LifeRacing

Professional Electronics for Automotive and Motorsport
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PDU-32 Power Controller

The **PDU-32** is a multi-channel solid state power switch with full microprocessor control, providing intelligent supply switching, monitoring and fusing functions for **12V** and **24V** applications. The **32** inputs and **32** outputs are calibrated using the **unique** fully schematic based software package '**PDUSetup**' with up to **30A** per power output (**45A** for short periods). Flash, latch and logic components can be used in **any** combination and simulated before programming. The validated and debounced state of all hard and soft (CAN) inputs is available to the schematic along with the trip state of outputs, to allow automatic backup functions to be implemented. All input and output states and currents are provided on **RS232** and **CAN** data streams for connection to logging or telemetry systems.

General	**Microprocessor controlled power switching, monitoring and fusing unit** **Fully configurable input to output schematic mapping with latch, flash, and logic functions** **Fully configurable inrush current, high current and low current trips** **Control and diagnostic communication with ECUs, datalogging or telemetry equipment**
Outputs	**32 switched power outputs with individual trip configuration** **Current monitoring on all outputs available on datastream or pc** **Maximum current per output 30A continuous, 45A for transient conditions** **64 soft outputs via CAN**
Inputs	**32 logic inputs with configurable pull up/down, active low/high, validation time and debounce time** **4 Voltage level inputs with configurable switching set points** **64 soft inputs via CAN with configurable validation time and debounce time**
Temperature	**Internal temperature monitoring**
Fault Pin	**Single pin fault indicator lamp output and reset input**
Interfaces	**Ethernet for pc configuration and monitoring connection** **CAN 2.0B interface for communication with other controllers or logging systems** **RS232 serial interface for communication with other controllers or logging systems**
Power Supply	**6V to 26V or 10V to 32V input voltage range**
Physical	**4 Deutsch Autosport or MIL connectors** **CNC machined, 'O' ring sealed, anodised aluminium case** **Maximum dimensions including the connectors are 210 x 122 x 45 mm** **Operating Temperature -25 to +85°C** **Total mass ~885 grams**

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PDU-32 Pinout

CONNECTOR 1
Mating Connector: AS620-16PN-HE

PIN	FUNCTION
1	OUT #01
2	OUT #02
3	OUT #03
4	OUT #04
5	OUT #05
6	OUT #06
7	OUT #07
8	OUT #08
9	OUT #09
10	OUT #10
11	OUT #11
12	OUT #12
13	OUT #13
14	OUT #14
15	OUT #15
16	OUT #16

CONNECTOR 2 [1]
Mating Connector: AS620-16PN[1]-HE

PIN	FUNCTION
1	OUT #17
2	OUT #18
3	OUT #19
4	OUT #20
5	OUT #21
6	OUT #22
7	OUT #23
8	OUT #24
9	OUT #25
10	OUT #26
11	OUT #27
12	OUT #28
13	OUT #29
14	OUT #30
15	OUT #31
16	OUT #32

CONNECTOR 4
Mating Connector: ASHD6141-S-N-C25

PIN	FUNCTION
1	+12V SUPPLY [2]

CONNECTOR 3
Mating Connector: AS616-35SN-HE

PIN	FUNCTION
1	INPUT #01 [3]
2	INPUT #02 [3]
3	INPUT #03 [3]
4	INPUT #04 [3]
5	INPUT #05
6	INPUT #06
7	INPUT #07
8	INPUT #08
9	INPUT #09
10	INPUT #10
11	INPUT #11
12	INPUT #12
13	INPUT #13
14	INPUT #14
15	INPUT #15
16	INPUT #16
17	INPUT #17
18	INPUT #18
19	INPUT #19
20	INPUT #20
21	INPUT #21
22	INPUT #22
23	INPUT #23
24	INPUT #24
25	INPUT #25
26	INPUT #26
27	INPUT #27
28	INPUT #28
29	INPUT #29
30	INPUT #30
31	INPUT #31
32	INPUT #32
33	SW GND
34	SW GND
35	SW GND
36	SW GND
37	SW 12V+
38	SW 12V+
39	SW 12V+
40	SW 12V+
41	WARNING AND RESET SWITCH
42	PDU RS 232 TX
43	PDU RS 232 RX
44	PDU RS 232 GND
45	PDU CAN HI #1
46	PDU CAN LO #1
47	PDU RX+
48	PDU RX-
49	PDU TX+
50	PDU TX-
51	GND IN
52	GND IN
53	GND IN
54	GND IN
55	GND IN

FOOTNOTES:
[1] Connector build time choice of N=Red, P = Yellow, B = Blue, D = Green
[2] Power supply build time choice of 12V or 24V
[3] Can be used as analogue voltage level input with configurable switching set points

