BD SENSORS
pressure measurement

CIT 700

Multichannel Process Display with Datalogger, Contacts and Analogue Outputs

Functional range standard

- configuration of max. 60 channels via inputs, outputs, controller, profiles
- connection of channels via mathematical / logical functions
- 8 integrated PD / PI / PID controller

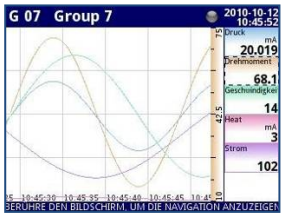
Datalogger

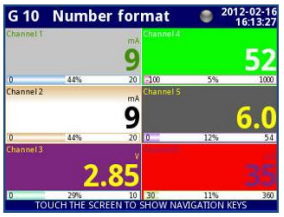
- logging of max. 60 channels
- 2 selectable measuring rates (max. 10Hz)
- extensive triggering functions
- internal memory 1,5 GB
- data transfer via USB stick / Ethernet

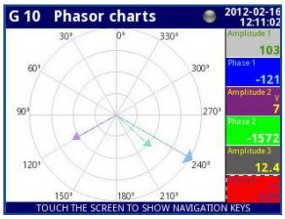
Product characteristics

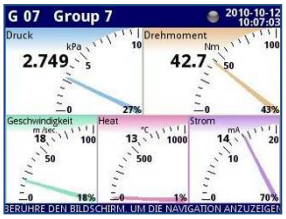
- front panel housing 96 x 96 mm
- graphic 3,5” TFT monitor, touchscreen
- 3 free fittable slots, 22 different input / output modules
- transducer supply 24 V_{DC}
- communication interface:
  3 x RS-485, 1 x RS-232, (Modbus RTU)
  2 x USB-Host-Port,
  Ethernet (Modbus TCP, Java Applets)

