



## CIT 750

### Multichannel Process Display with Datalogger, Contacts and Analogue Outputs

#### Functional range standard

- ▶ configuration of max. 90 channels via inputs, outputs, controller, profiles
- ▶ connection of channels via mathematical / logical functions
- ▶ 8 integrated PD / PI / PID controller

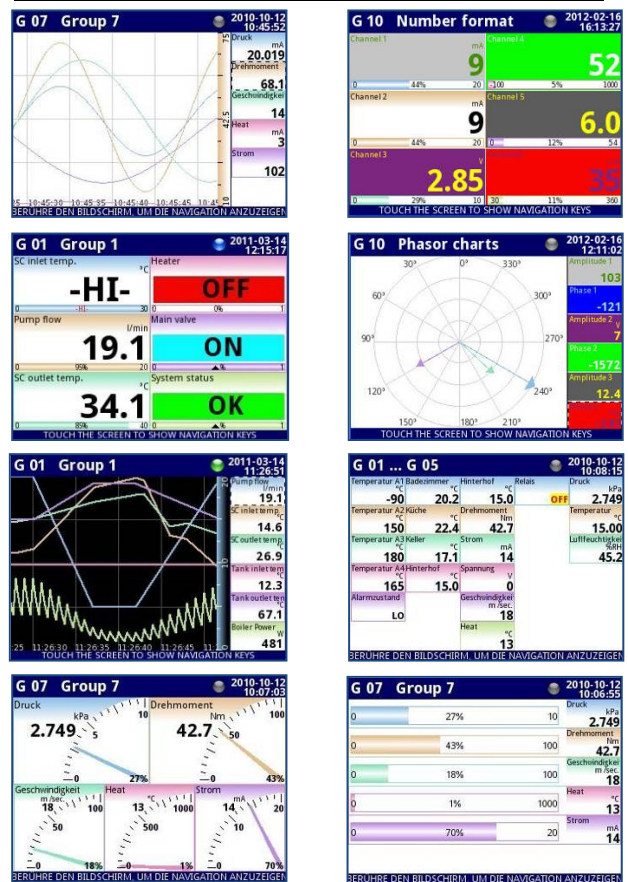
#### Datalogger

- ▶ logging of max. 90 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 144 x 144 mm
- ▶ graphic 5.7" TFT monitor, touchscreen
- ▶ 3 free fittable slots, 33 different input / output modules
- ▶ transducer supply 24 V<sub>DC</sub>
- ▶ communication interface:  
3 x RS-485, 1 x RS-232, (Modbus RTU)  
2 x USB-Host-Port,  
Ethernet (Modbus TCP, Java Applets)

#### Display modes



<b>Signal input/output</b>		
<b>UI4, UI8, UI12, U16, I16, U24, I24</b>		
Description	4/8/12/16/24 current/voltage inputs with common ground	
Input range/Resolution	-2...13V / 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%, 50mA-resettable fuse / 100Ω
<b>IS6</b>		
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	
<b>TC4, TC8, TC12*</b>		
Description	4/8/12 thermocouple inputs	
Input range/Resolution	-30...30mV / 1µV	-120...120mV / 4µV
Overload/Impedance	20% / 1MΩ	20% / 1MΩ
Measurement ranges	Typ: K, S, J, T, N, R, B, E, L(GOST), -25...25mV, -100...100mV	
<b>RT4, RT6*</b>		
Description	4/6 RTD inputs (resistance thermometer)	
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...300Ω, 0...3kΩ, 2/3/4-wire	
<b>UN3, UN5</b>		
Description	3/5 universal inputs with galvanically isolation for current, voltage, thermocouples and RTDs	
<b>Current/voltage inputs</b>		
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
<b>Thermocouple inputs*</b>		
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
<b>RTD inputs*</b>		
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...300Ω, 0...3kΩ, 2/3/4-wire	
<b>D8, D16, D24</b>		
Description	8/16/24 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), 24bit/6nibble/1integer(D24)	
<b>F12, F14</b>		
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	
<b>FT2, FT4</b>		
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	
<b>Pulse inputs</b>		
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	
<b>Current inputs</b>		
Input range/Resolution	-2...30mA / 1µA	
Accuracy	0,1% @25°C	
Overload/Impedance	20%, 50mA-resettable fuse / 100Ω	
<b>CP4 - 4 Counting-Inputs with galvanically Isolation</b>		
Description	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	

