DTI-E82/DTI-E82S
Electromagnetic Converter

2026

Dalian Teren Instruments Co.,Ltd

Model: DTI-E82(Integrated Type), DTI-E82S(Remote Type)

Features

- User-defined function on the power-on interface
- Automatic zero calibration function
- Three-amplitude excitation technology, excitation current 160mA、250mA
- Lightning protection and surge protection
- 5-segment nonlinear correction
- Automatic identification of empty and full pipe detection, no need for empty and full pipe calibration, eliminating false alarms
- Quick response, response speed 0.3 seconds
- Ambient temperature:–20～+65℃;Relative humidity:5%～90%;Power:less than 10W (after connecting the sensor).

Persistent storage, maximum instantaneous flow can be saved for up to 36 months (monthly storage method), 15 years (yearly storage method), up to 100 power-on and power-off information, up to 20 fault information, so as to study the working condition of the converter in the system later

Technical parameters

Current output	4-20 mA output, pulse or frequency output, high and low alarm output
Frequency output	Passive pulse: High level = external power supply -1V External power supply voltage ≤30 V Low level ≤0.5V Load current ≤50 mA The maximum frequency output is 5KHz. Note: When configured as pulse output, the frequency of pulse output is 0~5Hz.
Display	LCD display, displays instantaneous flow, total volume, flow rate, etc.
Display unit	For instantaneous flow, the optional display units are: m3/h, m3/m, m3/s, L/h, L/m, L/s, G/h, G/m, G/s. For cumulative flow, the optional display units are m3, L, G.

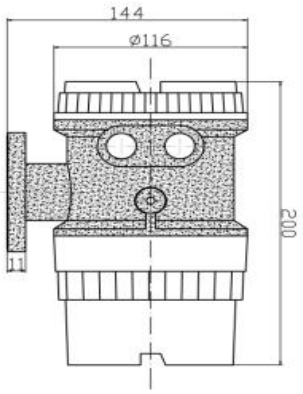
Communications(opt.)	RS485 communication, Hart protocol (opt.)
Protection grade	IP65
Power supply	AC 90 ~ 264V, 50/60HZ, 1A fast-blow fuse DC16V ~ 36V, 1A fast-blow fuse
Ambient temperature	-40~65°C
Ambient humidity	<85% r.h. (non-condensing)
shell material	Low copper die-cast aluminum Nema 4X, IEC60529 IP66 (standard), customizable
Power	10W

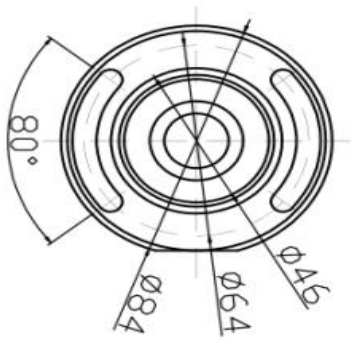
Note: The frequency output can be configured to indicate that the flow direction is reverse (always output low level) or forward (always output high level).

Transmitter outline dimension and type

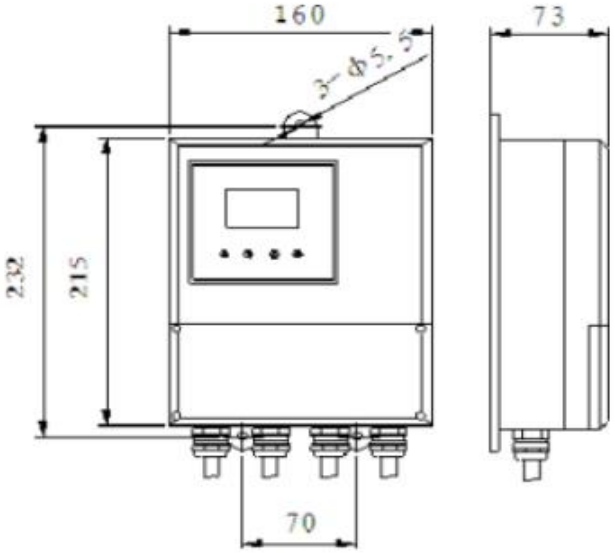
According to the size of the sensor, we offer four kinds of transmitter housing, As shown in the figure below, please note: the PCBboard, software and menus and functions are be the same, only the size of housing and shape of the housing is different

