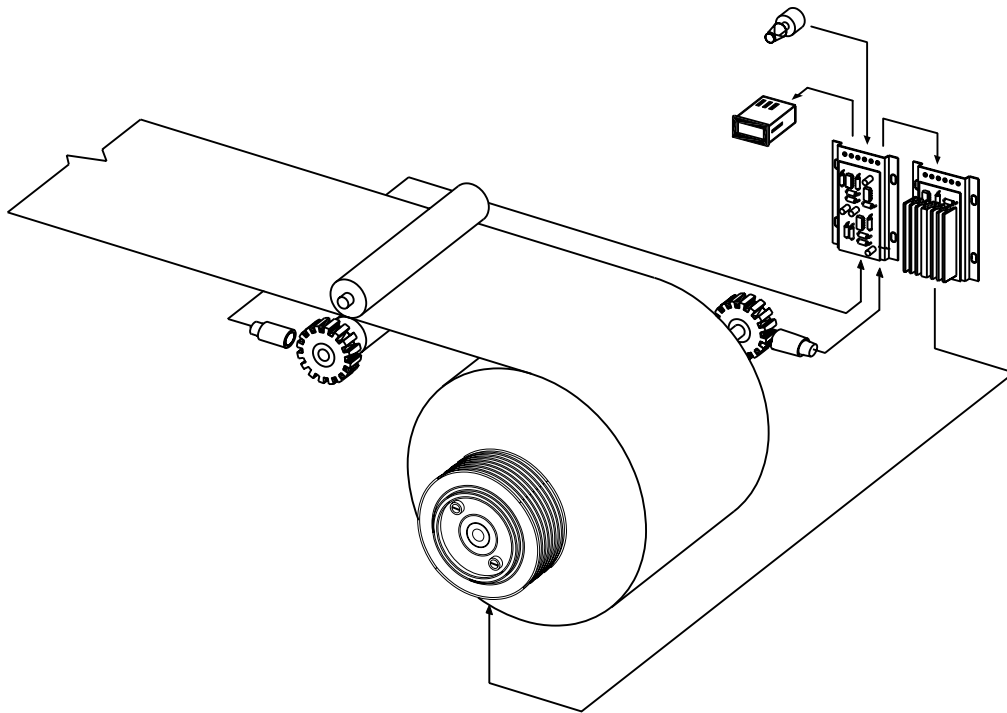


# CALCUL

## Configuration

### Technical features

Power supply	24 V (AC) or 30 V (DC)	
Mains consumption	(VA)	70
Output current	(A)	2
Input/Output analogic voltage	(V)	0-10
Operating temperature	( C)	0 to 40



### Operating principle

The CALCUL configuration regulates continuously the tension force of a product winded up on a web. The force set point is adjusted by the machine operator. This system is continuously computing the ratio between rotation web and linear speeds, to correct in automatic mode the required torque on the web shaft.

In the INERTIAL COMPENSATION CONTROL version, the web inertia is calculated (weight, speed, diameter) in order to correct the torque value and to keep a constant tension force during transients (acceleration and deceleration).

This regulator is basically made to operate with the whole range of MEROBEL couplings.

### Advantages

Display which allows to control the tension force set point.

Automatic storage of the last web diameter value when the machine stops.

Reset (external contact) when starting cycle.

Current regulated power supply (torque independent of the coupling temperature changes).

Set point monitoring with potentiometer or input voltage (0-10 V).

From a voltage (0-10 V), possibility to use the web diameter image.