<b>S8, S16, S24</b>	
Description	8/16/24 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
<b>R45, R65, R81, R121</b>	
Description	4/6 SPDT-relay outputs(SinglePoleDoubleThrow)      8/12 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
<b>IO2, IO4, IO6</b>	
Description	2/4/6 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	
<b>Supply</b>	
Supply voltage	standard: 85 ... 260 V <sub>AC</sub> / V <sub>DC</sub> option: 19 ... 50 V <sub>DC</sub> / 16 ... 35 V <sub>AC</sub>
Power consumption	15 VA, max. 20 VA
<b>Transmitter supply</b>	
DC	24 V <sub>DC</sub> ± 5%, max. 200 mA (not possible for UN3, UN5, UI12, U24, I24, RT6, TC12, D24, R121, R65, S24, IO6)
<b>Communication / Performance</b>	
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)
<b>Type of protection</b>	
Version without / With USB-port	standard: IP 65 (front foil)    IP40 (front USB) option: IP 54 (with lockable front)
<b>Permissible temperatures</b>	
Operating temperature	0 ... 60 °C
Storage temperature	-10 ... 70 °C
<b>Electrical protection</b>	
Electrical safety	EN 61010-1
EMC	EN 61326
<b>Miscellaneous</b>	
Display	graphic TFT, 5.7", touchscreen, coloured (16 bit), 320 x 240 pixels
Housing dimensions	144 x 144 x 100 mm
Housing	panel mounting
Housing material	NORYL-GFN2S E1
<b>Extended functions</b>	
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 15 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)**

Accessories		
Licence key for datalogging capabilities	material number LK-700	Enables data logging capabilities of CIT 750 for max. 90 channels. For additional activating of function for already delivered CIT 750 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 750 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 freeware and may be downloaded from our homepage.
Lockable, transparent front door	 material number Z900025	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 750 (also with mounted front door).

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## Ordering code CIT 750

CIT 750

SLOT A    SLOT B    SLOT C

□ - □□□ - □□□ - □□□ - □ - □ - □□□ - □□□

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				
12 x voltage input + 12 x current input	U I 12	U I 12	U I 12				
16 x voltage input	U 1 6	U 1 6	U 1 6				
24 x voltage input	U 2 4	U 2 4	U 2 4				
16 x current input	I 1 6	I 1 6	I 1 6				
24 x current input	I 2 4	I 2 4	I 2 4				
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				
24 binary input	D 2 4	D 2 4	D 2 4				
4 x RTD input	R T 4	R T 4	R T 4				
6 x RTD input	R T 6	R T 6	R T 6				
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				
12 x thermocouple input	T C 12	T C 12	T C 12				
3 x universal input	U N 3	U N 3	U N 3				
5 x universal input	U N 5	U N 5	U N 5				
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 O 2	I O 2	I O 2				
4 x analogue output	I O 4	I O 4	I O 4				
6 x analogue output	I O 6	I O 6	I O 6				
8 x SPST relay 1A	R 8 1	R 8 1	R 8 1				
12 x SPST relay 1A	R 1 21	R 1 21	R 1 21				
4 x SPDT relay 5A	R 4 5	R 4 5	R 4 5				
6 x SPDT relay 5A	R 6 5	R 6 5	R 6 5				
8 x SSR output	S 0 8	S 0 8	S 0 8				
16 x SSR output	S 1 6	S 1 6	S 1 6				
24 x SSR output	S 2 4	S 2 4	S 2 4				
Supply							
85 ... 260 V <sub>AC/DC</sub>					1		
16 ... 35 V <sub>AC</sub> / 19 ... 50 V <sub>DC</sub>					2		
Communication interface							
RS-485 (Modbus RTU) + USB device						1	
USB host port (back side)							
RS-485 (Modbus RTU) + USB device						2	
USB host port (front side)							
RS-485 (Modbus RTU) + USB device						3	
2x USB host port							
3 x RS-485 / RS-232							
2 x USB host port						4	
1 x USB device							
1 x Ethernet 10 Mbit/s							
RS-485 (Modbus RTU)						5	
2 x USB host-port							
1 x Ethernet 10Mbit/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						Z900025	
Mini USB Stick 8 GB						Z900024	

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