Integral type

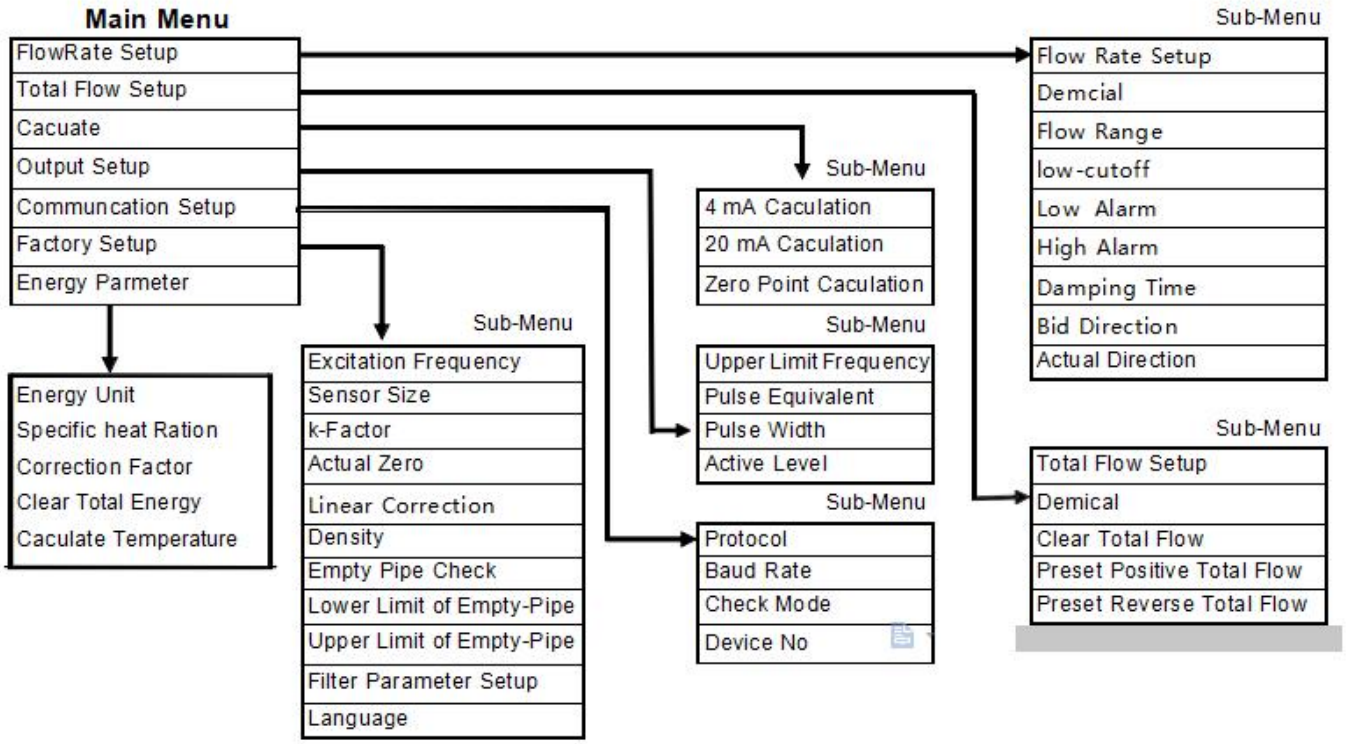




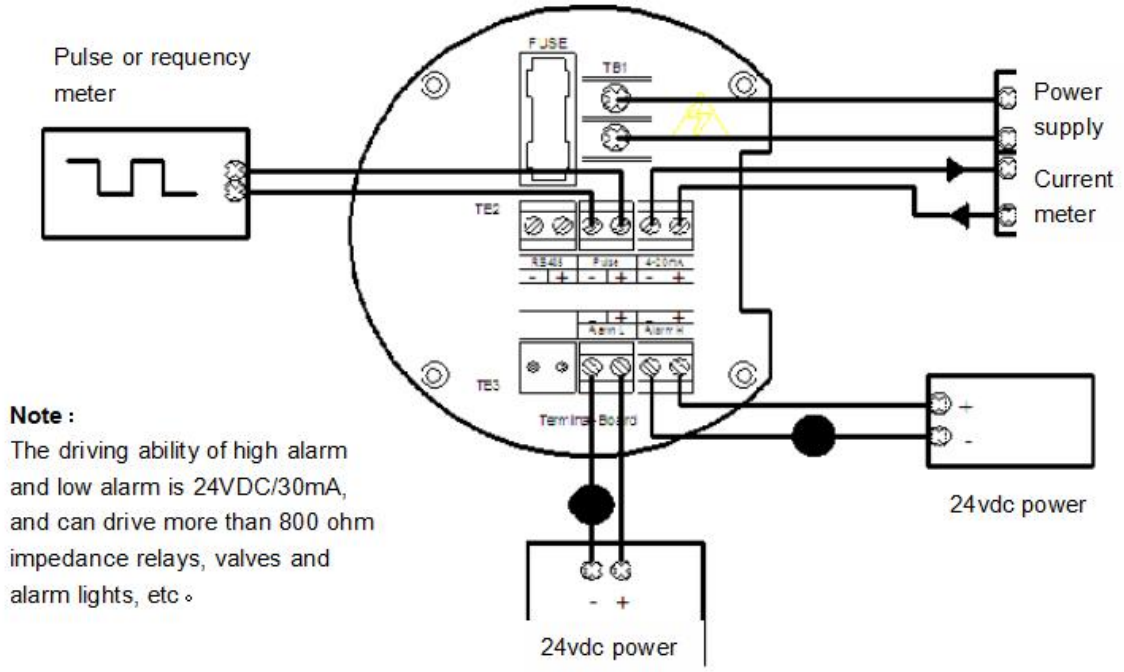
Remote Type



Transmitter Menu Structure



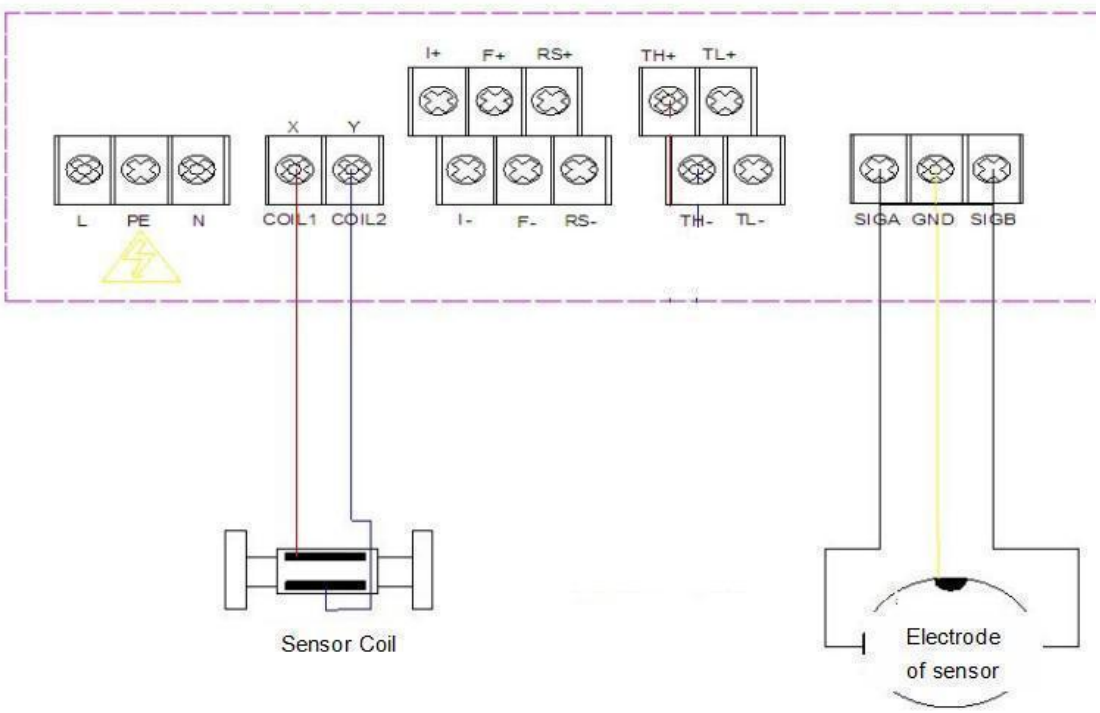
Wiring Diagram And Output Define



The meaning of each terminal is as follows

Identification		Funcation	Remarks
L		AC85-265V	L:AC220V power supply(Fire line)
N		AC85-265V	N:AC220V power supply(Zero line)
24V		DC18-36V +	Power supply 24V+
COM		DC18-36V -	Power supply 24V-
4-20mA	+	4-20mA +	The load resistance is less than or equal to 500 ohm
	-	4-20mA -	
Pulse	+	Frequency&pulse output +	
	-	Frequency&pulse output -	
RS485	+	RS485+	RS485 output
	-	RS485-	
Alarm H	+	High alarm output +	Suggest use 24VDC intermediate relay, Load current ≤ 30mA
