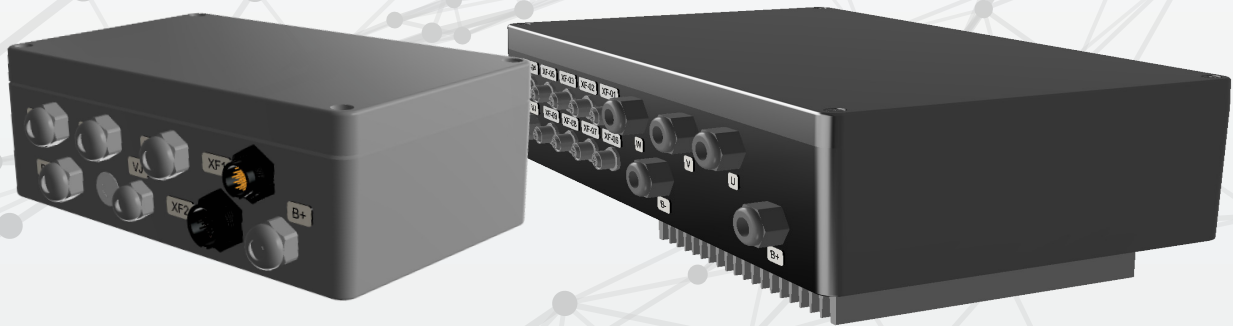


efa

Industrial Parts & Equipment

efa-controls.com



/ Electric Power Control Station EPCS Series

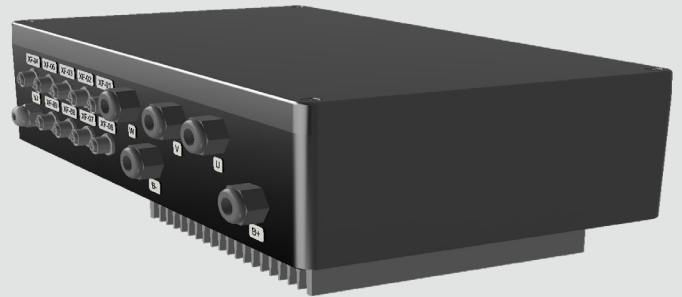
PLUG & PLAY MOTOR CONTROL

Control boxes for simplified
off-road vehicle electrification

/Power is nothing without Control

Off-the-shelf solution integrating motor control, command and CAN communication management... with a touch of automation

- The **Electric Power Control Station (CS)** series is a plug & play solution to quickly electrify your vehicle. It perfectly matches with traction and e-pump application on a wide range of battery powered vehicles.
- The efa **EPCS solution includes a system controller** that can operate as a commander device on the **CAN bus**.
- Works with any **AC induction, PMAC or BLDC motor**.
- **Motor auto-characterization simplifies on-truck pairing** with different induction motor types.



/Safety

- CAN communication with the BMS of the lithium ion battery protects the battery from overcurrent discharge, deep discharge
- Thermal cutback, warning and automatic shutdown protect the motor and controller
- Error logging, fault history and CAN Emergency Messages

Standards

- EN ISO 13849-1:2015
- EN 1175:2020

Dual-micro architecture achieves up to PL=d. category 2 functional safety
CE/UKCA marked as a programmable safety device

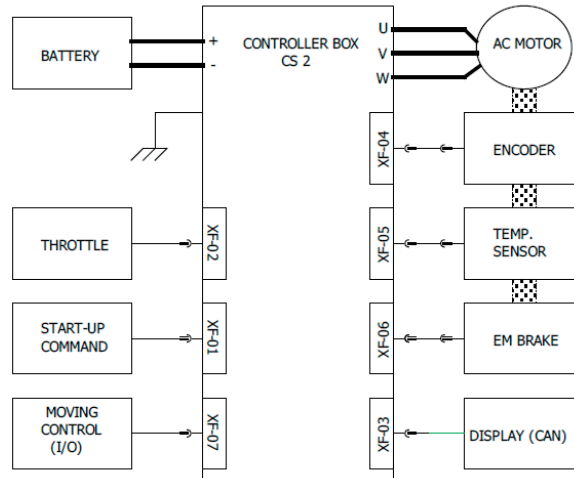
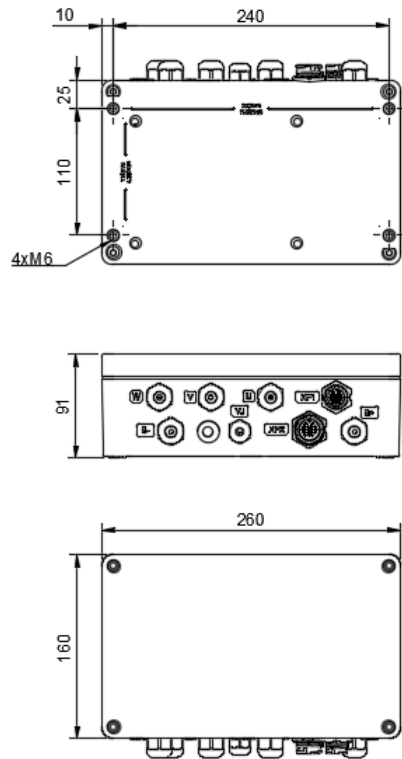
/Interfaces

