

Isolated DC-DC Converter for Fuel Cell and Alternative Energy Systems



PRODUCT OVERVIEW:

The **Isolated DC-DC converters** utilizes advanced Digital Power Processing, advanced magnetic and power devices with ZVS operation, providing high efficiency with fast dynamic bandwidth response for voltage, current and power regulations with input and output voltage and current and power limits control. The cost effective high frequency proven magnetic design with robust redundant control provides fast response, flexibility, reliability, light weight and volume product for Fuel Cell and alternative energy industry. Extensive J1939 CAN diagnostics.

FEATURES:

- Galvanic ally Isolated DC-DC,
- Input range: 175-600V_{DC}.
- Output range: MV:280 -500 or HV: 550-750V_{DC}
- Input Current: 550A
- Power Input: 100kW
- Ground voltage isolation detection and protection.
- Efficiency: 95%
- Short Circuit, OC, O/U V and OT protection.
- Parallelable with fault tolerance operation.
- CAN J1939 command, control and diagnostics. Vout control via CAN
- Environmental rating IP67 (IP69 Option)
- Option to control cooling fan and pump through discrete outputs
- Integrated safety disconnects and fusing on the input and output.



PART NUMBERING:

CV38 □ □ □ □ □ □

Config: consult company

APPLICATIONS:

Fuel Cell Systems, Smart Grid, Renewable, energy systems, UPS, battery charger.

Signal Connector:

Deutsch: DT04-6P-CL09

Output Power Connector:

Tyco 9-2141227-1

Input Power Connectors:

