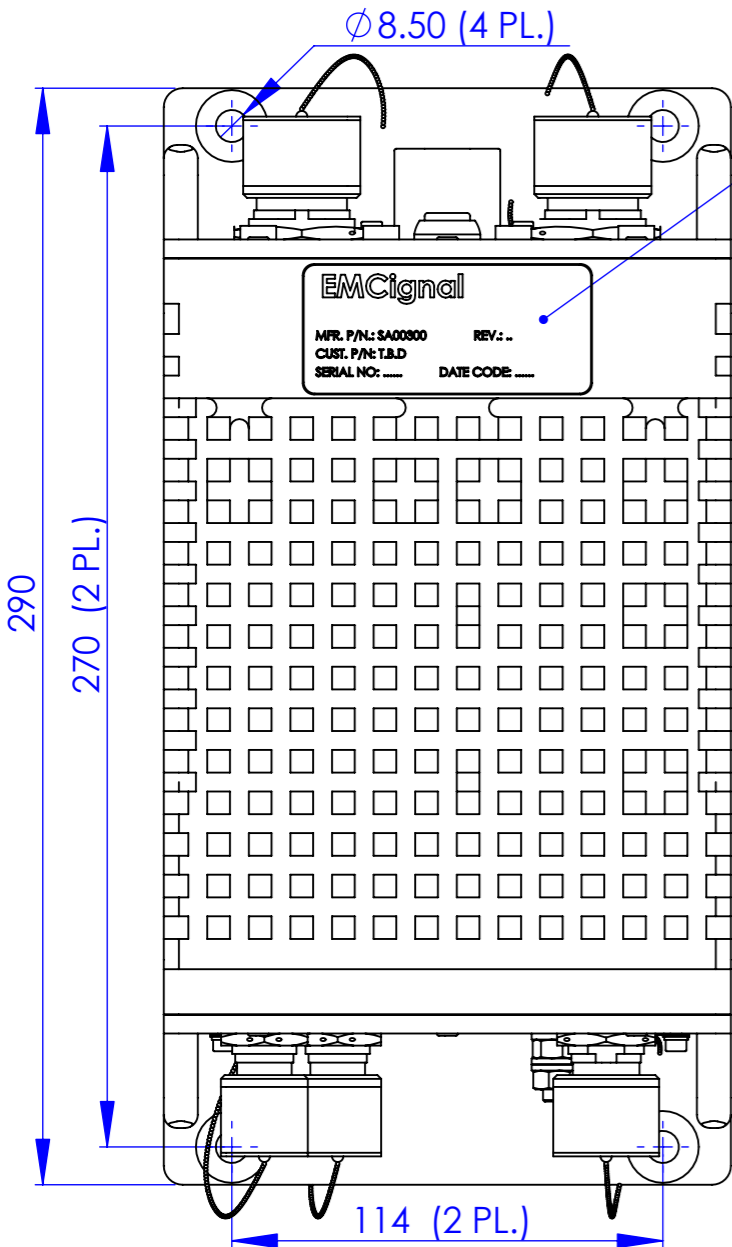
INPUT LAN (2 PL.)
D38999/24WA35SN

GND STUD
M6

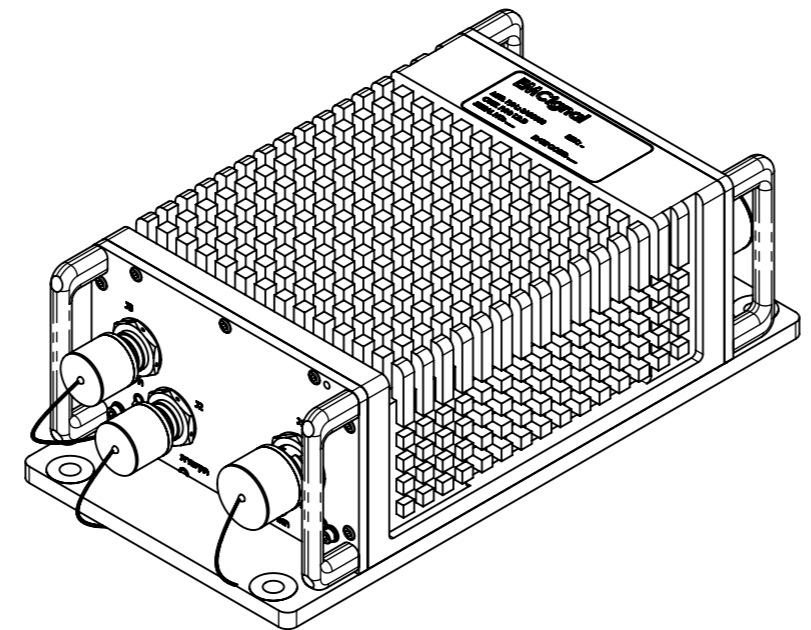
INPUT PWR
D38999/24WB35PA



OUTPUT CONNECTORS (2 PL.)
D38999/24WD35SN



CUSTOMER
NAME PLATE



PRODUCT P/N: SA00300

NAME	SIGNATURE	DATE	THIS DOCUMENT CONTAINS PROPRIETARY INFORMATION OF EMCIGNAL LTD. AND MAY NOT BE REPRODUCED, COPIED, DISCLOSED OR UTILIZED IN ANY WAY IN WHOLE OR IN PART, WITHOUT THE PRIOR WRITTEN CONSENT OF EMCIGNAL LTD. DO NOT MEASURE ON DWG. BREAK SHARP CORNERS. ALL UNDIMENSIONED RADIUS ARE R=0.5 MATERIAL	PROJECT XX	
	NIR NISSIM	16.06.2008			DRAFT
	LEONID BRUSSER	16.06.2008			CHECK
	NIR NISSIM	16.06.2008			DESIGN
	SANDLER A.	16.06.2008			PA.
	TINO NACSON	16.06.2008	APPR.		
NEXT ASSY.	SURF. FINISH				
XXXXX	N7				
SURFACE TREATMENTS:			MATERIAL		
.....				
ANGLE PROJECTION	TOLER.		TITLE		
	X. ±0.5		POWER SUPPLY AND CHARGER UNIT		
	X.X ±0.2				
	X.XX ±0.05				
SCALE: NONE	ANGLES ±30'		SIZE	DRAWING NO.	
DIM. IN MM	SHEET OF 1/3		A3	TMP-PWR-001	
				REV. 8	

EMCignal

Description

The unit is a Power supply and battery charger device. It is powered from vehicle power bus that complies with MIL-STD-1275 and has 2 channels of LAN communication that are feed through towards load applications. Its output has two output powers of 12Vdc/2A and 2 chargers for 2 batteries UBI2590 apply SMBus communication.

Electrical Performance:

Nominal Working Voltage	18Vdc to 30Vdc
Input Rated Current	20Adc max@Vin = 18Vdc
Output power	12Vdc@2A
Charger power	16.8Vdcmax
Charger current per channel	7Adcmax
Charge time	4Hrs@charge current =7A
Battery status information	SMBus
