

# XEV30K

## Stepper Valve Actuator



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# 1 General Description

XEV30K is a stepper valve actuator intended either for bipolar stepper valves or unipolar stepper valves. This device has been used with iPro-Based case controllers.

The maximum configuration of hardware is equipped with:

- 3 configurable valve outputs to drive bipolar or unipolar valves.
- 6 Configurable analog inputs:
  - Pb4/Pb5/Pb6: 4 to 20mA/0 to 5V/Pt1000; NTC/NTC\_CPC
  - Pb1/Pb2/Pb3: NTC/NTC\_CPC/Pt1000
- LAN serial line to communicate with iPro series.

# 2 Absolute Maximum Power

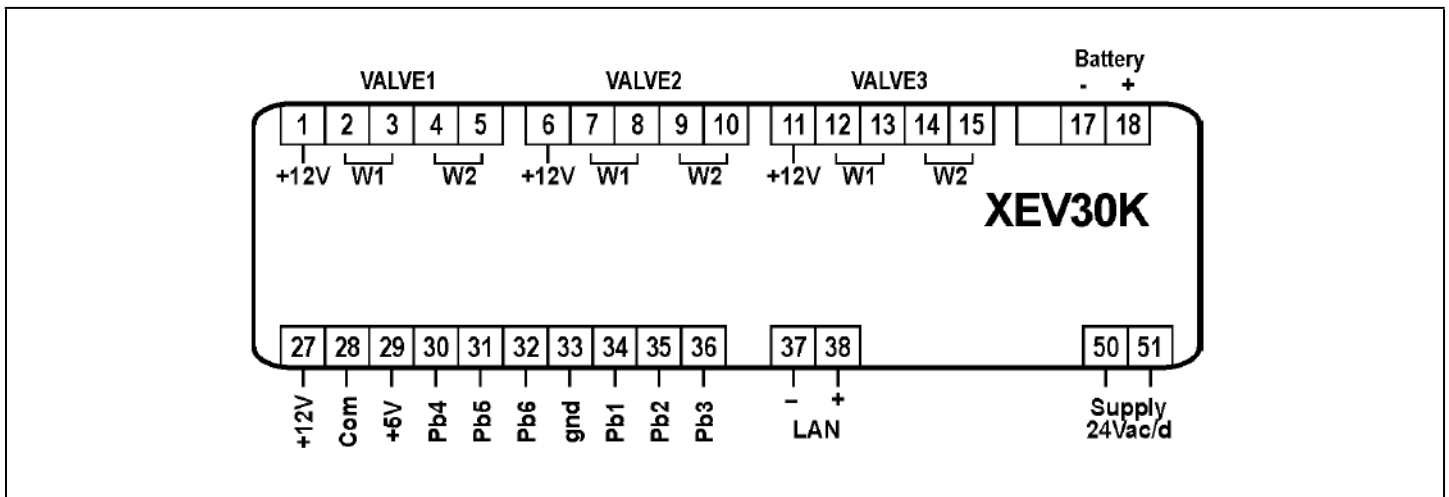
XEV30K is able to drive a wide range of stepper valves. The following table contains the maximum values of current that the actuator can supply to the stepper wiring. Select the current transformer depending on the application using the following table: each kind of driving and functioning is reported that the Dixell transformer will use.

**NOTE:** The electrical power absorption of the valve can be unrelated to refrigeration power that valve has. Before using the actuator, please read the technical manual of the valve supplied by the manufacturer and check the maximum current used to drive the valve in order to verify that they are lower than those indicated below.

		CONFIGURATION		
		ONE VALVE	TWO VALVES	THREE VALVES
Driving Mode		Full Step	Full Step	
Valve Type	Bipolar Valves (4 wires)	Current 0.9A max > TF20D	Current 0.9A max for each valve > TF40D	Current 0.9A max for each valve > TF60D -TBC
	Unipolar Valves (5-6 wires)	Current 0.33A max > TF20D	Current 0.33A max for each valve > TF20D	Current 0.33A max for each valve > TF40D-TBC

# 3 Wiring Diagram

## 3.1 Three Valve Configuration



## 4 Valve Connections

Reference the following table to understand the connection mode for valves of different manufacturers.

