CAN Physical Layer Analyser

Special Features

- Fast recognition of installation errors
- Preventive diagnosis allows increase of system availability
- Scanning of the analog signal and evaluation of the signal quality
- Suitable for system integrators and plant operators

Description

CANwatch is an analyzer supporting easy error detection during installation and operation of CAN networks. CANwatch judges the analog signal on the bus and detects errors like e.g. invalid levels, overshoots, slow slopes and short circuits within the signal lines.

Besides the diagnosis of problems during installation CANwatch offers the possibility to detect signal deficiencies below the level causing failures. This allows preventive error detection and thus an increase regarding the availability of automated systems.

Errors on the physical level of the CAN bus cannot be detected by protocol analyzers and could until now only be analyzed by specialists with expensive and bulky hardware. Due to the easy diagnosis and display with LED’s CANwatch offers fast detection and correction of errors also to installers and plant operators.

Technical Data

Layout and connection

The bus interface is realized with D-Sub 9 connectors complying to the CiA standard DS-102.

Pin 1	–	Reserved, do not connect
Pin 2	CAN_L	CAN_L bus line (dominant low)
Pin 3	Gnd	Ground
Pin 4	–	Reserved, do not connect
Pin 5	–	Reserved, do not connect
Pin 6	(Gnd)	Optional ground
Pin 7	CAN_H	CAN_H bus line (dominant high)
Pin 8	–	Reserved by CiA (error signal), do not connect
Pin 9	V+CAN	Supply voltage from CAN bus

Limiting Values

Parameter	Minimum	Maximum	Unit
Storage temperature	- 20	+ 80	°C
Operating temperature	0	+ 60	°C
Supply voltage	- 100	+ 35	V
Voltage on bus connections	- 2	+ 7	V
Admissible power consumption (at 60°C)	–	2000	mW

Any (also temporary) stress in excess of the limiting values may cause permanent damage on CANwatch and other connected devices. Exposure to limiting conditions for extended periods may affect the reliability and shorten the life cycle of the device.

Nominal Values

Parameter	Min.	Typ.	Max.	Unit
Supply voltage	10	24	30	V
Current consumption	–	40	–	mA
Input voltage CAN_L	tbd	–	tbd	V
Input voltage CAN_H	tbd	–	tbd	V
Input voltage difference (CAN_H – CAN_L)	tbd	–	tbd	V

All values, unless otherwise specified, refer to a supply voltage of 24V and an environmental temperature of 20°C.

Scope of Delivery

- CANwatch
- User Manual