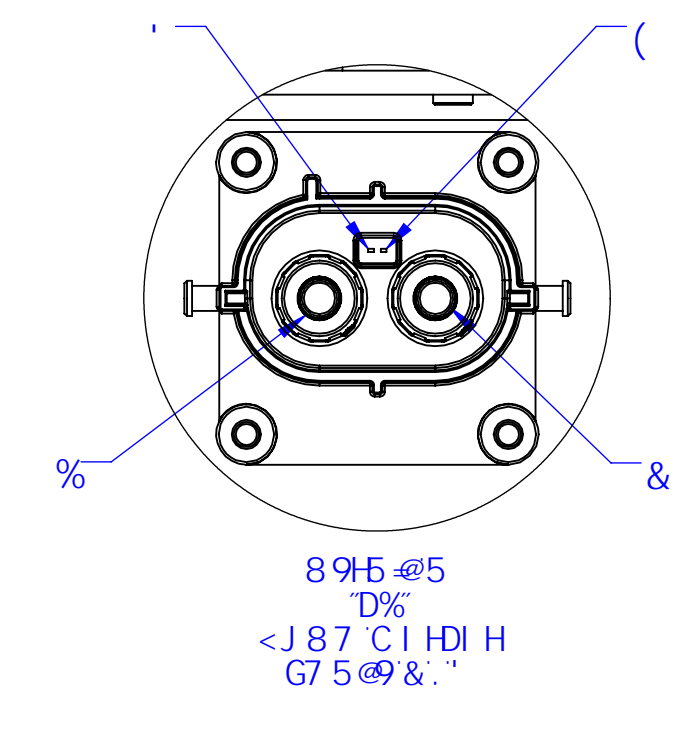
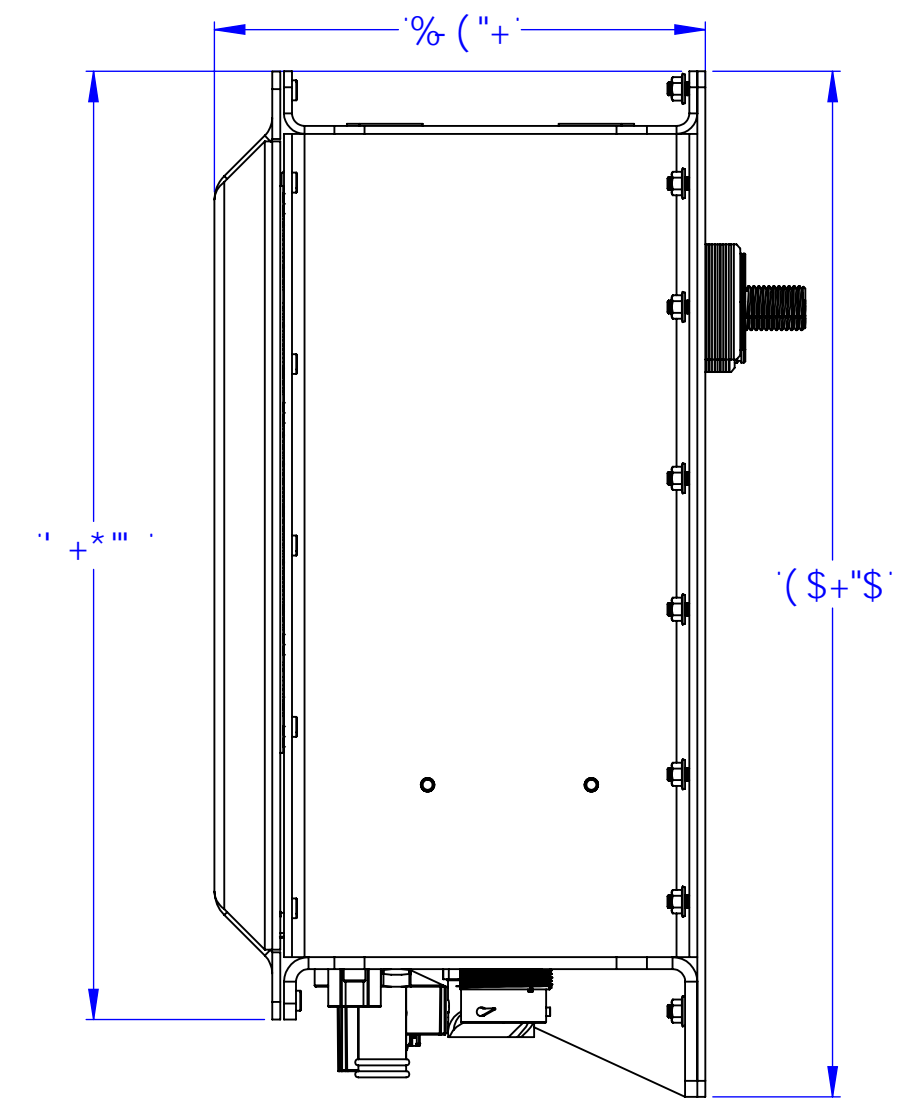
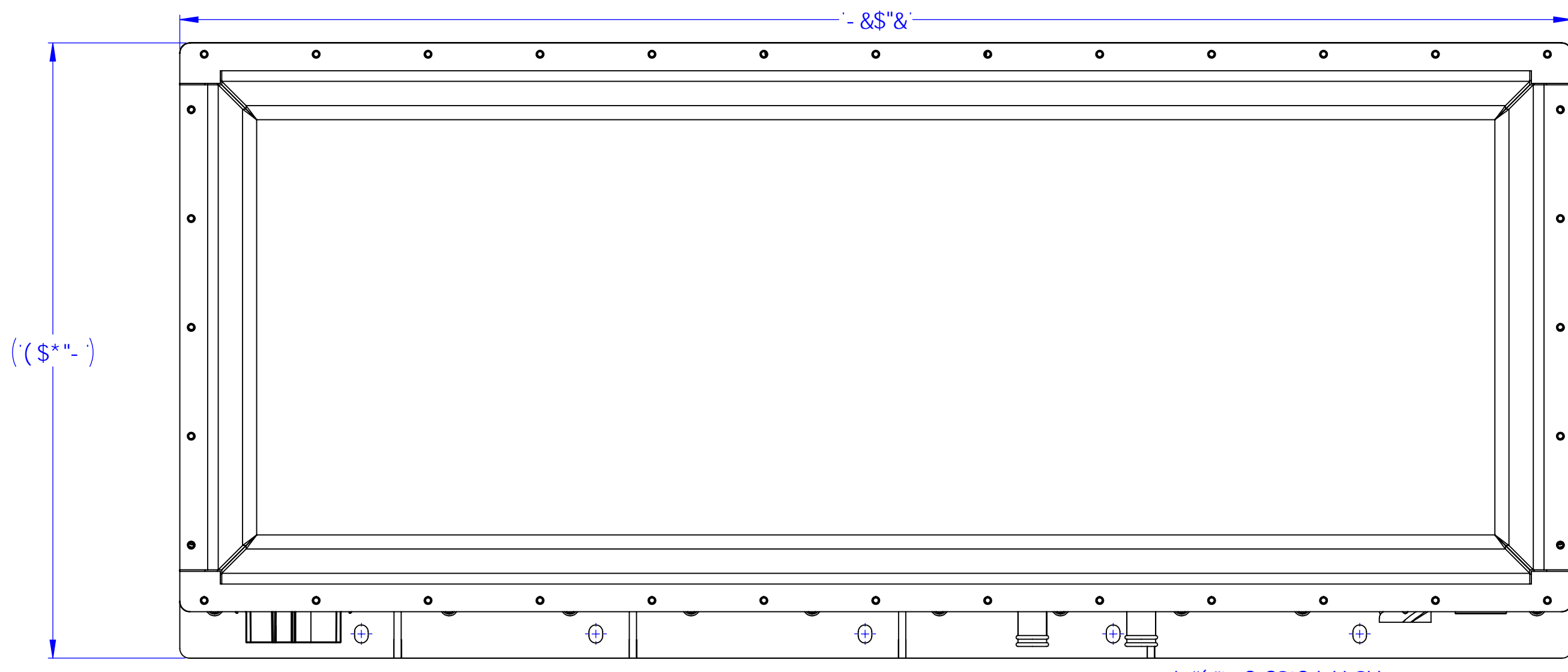
Customized

