



# FLOW COMPUTER

## MODEL EC351

### 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 EF77 flowmeters.

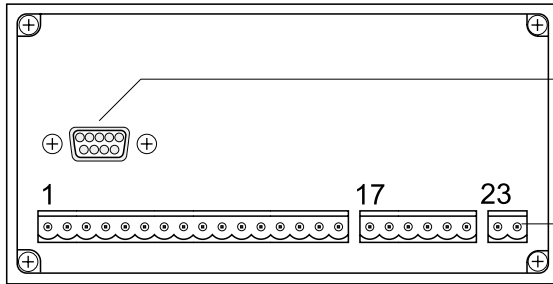


### Specifications

Model	EC351
Display	Two-line, backlit, liquid crystal, 20 characters per line
Line Voltage (Power Supply)	● Standard: 85 – 260 V AC (50/60 Hz) ● Option: 20 – 55 V AC (50/60 Hz)/16 – 62 V DC
Power Consumption	AC: less than 10 VA; DC: less than 10 W
Integral Supply for Transmitters	24 V DC, 100 mA regulated
Operating Temperature	0 – 50°C
Protection Standard	Front Panel: IP 65 / NEMA 4X; Housing: IP 20 (EN 60529)
Housing Material	Flameproof plastic

Inputs	Flow	Analog Input	Range	0/4 – 20 mA, 0 – 10 V, 0 – 5 V, 1 – 5 V
			Resolution	18 bit
Pressure, Density, Temperature	Pulse Input	Current Input	Automatic Error Recognition	Signal over-range, current loop broken
			Voltage Input Restriction	$U_{max}$ : 50 V DC, $R_{in}$ : > 25 k $\Omega$
			Current Input Restriction	$U_{max}$ : 24 V DC, $R_{in}$ : 100 $\Omega$
			Trigger Level	Current Pulse: 12 mA; Voltage Pulse: 10 mV, 100 mV, 2.5 V
			Input Restriction	$U_{max}$ : 50 V DC, $I_{max}$ : 25 mA, $f_{max}$ : 20 kHz
	Pt100 (RTD) Input	Relay Output (x2)	Range	0/4 – 20 mA
			Automatic Error Recognition	Signal over-range, current loop broken
			Connection	3-wire
			Temperature Resolution	0.01°C
			Linearity	Corrected internally
Outputs	Current Output (x2)	Automatic Error Recognition	RTD short, RTD open	
		Function	Flow alarm, temperature alarm, pressure alarm	
		Pulse Output	$f_{max}$ : 5 Hz	
		Contacts	SPDT 240 V, 1 A	
	Voltage Pulses	Range	0/4 – 20 mA	
		Resolution	16 bit	
		Linearity	0.05% o.f.s. (at 20°C)	
	Printer Output	Maximum Load Resistance	1 k $\Omega$	
Open Collector		Voltage < 30 V DC, current < 25 mA, $U_{CE}$ < 0.4 V		
Interface	Voltage Pulses	Voltage 24 V, current < 15 mA, internal resistance: 100 $\Omega$ , $f_{max}$ : 50 Hz		
	Interface	Serial interface RS232, 9-pin DSUB connector		

Connecting Terminals



(Rear view of panel mount housing)

Serial interface RS 232  
(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 Current input (active+, passive-)* or low-range current input for split range DP transmitters	
4 (-) Ground connection, 24 V DC supply	Active inputs*
5 (+) Pt100	Pt100 or Current input 1
6 (+) Pt100	
7 Pt100 (-) or current input (active+, passive-)	Current inputs
8 +24 V DC power (internally connected with terminal 1)	
9 (+) Pt100	
10 (+) Pt100	
11 Pt100 (-) or current input (active+, passive-)*	Pt100 or Current input 2

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 L+ for DC	Power supply
24 N for AC L- for DC	

Galvanic Isolation

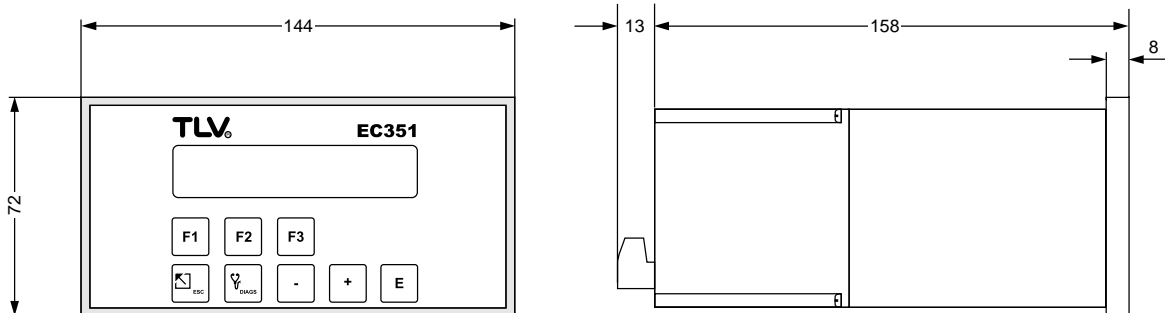
\* active: Transmitter with own power supply (4-wire)  
passive: Transmitter supplied by the flow computer (2-wire)



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

ISO 9001/ISO 14001

**TLV**® CO., LTD.  
Kakogawa, Japan  
is approved by LRQA Ltd. to ISO 9001/14001

