BD SENSORS
pressure measurement

front panel housing

CIT 400
CIT 401

Multifunctional Process Transmitter

- for supplying 2- and 3-wire-sensors with current signal
- **CIT 400:** 2 limit value relays and 1 alarm relay; optionally with ATEX approval
- **CIT 401:** for pump control application with 4 limit value relays and 1 alarm relay

Description

The multifunctional process transmitter CIT 400 has been developed especially for supplying and data acquisition of 2- and 3-wire-sensors with current signal. The CIT 401 is intended for pump control application. The micro-controlled process transmitter collects the signal of the sensor and shows the measured value in a 4-digit LE display.

Operation

For simple handling the device features an extensive menu system with several menu levels. The display can be freely programmed via 3 push-buttons, which offer the navigation through the menu system and feeding in values. The combination of independent limit value relays and freely configurable analogue output offers the solution of nearly every measurement task. The device is equipped with an access protection to permit operation of the complex menu system only to authorized persons.

Applications

- level measurement
- pump control application

Characteristics

- 4-digit LE display
- varieties of housing: front panel or hat rail
- extensive menu system for configuration of display, contacts etc.
- possibility for the galvanic insulated signal output to switch over from 0 ... 20 mA to 4 ... 20 mA
- special functions / administration
  - access protection

CE Ex

CIT 400 / CIT 401
Process Transmitter

TÜV CERT DIN EN ISO 9001

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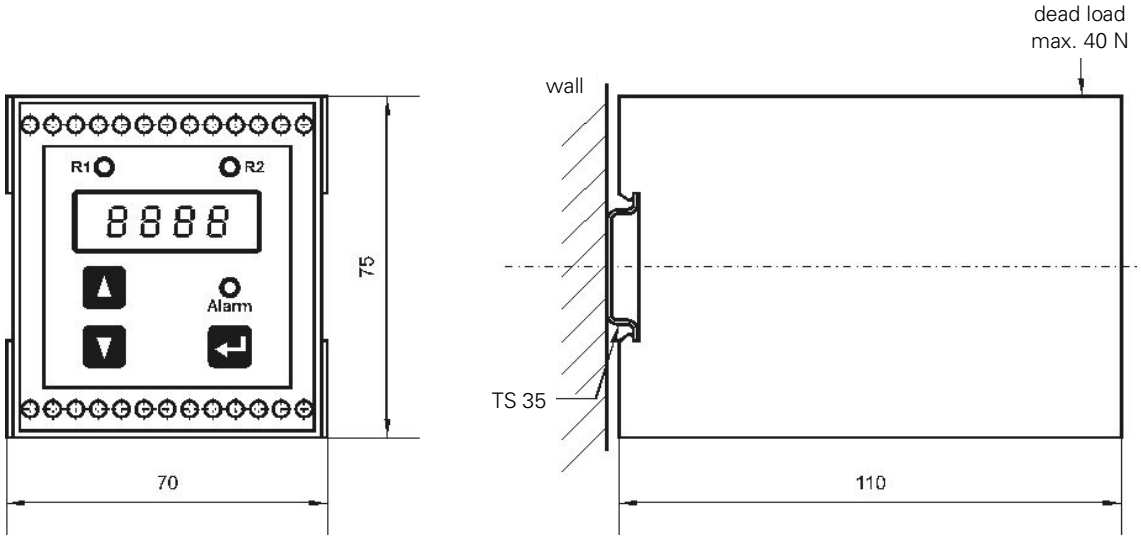
Signal output		
Output signal	0/4 ... 20 mA	
Permissible load	max. 500 Ω	
Number, type	1, galvanically insulated	
Signal input [1]		
2-/ 3-wire-system	4 ... 20 mA (for CIT 401 in front panel housing only 2-wire-system)	
Load	R_i = 50 Ω; input current max. 75 mA without damage; protected by poly-switch	
Number	1	
[1] *linearization via supporting points with CIT 401*		
Supply		
Supply voltage AC-device	standard: 230 V_{AC}, 50/60 Hz others on request	
	Ex-protection (optionally for CIT 400): 100 ... 240 V_{AC}, 50/60 Hz	
Supply voltage DC-device	standard: 24 V_{DC} ± 10 % others on request	
	Ex-protection (optionally for CIT 400): 18 ... 36 V_{DC}	
Power consumption	CIT 400: approx. 4 VA CIT 401: approx. 6 VA	
Contact / Alarm relay		
Contacts	CIT 400: 2 independent relay contacts (floating SPDT) CIT 401: 4 independent relay contacts (floating SPDT)	
Alarm relay	1 relay contact (floating SPDT with hat rail housing; floating NO with front panel housing); notifies broken line and over-current	
Switching voltage	max. 230 V_{AC}	
Switching current	max. 5 A (cos φ 0,9)	
Sensor supply		
DC device	V_S – 3 V	Ex-protection CIT 400: approx. 14.5 V @ 20 mA
AC device	approx. 14 V @ 20 mA; approx. 20.5 V @ 4 mA	
Sensor current limit		
Standard	ca. 32 mA	
Ex-protection CIT 400	linear limit, electronic limit approx. 37 mA	
Electrical protection		
Short-circuit protection	permanent - galvanic insulation of the contacts against measuring circuit and power supply	
Reverse polarity protection	DC device: no damage, but also no function	
Electromagnetic compatibility	emission and immunity according to EN 61326	
Electrical connection		
Standard	with fixed terminal clamp ; clamp section 2.5 mm²	
Housing		
	front panel housing	hat rail housing
Material	Noryl	ABS
Ingress protection	housing: IP 40 / IP 65 [2] clamps: IP 20	housing: IP 40 clamps: IP 20
[2] *IP 65 can be reached by an additional, front sided sealing with a flexible transparent protection cover (available as accessory)*		
Miscellaneous		
Display	4-digit 7-segment-LE display, red; digit height 10 mm; digit width 7.5 mm; range of indication -1999 ... 9999; accuracy 0.2 % ± 1 Digit	
LEDs	contacts: green	alarm: red
Operation	3 push-buttons allow configuration of the parameters via menus	
Permissible temperatures	electronics / environment/ storage: -20 ... 60 °C	
Weight	AC-device: approx. 450 g	DC-device: approx. 300 g
Installation position	any	
Data storage	non-volatile EEPROM	
Explosion protection (optionally for CIT 400)		
Approval AX13-CIT 400	II (1) GD [EEx ia] IIC	
Safety technical maximum values	U_o = 25.2 V, I_o = 84.8 mA, P_o = 535 mW; IIC: C_o = 107 nF; L_o = 5.7 mH	
Permissible temperatures	environment: -20 ... 40 °C	

