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Crate with Power Supply

ECH 238_1200W
ECH 238_1200W-UPS

Operator's Manual

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Attention!

-It is not allowed to use the unit if the covers have been removed.

-We decline all responsibility for damages and injuries caused by an improper use of the module. It is highly recommended to read the manual before any kind of operation.

Note

The information in this manual is subject to change without notice. We take no responsibility for any error in the document. We reserve the right to make changes in the product design without notification to the users.

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1. General information

The crate ECH 238_1200W is able to carry up to 8 Multi Channel HV-modules of the series EHS, EDS or EBS . The crate provides the necessary supply voltages and connections for remote control via CAN-interface.

Option **-UPS:** - Integrated UPS (bridge time at least 1 min)

Sufficient air flow must be ensured during the operation of the unit.

2. Technical data

	ECH 238 M
AC supply voltage	110 .. 240 V / max.12 A (fuses double sided)
DC supply voltages	+ 24 V (up to 50 A) + 5 V (up to 5 A)
Total Power	max. 1200 W
Floating	max. difference of voltage between PE and internal GND: $\Delta V \leq \lvert 30\ V \rvert$, clamped via antiparallel suppressor-diode with V_Z = 56 V
Mechanical layout	19“ – Standard BIN 6 U / ca. 450 mm depth Module slot depth 220 mm CAN-connectors: RJ45
Weight	10 kg
Operating Temperature	0°C … 40°C
Storage Temperature	-20°C … 50°C
Air cooling	In case of desk operation, rack mounting or the use of several crates in a stack forced air cooling must be provided. **Please use our 1U fan-unit for rack mounting, supplemented with mountable feet for desk operation.**

3. PIN assignment

3.1. Module station

Connector				Description	Remarks
1	a	b	c	+ 5 V	
3	a	b	c	+ 24 V	
4			c	I_{SL}	Connected to + 24 V with ca. 10 Ω / 3 W
5	a	b	c	GND	
11	a			CAN_GND	isolated
		b		CAN_L	
			c	CAN_H	
13	a			RESET	
		b			OFF with ramp (e.g. 10s after power fail)

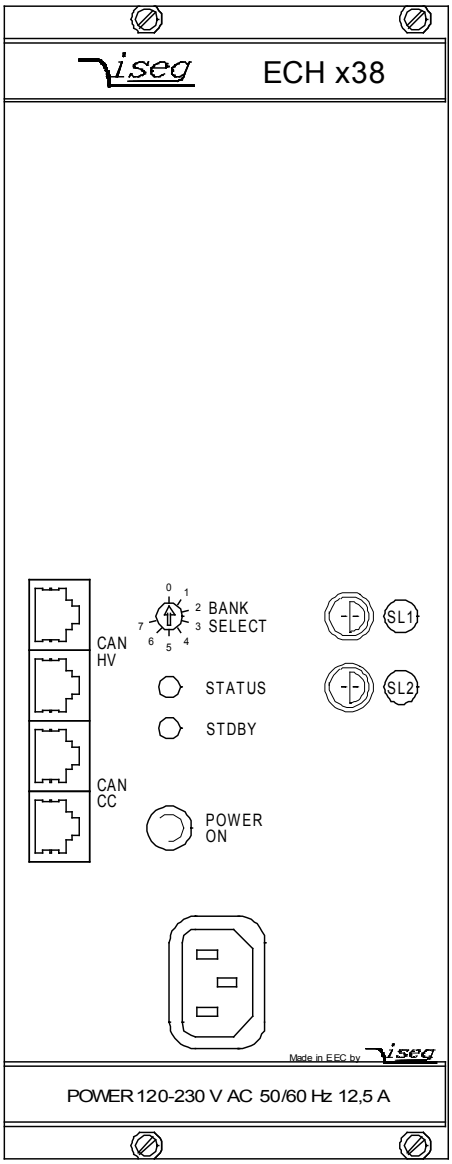
Connector				Description	Remarks
30	a			Bank_addr	module address $b2^4$, bank switch on front p.
		b		Bank_addr	module address $b2^5$, bank switch on front p.
31	a			Mod_addr	module address $b2^2$, hard-wired
		b		Bank_addr	module address $b2^3$, bank switch on front p.
			c	GND	
32	a			Mod_addr	module address $b2^0$, hard-wired
		b		Mod_addr	module address $b2^1$, hard-wired
			c	GND	

3.2. External CAN-Bus

The external CAN-Bus to control the iseg **HV** module (CAN-**HV**) and the crate with the built-in CAN **c**rate **c**ontroller (CAN-**CC**) is connected through RJ45 connectors on the front panel.
The CAN-Bus standard requires a termination with 120 Ω between CAN_L and CAN_H on both ends. For the crate side please use the delivered CAN terminations (iseg Art-nr.: 510245 and 580591).
It is possible to control the HV module and the crate controller via one CAN-Bus (e.g. by connecting “OUT” from CAN-HV to “IN” from CAN-CC).

Input	Output	PIN	Signal
RJ45	RJ45	1	CAN-H
		2	CAN-L
		3	CAN-GND

4. Front panel / Operation



2 • RJ45 **CAN HV**
HV module CAN-Bus (CAN-IN, termination or CAN-OUT to more CAN nodes)

2 • RJ45 **CAN CC**
Crate **C**ontroller CAN-Bus (CAN-IN, termination or CAN-OUT to more CAN nodes)

BANK-SELECT-switch
select bank with fixed Module address

STATUS LED (green/red)
green indicates:
POWER-ON (24V-DC O.K.) and no CAN error and
Option UPS: Battery on float charge
STDBY
AC-supply ON
remote control possible
POWER-ON
ON – OFF switch 24V-DC Supply

AC-Power

SAFETY LOOP 1:
I_S (Internal SL current)
2-pin Lemo socket
one side connected to + 24 V with ca. 10 Ω / 3 W, other side connected to module station (4c).
If the module safety loop of the built-in multichannel module with **option _SL** is active then an output voltage in any channel of it is only present if this safety loop is closed!

SAFETY LOOP 2:
INHIBIT
2-pin Lemo socket for external INHIBIT signal to shut down the integrated HV module with ramp.

LOW level on the right pins or connecting to the left pins: INHIBIT is active

HIGH level or open:
Output according setting