

Network-compatible current measuring transducers – ACT20C

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Introduction

ACT20C signal conditioner with Ethernet interface

Comprehensive process transparency is provided by the transfer of diagnostics information, signals and data

To be able to control systems and processes optimally, you require a constant flow of information on the current states of individual applications, devices and functions.

Our ACT20C signal conditioner not only monitors the signal conversion, but also communicates precise information on device status, signals and data directly to connected computer and control systems.

Our Ethernet interface enables an event-controlled transfer of diagnostics information, which in turn supports the elimination of faults in, for example, plant operation.



Universal signal conversion

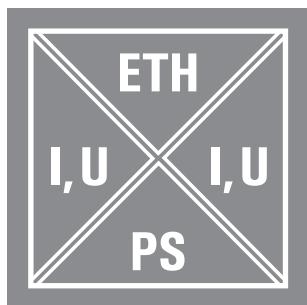
Can be used in a multitude of applications thanks to customer and application specific defined conversion methods with just one single module.

Simple operation and configuration

Software supported configuration allows a fast application of settings and simple operation.

Simple remote access

Continuous monitoring of device and system functions, simple and affordable integration of existing Ethernet networks.



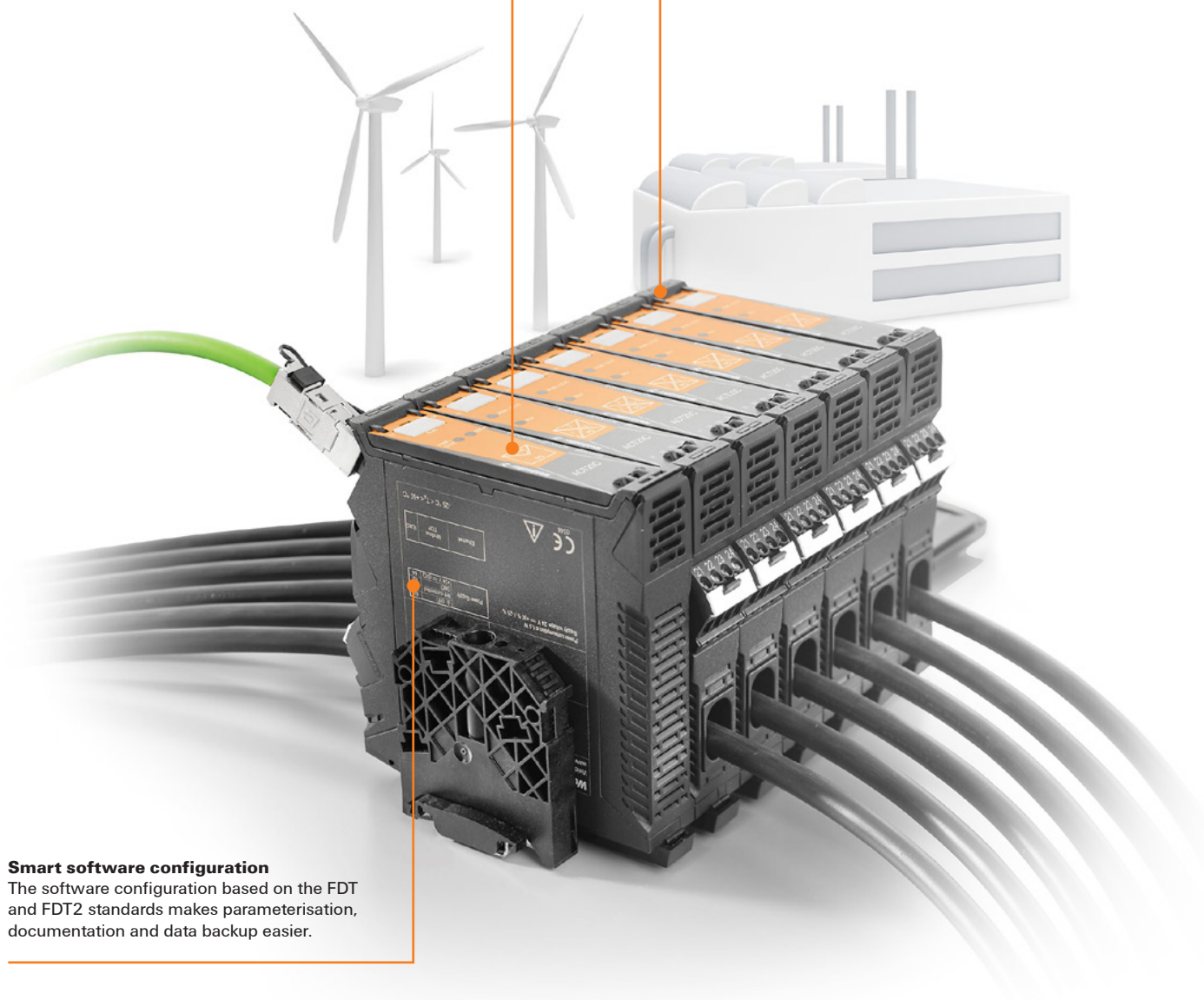
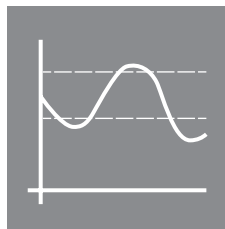
Condition monitoring

