DCR

Programmable Transducer for Temperature, Resistance, and Standard Signals

Programmable universal transducer for fast and high accuracy measurements of low DC voltage or current, resistance, RTD, potentiometer, thermocouple or tap changers. Advanced filter functions and characteristic setting points that can be individually set for both, analog and relays outputs. Auxiliary supply with wide input voltage range and free configuration software, ConfigLQT.

Technical Data		Details
Input	Current	±24 mA
	Voltage	±24 VDC, ±12 VDC, ±300 mV, ±77 mV
	Resistance 2 Wire	0 - 6 kΩ, 0 - 3 kΩ, 0 - 1480 Ω, 0 - 720 Ω
	Resistance 3 Wire	0-12 kΩ, 0-6000 Ω, 0-3000 Ω, 0-1500 Ω, 0-750 Ω
	PT100, PT250, PT500, PT1000	-200 - 850 °C
	K	-200 - 1372 °C
	J	-210 - 1200 °C
	N	-200 - 1300 °C
	R,	-50 - 1768 °C
	S	-50 - 1768 °C
	B	-250 - 1820 °C
	T	-200 - 400 °C
	E	-200 - 1000 °C
	Potentiometer/Tap Changer	0 - 250 kΩ, 0 - 50 kΩ, 0 - 5 kΩ, 0 - 1 kΩ
	Current Shunt	±300 mV, ±77 mV
Auxiliary supply	Range	24 – 230 VDC / 90 – 230 VAC ±10 %
	Burden	max 4.5 W / 10 VA (2 analog outputs) max 3.5 W / 7 VA (1 analog output + 24 VDC)
Output	Analog Outputs	1 (without relay outputs), 2, or 1 with 24 VDC Supply
	Programmable Range	±20 mA, ±5 mA, ±10 V (Settings within the range)
	Resolution	16 bits
	External Resistance Load	Current output: ±20 mA ≤ 500 Ω, ±5 mA ≤ 2000 Ω (10V) Voltage output: ±10 V ≥ 500 Ω
	Response Time	< 50 msec
	Ripple	≤ 0.2 %
	Relay Outputs (only with DCR -022 and -032)	2(Mechanical) 8 A 250 VAC (NO) 8 A 30 VDC- 300 mA 300 VDC (NO)
General Data		
	Galvanic Isolation	Supply, input, and output are galvanically isolated
	Connection Terminals Torque	Input, Output & Auxiliary: 2.5 mm^2 / 0.5 Nm
	Humidity	95% non-condensing
	USB	USB Micro-B, port for configuration
	Temperature	-10…+55 °C (operation), -40…+70 °C (storage) Temperature coefficient < 0.1 % / 10 °C
	Test Voltage	4 kVAC /1 min
	Measurement/Overvoltage	Cat. III
	Pollution Degree	2
	Dimension (W x H x D)	35 x 132 x 101 mm
	Weight	330 gr
	Protection	Enclosure IP40 Terminals IP20
	Flammability Class	UL94 V-0
	Standards	SS-EN 60688:2021 Transducers, EN 61000-6-2 / -6-4 / -6-5 SS-EN 61010-1 Safety, SS-EN 61010-2-030

