

Task manager V. 1.0

Descriptions

This function is launched every TIMER1 interrupt, by ENC_RTC() function. It checks overrun task problems, and shifts the enable condition to the new task (TASK1 ..TASK10)

Syntax: TaskManager()

Output parameters: TASK0 ..TASK10, TASK0_STEP

Status: COUNT_TASK

Code:

```
void TaskManager()
{
  noInterrupts();
  /* The next instruction require interrupt disable. The following operation cover a bug note on PWM 1. With this set up the PWM 1 has 12 bit of resolution and its value use two byte. Has been
  noted that when low byte is set with 255, value the PWM is set at 100% ignoring the state of the high byte. For the MC_Out_PWM value equal to 255 the analogwrite is inhibited*/
  if (MC_Out_PWM != 255){analogWrite(PIN_PWM_OUT, MC_Out_PWM);} interrupts(); // Enable interrupt

  switch (TASK0_STEP) // This version execute TASK0 in N°3 step
  {
    case 0: Task0_Step0(); break; // Lanch EmergencyStop()
    case 1: Task0_Step1(); break; // Lanch StartADC()
    case 2: Task0_Step2(); break; // Lanch MaxCurrentDetec()
    //...
    //case n: Task0_Stepn(); break;
  }

  TASK0 = false; // Flag reset at the end of the Task 0

  switch (COUNT_TASK) // Executed every 500 micro second after execution of Task0
  {
    case 1: if (TASK1) { TASK_1(); TASK1 = false;} break; // Start TestStatusInput(), SpeedControlMode()
    case 2: if (TASK2) { TASK_2(); TASK2 = false;} break; // Start StartADC()and conversion count pulses in mm
    case 3: if (TASK3) { TASK_3(); TASK3 = false;} break; // Used to send parameter to the PC monitor
    case 4: if (TASK4) { TASK_4(); TASK4 = false;} break; // Used to send parameter to the PC monitor
    case 5: if (TASK5) { TASK_5(); TASK5 = false;} break; // Used to send parameter to the PC monitor
    case 6: if (TASK6) { /* list instructios TASK 6 every 5 mSec*/ TASK6 = false;} break; // Available
    case 7: if (TASK7) { /* list instructios TASK 7 every 5 mSec*/ TASK7 = false;} break; // Available
    case 8: if (TASK8) { /* list instructios TASK 8 every 5 mSec*/ TASK8 = false;} break; // Available
    case 9: if (TASK9) { TASK_9(); TASK9 = false;} break; // Start In_Position(),EndStrokeStop()
    case 10: if (TASK10){ TASK_10(); TASK10 = false;} break; // Start MotorControl()
  }
}
```