Line regulation ($\pm 10\%$)	$\pm 0.5\%$
Load regulation	$\pm 0.5\%$
Ripple	$< \pm 1\% + 300 \text{ mVp-p}$
Load transient (10-90%)	$< 6\%$ typical overshoot
Response time	100 ms typical
Turn-on rise time (wake up to full power)	Soft-start, (0.1-2 sec, adjustable)
Output protection	Temp, Voltage, current and short
Cooling	WEG $< 60^\circ\text{C}$ 12 Lpm
Operating temperature (ambient)	-30°C to $+65^\circ\text{C}$,
Load de-rating	10% / $^\circ\text{C}$ from 60°C
Storage temperature	-40°C to $+105^\circ\text{C}$
Efficiency	95%
Isolation resistance	$> 1 \text{ M}\Omega$ at 700Vdc
Weight	44kg
Bias Supply	11V _{DC} - 30V _{DC}

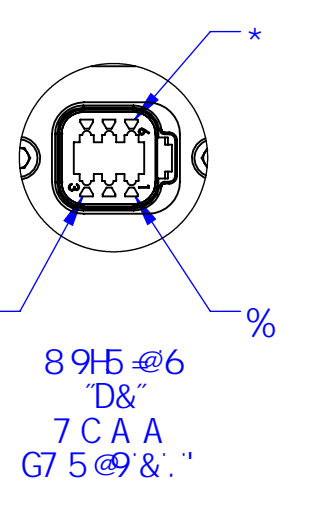
Integrated Components Solutions for Clean Mobility & Energy Conservation

DATA SHEET REV: 190118, Specifications subject to change.

