XCP-Gateway 4S pro

Product description

CSM's **XCP-Gateway 4S pro** is a protocol converter designed for the CSM EtherCAT® measurement module series, and has been developed for measurement tasks with multiple measurement channels and high measurement data rates. Up to 4.5 million data points per second (MS/s), e.g. four channels with 1 MHz, can be synchronously acquired via each of the 4 ECAT inputs. PTP according to IEEE 1588 is used as a synchronization mechanism to further measurement chains, optionally with global time synchronization via GPS.

The **XCP-Gateway 4S pro** enables CSM EtherCAT® and CAN measurement devices to be linked to the XCP-on-Ethernet data protocol. In addition, temperature information from CSM High-Voltage Breakout Modules can be transferred via EtherCAT®. All connected measurement modules receive their power supply from the **XCP-Gateway 4S pro**. The configuration of both EtherCAT® and CAN measurement modules is done in CSMconfig.

Key features

CAN | EtherCAT

▶ converts 4 CSM EtherCAT® measurement chains to standard protocol XCP-on-Ethernet with 1 Gbit/s
  ▶ EtherCAT®: time synchronization of all measurement signals better than 1 µs via PTP (IEEE 1588), GPS optional
  ▶ XCP-on-Ethernet: accuracy of measurement signal time stamps is 1 µs
▶ 4 ECAT inputs, each suited for 4.5 MS/s, for CSM EtherCAT® measurement modules
▶ 2 CAN interfaces for connecting CSM CAN bus measurement modules

Scope of delivery

▶ XCP-Gateway 4S pro
▶ Configuration software CSMconfig
▶ Documentation

Accessories

▶ See datasheets "XCP/ECAT Accessories" and "CAN Accessories"

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Technical data

Type designation	XCP-Gateway 4S pro
PC	
Physical layer	Ethernet 1000Base-T, 1 Gbit/s
Protocol	XCP on UDP/IP
ECAT	4 inputs
Physical layer	Ethernet 100Base-TX, 100 Mbit/s
Protocol	EtherCAT®
CAN	CAN 2.0B (active), High Speed (ISO 11898-2:2016), 125 kbit/s to 1 Mbit/s for connecting CAN-based CSM measurement modules
Configuration	via CSMconfig, settings are stored in the device
Power supply	
Minimum	6 V DC (-10 %)
Maximum	50 V DC (+10 %)
Power consumption	typ. 2.3 W
LED Ethernet	Link/Activity PC (green)/Link/Activity ECAT (green)
LED Status	3 multi-colored LEDs per each ECAT input for DEV, ECAT and SYNC
LED CAN/PWR	interface activated (green)
Housing	aluminum, silver anodized
Protection class	IP67
Weight (device)	approx. 500 g
Dimensions (w × h × d)	approx. 200 × 40 × 60 mm (Slide Case)
Connectors	
PC (Ethernet)	LEMO 1B, 8-pole, code J
ECAT/PWR (EtherCAT®/power supply)	LEMO 1B, 8-pole, code A
CAN/PWR	LEMO 0B, 5-pole, code G
GPS	SMA socket (female)
PWR IN	LEMO 0B, 5-pole, code J
Operating and storage conditions	
Operating temperature	-40 °C to +85 °C
Relative humidity	5 % to 95 %
Pollution degree	3
Storage temperature	-55 °C to +90 °C
Conformity	CE

CSM

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