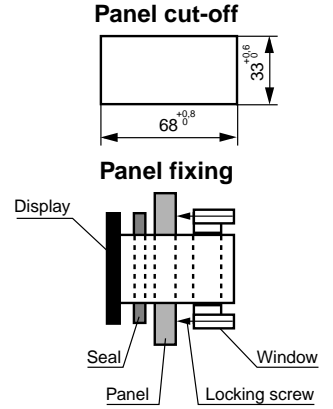
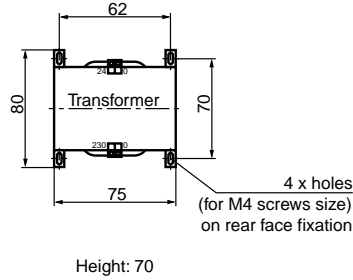
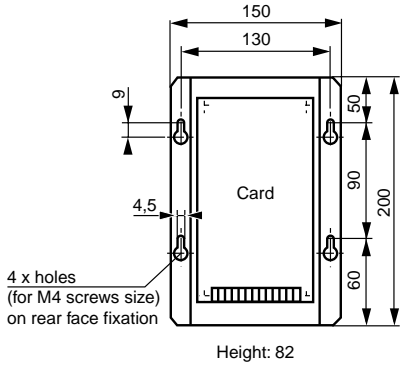
From external contacts, it is possible:

- to switch off the current in the coupling (FREEWHEEL function),
- to fix a current (MAXIMUM TORQUE function), ajustable on the electronic card.
- to reset the value of the starting cycle.

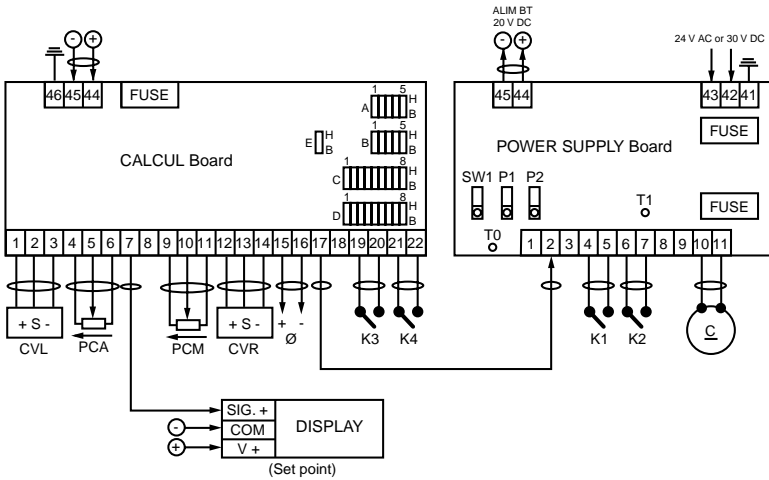
Possibility to increase the output current up to 5 A by changing the transformer power.

Advanced version with INERTIAL COMPENSATION CONTROL.

## Size and mounting



## Electrical wirings



### Basic operating configuration

- CVL : Linear speed Hall effect sensor
- PCA : AUTO set point potentiometer 10 K
- PCM : MANU set point potentiometer 10 K
- CVR : Rotation speed Hall effect sensor
- K4 : INIT contact  
(see chapter "PROCESS" in the technical file)
- C : MEROBEL coupling  
(no polarities conscious).

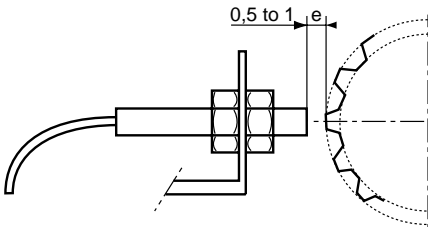
### Optional configuration

- Diameter information output (0-10 V)
- K1 : FREEWHEEL contact  
(see chapter "PROCESS" in the technical file)
- K2 : Max. torque contact  
(see chapter "PROCESS" in the technical file)
- K3 : AUTO/MANU contact  
(see chapter "PROCESS" in the technical file)

## Material list

- CALCUL card ref.: 336.701.00
- Power Supply card ref.: 323.150.09
- TRANSFORMER (240 V) ref.: 323.150.03

## Hall effect sensors



Speed information is detected by Hall Effect sensors, associated with tooth wheel (see technical sheets).

## Installation and adjustment

A technical file is provided with these devices giving all the necessary informations to install and adjust your configuration. It is also available at our Sales department.  
A specific file is supplied for the Inertial Compensation control version.