Battery thermal control	included
Vehicle current determination	7Adc or 3.5Adc
Charge status indication	LED (3 colors) included
Efficiency:	85% typ.
Over temperature protection	included (71°C base plates)
MIL-STD-1275A	fully comply
Input surge voltage	100V/50msec at 0.5Ω source impedance
Input spike voltage	±250V/15mJoules
Input emergency under voltage	10Vdc / output power operated, chargers off.
Ripple voltage	7Vp-p max
Reverse polarity protection	included
EMI performance per MIL-STD461E (*)	comply with : CE101, CE102, CS101, CS114, CS115, CS116, RE101, RE102, RS101, RS103, RS105

(*) use shielded cables

RTN Lines are not connected to Chassis GND.

Connectors Pin assignment:

Unit connectors per table:

Connector	MIL-C-38999 P/N	Function
J1	D38999/26WB35PA	Power input and charge determination
J2	D38999/24WA35SN	LAN 1
J3	D38999/24WA35SN	LAN 2
J4	D38999/24WD35SN	Load 1 charge and power
J5	D38999/24WD35SN	Load 2 charge and power

Pin assignment per tables:

J1 – power input and charge determination

J2,J3 – LAN1 and LAN2

Contacts	Description
1,2,10,12	Input power (+)
3,9,11,13	Input power (-)
4,5	Charge determination
7,8	Spare
6	Chassis GND

Contacts	Description
1	TX (+)
2	TX (-)
3	N.C
4	Spare
5	RX (-)
6	RX (+)

REV.	CHANGE ORDER No.	CHANGES	DATE	APPROVAL
X	XXXX	XXXXX	XXXXX	XXXXX

J4 – Load 1 charge and power
J5 – Load 2 charge and power

Contacts	Description
1,19	Power (-)
18,30	Power (+)
3,4,21	Charge (+)
5,6,22	Charge (-)
15	SMCLK (SMBus clock)
16	SMDATA (SMBus data)
28	Current determination
9	TX (+)
10	TX (-)
11	RX (+)
12	RX (-)
32,35	IND (indication)
2,7,8,13,14,17,20,23,24,25,26,27,29,31,33,34,36	Chassis GND

