

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
- 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

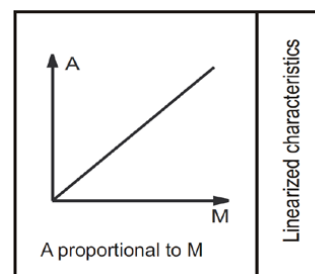
Output 1 and Output 2

DC current standard ranges 0...20mA or 4...20mA
 Burden voltage Negative > -19V
 Positive < 22V
 External Resistance $R_{ext\ max.} [k\Omega] = 15V/I_{AN} (mA)$ or $-12V/I_{AN} (mA)$
 $I_{AN} (mA) = \text{Full scale current}$
 DC voltages standard ranges 0...5V, 1...5V, 0...10V, 2...10V
 External Resistance $R_{ext\ min.} [k\Omega] = U_A (V)/20mA$
 $U_A (V) = 15V$ or $-12V$
 Residual ripple in Output current < 0.5% p.p.



Response time < 4s
 Power supply 60 ... 300 V AC/DC (45 ... 66 Hz) or 24 ... 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 * $R_{ext\ max.}$
 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)

Mechanical Data

Housing / mounting DIN Rail housing / 35 mm DIN Rail mounting
 Material Polycarbonate
 Mounting position Any
 Weight appr. 350 g

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Environmental conditions

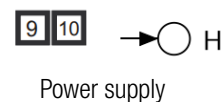
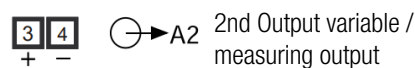
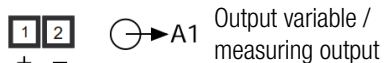
Electrical standards	Acc. to IEC 1010 resp. EN 61010
Electromagnetic compatibility	Acc. to IEC 61326-1 IEC 61000-4-3 / -4, Level 3
Climatic rating	Climate case 3Z acc. to VDI/VDE 3540
Nominal range of use	0°C ... 45°C (usage group II)
Operating temperature	-20°C ... +65°C
Storage temperature	-40°C ... +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)
Range Output 1	0...20 mA or 4...20 mA or voltage signals of 0...5 V, 1...5 V, 0...10 V, 2...10 V
Range Output 2	0...20 mA or 4...20 mA or voltage signals of 0...5 V, 1...5 V, 0...10 V, 2...10 V

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



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Ordering information SIRAX BT5600: Programmable On-Load Tap Position Transducer

Basic Device	Input resistance				Outputs		Auxiliary supply voltage		Standard protocol	Article number
	0 ... 25 kΩ	0 ... 20 kΩ	0 ... 18 kΩ	0 ... 17 kΩ	Output 1; Programmable, 0...20mA or 0...10V	Output 2; Programmable, 0...20mA or 0...10V	60 ... 300 V AC/DC	25 ... 60 V AC/DC	Modbus	
With LCD display DIN rail mount	•	-	-	-	•	•	•	-	•	194889
•	-	•	-	-	•	•	•	-	•	194897
•	-	-	•	-	•	•	•	-	•	194905
•	-	-	-	•	•	•	•	-	•	194913
•	•	-	-	-	•	•	-	•	•	194921
•	-	•	-	-	•	•	-	•	•	194929
•	-	-	•	-	•	•	-	•	•	194937
•	-	-	-	•	•	•	-	•	•	194945

Accessories

Description	Article No.
Programming cable PRKAB5000 for DIN mounting version	176314



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