TLV® FLOW COMPUTER

MODEL EC351

MULTI FUNCTION FLOW COMPUTER FOR FLUID APPLICATIONS

Features

Compact flow computer combines signals from volumetric flowmeters with those from pressure, temperature and density sensors. Using appropriate flow equations, a wide range of important variables can be calculated and displayed.

1. Calculates and displays mass flow, corrected volume, heat, delta heat and other process variables.
2. Fast initial start-up possible using the "Quick Setup" program.
3. Function keys are programmable.
4. Outputs are galvanically isolated.
5. Has a multi-language (English, German, French) cleartext display.
6. Easy connection to and full compatibility with EF200 flowmeters.

Specifications

Model	EC351
Display	Two-line, backlit, liquid crystal, 20 characters per line
Line Voltage (Power Supply)	85 to 260 V AC (50/60 Hz)
Power Consumption	AC: less than 10 VA
Integral Supply for Transmitters	24 V DC, 100 mA regulated
Operating Temperature	0 to 50 °C
Protection Standard	Front Panel: IP65 / NEMA 4X; Housing: IP20 (EN 60529)
Housing Material	Flameproof plastic

Inputs	Flow	Pulse Input	Trigger Level	Current Pulse: 12 mA
			Input Restriction	U_{max}: 50 V DC, I_{max}: 25 mA, f_{max}: 20 kHz
	Pressure, Density, Temperature	Current Input	Range	0/4 to 20 mA
			Automatic Error Recognition	Signal over-range, current loop broken
		Pt100 (RTD) Input	Connection	3-wire
			Temperature Resolution	0.01 °C
			Linearity	Corrected internally
			Automatic Error Recognition	RTD short, RTD open
Outputs		Relay Output (×2)	Function	Flow alarm, temperature alarm, pressure alarm
			Pulse Output	f_{max}: 5 Hz
			Contacts	SPDT 240 V, 1 A
		Current Output (×2)	Range	0/4 to 20 mA
			Resolution	16 bit
			Linearity	0.05% o.f.s. (at 20 °C)
			Maximum Load Resistance	1 kΩ
		Pulse Output (selectable)	Open Collector	Voltage < 30 V DC, current < 25 mA, U_{CE}< 0.4 V
			Voltage Pulses	Voltage 24 V DC, current < 15 mA, internal resistance: 100 Ω, f_{max}: 50 Hz
		Printer Output	Interface	Serial interface RS232, 9-pin DSUB connector

Connecting Terminals
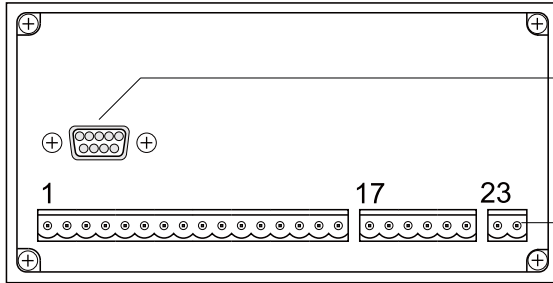
(Rear view of panel mount housing)

Serial interface RS232
(Common ground connection
with Terminal 4)

3 separate terminal strip
connectors can be easily
removed to simplify wiring

	Terminal Designation	Inputs/Outputs
1	+24 V DC supply (internally connected with terminal 8)	Flow input
2	Pulse or voltage input (active+, passive-)* or high-range current input for split range DP transmitters	
3	Not used (Voltage or Current input)	
4	(−) Ground connection	Active inputs*
5	(+) Pt100	Pt100 or Current input 1
6	(+) Pt100	
7	Pt100 (−) or current input (active+, passive−)	
8	+24 V DC power (internally connected with terminal 1)	Current inputs
9	(+) Pt100	Pt100 or Current input 2
10	(+) Pt100	
11	Pt100 (−) or current input (active+, passive−)*	

	Terminal Designation	Inputs/Outputs
12	(+) active or passive	Pulse output
13	(−) active or passive	
14	(+) Current output 1	Current outputs
15	(+) Current output 2	
16	(−) Ground connection	
17	Function: Normally Open contact (NO)	Relay output 1
18	Relay 1 wiper	
19	Function: Normally Closed contact (NC)	
20	Function: Normally Closed contact (NC)	Relay output 2
21	Relay 2 wiper	
22	Function: Normally Open contact (NO)	
23	L1 for AC	Power supply
24	N for AC	

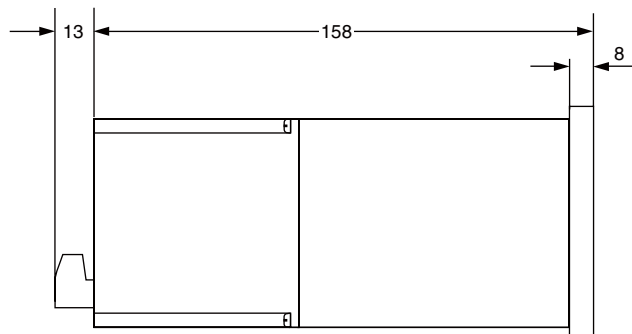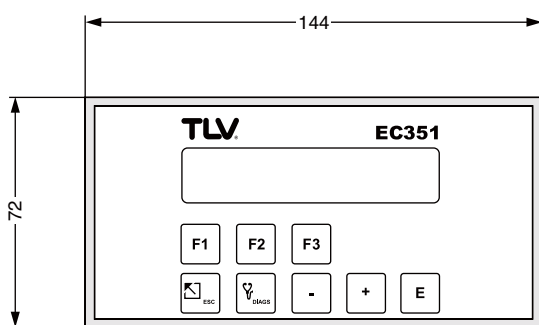Galvanic Isolation

* *active*:   Transmitter with own power supply (4-wire)
   passive: Transmitter supplied by the flow computer (2-wire)

⚠ **CAUTION** The three inputs share a common ground connection. The two current outputs also share a separate ground connection. If complete separation is required between the two current outputs, then external galvanic isolators must be used.

Dimensions

● **EC351** Housing for panel mounting

(Units: mm)
Weight: approx. 0.6 kg

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Specifications subject to change without notice.