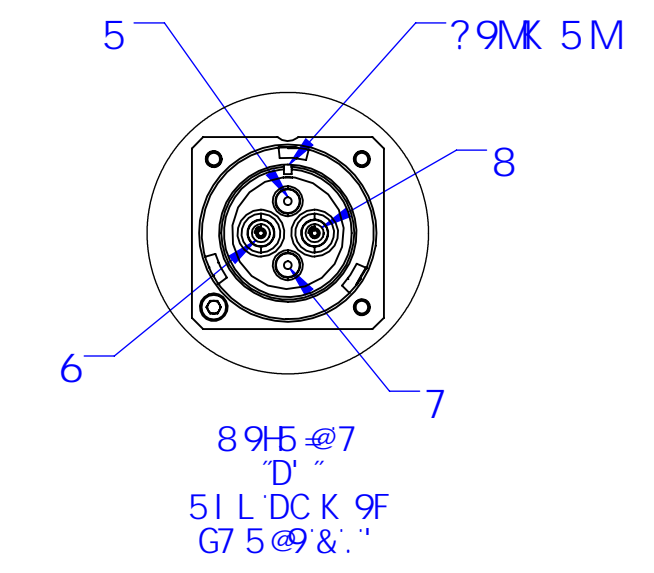
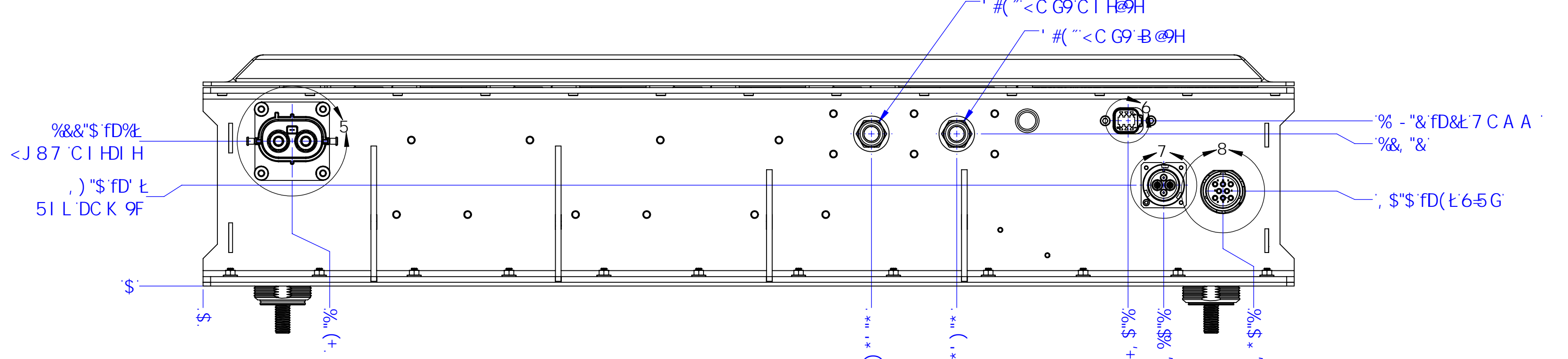
www.ushybrid.com