NAME SIGNATURE	DATE		THIS DOCUMENT CONTAINS PROPRIETARY INFORMATION OF EMCsignal LTD. AND MAY NOT BE REPRODUCED, COPIED, DISCLOSED OR UTILIZED IN ANY WAY IN WHOLE OR IN PART, WITHOUT THE PRIOR WRITTEN CONSENT OF EMCsignal LTD. DO NOT MEASURE ON DWG. BREAK SHARP CORNERS. ALL UNDIMENSIONED RADIUS ARE R=0.5	PROJECT XX
NIR NISSIM	16.06.2008	DRAFT		
LEONID BRUSSER	16.06.2008	CHECK		
NIR NISSIM	16.06.2008	DESIGN		
SANDLER A.	16.06.2008	PA.		
TINO NACSON	16.06.2008	APPR.		
NEXT ASSY.	SURF. FINISH			
XXXXX	N7			
SURFACE TREATMENTS:			MATERIAL	
ANGLE PROJECTION	TOLER.	TITLE		
	X. ±0.5	POWER SUPPLY AND CHARGER UNIT		
	X.X ±0.2			
	X.XX ±0.05			
SCALE: NONE	ANGLES ±30'	SIZE	DRAWING NO.	REV.
DIM. IN MM	SHEET OF 2/3	A3	TMP-PWR-001	8



Reliability

MTBF operating (GM): 14,000Hrs
 MTBF average (50% GM, 50% GF): 42,000Hrs
 Mission reliability (24Hrs) 0.9983 for MTBF = 14,000

Environmental performance:

Per MIL-STD-810F

Operating Temperature: -20°C to +55°C
 Non- Operating Temperature: -20°C to +71°C
 Altitude:

Transportation 40,000 FT
 Operation -450m (-1,500FT) to 3000m (10,000FT)

Humidity: up to 95% no dropping
 Rain : 120mm/hr @ wind velocity = 65Km/hr

,drop dia=1 to 4.5mm
 Blowing dust: 6 Hrs @ wind velocity 5 to 10m/sec @
 T=50°C, Humidity 25% -30% ; dust
 compound and density per MIL-STD-
 810F para. 2.2.2.5 a and 2.3.2.6 a

Blowing sand: 2 Hrs @ wind velocity 20 to 30m/sec @
 T=50°C, Humidity 25% -30% ; dust
 compound and density per MIL-STD-
 810F para. 2.2.2.5 b and 2.3.2.6 b2

Sun radiation: Operation per method 505.4 procedure I cycle A1
 Non Operation per method 505.4 procedure II cycle A1

Fungus: per method 508.5 table 508.5-II (level – none)

Explosive environment: per method 511.4 procedure I

Salt fog: per method 509.4 salt density 5%/min.

Water resistance: 15minuts 50psi blowing water thru a

pipe with 0.75" dia. 48Hrs exposure to vapor of fuel,

Chemical resistance hydraulic liquids and lubricants
 Vibration per method 514.5 procedure I ground
 mobile (GM) Composite wheeled vehicle up to

2.18grms @ 5 to 500Hz
 Shock per MIL-STD-810E method 516.4
 procedures V and VI:

Peak value of shock 40g
 Time Duration 11mS
 Wave shape Sow Tooth

REV.	CHANGE ORDER No.	CHANGES	DATE	APPROVAL
X	XXXX	XXXXX	XXXXX	XXXXX

NBC

Chemical material 10gr/mm² of HD and GD material with
 MMD of 2.5mm and G material mixed
 with VX with MMD 250µm
 Biological material 100,000 spores sized of 1 to 5µm
 Radioactive material 4gr/mm² sized of 371 to 200µm and
 185gr/mm² GB Gamma radiation

Weight: 4950g. MAX
 Material: Al. Alloy 6061-T6
 Finish: Chromate conversion coating per
 MIL-C-5541E, CLASS 1A
 Painting: Base Coat per MIL-PRF-23377
 Top coat per MIL-PRF-85285
 Color No. 24084

NAME SIGNATURE	DATE		THIS DOCUMENT CONTAINS PROPRIETARY INFORMATION OF EMCsignal LTD. AND MAY NOT BE REPRODUCED, COPIED, DISCLOSED OR UTILIZED IN ANY WAY IN WHOLE OR IN PART, WITHOUT THE PRIOR WRITTEN CONSENT OF EMCsignal LTD.	
NIR NISSIM	16.06.2008	DRAFT		
LEONID BRUSSER	16.06.2008	CHECK		
NIR NISSIM	16.06.2008	DESIGN		
SANDLER A.	16.06.2008	PA.		
TINO NACSON	16.06.2008	APPR.		
NEXT ASSY. XXXXX	SURF. FINISH N7		DO NOT MEASURE ON DWG. BREAK SHARP CORNERS. ALL UNDIMENSIONED RADIUS ARE R=0.5	PROJECT XX
SURFACE TREATMENTS:			MATERIAL	
ANGLE PROJECTION	TOLER.	TITLE		
	X. ±0.5 X.X ±0.2 X.XX ±0.05	POWER SUPPLY AND CHARGER UNIT		
SCALE: NONE	ANGLES ±30'	SIZE	DRAWING NO.	REV.
DIM. IN MM	SHEET OF 3/3	A3	TMP-PWR-001	8

