

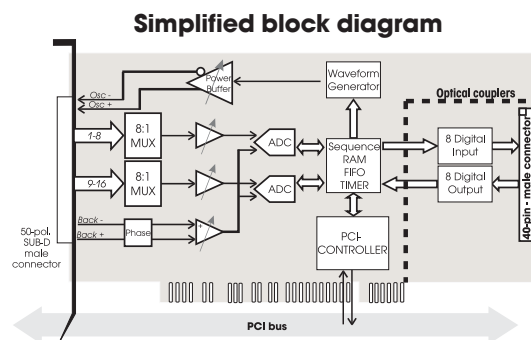
Acquisition of 1, 8 or 16 inductive displacement transducers



APCI-3701

Specifications

| Analog inputs | |
|---------------------------------------|---|
| Number of inputs: | for 1, 8 or 16 inductive displacement transducers |
| Resolution: | 16-bit |
| Interrupt: | At end of conversion, timer overrun or end of scan, DMA Short circuit on the transducer supply |
| Programmable modes: | - Trigger (external, through digital input) - Interrupt - Polling - DMA - Autorefresh |
| Conversion start: | Triggering through software (API function), timer-driven or digital input |
| End of conversion: | readable through software or interruptible |
| Timer: | 1 x 16-bit |
| Diagnostic possibilities: | Short circuit or break of the transducer supply Short circuit or break of the transducer signal line |
| Digital I/O | |
| Number of I/O channels: | 8 dig. inputs, 8 dig. outputs, 24 V |
| Optical isolation: | 1000 V through optical couplers |
| Inputs current at 24 V: | 3 mA typ. |
| Max. input frequency: | 5 kHz |
| Max. switching current: | 50 mA typ. |
| Input range: | 0-30 V |
| Output range: | 5-30 V |
| Noise immunity | |
| Test level: | - ESD: 4 kV - Fields: 10 V/m - Burst: 2 kV/4 kV Netz - Conducted radio interferences: 10 V |
| Physical and environmental conditions | |
| Dimensions: | 175 x 99 mm |
| System bus: | PCI 32-bit, 64-bit acc. to specification 2.2 (PCISIG) |
| Space required: | 1 PCI slot for analog inputs, 1 slot opening for digital I/O with FB3701 |
| Operating voltage: | +5 V, ±5 % vom PC; 24 V external |
| Operating voltage (+ 5 V vom PC): | APCI-3701-8: 1,28 A; APCI-3701-16: 1,40 A |
| Operating voltage (+ 5 V vom PC): | for Knaebel version APCI-3701-K |
| APCI-3701-K-8: | 1,37 A without load 1,40 A with 8 Knaebel transducers |
| APCI-3701-K-16: | 1,44 A without load 1,74 A mit 16 Knaebel transducers |
| Front connector: | 50-pin SUB-D male connector |
| Additional Connector: | 16-pin male connector for connecting the dig. I/O |
| Temperature range: | 0 to 60 °C (with forced cooling) |

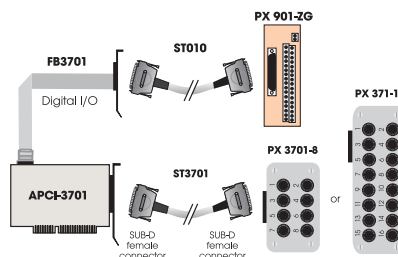


Pin assignment 50-pin SUB-D male connector (APCI-3701-16)

| Pin | Pin | Pin | Pin | Pin | Pin |
|-----|--------|-----|--------|-----|-----|
| 24 | BACK+ | 18 | BACK+ | 34 | 18 |
| 25 | BACK- | 19 | BACK- | 35 | 1 |
| 26 | OSC+ | 20 | OSC+ | 36 | 2 |
| 27 | OSC+ | 21 | OSC+ | 37 | 3 |
| 28 | OSC- | 22 | OSC- | 38 | 4 |
| 29 | PWRGND | 23 | OSC- | 39 | 5 |
| 30 | CH0 | 24 | PWRGND | 40 | 6 |
| 31 | PWRGND | 25 | CH2 | 41 | 7 |
| 32 | CH3 | 26 | PWRGND | 42 | 8 |
| 33 | PWRGND | 27 | CH5 | 43 | 9 |
| | | 28 | PWRGND | 44 | 10 |
| | | 29 | CH8 | 45 | 11 |
| | | 30 | PWRGND | 46 | 12 |
| | | 31 | CH11 | 47 | 13 |
| | | 32 | PWRGND | 48 | 14 |
| | | 33 | CH14 | 49 | 15 |
| | | | | 50 | 16 |
| | | | | | 17 |

osc+/-: phase-shifted supply signal of the inductive transducers
 Back+/-: Return lines of the supply voltage for measuring the amplitude. It serves as true value signal of the oscillator for the supply voltage.
 CHx: Transducer input and input number
 PWRGND: Ground

ADDI-DATA connection



ORDERING INFORMATION

ADDIALOG APCI-3701

Acquisition von 8 to 16 inductive displacement transducers. Incl. technical description, software drivers and calibration tool SET3701.

Standard versions (APCI-3701)

APCI-3701-1: for 1 displacement transducers (incl. cable with flange socket, 2 m, ST3701-1)

APCI-3701-8: for 8 displacement transducers

APCI-3701-16: for 16 displacement transducers

Accessories for HB and LVDT Transducers:

PX 3701HB-8: Connection box of the APCI-3701-8 for 8 half-bridge transducers

PX 3701HB-16: Connection box of the APCI-3701-16 for 16 half-bridge transducers

PX 3701LVDT-8: Box of the APCI-3701-8 for 8 LVDT transducers

PX 3701LVDT-16: Box of the APCI-3701-16 for 16 LVDT transducers

ST3701: Connection cable between APCI-3701 and the box

APCI-3701-8-K: for 8 Knaebel displacement transducers

APCI-3701-16-K: for 16 Knaebel displacement transducers

Accessories for all versions:

FB3701: Ribbon cable for digital I/O

PX 901-ZG:

Terminal board for digital I/O

ST010:

Standard round cable, shielded, twisted pairs, 2 m

Knaebel versions (APCI-3701-K)

APCI-3701-8-K: for 8 displacement transducers of Horst Knaebel

APCI-3701-16-K: for 16 displacement transducers of Horst Knaebel

Accessories for APCI-3701-K (Knaebel transducers):

PX 3701-K-8: Connection box of the APCI-3701-8 for 8 LVDT transducers

PX 3701-K-16: Connection box of the APCI-3701-16 for 16 LVDT transducers

ST3701-8-KS: Connection cable between APCI-3701-8 and connection box PX 3701-8; symmetric pairs with single shield of the pairs, coaxial structure, additional common shield for 8 channels

ST3701-16-KS: like ST3701-8-KS but for 16 channels

APCI-3701-K-16 and connection box PX 3701-16

Cable length in 2 m, 5 m or 10 m!



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