## 5 Serial Line - CanBus

The device can communicate through CanBus serial line only when a correct address is set. The addressing is made through the dip-switch called **Address** as demonstrated in the following drawing:

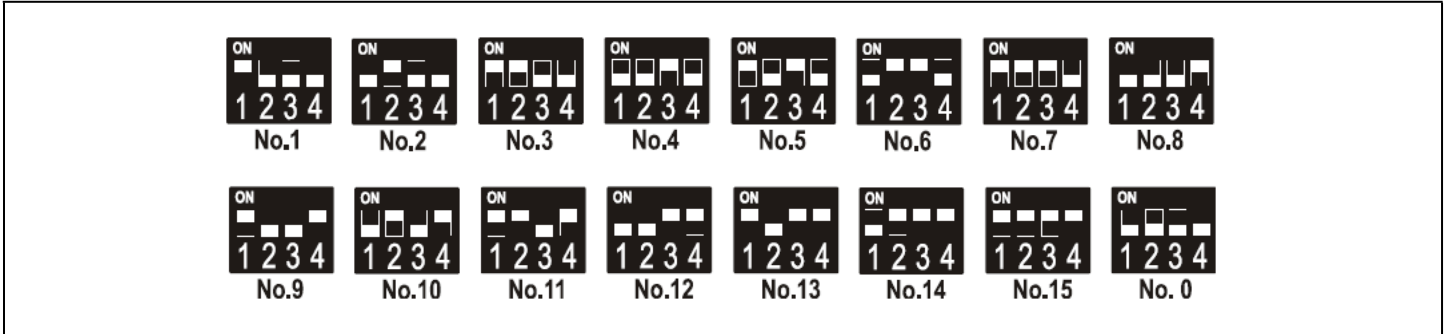