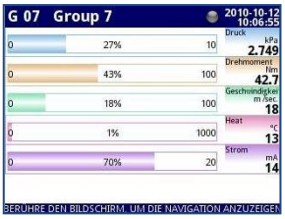
Display modes











BD SENSORS GmbH
BD-Sensors-Straße 1
D - 95199 Thierstein

Tel: +49 (0) 92 35 / 98 11- 0
Fax: +49 (0) 92 35 / 98 11- 11

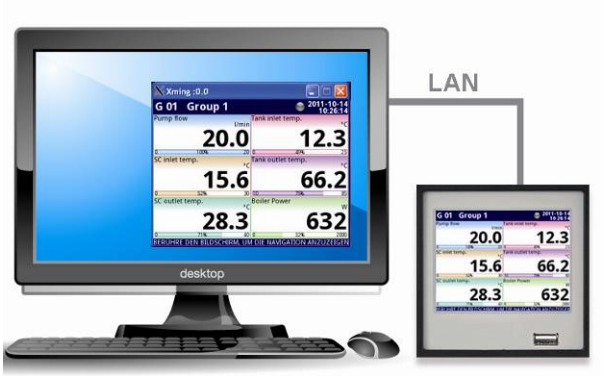
www.bdsensors.com
info@bdsensors.de

Signal input/output		
UI4, UI8, U16, I16		
Describtion	4/8/16 current/voltage inputs with common ground	
Input range/Resolution	-2...13V / 1mV	-2...13V / 1mV
Measurement ranges	0...5V, 1...5V, 0...10V, 2...10V	0...5V, 1...5V, 0...10V, 2...10V
Accuracy	0,1% @25°C	0,1% @25°C
Overload/Impedance	20% / 100kΩ	20% / 100kΩ
IS6		
Describtion	6 current inputs, isolated	
Input range/Resolution	3...30mA / 1µA	
Measurement ranges	4...20mA	
Accuracy	0,25% @25°C	
Overload/Impedance	50mA-resettable fuse / 1750Ω@4mA, 400Ω@20mA	
TC4, TC8*		
Describtion	4/8 thermocouple inputs	
Input range/Resolution	-30...30mV / 1µV	-30...30mV / 1µV
Overload/Impedance	20% / 1MΩ	20% / 1MΩ
Measurement ranges	Typ: K, S, J, T, N, R, B, E, L(GOST), -25...25mV, -100...100mV	
RT4*		
Describtion	4 RTD inputs (resistance thermometer)	
Input range/Resolution	0...325Ω / 0,01Ω	0...325Ω / 0,01Ω
Measurement ranges	Pt100, Pt500, Pt1000, Pt´50, Pt´100, Pt´500, Cu50, Cu100, Cu´50, Cu´100, Ni100, Ni500, Ni1000, 0...300 Ω, 0...3kΩ, 2/3/4-wire	
UN3		
Describtion	3 universal inputs with galvanically isolation for current, voltage, thermocouples and RTDs	
Current/voltage inputs		
Input range/Resolution	-1...12V / 1mV	-2...30mA / 1µA
Measurement ranges	0...5V, 1...5V, 0...10V, 2...10V	0...20mA, 4...20mA
Accuracy	0,1% @25°C	0,1% @25°C
Overload/Impedance	20% / >100kΩ	20% / <65Ω
Thermocouple inputs*		
Input range/Resolution	-10...30mV / 2µV	-10...120mV / 4µV
Measurement ranges	Typ: K, S, J, T, N, R, B, E, L(GOST), -25...25mV, -100...100mV	
Overload/Impedance	20% / >1,5MΩ	20% / >1,5MΩ
RTD inputs*		
Input range/Resolution	0...325Ω / 0,01Ω	0...3250Ω / 0,1Ω
Measurement ranges	Pt100, Pt500, Pt1000, Pt´50, Pt´100, Pt´500, Cu50, Cu100, Cu´50, Cu´100, Ni100, Ni500, Ni1000, 0...300 Ω, 0...3kΩ, 2/3/4-wire	
D8, D16		
Describtion	8/16 binary inputs, each 4 inputs with common ground	
Input range	0...30V, Uin<1V = LOW, Uin>4V =HIGH	
Curr. consumption/Isolation	15mA(24V), 5mA(10V), 2mA(5V) / 500V	
Processing	8bit/2nibbles/1byte(D8), 16bit/4nibble/1integer(D16)	
FI2, FI4		
Describtion	2/4 current inputs with balance counter(flowmeter) + 2/4 standard-current inputs with common ground	
Input range/Resolution	-2...30mA / 1µA	
Measurement ranges	0...20mA, 4...20mA	
Accuracy	0,1% @25°C	
Overload/Impedance	20%, 50mA-resettable fuse / 100Ω	
Processing	Reset of counter: internal/external/autoreset	
FT2, FT4		
Describtion	2/4 tachometer/flowmeter inputs(quadrature pulse inputs) or 2/4 tachometer/flowmeter inputs(each with one pulse input and one programmable function input) + 2/4 standard-current inputs with common ground	
Pulse inputs		
Input range	0...30V, Uin<1V = LOW, Uin>5V =HIGH, 0,1Hz... 50kHz	
Curr. consumption/Isolation	12mA(24V) / 2kV	
Processing	Operation modes: tachometer + counter(up/down), reset of counter: internal/external/autoreset	
Current inputs		
Input range/Resolution	-2...30mA / 1µA	
Accuracy	0,1% @25°C	
Overload/Impedance	20%, 50mA-resettable fuse / 100Ω	
CP4		
Describtion	4 counters each with two pulse inputs with galvanically isolation, one programmable input and one reset input	
Input range	0...30V, Uin<1V = LOW, Uin>10V =HIGH, max. 5kHz	
Curr. consumption/Isolation	14mA(24V), 6mA(10V), 50mA-resettable fuse / 2kV	
Processing	Operation modes: A+B/A-B/ counter(up/down)/quadrature counter, reset of counter: internal/external/autoreset	

