

Industrial rail 16-channel 4-20mA analog optical transceiver Specification

Overview

Model: FCP-A16G

This series of devices adopts large-scale FPGA design and adopts original technology to support 1~16 channels of analog signals (current/voltage) to fiber relay. The device adopts dual power supply, high-performance FPGA programmable device, no MCU processing, high-speed conversion, sampling frequency can reach 20KHZ, 12-bit AD conversion chip, which solves the problems of electromagnetic interference, ground loop interference and lightning damage, greatly improving the problem. Control signal reliability, security and confidentiality, and also solve the problem of limited cable transmission distance.

Photo



Features

- The device is paired, the local signal input, and the opposite signal output;
- Support 4~20mA, 1-16 way current; or support 0~10V/0~5V, 1-16 way voltage; 16 channels of analog input and output can be combined arbitrarily;
- 16-channel analog AD/DA channel uses FPGA parallel read and write, non-MCU sequential read and write mode, each channel analog delay <0.1ms;
- Each analog quantity reads high-speed sampling data through FPGA, and the sampling rate is 20K times/second, which is much higher than similar products in the market;
- Multimode fiber/single mode fiber is optional, multimode can transmit 2KM, single mode can transmit 20KM,

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- ST/SC/FC interface is optional;
- Signal failure protection function; display of electrical interface and fiber running status in all directions
- 4-20ma interface anti-radar to IEC61000-4-5 (8/20μS) differential mode: 6KV, impedance (2Ω); common mode: 6KV, impedance (2Ω) standard
- Support wide range of AC and DC input, support internal isolation, redundant dual power input, power supply overload protection, anti-reverse protection
- Meet the requirements of industrial four-level electromagnetic compatibility;
- Super lightning protection function: lightning protection, anti-induction high voltage, anti-surge, etc.;
- No fan to efficiently dissipate heat and reduce repair time;
- IP40 enclosure protection level, able to withstand the test of harsh environment;
- rail or wall mounting;
- Wide temperature type: working temperature -40 ° C ~ +85 ° C;
- All models are tested by 100% baking machine, the warranty period is 5 years;

Parameters

◆ Fiber

Optical port: 1
 Optical fiber: single fiber and double fiber
 Fiber Interface: FC/SC/ST/LC (SFP)
 Wavelength: 850nm/1310nm multimode;
 1310nm/1550nm single mode
 No relay transmission distance: 20~120Km
 Typical transmit power:
 Single mode 1310/1550nm: ≥-9dBm
 Multimode 850nm: -18dBm
 Multimode 1310nm: -25dBm
 Acceptable sensitivity range: -28dBm~- 40dBm

◆ Current analog

Input and output range: 0~20mA (including 4~20mA)
 Resolution: 12 digits
 Sampling rate: 20K times / sec
 Time delay: <0.1ms
 Maximum load capacity: 600Ω

Input resistance: 125Ω
 Accuracy: 0.4% (normal temperature)

◆ Voltage analog

Input and output range: 0~10V (including 0~5V)
 Resolution: 12 digits
 Sampling rate: 20K times / sec
 Time delay: <1ms
 Maximum load capacity: 600Ω
 Input resistance: 100KΩ

Accuracy: 0.4% (normal temperature)

◆ Working environment

Working temperature: -40 ° C - +85 ° C
 Storage temperature: -40 ° C - +85 ° C
 Working humidity: 0% - 95% (no condensation)
 MTBF: >100,000 hours

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| Product number | FCP-A16G |
| Product function description | Simultaneous transmission of 16 analog interfaces on the fiber |

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| Service port description | 1 fiber interface; 16 analog interfaces |
| Power supply | Redundant dual power input: DC12-48V power consumption <5W overload protection: support; reverse connection protection: support; redundancy protection: support Access terminal: 4-core 5.08mm pitch plug-in terminal Housing: IP40 protection grade, aluminum alloy Installation method: rail mounting, wall mounting |
| Product Size | Dimensions: 133mm (length) x 120mm (width) x 50.0mm (height) |
| weight | 0.75kg/set |

Application

Point to Point Application:

Some separate discrete analogs require long-distance communication, or severe interference requires electrical isolation:

