

Load limiter for knuckleboom cranes

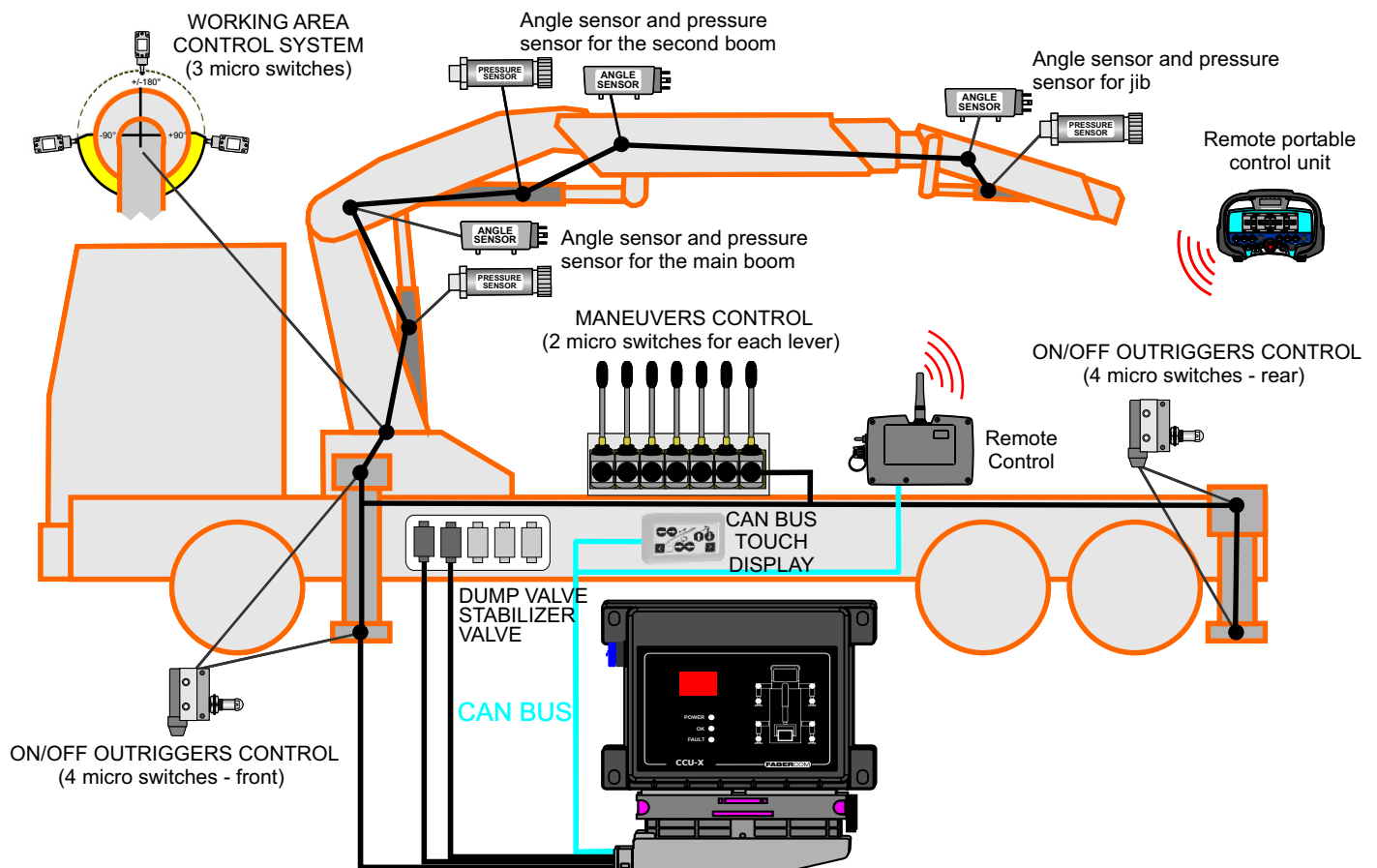


1 - General description

The CCU-X system is a load limiter device for truck cranes based upon the reading of pressures inside the lifting jacks. Pressures are compared in real time with the limit thresholds settable by configurator, which represent the crane maximum moment capacity. The system includes a series of functions and controls listed below:

- management of allowed movements in case of activation of the moment limiting device in relation to the position of main boom position, second boom, jib, winch, measured by angle sensors;
- stabilizers and outriggers management using digital or analogic sensors;
- working areas management;
- failures and malfunctioning selfdiagnostics;
- management of the spool sensors of hydraulic distributor;
- CAN bus direct interface with Scanreco remote control;
- parameters configuration by special display or by PC.

The equipment is fitted with a graphic touch screen panel to show pressures, usage percentages and alarm messages.