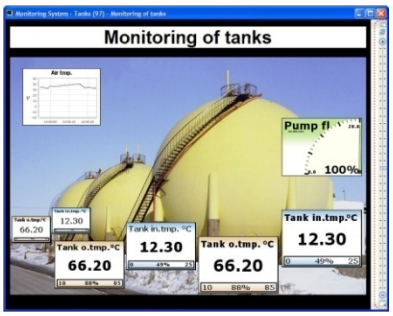
S8, S16		
Describtion	8/16 solid state relay outputs (SSR) with PWM-function, each 8 outputs (one group) with separate supply(internal/external)	
Max. current	Powered internally: 10mA, max. 50mA each group, powered externally: 100mA, max. 500mA each group	
Max. voltage	Powered internally: >8V, powered externally: >Uext.-0,5V	
External supply	10...30V	
PWM-Period/-resolution	0,1...1600s / 0,1s	
PWM-Frequenzy/duty factor	5kHz (internally), 20µs (output quantization) / 0...100%, resolution 15bit	
R45, R81		
Describtion	4 SPDT-relay outputs (SinglePoleDoubleThrow)	8 SPST- relay outputs (SinglePoleSingleThrow)
Max. current/voltage	5A, cosφ =1 each output / 250VAC	1A, cosφ =1 each output / 250VAC
Isolation strength	>1kV for 60s	>1kV for 60s
IO2, IO4		
Describtion	2/4 passive current outputs 4...20mA	
Output range/Resolution	3...22mA, 50mA-resettable fuse / 12bit	
Accuracy	0,1% @25°C	
Voltage dropout/ext. supply	Max. 9V / 9...30V	
*Accuacy depends on selected measurement range, please check manual of device		

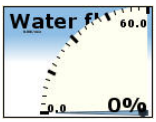
Supply	
Supply voltage	standard: 85 … 260 V_{AC} / V_{DC} option: 19 … 50 V_{DC} / 16 … 35 V_{AC}
Power consumption	15 VA, max. 20 VA
Transmitter supply	
DC	24 V_{DC} ± 5%, max. 200 mA (not possible for UN3)
Communication / Performance	
Communication interface	standard: RS-485 (Modbus RTU), Master / Slave USB Host (on rear panel / front side), USB device (service) option: 3 x RS-485/RS-232, Master / Slave 2 x USB Host, 1 x USB device, (service) 1 x Ethernet 10 Mbit/s (RJ45, Modbus TCP, Java Applets, Webserver)
Type of protection	
Version without / With USB-port	standard: IP 65 (front foil) IP40 (front USB) option: IP 54 (with lockable front)
Permissible temperatures	
Operating temperature	0 … 60 °C
Storage temperature	-10 … 70 °C
Electrical protection	
Electrical safety	EN 61010-1
EMC	EN 61326
Miscellaneous	
Display	graphic TFT, 3.5", touchscreen, coloured (16 bit), 320 x 240 pixels
Housing dimensions	96 x 96 x 100 mm
Housing	panel mounting
Housing material	NORYL-GFN2S E1
Extended functions	
Integrated date and time display	
Adjustable contrast and brightness of display, Screensaver	
Programmable upper / lower deviation messages, traffic lights function (change of the background colour)	
Read out numeric (number) / binary (text)	
Multi lingual menu navigation (EN, DE, FR, CZ, HU, RO, RU, PL, ES)	
Password protection	
Allocation of channels in 10 groups (max. 6 channels per group)	
Programmable display filter + scaling (linear / user defined)	
Extensive mathematical / logical functions	
User defined time / event driven profiles	
Acoustical signal	
16 virtual relays	
Data and configuration transfer via USB stick / Ethernet	

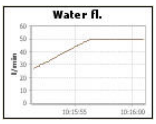
Remote-Desktop

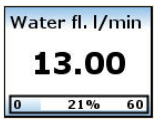


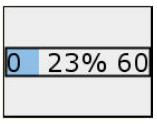
Java Applets

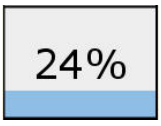




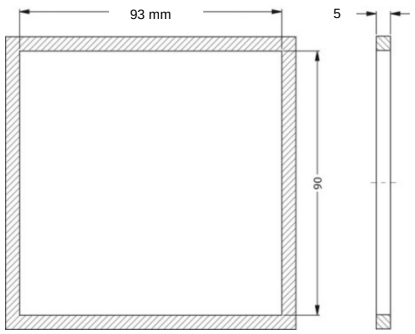




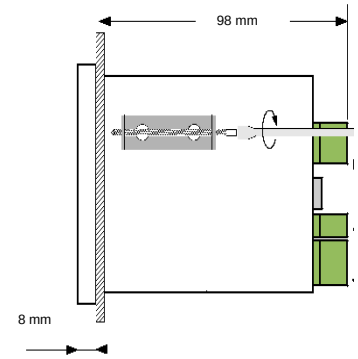




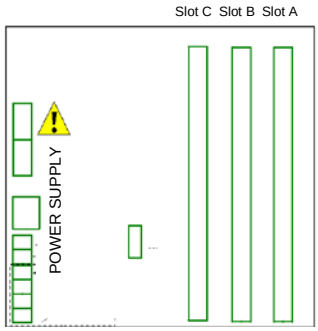
Dimensions (in mm)