Figure 5-1 - CanBus Serial Line

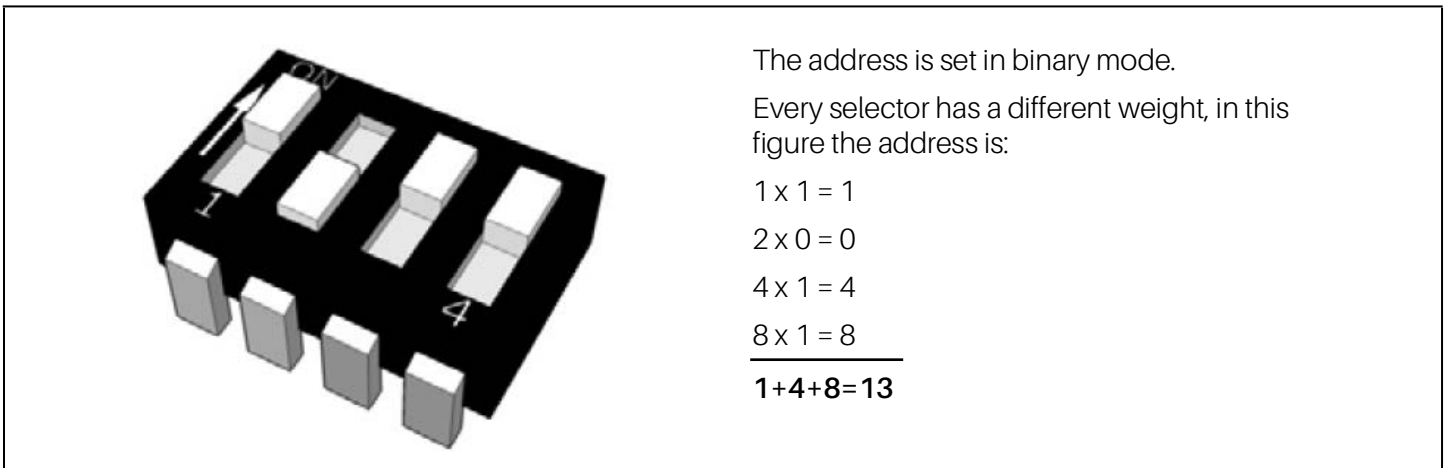


Figure 5-2 - CanBus Device

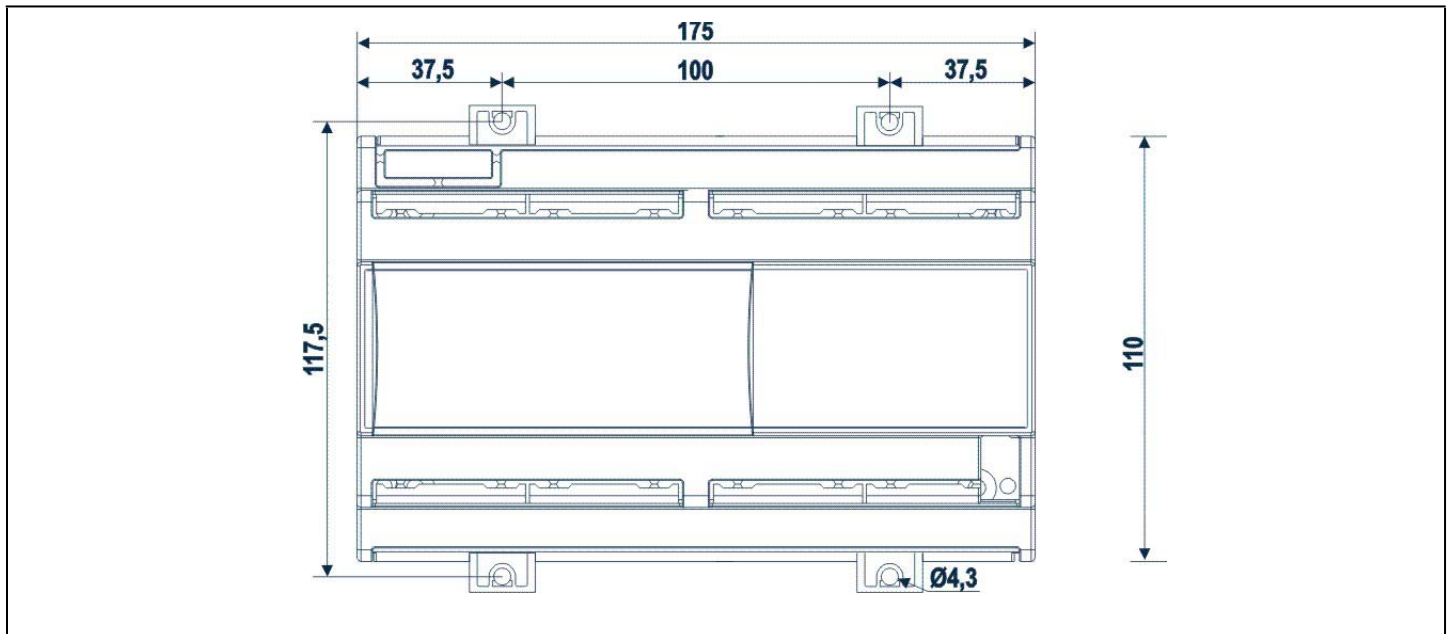
## 6 LEDs Meaning

Additional LED are added with the following functions, not reported on the wiring diagram.