Preventative maintenance strategies using automation-independent information about operating conditions and process data for connected devices.



Multiple limit value monitoring

The main alarm and auxiliary alarm permit precise identification of all alarm situations.



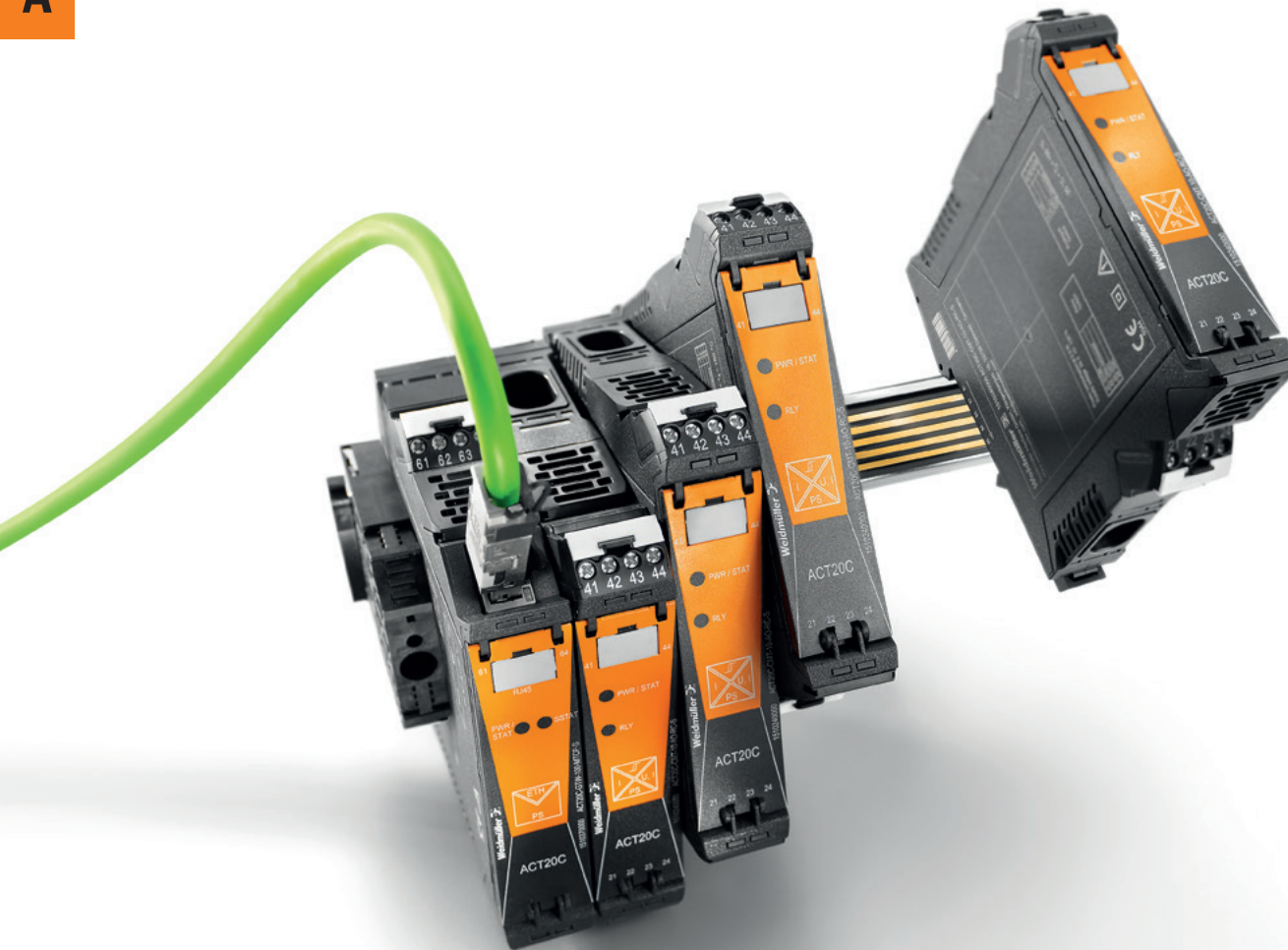
Smart software configuration

The software configuration based on the FDT and FDT2 standards makes parameterisation, documentation and data backup easier.