panel cut-out

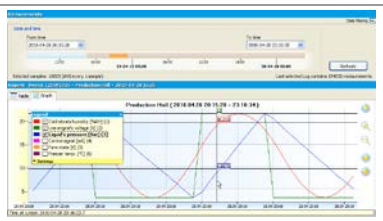


assembly



back side

Accessories

Licence key for datalogging capabilities	material number LK-700	Enables data logging capabilities of CIT 700 for max. 60 channels. For additional activating of function for already delivered CIT 700 serial number is necessary.
Software DAQ-Manager	 material number SW-DAQ	Program for displaying (table or graph), archiving, evaluation and export data stored on CIT 700 with enabled data logging capabilities. Data are imported via USB flashdrive or Ethernet. Export of the data is performed in CSV format. This software is included in scope of supply.
Lockable, transparent front door	 material number Z900002	Prevents damage of display and increases access protection.
Mini USB flasdrive 8 GB	 material number Z900024	Enables transfer of data and configuration between PC and CIT 700 (also with mounted front door).

Tel: +49 (0) 92 35 / 98 11- 0
Fax: +49 (0) 92 35 / 98 11- 11

www.bdsensors.com
info@bdsensors.de

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Ordering code CIT 700

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		SLOT A	SLOT B	SLOT C					
Basic version									
multichannel controller colour TFT dispay touchscreen	1								
Slot A / B / C		**SLOT A**	**SLOT B**	**SLOT C**					
empty		E 0 0	E 0 0	E 0 0					
4 x voltage input + 4 x current input		U I 4	U I 4	U I 4					
8 x voltage input + 8 x current input		U I 8	U I 8	U I 8					
16 x voltage input		U 1 6	U 1 6	U 1 6					
16 x current input		I 1 6	I 1 6	I 1 6					
6 current input (isolated)		I S 6	I S 6	I S 6					
8 binary input		D 0 8	D 0 8	D 0 8					
16 binary input		D 1 6	D 1 6	D 1 6					
4 x RTD input		R T 4	R T 4	R T 4					
4 x thermocouple input		T C 4	T C 4	T C 4					
8 x thermocouple input		T C 8	T C 8	T C 8					
3 x universal input		U N 3	U N 3	U N 3					
4 x pulse input		C P 4	C P 4	C P 4					
2 x current input (flowmeters) + 2 x current input		F I 2	F I 2	F I 2					
4 x current input (flowmeters) + 4 x current input		F I 4	F I 4	F I 4					
2 x puls input (flowmeters/ ratemeters) + 2 x current input		F T 2	F T 2	F T 2					
4 x puls input (flowmeters/ ratemeters) + 4 x current input		F T 4	F T 4	F T 4					
2 x analogue output			I 0 2	I 0 2					
4 x analogue output			I 0 4	I 0 4					
8 x SPST relay 1A			R 8 1	R 8 1					
4 x SPDT relay 5A				R 4 5					
8 x SSR output				S 0 8					
16 x SSR output				S 1 6					
Supply									
85 … 260 $V_{AC/DC}$					1				
16 … 35 V_{AC} / 19 … 50 V_{DC}					2				
Communication interface									
RS-485 (Modbus RTU) USB host port (back side)						1			
RS-485 (Modbus RTU) USB host port (front side)						2			
RS-485 (Modbus RTU) 2x USB host port						3			
3 x RS-485 / RS-232 2 x USB host port 1 x Ethernet 10 Mbit/s						4			
RS-485 (Modbus RTU) 2 x USB host-port 1 x Ethernet 10Mbit/s						5			
Display foil									
neutral							1 0 0		
customer							9 9 9		consult
Special version									
standard								0 0 0	
customer								9 9 9	consult
accessories									
Licence Key for Datalogger								LK-700	
Software DAQ-Manager								SW-DAQ	
lockable, transparent door								Z900002	
Mini USB Stick 8 GB								Z900024	

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BD|SENSORS GmbH
BD-Sensors-Straße 1
D - 95199 Thierstein

Tel. +49 (0) 9235 / 98 11 - 0
Fax +49 (0) 9235 / 98 11 - 11

www.bdsensors.de
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info@bdsensors.de