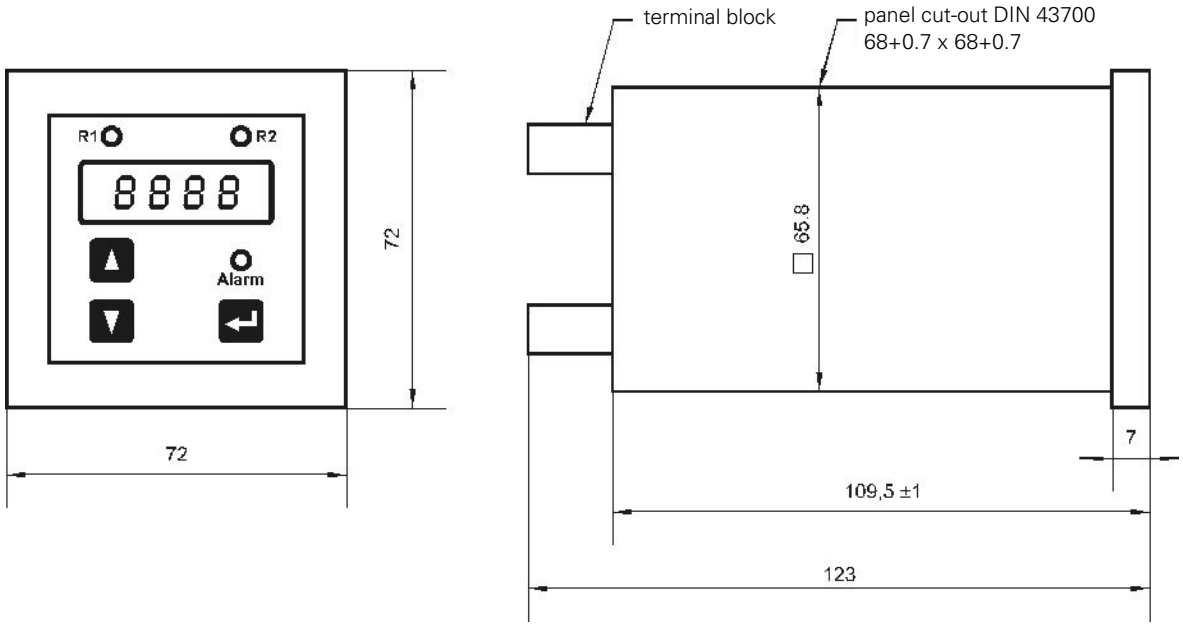
Dimensions

Housing for hat rail or wall mounting



⇨ available as accessory: transparent protection cover to snap-in, hinged, offers lead-sealing front side protection (total length increases by 9 mm)

Housing for front panel mounting

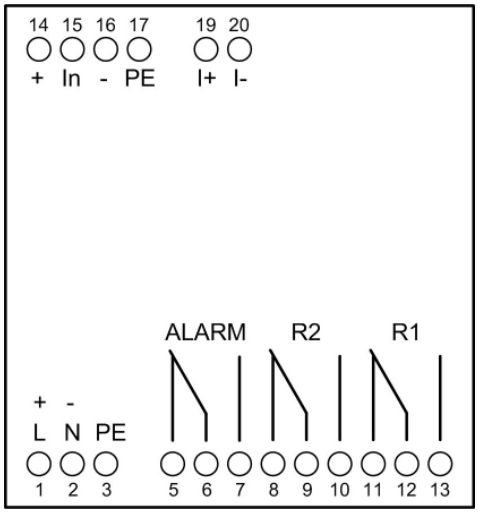


⇨ available as accessory: flexible protection cap, furthermore accessibility of operation elements, front side ingress protection: IP 65