High process reliability

A galvanic four-way isolation and an impulse withstand voltage of 6.4 kV pursuant to IEC 61010-2-201 guarantee optimum fusing.

Selection table



Selection table

Order No.	Product	Input							Miscellaneous	Sensor feed	Width
		Amount	0...20 mA	4...20 mA	0...10 V	0...5 V	TC	RTD			
Network-compatible current measuring transducers – ACT20C											
1510370000	ACT20C-GTW-100-MTCP-S	1							RJ45, Modbus TCP		22.5 mm
1510240000	ACT20C-CMT-10-A0-RC-S	1							0...5/10 A AC/DC		22.5 mm
1510420000	ACT20C-CMT-60-A0-RC-S	1							0...40/50/60 A AC/DC		22.5 mm
2044840000	ACT20C-CML-10-A0-RC-S	1							0...1/5/10 A AC/DC		22.5 mm
1510340000	ACT20C-LBT-10	0									20.6 mm

	Output					Configuration	Auxiliary power	Rated voltage	Isolation	Connection system	Special characteristics
	Amount	0...20 mA	4...20 mA	0...10 V	Relay						
0						Software	24 V DC	30 V	3-way	S	Modbus TCP Gateway
1	X	X	X	X	X	± 20 mA, Limit value relays	24 V DC	300 V	4-way	S	Through hole current converter
1	X	X	X	X	X	± 20 mA, Limit value relays	24 V DC	300 V	4-way	S	Through hole current converter
1	X	X	X	X	X	± 20 mA, Limit value relays	24 V DC	300 V	4-way	S	Current carrying conductor at the terminals
0											Electrical termination on mounting rail bus, ACT20C station

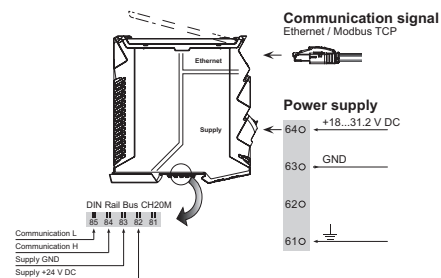
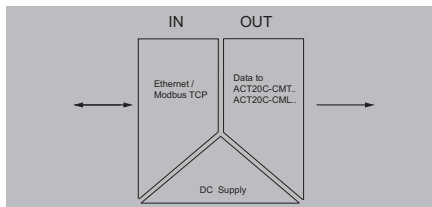
Connection system: S = screw / Z = tension clamp / P = Push In, ILP = Input Loop Powered, OLP = Output Loop Powered

Gateway

Gateway for ACT20C station

- Access to all data from the devices connected to an ACT20C station
- RJ45 port with Ethernet TCP/IP
- Configuration by means of the FDT/DTM standard
- Station management with "Plug & Produce" and "Hot Swapping"

ACT20C-GTW-100-MTCP-S



Technical data

Communication	
Addressing	
Configuration	
RJ45 ports	
Interface	
General data	
Configuration	
Power consumption, max.	
Voltage supply	
Insulation coordination	
Rated voltage / test voltage: Ethernet interface to supply / functional earth to supply / Ethernet interface	
Standards	
Test voltage	
Impulse withstand voltage	
Pollution degree	
Overtoltage category	

DHCP or manual adjustment	
With FDT/DTM software, DHCP	
10/100BaseT(X), auto negotiation	
Communication via CH20M rail bus with all current measuring transducers (ACT20C-CMT-x)	
General data	
With FDT/DTM software, DHCP	
1.5 W	
18.0 ... 31.2 V DC	
Insulation coordination	
30 V AC RMS	
IEC 61010-1, IEC 61010-2-201:2013, 1st Edition, IEC 61326-1:2012	
1.1 kV	
0,5 kV (1.2/50 µs)	
2	
II	

Dimensions	
Clamping range (nominal / min. / max.)	mm ²
Depth / Height / Width	
Note	