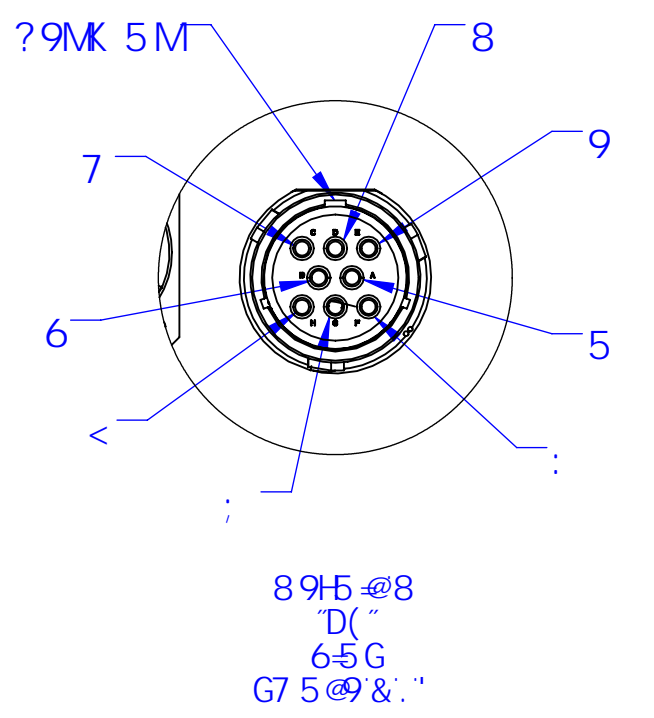
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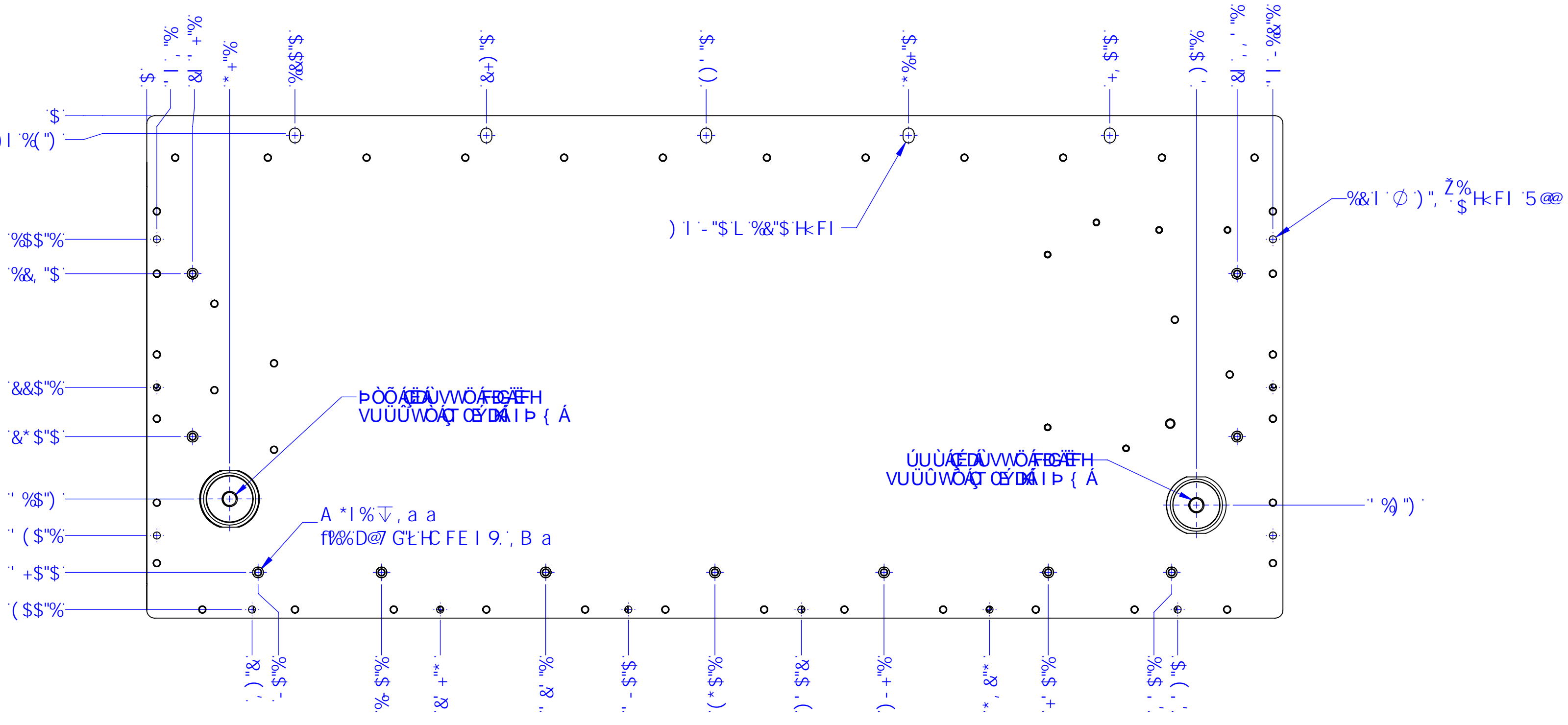
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 + " " G99 G<99H&: CF 7 CBB97 HCF DBCI H"
 ; " " 7 : 1 5DDFC LA 5H97 9BHFC : ; F5J #M
 - " " 1 B HA I GH69 BG5 @98 K #K J 6F5HC B 6C @HC B A C I BH"

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