

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 en sens négatif / origine	Profil de vitesse
2147483647 Limite pombre de pas en sens positif (origine	O Vitesse Cte
	🔿 Trapèze
Coerndent pas moteur/pas codeur	A 400 Uitages start (stap (pag/s)
Sens de déplacement moteur 💿 normal 💽 inversé	Accélération
Prise origine Sens positif Sens pégatif	Decélération (pas/s²)
	2000 Vitesse consigne (pas/s)
Capteurs	● Pas entier ○ 1/2 pas
FC - FC + Origine Prise origine obligatoire	Alimentation du moteur
	Courant moteur Courant maintien Temps (ms)
Dégagement Origine (pas)	
Rattrapages de jeu	
Nombre de pas des abordages	Envoi Configuration Forcer Origine Test Moteur
Nombre de pas des abordages Origine	Déplacements volontaires
Paramètres CODEUR	Type de mouvement
O Absolu ENDAT 2.2 O Incrémental	💿 Relatif 💦 Absolu
	Nombre de pas (2)
	(valeur signee)
0 Théorique 0 Théorique	LANCER MOUVEMENT Arret
F/S	Déplacement vers (en vitesse start/stop)
	EC _ EC + Origine
ETOR 1 Ouverture OFermeture	I C T C T C T C T C T C T C T C T C T C
ETOR 2 Ouverture OFermeture	STOR Etat du système
FC+ Ouverture OFermeture	ON X0000 Code d'erreur
FC- Ouverture Fermeture	Code erreur moteur
	OFF Etat
Convertaire Craimietare	
	,

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



Capital de 1 000 000 € - SIRET : 410 675 078 00027 - APE : 7112B - TVA : FR 19 410 675 078

This document belongs to ISP SYSTEM, it cannot be used, copied or communicated without a prior written agreement. The mentioned information, herein, are subject to change. Thanks to consult ISP SYSTEM