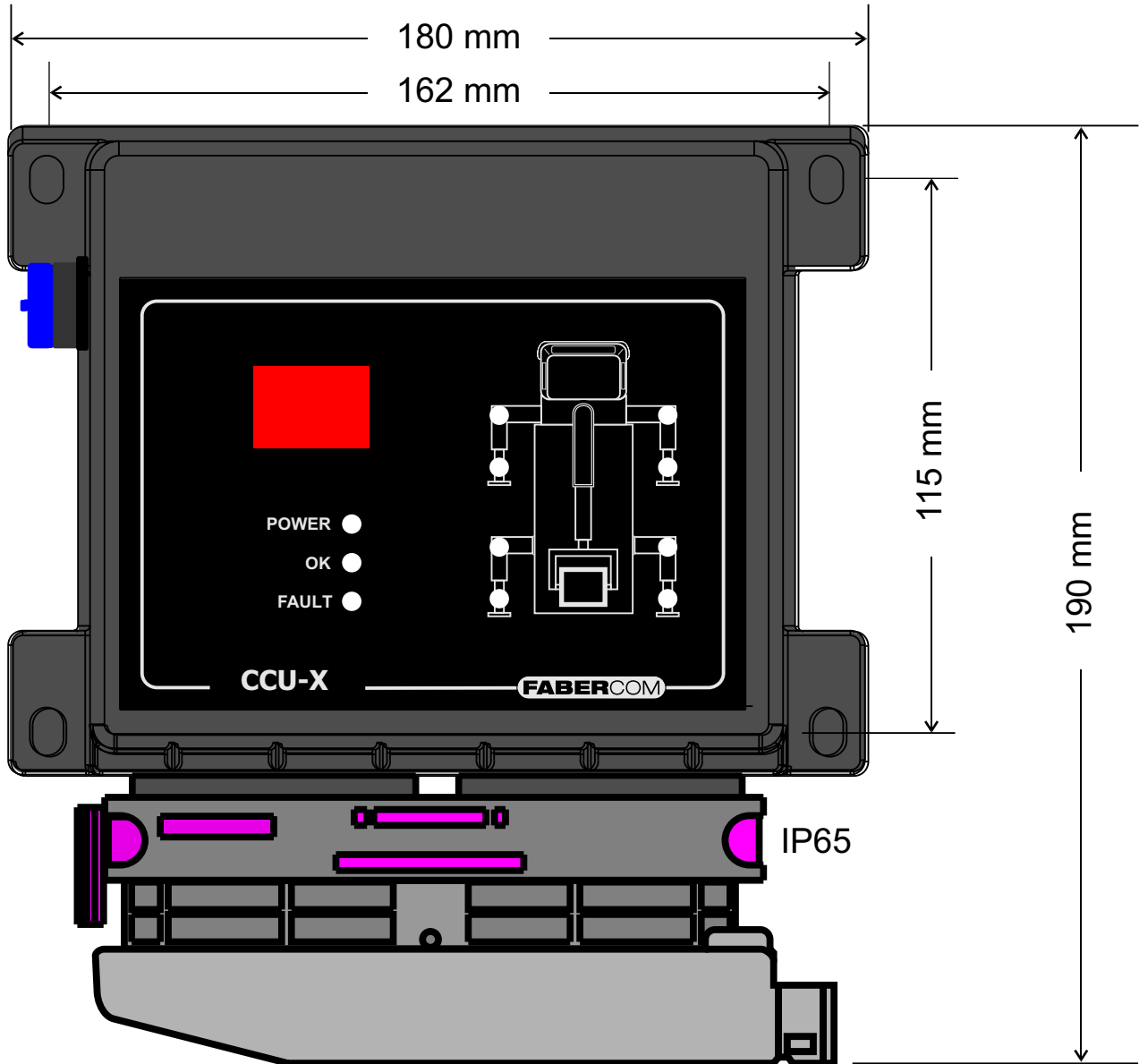


2 - Main Features of the system

By connecting the spool sensors of the distributor maneuvers to the CCU-X card, the control unit activates or not the bypass valve based on the state of load of the crane. The thresholds are set depending on the position of the stabilizers and outriggers. The angle sensors in the second boom and in the jib are used to monitor the booms position depending on the load and to block the machine in case of overload, allowing only the activation of the maneuvers that bring the system in safety conditions.

In case of Scanreco remote control installed in the system, the same maneuvers performed manually can be achieved by moving the levers of the portable unit. Through the CCU-X configurator, you can associate each lever to the correct maneuver, without modifying the remote control software or configuration.

Supply voltage	12 or 24 Vdc +/-20%
Current absorption	300mA + output load (7.5A protection fuse)
Working temperature range	-25 ÷ +70 °C
Protection degree	IP65
Output current	Maximum 2.5A for each output (maximum total current 7.0A)
Housing dimensions	180 x 154 x 39 mm
Maximum overall (with connector)	180 x 190 x 39 mm
Maximum current in the bypass valve circuit	8A (it's mandatory to protect this circuit before the ECU with an appropriate protection fuse)



3 - Ordering part numbers: mandatory for the system

- CCU-X electronic control unit
Part number: **PCCUX**

- **S** - Standard (single pressure)
- **D** - Differential pressure
- **1** - Power supply 12 Vdc
- **2** - Power supply 24 Vdc

- ECU cable
Part number: **PCABFC500**

- **7** - Essential (kit with 56 poles connector, case, not wired contacts and caps)
- **9** - Standard (50 wired poles useful for cranes with main boom and second boom, no jib)

- Touch screen display
Part number: **POPRVNBTL3010**

- CAN bus terminator
Part number: **PCVMM12T**

- Connection cable for touch screen display
Part number: **PCABCAN03**

- CAN bus splitter
Part number: **A2001730031**

4 - Ordering part numbers: optional

- Configuration display TERA
Part number: **POPRTFP3011**

- Connection cable for configuration display TERA
Part number: **PCABCAN02**

- PCAN-USB interface for PC configuration
Part number: **A1001830010**

- Connection cable for PCAN-USB interface
Part number: **PCABCAN01**

- Angle sensor range -105° +105°
Part number: **PSIA3**

- Additional electronic control unit for winch
Part number: **PCEN12E3**

- Connection cable for additional electronic control unit for winch
Part number: **PCABFC2024**

- Pressure sensor range 0-400 bar with full cable
Part number: **PSP004**

- Lever switch to detect the working area
Part number: **PFCL**

- Small piston switch to detect the position of stabilizers
supports and outriggers
Part number: **PFCP**

5 - Part numbers summary