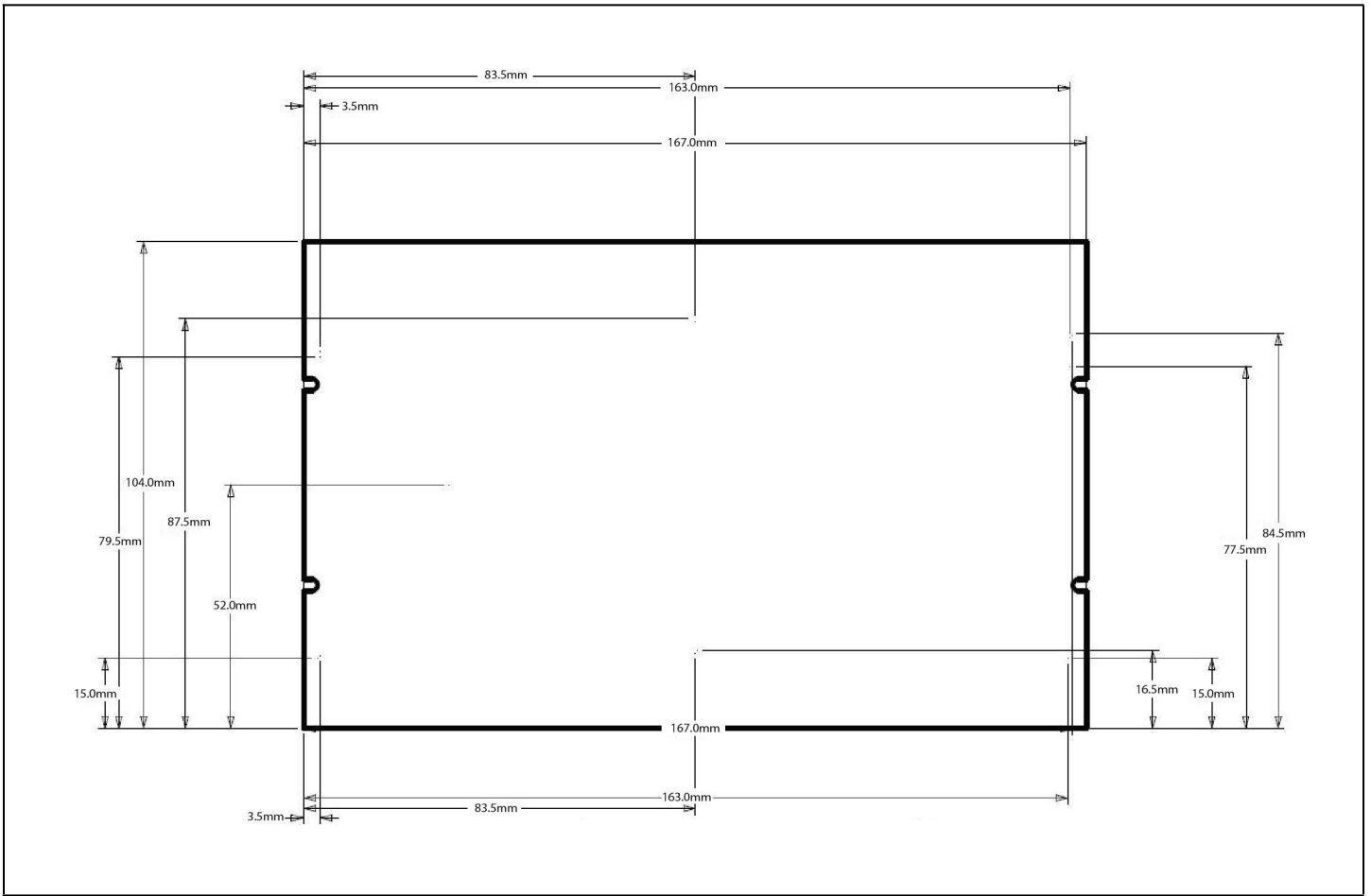
LED	MODE	MEANING
PWR ON	On	The device is correctly powered
ALARM	On	An alarm is present
TX/RX	Blinking	CanBus or LAN activity, communication activated
TX/RX	On	No link
OPEN V1	Blinking	Valve 1 is opening
OPEN V1	On	Valve 1 completely opened
CLOSE V1	Blinking	Valve 1 is closing
CLOSE V1	On	Valve 1 completely closed
OPEN V2	Blinking	Valve 2 is opening
OPEN V2	On	Valve 2 completely opened
CLOSE V2	Blinking	Valve 2 is closing
CLOSE V2	On	Valve 2 completely closed
OPEN V3	Blinking	Valve 3 is opening
OPEN V3	On	Valve 3 completely opened
CLOSE V3	Blinking	Valve 3 is closing
CLOSE V3	On	Valve 3 completely closed

## 7 Dimensions

### 7.1 10 DIN Case - Dimensions



## 7.2 Open Board - Preliminary Dimensions



## 8 Technical Data

Case	10 DIN or open board
Connectors	Disconnectable terminal block $\leq 2,5 \text{ mm}^2$ or screw connector
Power Supply	24Vac/dc
Absorption	60VA max
Probe Inputs	3 configurable as NTC/NTC_CPC/Pt1000 3 configurable as NTC/NTC_CPC/Pt1000, 4 to 20mA/0 to 5V
Valve Output(s)	See table on <i>page 2</i>
Serial Connection	LAN Bus
Data Storing	Non volatile memory (EEPROM)
Kind of Action	1B; <b>Pollution Grade: 2; Software Class: A</b>
Rated Impulsive Voltage	2500V; <b>Over Voltage Category: II</b>
Operating Temperature	-10 to 60 °C; <b>Storage Temperature: -30 to 85 °C</b>
Relative Humidity	20 to 85% (no condensing)
Measuring and Regulation Range	<b>NTC Probe: -40 to 110°C</b> <b>Pt1000 Probe: -50 to 100°C</b> <b>Pressure Transducer: -1.0 to 50.0 Bar</b>
Resolution	0,1°C or 1 °F; <b>Accuracy@ 25°C: <math>\pm 0,5 \text{ °C} \pm 1 \text{ digit}</math></b>

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