NEW

new CED400X

Electronic Control Unit

The ideal solution for most types of mobile operating machines

walvoil
HYDRAULIC CONTROL SYSTEMS

New CED400X Electronic Control Unit

- ☐ **CAN Bus version is available with CANopen and ISOBUS protocols**
- ☐ **Extremely fast cycle time**
- ☐ **Programmable functionality**

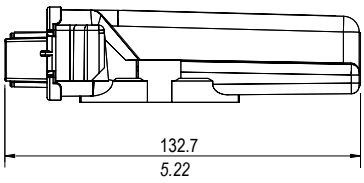
The **CED400X** Electronic Control Unit is designed to work together with hydraulic components in mobile and off-highway operating machines.
The CAN Bus version is available with CANopen and ISOBUS protocols.
The CED400X ECU can be used in all types of mobile operating machines (agriculture, forestry, building construction).
The device can be used as a general purpose controller, stand alone or as part of CAN Bus distributed control system, as a proportional valve driver and as a controller for pumps and motors.
Thanks to the extremely fast cycle time it makes easy to implement innovative electro-hydraulic functions (eg. electronic Load Sensing).

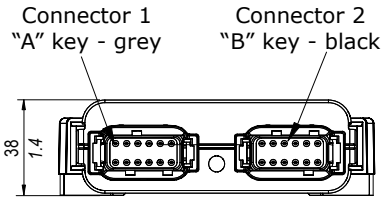
Working conditions

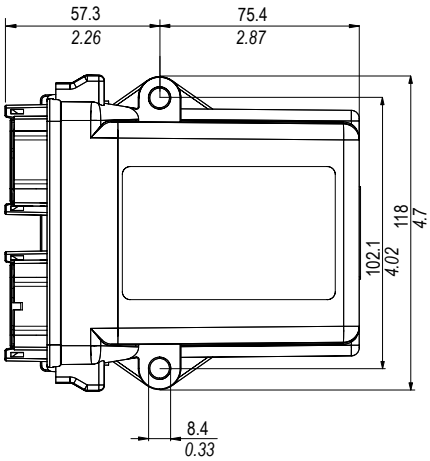
Supply voltage	8-32V
Supply current	50 mA (no load) 7A (max on power pin)
EMC	100 V/m - ISO 13877/ISO 14982
ESD	25 kV - ISO 7637-2
Load Dump	130 V - EN61000-4-2
Additional protections	supply polarity reversal short circuit to ground on all pins short circuit to Vbb on all pins
Operating temperature range	from -40° C *(-40° F)* to 85° C *(185° F)* ambient
Storage temperature range	from -40° C *(-40° F)* to 85° C *(185° F)* ambient
Ingress Protection	IP67 with mating connector attached
Weight	260 g *(0.573 lb)*
Vibration	IEC 60068-2-64
Shock	IEC 60068-2-27 Test Ea
Connectors	2 individually keyed DEUTSCH DTM connectors

NEW

Dimensions







Connector 1		Connector 2	
Pin	**Function**	**Pin**	**Function**
1	Vbb	1	4B / DI_5 / Gnd
2	AI_3/Vjoy	2	1B
3	AI_2	3	2B
4	DI_0	4	2A
5	RX/DI_4	5	3B / DI_2
6	CAN L/DI_2	6	3A / DI_3
7	CAN H/DI_3	7	G_3
8	TX/DI_5	8	G_2
9	DI_1	9	G_1
10	AI_0	10	G_4 / DI_4
11	AI_1	11	1A
12	Gnd	12	4A / Vjoy

Description composition

CED □ □ □ □/□ □/ □ □/ □ □/□ □/□

Number of functions

100X) One proportional function
200X) Two proportional functions
300X) Three proportional functions
400X) Four proportional functions

Analog Inputs

F5) Range 0 to 5V, floating
FV) Range 0 to Vbb, floating
C5) Range 0 to 5V, pull to Center
CV) Range 0 to Vbb, pull to Center

Digital/Frequency Inputs

U5) Pull Up 5V
UV) Pull Up Vbb
C5) Pull to center 2.5 V
CV) Pull to Center (Vbb/2)

5V supply output

V5) 5V supply for external sensors
V0)

Other

Specify additional options

Communication Ports

CB) CAN Bus
RS) RS 232

Note: Vbb=vehicle battery voltage

Features

- 24 pins: 2x12 poles Deutsch DTM
- 16 bit fixed point DSP running at 32 MHz
- 12 bit A/D converter
- 8 inputs
  - 4 analog:
    - 0 to 5 VDC or 0 to 33V
    - Option pull to center (2.5V or Vbb/2)
  - 4 digital or frequency:
    - Digital: pull up, pull down or pull to center
    - Frequency: up to 10kHz, pnp / npn
- 12 outputs
  - 8 High Side 2A, bidirectional pairs
  - 4 Low Side 2A with current measurement for closed loop pwm
- 3 ways watch-dog to cut off power outputs
  - external pin
  - main microprocessor watchdog
  - independent watchdog
- 1 CAN 2.0B port
- 1 RS-232 serial port
- 5 VDC power supply for external sensors
  - internally monitored and regulated
  - max current 200 mA
- Calibration software for PC
  - Joystick Input signal range
  - Output Currents (Min, Max, Dither Frequency)
  - Ramps and Float options

Application

The CED400X ECU can be used in all types of mobile operating machines (agriculture, forestry, building construction).

Accessories

PC communication cable (RS232 and CAN Bus)
USB/RS232 Converter
USB/CAN Bus Converter
WST Calibration Software for PC

Other configurations available on request.
Please contact Walvoil Sales Department.