Screw connection, RJ45 plug-in connector	
1.5 / 0.5 / 2.5	
113.6 / 117.2 / 22.5 mm	
Note	

Ordering data

Note		
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Type	Qty.	Order No.
ACT20C-GTW-100-MTCP-S	1	1510370000

Accessories

Note	
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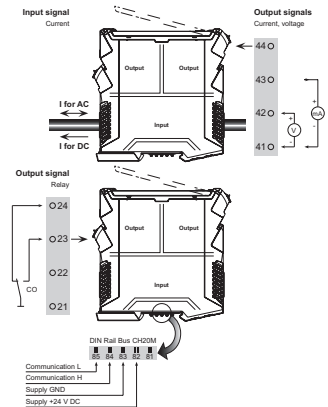
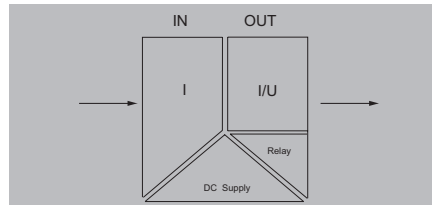
Note	
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Current transformer with limit value monitoring

- Measuring and monitoring of AC/DC current
- Input and output ranges are adjustable
- Contact-free through-hole technology
- Relay output for limit value alarm with switching threshold, delay, hysteresis
- Monitoring/configuration via ACT20C station/gateway

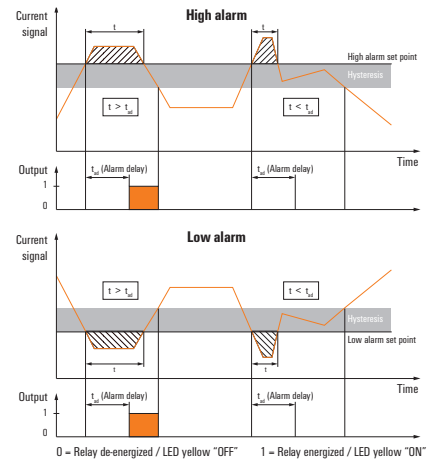
ACT20C-CMT



Technical data

Input	
Input measurement range	
Input signal	
Input frequency	
Output (analogue)	
Output voltage	
Output current	
Load resistance current	
Load resistance voltage	
Output (digital)	
Type	
Rated switching current	
Max. switching voltage, AC	
General data	
Configuration	
Step response time	
Temperature coefficient	
Voltage supply	
Insulation coordination	
Rated voltage	
EMC standards	
Galvanic isolation	
Test voltage	
Impulse withstand voltage	
Pollution degree	
Overvoltage category	
Dimensions	
Clamping range (nominal / min. / max.)	mm ²
Depth / Height / Width	
Note	

1510240000: configurable, 0...5/10 A AC (RMS) or DC; 1510420000: configurable, 0...40/50/60 A AC (RMS) or DC Current-carrying cable in feed-through hole, Diameter 10.5 mm AC: 15...700 Hz
Adjustable, 0...10 V, 2...10 V, 0...5 V, 1...5 V, -5...+5 V, -10...+10 V Adjustable, 0...20 mA, 4...20 mA, -20...+20 mA
≤ 600 Ω ≥ 10 kΩ
Relay, 1 CO contact, Process alarms (4x) with hysteresis, with alarm delay (configurable) 0...180 s
6 A 250 V
With FDT/DTM software, via gateway (ACT20C-GTW-100-MTCP-S), Addressing via DIP switches
< 300 ms typ. 0.04 % / K, max. 0.09 % / K via the system bus
300 V AC _{rms} IEC 61326-1
4-way isolator, between input/output/supply/relay
4 kV 6.4 kV (1.2/50 μs)
2 III
Screw connection
1.5 / 0.5 / 2.5 113.6 / 117.2 / 22.5 mm



User address	DIP switch S1					
	1	2	3	4	5	6
2						
3						
4						
5						
6						
7						
8						
...						
16						
...						
32						
33						

■ = ON

Ordering data

- Input measurement range 0...5/10 A
- Input measurement range 0...40/50/60 A

Type	Qty.	Order No.
ACT20C-CMT-10-AD-RC-S	1	1510240000
ACT20C-CMT-60-AD-RC-S	1	1510420000