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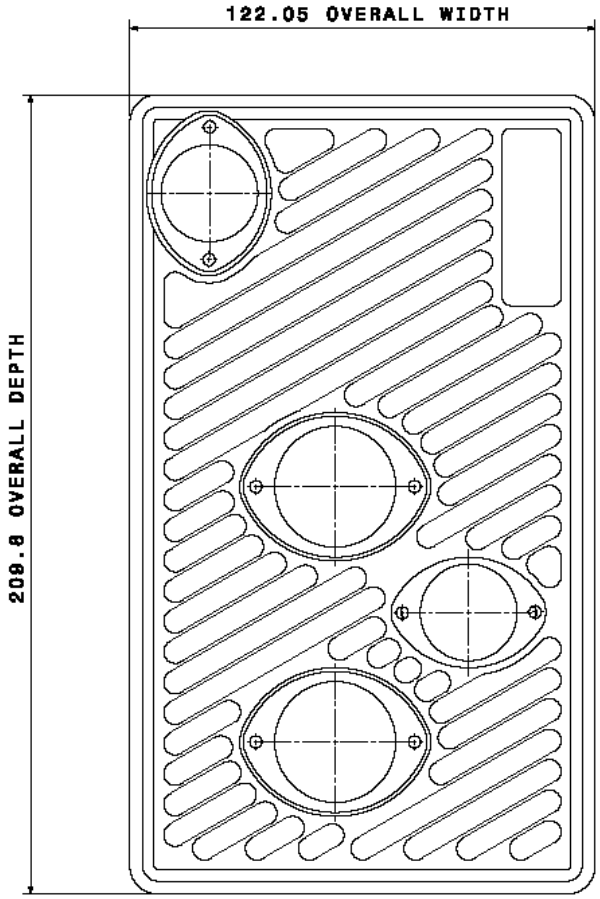
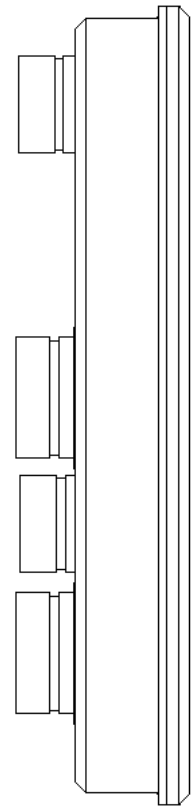
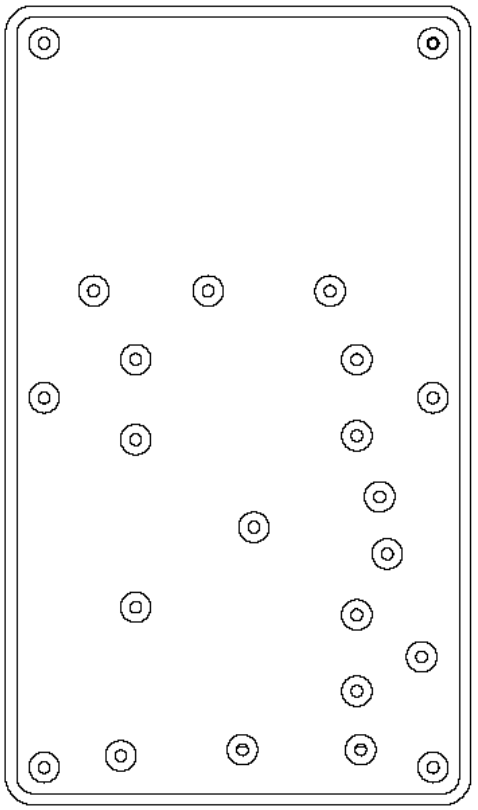
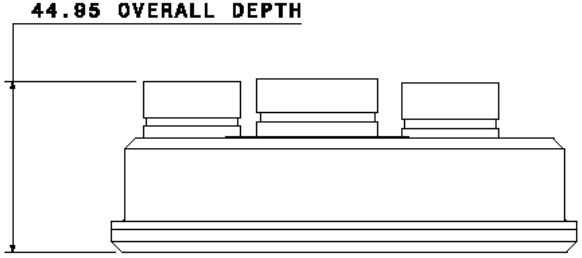
PDU-32

THIRD ANGLE PROJECTION









GENERAL TOLERANCES:	
LINEAR AND RADIAL	0.00 ±0.05 0.0 ±0.2 0 ±0.5
ANGULAR	±1°

NOTES: UNLESS OTHERWISE STATED

1. ALL DIMENSIONS ARE IN MILLIMETRES (mm)
2. THREADS: ISO COARSE TO CLASS 6H/6g U.O.S
3. GENERAL FINISH $\sqrt{}$ REMOVE BURRS & LIGHTLY BREAK SHARP EDGES
4. DO NOT SCALE

Issue	Ref.	Details	Drn.	App'd.	Date
01A	-	RELEASED FOR MANUFACTURE	TGB	TGB	14062013
00A	-	RELEASED FOR INFORMATION & LAYOUT ONLY	TGB		14062013

Title	PDU-32 - Installation Assembly
Dwg. No.	PDU-32
Matl.	N/A
Heat Treat.	N/A
Surface Finish	N/A
Scale	1:1
Size	A2
Sheet	1 of 1
Qty per Assy	1
Date	
Drawn by	

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