Manuel du participant

Atelier en Autoconstruction
Enrouleuse à bâches - 2021

Contenu :

1. Détails logistique
2. Schéma électrique
3. Charte de coupe et configuration - fils et câblâge électrique
4. Manuel module de protection pour batteries
5. Liste de coupe et pliage pour pièces en tôle
6. Sondage d'appréciation pour CFA

Lieu

L'atelier se déroule à l'édifice Bonin à Acton Vale, dans l'atelier du programme fabrication de structures métalliques et de métaux ouvrés de l'Ecole Professionnelle de St-Hyacinthe (EPSH)

- 301 rue Bonin, Local B, Acton Vale QC. J0H 1A0.

Horaire

Vendredi 26 fév
  8h30 à midi, 13h à 17h
Samedi 27 fév
  8h30 à midi, 13h à 17h
Dimanche 28 fév
  8h30 à midi, 13h à 17h

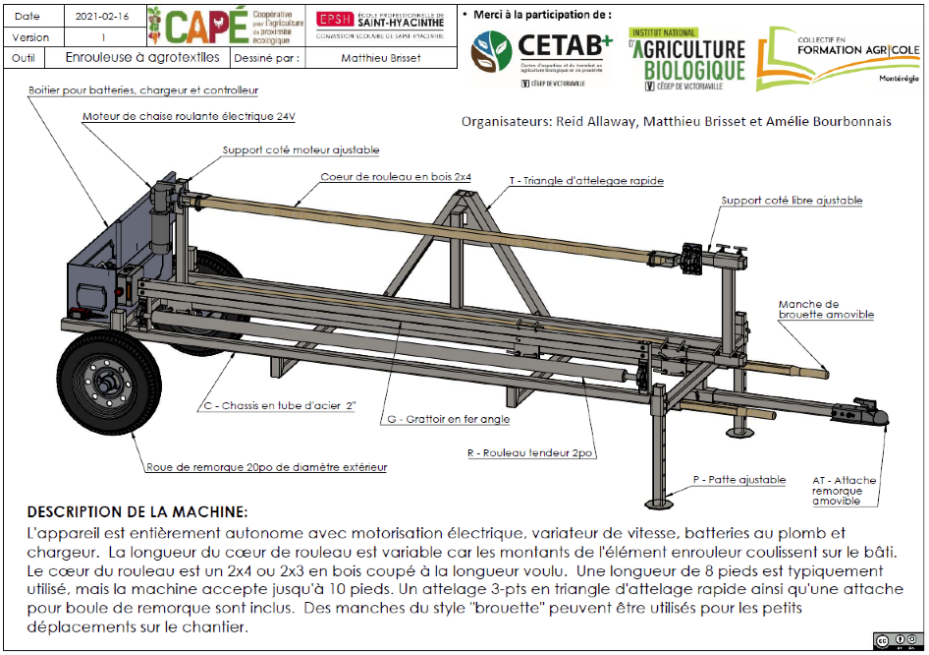
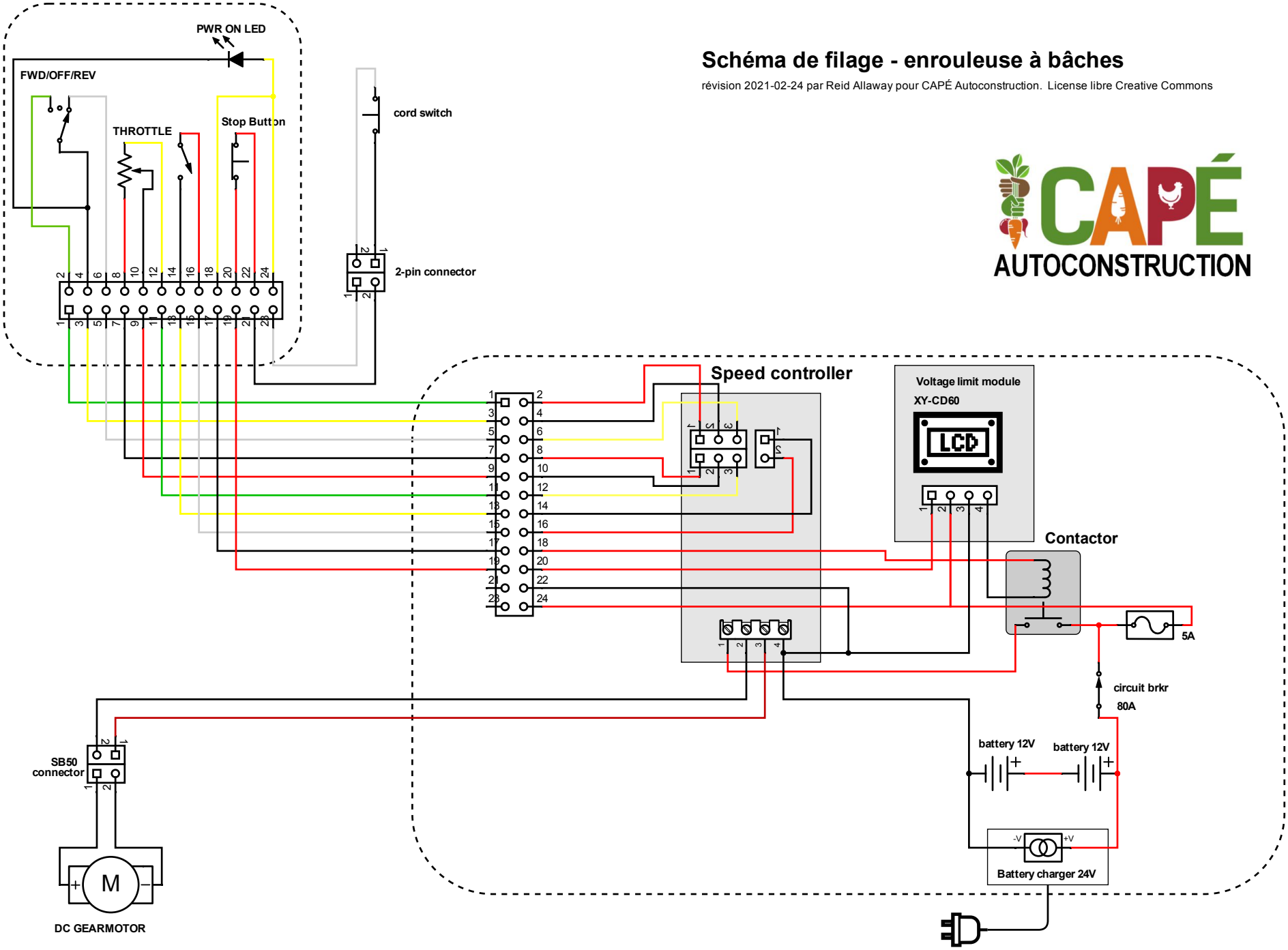