Note

Accessories

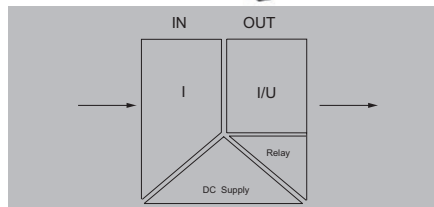
Note

Current transformers

Current transformer with limit value monitoring

- Measurement and monitoring of AC/DC currents
- Input/output electrically isolated
- Measurement range extension via passive current transformers
- A component of the ACT20C station
- Relay output for limit value alarm with switching threshold, delay, hysteresis

ACT20C-CML-10-A0-RC-S



Technical data

Input	
Input measurement range	configurable, 0...1/5/10 A AC (RMS) or DC
Input signal	Power cable can be connected to the terminals
Input frequency	AC: 15...400 Hz (true root mean square), AC: 50 Hz (arithmetic average)
Output (analogue)	
Output voltage	Adjustable, 0...10 V, 2...10 V, 0...5 V, 1...5 V, -5...+5 V, -10...+10 V
Output current	Adjustable, 0...20 mA, 4...20 mA, -20...+20 mA
Load resistance current	≤ 600 Ω
Load resistance voltage	≥ 10 kΩ
Output (digital)	
Type	Relay, 1 CO contact, Process alarms (4x) with hysteresis, with alarm delay (configurable) 0...180 s
Rated switching current	2 A
Max. switching voltage, AC	250 V
General data	
Configuration	for thresholds (overcurrent / undercurrent), delay and hysteresis, via gateway (ACT20C-GTW-100-MTCP-S), With FDT/DTM software
Step response time	≤ 300 ms (RMS), ≤ 60 ms (AA)
Temperature coefficient	≤ ±100 ppm/K @ -25...+55 °C, ≤ ±200 ppm/K @ +55...+70 °C
Voltage supply	24 V DC ± 30 %
Insulation coordination	
Rated voltage	300 V AC _{rms}
EMC standards	IEC 61326-1, IEC 61010-2-201
Galvanic isolation	4-way isolator, between input/output/supply/relay
Test voltage	4 kV
Impulse withstand voltage	6 kV (1.2/50 μs)
Pollution degree	2
Overvoltage category	III
Dimensions	
Clamping range (nominal / min. / max.)	mm ²
Depth / Height / Width	
Note	

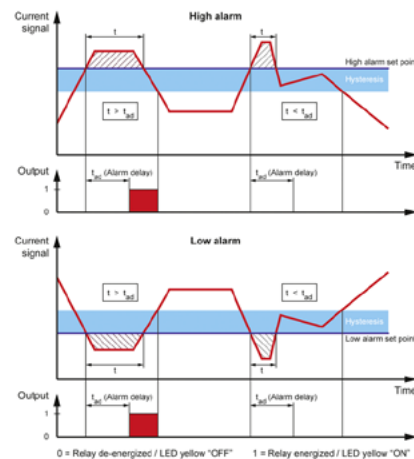
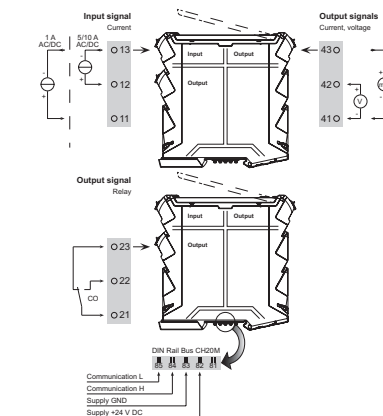
Ordering data

Type	Qty.	Order No.
ACT20C-CML-10-A0-RC-S	1	2044840000
Note		

Accessories

Note	
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Input signal	Current
1 A AC/DC	
5/10 A AC/DC	
O13	Input
O12	Output
O11	Output
Output signal	Relay
O23	Input
O22	Output
O21	Output
DIN Rail Bus CHDM	
Communication L	
Communication H	
Supply GND	
Supply +24 V DC	



Configuration

	DIP switch S1					
User address	1	2	3	4	5	6
2						
3						
4						
5						
6						
7						
8						
...						
16						
...						
32						
33						

■ = ON

Bus termination terminal

- Electrical termination of the CH20M rail bus of an ACT20C station
- Acts as a mechanical end bracket at the same time

ACT20C-LBT-10



Technical data

Humidity
Ambient temperature
General data
Rail

5...95 %, no condensation
-25 °C...+60 °C
TS 35

Dimensions
Depth / Width / Height

63 / 20.6 / 56

Note

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Ordering data

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Type	Qty.	Order No.
ACT20C-LBT-10	1	1510340000

Note

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Accessories

Note

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