

SIRAX BT5600 Programmable Tap Position Transducer

Description

The purpose of the Tap position transducer is to convert tap position of transformers to equivalent analogue output. Outputs can be given as input to either RTU or indicator or recording instrument. Tap position transducers receives resistance input, which corresponds to tap position of transformer. Output is proportional to tap position.

Input variable and measuring range are programmed with the aid of a PC and the configuration software.

The device has one input channel and two independent outputs.

Features

- Input measuring range can be programmed using PC /Simplifies project planning and engineering (the final range can be determined during commissioning).
- Electrically isolated Dual outputs.
- Tap number is programmable from 1 to 100 using software.
- Tap position is displayed on front LED display
- Analogue output signal also programmed using the PC (impressed current or superimposed voltage for all ranges between - 20 and + 20 mA DC resp. - 12 and + 15 V DC)
- Galvanic and optical isolation between Power supply, Input and outputs
- 3,4 wire measurement to compensate lead resistance automatically.
- 2 wire measurement with lead resistance compensation through software.

Technical Data Measuring Ranges

Input

Measured Variable	Measuring ranges		
	Limits	Min. span	Max. span
Low Resistance Range	0 ... 3700 Ω	500 Ω	3700 Ω
High Resistance Range	0 ... 25000 Ω	500 Ω	25000 Ω

Measuring current = 0.081mA for measuring range 0...3700 Ω
= 0.012mA for measuring range 0...25000 Ω

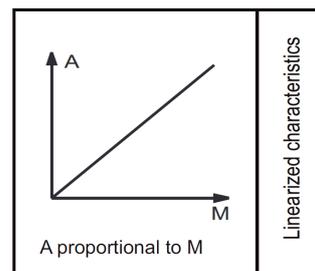
Output 1 and Output 2

DC current standard ranges 0...20mA or 4...20mA
DC current Non-Standard ranges -20...+20mA
Min. Span 5mA
Max. Span 40mA
Burden voltage Negative > -19V
Positive < 22V
External Resistance Rext max. [kΩ] = 15V/IAN (mA) or -12V/IAN (mA)
IAN (mA) = Full scale current



DC voltages standard ranges	0...5V, 1...5V, 0...10V, 2...10V
External Resistance	Rext min. [kΩ] = UA (V)/20mA UA (V) = 15V or -12V
Residual ripple in Output current	< 0.5% p.p.
Response time	< 4s
Power supply	60...230...300 V AC/DC (45...66 Hz) or 24...48...60 V AC/DC (45...66 Hz)
Power consumption	< 3W Or < 4.7VA

Output characteristics



Accuracy Data (acc. to IEC 60688)

Basic Accuracy	± 0.2% of range
Reference ambient Temperature	23°C ±2K
Nominal value of Aux supply voltage	230V 50Hz or 60Hz AC/DC 48V 50Hz or 60Hz AC/DC
Output burden	0.5 * Rext max.
Input Frequency	50 Hz ±0.3%

Influence factors

Temperature	± 0.15% per 10K
Burden influence	< ± 0.1% for current and voltage output
Magnetic field	< ± 0.2% (400 A/T)

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Mechanical Data

Housing / mounting	DIN Rail housing / 35 mm DIN Rail mounting or Panel mounting 96x96 mm
Material	Polycarbonate
Mounting position	Any
Weight	350 g

Environmental conditions

Electrical standards	Acc. to IEC 1010 resp. EN 61010
Electromagnetic compatibility	Acc. to IEC 61326-1 IEC 61000-4-3 / -4, Level 3
Climatic rating	Climate case 3Z acc. to VDI/VDE 3540
Nominal range of use	0°C ... 45°C (usage group II)
Operating temperature	-20°C ... +65°C
Storage temperature	-40°C ... +70°C
Annual mean relative humidity	≤75% standard Climatic rating
Shock (acc. to 60068-2-27)	500 m/s ² (50g)
Vibration (acc. to IEC 60068-2-6)	10...150...10Hz, 0.15mm, 20 m/s ² (2g)

