

ICU

INVERTER CONTROL UNIT FOR RAILWAY APPLICATIONS



Product Description

ASELSAN's ICU contains fiber optical interfaces for IGBT control, encoder and resolver interfaces, power supplies for current and voltage sensors, I/O interfaces, powerful relay driver circuit, ADC interfaces, short circuit/high voltage protection circuit for sensors, thermistor and PT100 interfaces.

ICU achieves the operations mentioned above with an exceptional computing power. ICU is the tailored solution for demanding railway applications, inverter control with integrated DSP board.

Typical Applications

- Light Railway Vehicles
- Trams
- Metros
- Electrical Multiple Units
- Locomotives

Product Features

- ± 24 VDC, 15VDC isolated and regulated outputs
- Texas Instruments' DSP28377 processor
- CANopen, RS422/485 interface options
- Overvoltage, overcurrent, undervoltage and short circuit protection
- 11 current/voltage sensor interfaces
- 9 NTC thermistor interfaces
- 8 PT100 (3 wire/4 wire) interfaces
- 3 encoder interfaces
- 2 resolver interfaces
- 4 analog outputs
- 12 digital inputs
- 4 isolated digital inputs
- 4 isolated digital outputs
- 8 pairs of optical fiber connection
- Complies with EMC requirements
- Fully automated self test at start-up
- Railway qualified components

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Technical Specifications

Rating

Supply Voltage	: 9-36 VDC
Current Consumption	: 5 A max.
Digital Input High Voltage	: 18-154 VDC
Digital Output Voltage	: 24 VDC (36 VDC max.)
Analog Output Voltage	: 24 VDC (32 VDC max.)
Analog Output Current	: 6.5 A max.
Power Supplies	: ±24 VDC, 1.67 A max.
	: 15 VDC, 5.32 A max.
	: 15 VDC, 0.4 A max

Standards

Electrical	: EN 50155, EN 50121-3-2
Environmental	: EN 50155, EN 50125, EN 61373

Interfaces

Digital Inputs	: 8
Isolated Digital Inputs	: 4
Digital Outputs	: 4
Analog Outputs	: 6
Thermistor	: NTC
PT100	: 100 Ω @ 0 °C
ADC	: 16bit
CAN Bus	: CANopen IEC 61375-3-3, : CAN2.0 ISO 11898, IEC 60747-5-2
RS-422/RS-485	: ANSI/TIA/EIA-485-A-9, IEC 60747-5-2

Mechanical Data

Weight	: ~1.7 kg
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Dimensions