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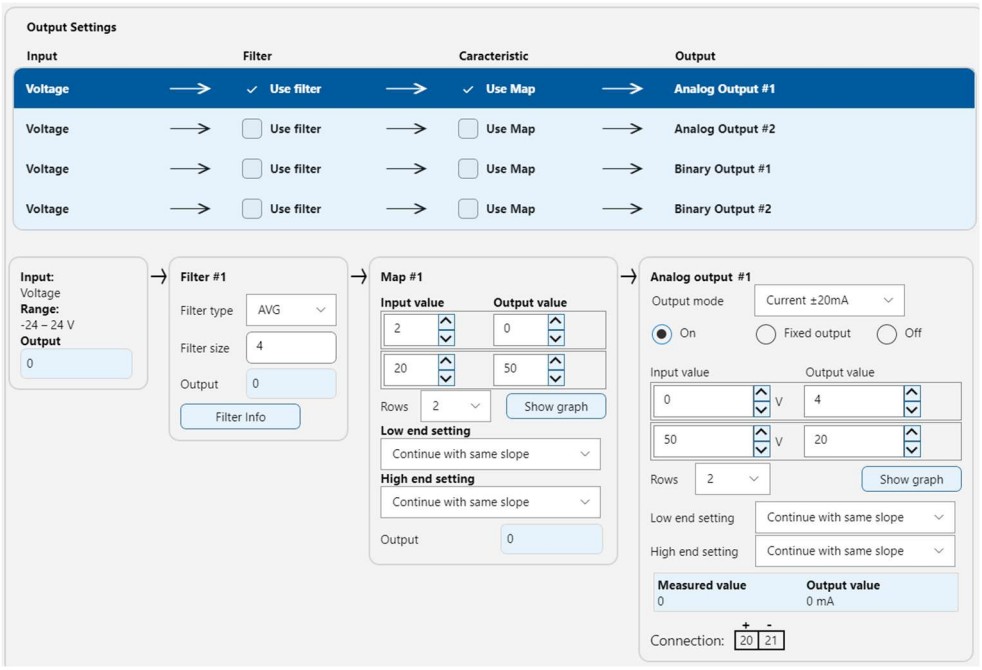
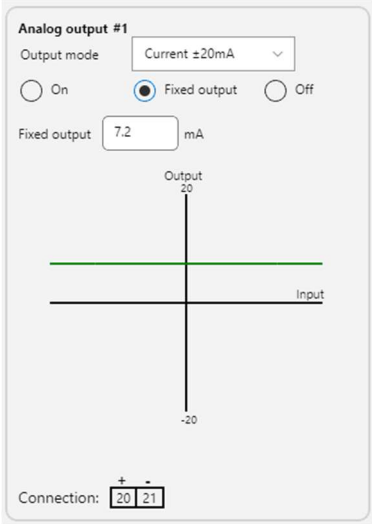




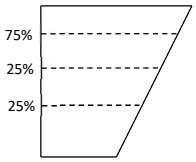
Configuration Software - ConfigLQT

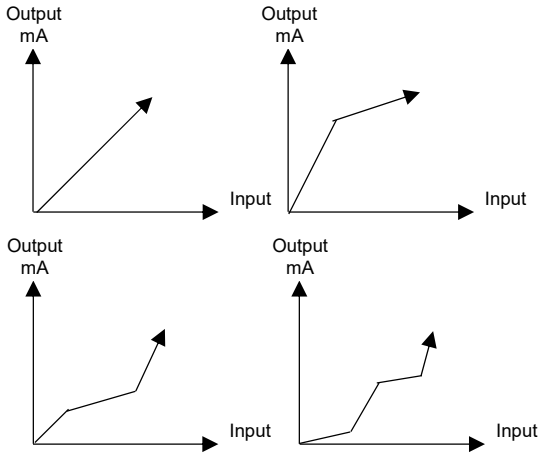
ConfigLQT, free configuration software, downloadable from our webpage, www.tillquist.com, configures all Tillquist's programmable transducers. The software connects to live transducers, changes the configuration, and visualizes live readings.

Programmable Characteristic Setting Points

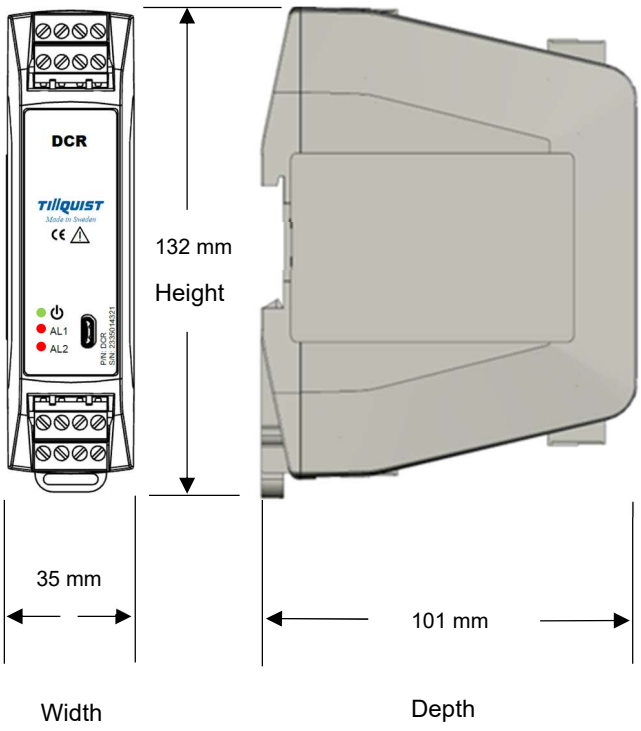
Transmission Functions (up to 20 setting points)

Sensor	Used Value
0 Ω	Empty
62 Ω	125 liters
105 Ω	250 liters
146 Ω	375 liters
180 Ω	500 liters