Altitude

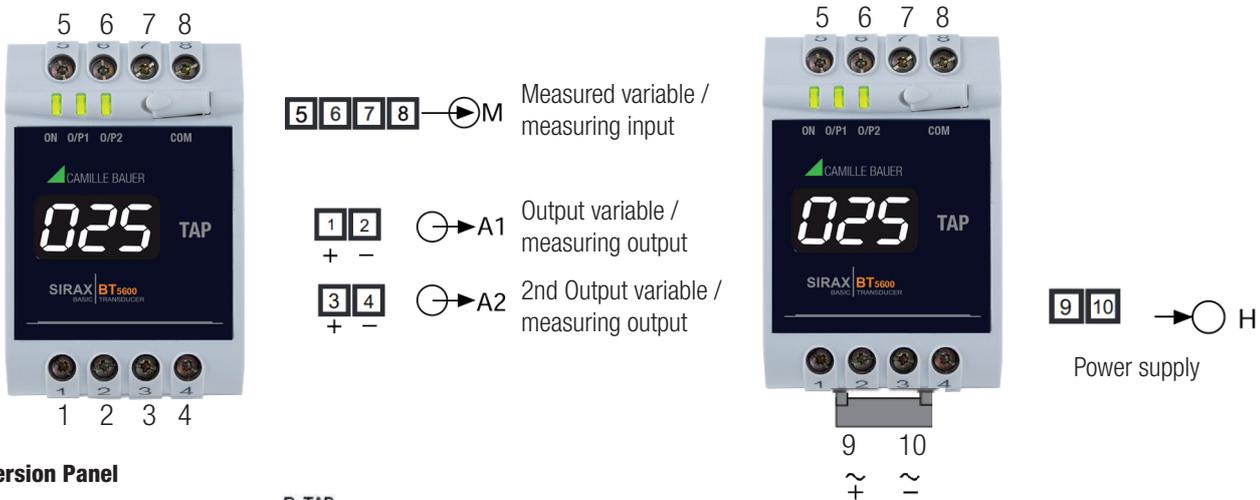
< 2000m
For indoor use

Safety

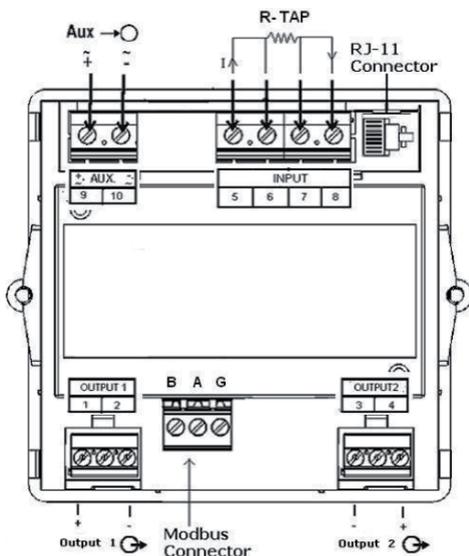
Over voltage category (acc. to IEC 664)	III for power supply II for measuring input and output
Pollution degree	2
Operating voltages	< 300V between all insulated circuits
Double insulation	Between power supply and all other circuit Between measuring input and measuring output
Test voltage	3.7 kV, 50Hz for 1 minute between power supply and all other circuits 2.3 kV, 50Hz for 1 minute between measuring inputs and measuring output 500 V, 50Hz for 1 minute between measuring output 1 and measuring output 2
Common mode voltage	100V
Flammability class	UL94 V-0, self-extinguishing, non-dripping, halogen-free
Protection (acc. to IEC 60529)	IP40 for housing IP20 for terminals

Connections

Version DIN Rail



Version Panel



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Ordering information

Description	Blockingcode	No-go with blockingcode	Article No. / Feature
SIRAX BT5600, Programmable Tap position transducer			BT5600-
Features, Selection			
01 Version			
DIN Rail Mounting 35mm	A		1
Panel Mounting 96x96 mm	B		2
02 Input resistance			
0 ... 25 k Ω			1
0 ... 20 k Ω			2
0 ... 18 k Ω			3
0 ... 17 k Ω			4
03 Range Output 1			
0 ... 20 mA			1
4 ... 20 mA			2
0 ... 10 V			3
2 ... 10 V			4
04 Range Output 2			
0 ... 20 mA			1
4 ... 20 mA			2
0 ... 10 V			3
2 ... 10 V			4
05 Auxiliary supply voltage			
60 ... 230 V AC/DC		B	1
60 ... 300 V AC/DC		A	2
24 ... 60 V AC/DC		B	3
20 ... 40 VAC / 20 ... 60 VDC		A	4
06 Interface			
Without RS485 / Modbus RTU			1
With RS485 / Modbus RTU		A	2



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