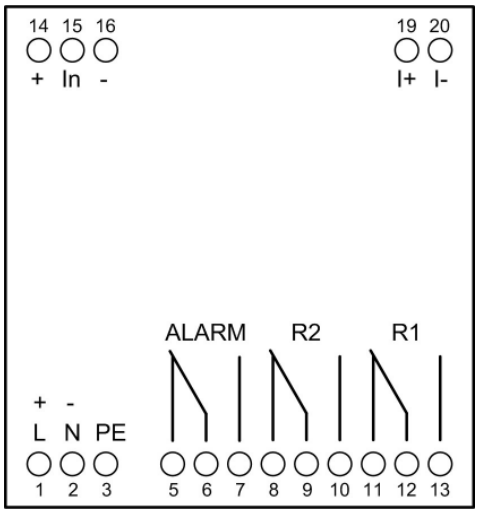
Connecting terminals

CIT 400:

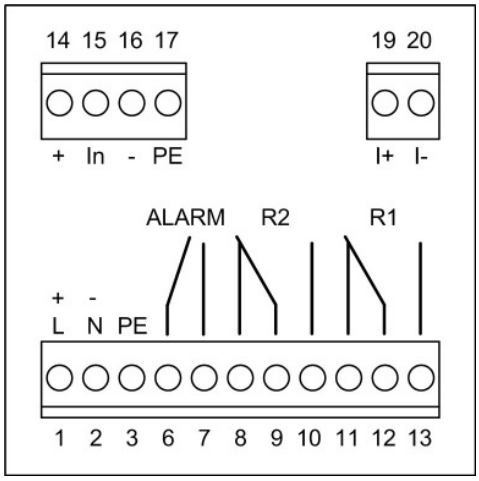
hat rail housing without Ex-protection



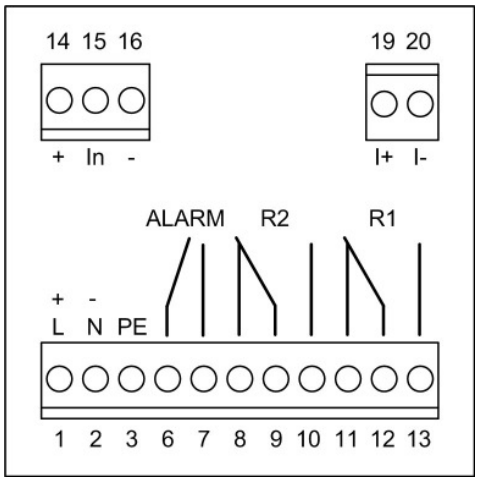
hat rail housing with Ex-protection



front panel housing without Ex-protection

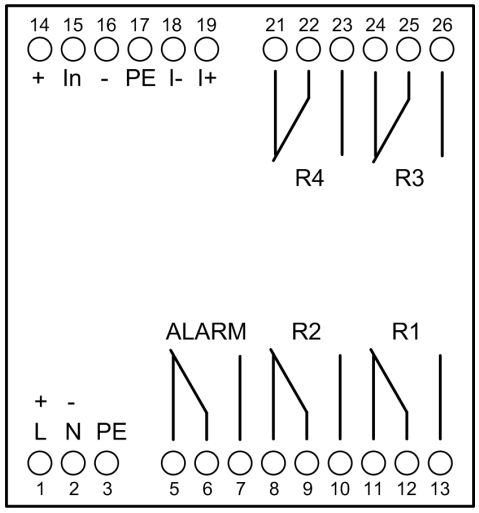


front panel housing with Ex-protection

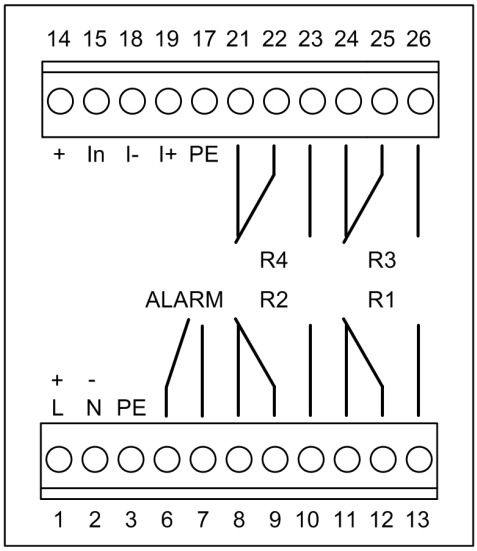


CIT 401:

hat rail housing



front panel housing



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Ordering code CIT 401

CIT 401 PH1-□-□-□-□-□□□

Type of construction								
Hat rail or wall mounting	H							
customer	9							
Ex-protection								
without Ex protection		S						
Supply								
24 V_{DC}			3					
230 V_{AC}			5					
customer			9					
Version								
BD SENSORS				B				
neutral				N				
customer				9				
Special version								
standard					0	0	0	
customer					9	9	9	

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