- **General Purpose I/Os**
 - 17 x digital Inputs
 - 9 x analog Inputs
- **Throttle inputs**
 - 2 x potentiometer Inputs
- **Motor inputs**
 - 1 x quadrature encoder
 - 1 x sin/cos sensor
- **Motor outputs**
 - 5 x driver outputs
incl. proportional driver
- **Communication**
 - CAN Open
 - CAN J1939
 - CAN Layer 2

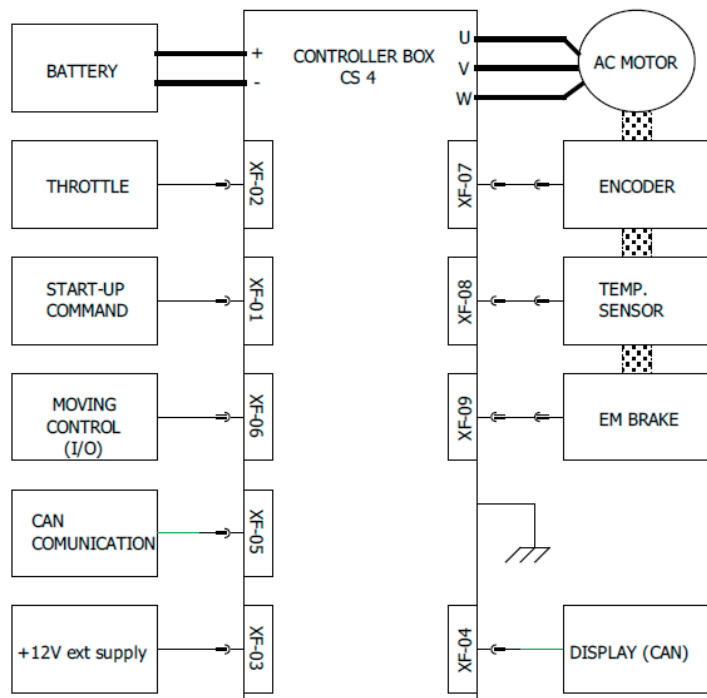
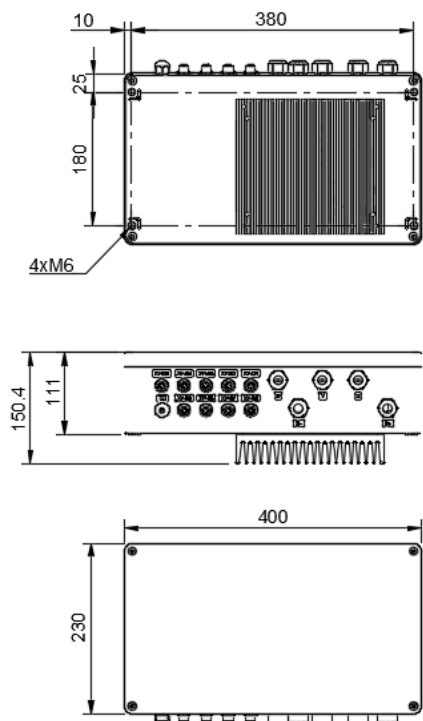
Note : configurable 11 or 29 bits protocol support

/ Mechanical drawings & diagrams

CSA Series



CSB Series



/Technical specifications

MODEL	BATTERY VOLTAGE (V)	I OUT (S2-2MIN) (ARMS)	I OUT (S2-60') (ARMS)	P MOTOR (S2-60') (kW)
CSA-24-240	24	240	120	2
CSA-48-240	48	240	110	4
CSB-24-375	24	375	150	3
CSB-48-450	48	450	160	7
CSB-96-300	96	300	110	8
CSB-24-650	24	650	160	4
CSB-48-650	48	650	200	10
CSB-96-450	96	450	140	10

/Functions

	CSA	CSB
MOVING CONTROL (I/O)	YES	YES
TEMPERATURE SENSOR	YES	YES
EM BRAKE CONTROL	YES	YES
ENCODER	YES	YES
THROTTLE	YES	YES
START UP CONTROL (I/O)	YES	YES
CAN NETWORK	YES	YES
SECOND CAN NETWORK	NO	YES
+12V EXTERNAL SUPPLY	NO	YES
PROTECTION LEVEL	IP68	IP68



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