



CIT 700

Universal-Multichannel
Process Display TFT
with Contacts,
Analogue Outputs
and Datalogger

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

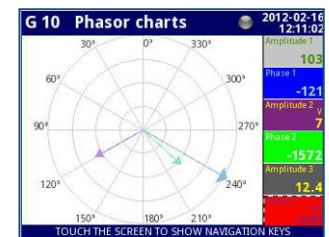
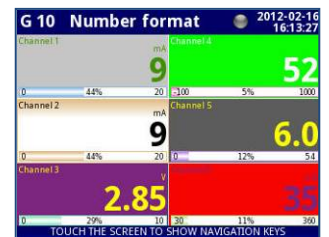
Datalogger

- ▶ 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



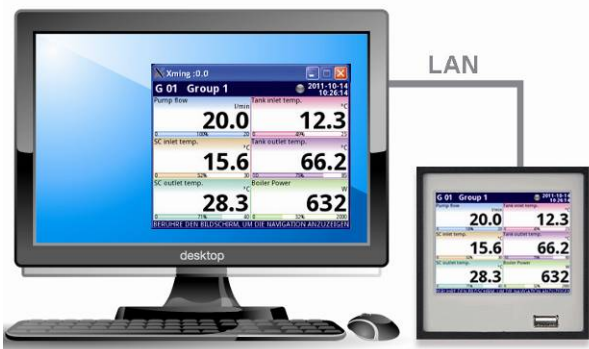
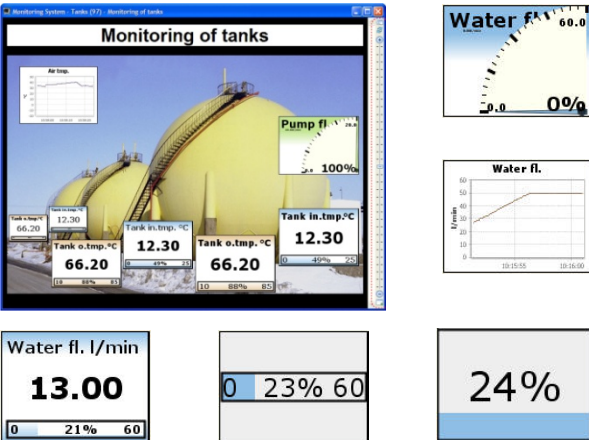
Signal input/output		
UI4, UI8, UI16, I16		
Description	4/8/16 current/voltage inputs with common ground	
Input range/Resolution	-2...13V / 1mV	-2...13V / 1mV
Measurement ranges	0...5V, 1...5V, 0...10V, 2...10V	0...5V, 1...5V, 0...10V, 2...10V
Accuracy	0,1% @25°C	
Overload/Impedance	20% / 100kΩ	20% / 100kΩ
IS6		
Description	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*		
Description	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*		
Description	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		
Description	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	
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		
Description	8/16 binary inputs, each 4 inputs with common ground	
Input range	0...30V, U _{in} <1V = LOW, U _{in} >4V =HIGH	
Curr. consumption/Isolation	15mA(24V), 5mA(10V), 2mA(5V) / 500V	
Processing	8bit/2nibbles/1byte(D8), 16bit/4nibble/1integer(D16)	
F12, F14		
Description	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		
Description	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, U _{in} <1V = LOW, U _{in} >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		
Description	4 counters each with two pulse inputs with galvanically isolation, one programmable input and one reset input	
Input range	0...30V, U _{in} <1V = LOW, U _{in} >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		
Description	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-Frequency/duty factor	5kHz (internally), 20µs (output quantization) / 0...100%, resolution 15bit	
R45, R81		
Description	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		
Description	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	
*Accuracy 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		

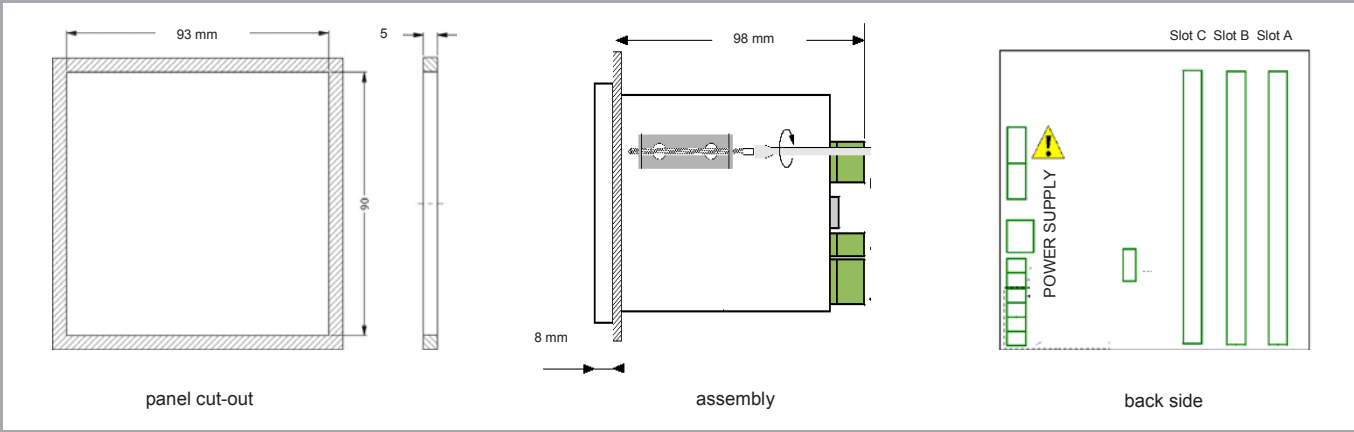
CIT 700

Multichannel Process Display




Technical Data

Remote-Desktop	Java Applets
	

Dimensions (in mm)



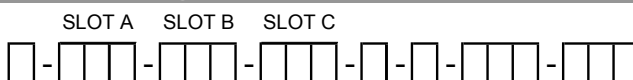
Accessories

Licence key for datalogging capabilities	<p>material number LK-700</p>	<p>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.</p>
Software DAQ-Manager	 <p>material number SW-DAQ</p>	<p>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.</p> <p>This software is freeware and may be downloaded from our homepage.</p>
Lockable, transparent front door	 <p>material number Z900002</p>	<p>Prevents damage of display and increases access protection.</p>
Mini USB flasdrive 4 GB	 <p>material number Z900003</p>	<p>Enables transfer of data and configuration between PC and CIT 700 (also with mounted front door).</p>

This data sheet contains product specification, properties are not guaranteed. Subject to change without notice.

Ordering code CIT 700

CIT 700



Basic version							
multichannel controller							
colour TFT display	1						
touchscreen							
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 device USB host port (back side)					1		
RS-485 (Modbus RTU) + USB device USB host port (front side)					2		
RS-485 (Modbus RTU) + USB device 2x USB host port					3		
3 x RS-485 / RS-232 2 x USB host port 1 x USB device					4		
1 x Ethernet 10 Mbit/s							
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 4 GB						Z900003	