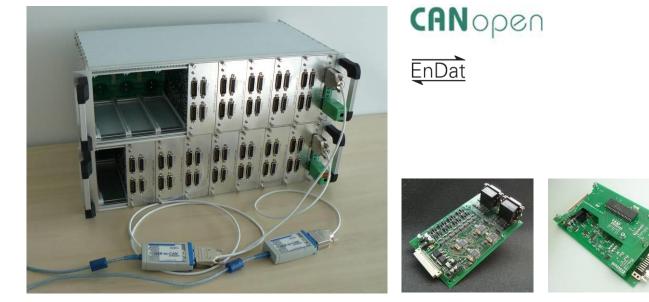


CONTROL RACK STEPPER MOTOR WITH INCREMENTAL OR ABSOLUTE ENCODER CANOpen OR USB CONTROL DATASHEET ISPFDP7C2AMPP CAN / ISP C2AMPP-2C

Update : 27/07/2013



Non contractual photos

1 - Rack ISP FDP7C2AMPP

- Board tray with a backplane with a bus CANOpen, (resistor 1200hm embedded), with automatic addressing of the card (on the position rack basis).
- 1 to 7 board ISP C2AMPP-2C, (10F width),each controlling 2 motors and two encoders, inputs /outputs go no go automaton (Extensible to 8 x 2 axis optional) or 1 to 14 board, (5F width), equivalent, each controlling 1 motor and 1 encoder
- An electrical interface board, with supply connectors and SUBD9 for CANOpen

Separated accessories

 An external gateway IXXAT as Compact USB to CAN can be provided with a standard driver IHM

2 - Board ISP C2AMPP-2C

Control mode:

- Absolute and relative displacement
- Motor move by full steps or 1/2 step
- Velocity profile : start/stop or acceleration / deceleration ramp
- Speed and acceleration value adjustable up to 4kHz
- Collision control to limit the backlash at end of movement
- Homing on cam with collision and adjustable original disengaging value

ISP SYSTEM – Control Rack CANOpen

- Free displacement to limit switch
- Pre-setting
- Adjustable motor current (maximum 2A)
- Positive and negative software stops adjustable by configuration

Each axis has the following interfaces:

• Bipolar motor

Encoder (either) :

- None
- Incremental encoder(*) (Configurable conversion factor step encoder / step motor
- Absolute encoder(*) Endat 2.2, SSI or SPI
- Two limit switches inputs 24 Vdc, electrically insulated can be inversed or inhibited
- One original input cam 24Vdc electrically insulated (can be inhibited)
- Two go no go inputs 24 Vdc available
- One go-no-go output 24Vdc
- Original Limit switch sensors can be configured Close/ Open

(*): the previous supply of a copy of each model of due encoder is recommended to ensure validation and interfaces adaptation to customer needs.

3 - Applications

Complex positioning system composed of many stepper motors, controlled in parallel and locally- operate synergistically

4 - Options

- Outage detection and energy reserve for position recording
- Gateway USB-CAN with control interface under Labview 7.1

Parametres AXE		Paramètres de mouvement
-2147483648 Limite nombre de pas	al 🔿 inversé	Profil de vitesse Vitesse Cte Trapèze Vitesse start / stop (pas/s) Vitesse start / stop (pas/s) Vitesse start / stop (pas/s) Vitesse consigne (pas/s) Vitesse consigne (pas/s)
FC - FC + Origine F Inhibition Dégagement C Rattrapages de jeu	rise origine obligatoire 📄 Inversion FC 📄 Vrigine (pas)	Pas entier 1/2 pas Alimentation du moteur Courant moteur Courant maintien Temps (ms) 200 mA + 200 mA + 0
0 Nombre de pas des abordages 0 Nombre de pas des abordages Origine		Envoi Configuration Forcer Origine Test Moteur Déplacements volontaires
Paramètres CODEUR		Type de mouvement
Absolu ENDAT 2.2 O Incrémental		💿 Relatif 💦 Absolu
0 Lue 0 0 Théorique 0	Lue	Nombre de pas (valeur signée)
J P		
E/S		Déplacement vers (en vitesse start/stop)
ETOR 1 Ouvertu	re OFermeture	FC - FC + Origine
ETOR 2 Ouvertu	re •Fermeture	STOR Etat du système
FC+ Ouvertu	re •Fermeture	ON Code d'erreur
FC- Ouvertu	re •Fermeture	x0000 Code erreur moteur
Origine Ouvertu		OFF Etat

Example of a standard setup and control interface of a motor axis and its encoder feedback on position.

- Graphical Interface of control available on C++ Qt for Windows
- Graphical Interface of control available on C++ Qt for Linux (on process)

5 - Technical specifications

CHARACTERISTICS (hors options)	VALUE
Logic power supply	24VDC
Motor power supply	24VDC to 48VDC (by separated supply)
Maximal intensity per motor	2A per phase
Encoder power supply	5V à 7V adjustable 250mA maximum per encoder (or 4A)
Dimensions	450mm x 3U x 210mm
Communication Connector Power supply connector Logic power supply connector Motor Connector (1 axis with E/S TOR) Encoder connector (1 axis)	SUBD 9 male Phoenix contact MiniConnec Power serie HC Phoenix contact MiniConnec Classic SUBD 15 points female SUBD 15 points male
TOR Inputs	24VDC Nominal Current : between 5 and 15mA Maximal Current: 30mA
TOR outputs	24VDC Nominal Current : 300mA Maximal Current: 2A (duration<10ms)
Reliability	Axis and encoder drive unit: 150 000 h Communication backpanel Profinet : 200 000 h



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