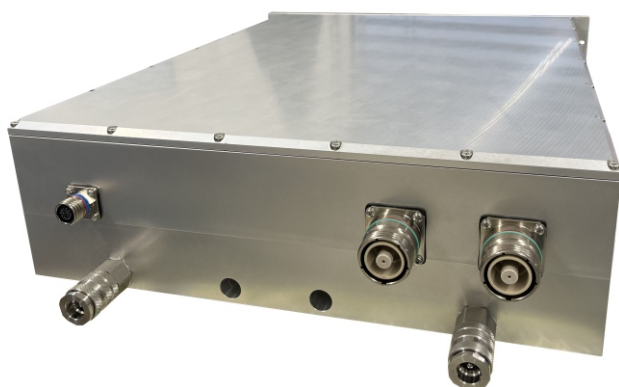


SE6452X



Description

SE6452X is a special purpose OEM diode driver to supply high power fiber lasers pumping stages for laser drone defense systems.

For mobile application it provides a variable battery supplied input ranging from 40 to 56 VDC.

Its boost topology supplies diodes with compliance voltage to 95 VDC.

All circuitry is encased within a milled aluminium IP67 sealed housing. Water cooling is integrated into the monolithic chassis structure.

Integrated high current contactors disconnect the battery input from the driver electronics on demand.

For other driver configurations or different applications please contact our product management.

Features

- Water cooled IP67 chassis
- Output 8x up to 16 A/90 V
- Boost output U_{out} up to 90 V from 40 ..56 VDC battery input
- Battery supply input max. 295 A
- Fully isolated digital interfaces
- typ. 200 μ s rise/fall time
- Safety up to Performance Level e (EN 13849-1)

Specifications

Output	max. 11 kW, 8chn. each 0 .. 16 A / 5 .. 90 V ¹⁾
Rise time	typ. 150 .. 250 μ s ²⁾
Current ripple	typ. 0.2% (of full scale)
Digital control	RS485 and USB

Driver protective features/ error output	Monitor starting sequence, soft start, transient protection, OVP, over temperature protection, user current limit, shut down reaction time <1 μ s output discharge circuit
	Thermal monitoring: Baseplate, Aux PSU, high-current input connectors, 8x driver PCB
	Safety relay monitored redundant high current contactors, emergency stop
	Digital interface completely isolated towards power stage.

Efficiency	typ. 96 .. 98.5 %
Input	nom. 48 VDC, typ. 40 .. 56 VDC, max. 295 A
Environment	min. +5 °C .. +50 °C
Cooling	Water
Heat loss	max. power dissipation ca. 500 W
DC connectors in/out	MIL-DTL-38999
Size	Mainframe 3U, depth 595 mm
Weight:	ca. 32 kg

¹⁾ Higher output to 125 VDC in boost operation available.
Up to 400 VDC diode driver output on request for buck mode operation.

²⁾ Rise/fall time performance down to 50 μ s for CW drivers available.
Faster CW to QCW performance on request

Operation / starting sequence:

- Mount the driver to a proper heat sink. Max. power dissipation ≤ 20 W, typical efficiency 97 .. 98% → refer to fig. 17

Interface logic

Start-up timing

fig. 05

fig. 06