Schéma de filage - enrouleuse à bâches

révision 2021-02-24 par Reid Allaway pour CAPÉ Autoconstruction. License libre Creative Commons



XY-CD60 battery protection module Operating Instructions

1.Description:

XY-CD60 is a battery charge and discharge control module. It can be used for DC sources and loads from 6V to 60V

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2. Quick reference

- Connect correct input voltage at VIN+ and VIN-
- Press & hold SET button 5sec to select operating mode (P-1 Charging, P-2 Discharging)
- press SET button to switch parameters.
- Press or hold UP/DOWN buttons to increase/decrease parameter value.
- HOLD SET button 5 sec to save parameters and begin program

3.Operation:

1.Module supports 2 working modes:

- Charging Control P-1
- Discharging Control P-2.

Charging Control P-1: This mode is used for charging control to prevent overcharging. Display symbol IN indicates charging mode.

Discharging Control P-2: This mode is used for battery discharge control to prevent battery over-discharge and extend battery life. Display symbol OUT indicates discharging mode.

Battery voltage percentage display:

Module displays current voltage of battery and voltage %. Percentage is comparison of current voltage and low voltage limit (dn) and high voltage limit (UP).

Button Description:

- “Long press” means keep the button depressed for more than 5 seconds.
- UP button:
  - Short press to switch display charging/discharging time and battery voltage percentage.
  - Long press to switch work mode. IN is Charging mode and OUT is Discharging mode.
  - Short/Long press to increase parameter value at parameter set mode.
- DOWN button:
  - Short press to turn ON/OFF output.
  - Long press to turn ON/OFF display status L-P (power saving mode):
    - ON: Turn ON power saving mode. The display screen will turn OFF after 5~10minutes.Press any button to resume display.
    - OFF: Turn OFF power saving mode. The display screen will keep ON all the time.
  - Short/Long press to decrease parameter value at parameter set mode.
- SET button:
  - Short press to automatically switch/query display parameters UP/dn/OP/DOP at charging mode and UP/dn/OP/DOP/FOP at discharging mode in normal display interface. Short press to switch select parameter set in parameter set mode.
  - Long press to enter into parameter set mode.
  - Hold SET button 5 sec to save parameter values.