Dimensions



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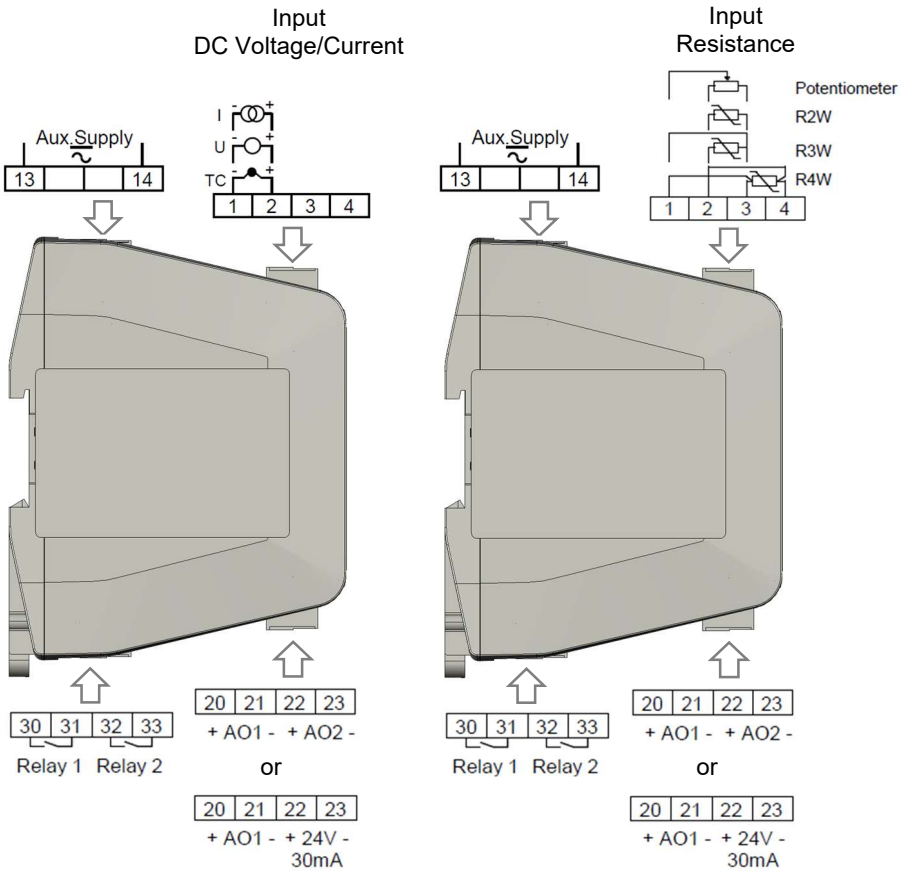
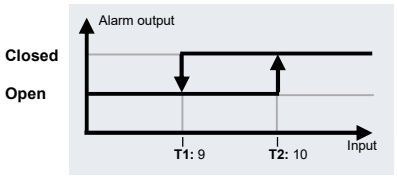
Connections

DCR



Relay Outputs

Closed above level



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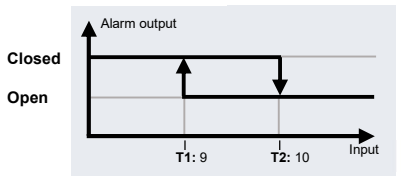

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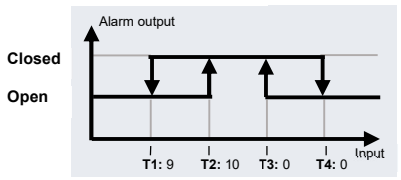

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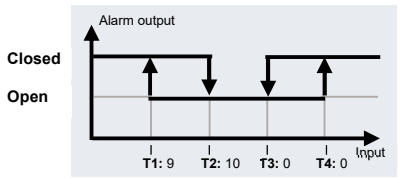

Ordering Codes

DCR Ordering Codes

	DCR-0	XX	XXX
Number of Analog and Relay Outputs			
1 AO, no relay outputs		10	
2 AOs, 2 relay outputs		22	
1 AO, 2 relay and 24VDC, 30 mA Supply		32	
Other Requirements			
Standard Configuration			000
Customer configuration (to provide ERF)			001

Ordering Codes Examples

DCR-022000: DCR transducer with 2 analog and 2 relay outputs
DCR-032000: DCR transducer with 1 analog and 2 relay outputs, and 24 VDC supply
DCR-010000: DCR transducer with 1 analog

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