



PMS-CMR5000

Motion Controller

Measurement machine control system based on advanced MCU+FPGA design

PMS-CMR5000

Product Introduction

- Measurement machine control system based on advanced MCU+FPGA design, peripheral control signals are completely isolated from MCU+FPGA, and have a variety of additional functions, which is the special controller for automatic image measurement instruments and CMMs in POMEAS products.
- Integration of linear scale/encoder counting, motor control, probe latching, light source control, I/O control, etc., using a network cable to communicate with the PC, and at the same time support for 32 and 64-bit operating system.
- Provides the One Box solution for image measurement instrument electronic control system, significantly improves the image measurement instrument electronic control system complicated, high cost, low performance, failure rate and other problems.

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Product Feature

- Realise high-precision motion control of the machine, with 6-axis high-speed differential pulse output control interface. Perfect motion control function: support any 2-axis straight line, arc, ellipse interpolation, support any 3-axis spatial arc interpolation, spatial helix, 4-axis straight line interpolation, dual-coordinate flying interpolation, follow interpolation motion, etc;
(Acceleration and deceleration planning control function is equipped as standard, which can realise precise 3D spatial straight line interpolation and circular arc interpolation motion.)
- With forward-looking preprocessing algorithm, backlash compensation, pitch error compensation, etc.;
- The control card internally saves every desired position accurately at high speed for in-motion snapshot function;
- Ability to plan continuous motion trajectories
- With a variety of motion modes: return to zero motion, point motion, Jog motion mode, interpolation motion, continuous motion, etc., to meet the needs of multifunctional motion.
- 4-axis linear scale counting, can be connected to any brand of differential (RS422) square wave signal output linear scale;
- Internal 8-zone ring light source drive control, 2-channel bottom light source drive control, 1-channel coaxial light source drive control;
- Adjustable brightness range 0-200 levels, brightness level 1-16 levels;
- Programmable 6045 light source control (40-zone) function;
- Contact probe interface, triggering hardware synchronised latching of 3-axis linear scale data.
- I/O interface, input detection function, output drive function, all with opto-coupler isolation protection.
- Adopt network interface data communication, strong anti-interference ability, long communication distance, stable and reliable.
- The APIs are designed for practical use on image measurement machines and CMMs, and only a few APIs are required to perform all functions.

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Product Parameter

Power	24 VDC ± 5% @ 2A		
Communication	Network Interface	TCP	
Motor Drive	No. of Drive Axes	6-axis	
	Drive method	Pulse + Direction signals	
	Max. Pulse Output Frequency	4 MHz	
Linear Scale Counting	No. of Counting Axes	4-axis	
	Interface Definitions	RS422	
	Power Output Capacity	5.0-5.15V @ 0-150mA	
	Input Frequency	<6MHz	
Light Source Control	Surface Light	8-zone or external 6045	
	Bottom Light*2	1000mA @ 5V/12V/24V	
	Coaxial Light*1	1000mA @ 5V/12V/24V	
	Software Brightness Adjustment Range	Level 200 (brightness levels 1-16)	
Probe	With LED	Hardware Latch	
I/O Control	Input Interface (opto-coupler isolated)	8-Channel Universal Inputs	
	Output Interface (opto-coupler isolated)	8-Channel Universal Outputs	
Working Conditions	-10-50 , No Condensation, No Oil		
Dimension	300*200*50 (mm)		