P-2 Mode: Discharging Control

1. Connect battery voltage 6V-60V to Input terminals (VIN+, VIN-)
2. Connect a suitable load to output terminals (OUT+, OUT-). Note: voltage at output terminals will be battery voltage
3. Output will turn ON (flashing OUT symbol) and the battery will begin discharging if battery voltage is more than the Upper Limit Voltage Value (UP).
4. Output will turn OFF and the battery will stop discharging when battery voltage drops below the Lower Limit Voltage Value (dn).
5. The symbol OUT will flash when Output is active and discharging is enabled
6. Setting parameters:
   a. Upper Limit Voltage Value (UP): minimum voltage value to enable discharge.
   b. Lower Limit Voltage Value (dn): Battery minimum allowable voltage. Discharging is disabled when the battery voltage reaches this value. Also called “over-discharge protection” voltage value.
   c. Discharging Time (OP) - sets battery discharging time.
      i. Discharging time control function is enabled when the OP parameter value is more then 00:00. Minimum set time value 1minute.
      ii. To disable set OP value to 00:00.
      iii. Timer starts when output is enabled (begin discharging cycle).
      iv. Module will turn OFF output to terminate a discharging process when time value OP is reached
      v. Module automatically turns OFF discharging time control function if battery voltage is more than the Upper Limit Voltage Value UP and flashing H:ER that means the unreasonable time parameter setting. Press any key to stop flashing.
      vi. Record and display discharging time if disabled Discharging Time OP when short press button SET. Clear time if at next discharging or exit discharging time display interface.
   d. Turn ON Delay Time (dOP):
      i. Set the delay interval between the first and the second discharging. The time range is 0~999second.
   e. Discharge Turn ON Forced Start Time (FOP):
      i. This function is used to prevent the device from starting instantly and reduce the battery voltage, so that it is lower than the Lower Limit Voltage Value dn and causing the module to automatically turn off the output and causing the battery to not discharge properly.
      ii. The module will check the battery voltage again if enabled Discharge Turn ON Forced Start Time function.

Discharging Control Mode P-2

Discharging Time

1>.Output terminal connect suitable load. Note the output voltage is same to battery.
2>.Output turn ON and the battery starts to discharging if battery voltage is more than the Upper Limit Voltage Value UP.
3>.Output turn OFF and the battery stops to discharging if battery voltage is less then the Lower Limit Voltage Value dn.
4>.The symbol OUT will flashing when discharging.

Discharging Mode Parameter Description (P-2 OUT)

1>.Output terminal connect suitable load. Note that the output voltage is same to battery.
2>.Output turn ON and the battery starts to discharging if battery voltage is more than the Upper Limit Voltage Value UP.
3>.Output turn OFF and the battery stops to discharging if battery voltage is less then the Lower Limit Voltage Value dn.
4>.The symbol OUT will flashing when discharging.

Display Parameter

Battery Voltage & Battery Voltage Percentage

Battery Voltage & Discharging Time

Setting parameter

Discharge Turn ON Forced Start Time FOP (0~10second)