	-	High alarm output -	
Alarm L	+	Low alarm output +	
	-	Low alarm output -	

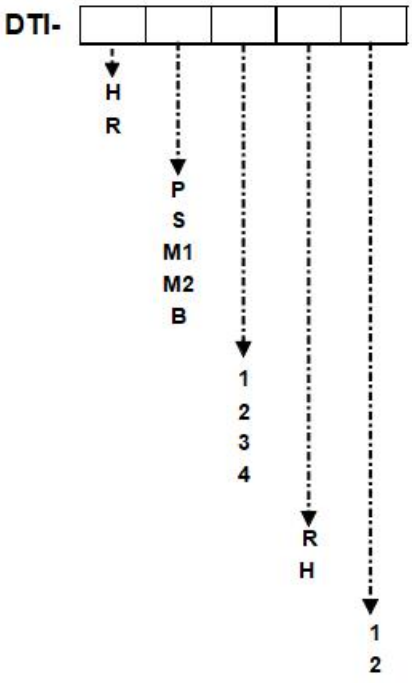
Separate Type Wiring Diagram (AC and DC Power Supply Type)



Identification	Funcation	Remarks
L	AC 85~265V	L: AC 86-220V fire line
PE		
N	AC 85~265V	N : AC 86-220V zero line
24V	DC 16~36V +	24VDC+ power supply
com	DC 16~36V -	24VDC- power supply
I+	4~20mA output	The load resistance is less than or equal to 500.ohm
I -	4~20mAoutput	
F+	Frequency&pulse output +	
F -	Frequency&pulse output -	
RS+	RS485 +	RS485 output terminal
RS-	RS485 -	
TH +	Pt100 or Pt1000	Connect to inlet temperature sensor
TH -		
TL+	Pt100 or Pt1000	Connect to outlet temperature senssor
TL -		
coil1 (X)	connecting to excitation coil of sensor。	
coil2 (Y)		
SIGA	electrode A	Connect to signal electrode A
GND	Signal ground	Connect to the grounding electrode
SIGB	electrode B	Connect to Signal electrode B

Appendix

Appendix 1: Flow Meter Transmitter Mode



Electromagnetic Flowmeter Transmitter

Integral type
Separate(Remote) type, with Wall mounted shell

Only PCB
Integral type, with 1608 shell
Integral type, with 84mm-Abb shell
Integral type, with 97mm-Abb shell
Integral type, with big -size shell

3.6v battery
24vdc power supply
86vac to 265vac power supply
100vac to 420 vac power supply

RS485 communcation
HART communcation

Suitable to 30～65 ohm (Total resistance of two coil)
Suitable to 70～120 ohm (Total resistance of two coil)