Setting parameter

Upper Limit Voltage Value UP

Lower Limit Voltage Value dn

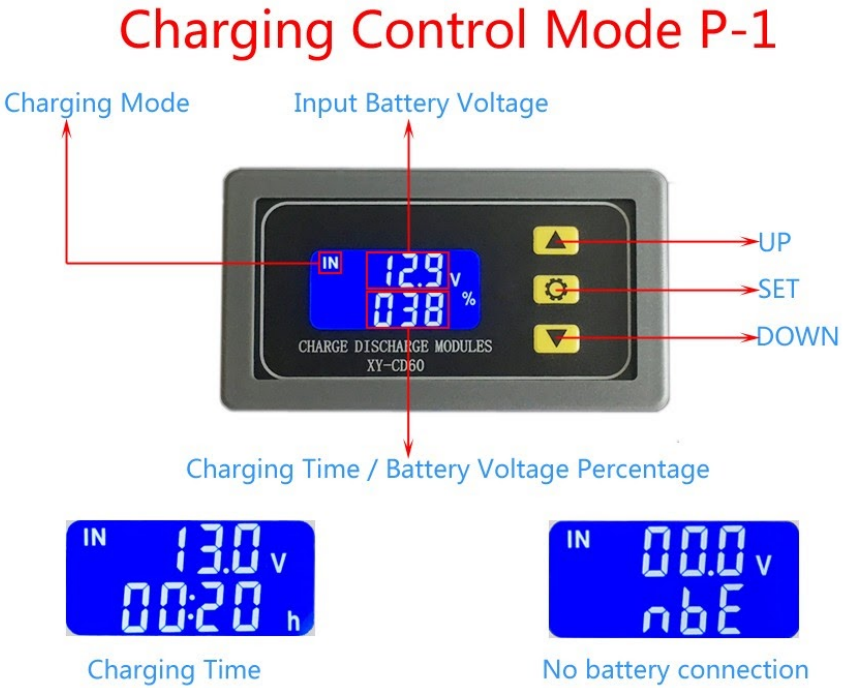
Discharging Time OP

Turn ON Delay Time dOP 0~999s

Note:
1. Discharging Time OP range 00:00~99:59 hours.
2.Turn ON Delay Time dOP range is 0~999second but not 0~999hours!
3.Discharge Turn ON Forced Start Time FOP range is 0~10s but not 0~10h!

P-1 Mode: Charging Control

1. Connect suitable charger 6-60V to Input Terminals (VIN+ VIN-)
2. Connect battery to output terminals (OUT+ OUT-). Display will show 0.00V and nbE if the battery voltage is outside limits
3. Output will turn ON and battery will being charging if battery voltage is less than Lower Limit Voltage value (dn)
4. Output will turn OFF and battery charging will cease if battery voltage is greater than the Upper Limit Voltage value (UP)
5. The symbol IN will flash during charging
6. To set parameters:
   a. Upper Limit Voltage Value (UP): Maximum voltage of the battery. Stop charging the battery if it exceeds this value. Also called overcharge protection voltage value.
   b. Lower Limit Voltage Value (dn): minimum allowable battery voltage. Start charging the battery when the battery voltage is lower than this value. Use this parameter to avoid charge cycle restart when battery voltage drops to rest after end of charge cycle
   c. Charging Time (OP):
      i. Set battery charging time.
      ii. Turn ON charging time control function when the OP parameter value is more then 00:00. Minimum set time value 1minute.
      iii. Turn OFF OP control if set 00:00.
      iv. Start the timer when turn on output to start charging.
      v. Module turn OFF output to complete a charging process when timing is completed.
      vi. Module automatically turns OFF charging time control function if battery voltage is less than the Lower Limit Voltage Value dn and flashing H:ER that means the unreasonable time parameter setting. It means insufficient charging and needs to continue charging the battery. Press any key to stop flashing.
      vii. Record and display charging time if disabled Charging Time OP when short press button SET. Clear time if at next charging or exit charging time display interface.
   d. Turn ON Delay Time dOP: Set the delay interval between the first and the second charging. The time range is 0~999second.



1>.Output terminal connect 1pcs DC 6V-60V battery. It will display 0.00V and nbE if the battery does not meet the requirements.

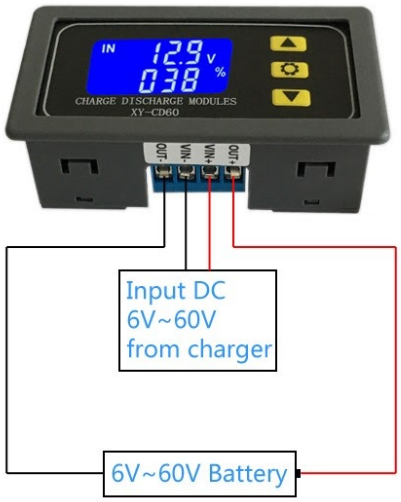
2>.Output turn ON and the input charger starts charging the battery if battery voltage is less than the Lower Limit Voltage Value dn.

3>.Output turn OFF and the input charger stops charging the battery if battery voltage is more than the Upper Limit Voltage Value UP.

4>.The symbol IN will flashing when charging.

Charging Control Mode P-1

Wiring diagram



Note: The voltage of the charger must be the same as the rated voltage of the battery.

Charging Mode Parameter Description (P-1 IN)

1>.Output terminal connect 1pcs DC 6V-60V battery. It will display 0.00V and nbE if the battery does not meet the requirements.
2>.Output turn ON and the input charger starts charging the battery if battery voltage is less than the Lower Limit Voltage Value dn.
3>.Output turn OFF and the input charger stops charging the battery if battery voltage is more than the Upper Limit Voltage Value UP.
4>.The symbol IN will flashing when charging.

Display Parameter

Input Voltage & Battery Voltage Percentage	Input Voltage & Charging Time	No Battery Connected
		

Setting parameter

Upper Limit Voltage Value UP	Lower Limit Voltage Value dn	Charging Time OP	Turn ON Delay Time dOP 0~999s
			

Note:
1. Charging Time OP range 00:00~99:59 hours.
2.Turn ON Delay Time dOP range is 0~999second but not 0~999hours!