



FTS84/85 Digital Thermo Air Velocity Transmitter



Application

〈 Feature 〉

- Capable of temperature compensation and linear adjustment
- Double line character : air velocity & temperature
- Switch for physical quantity : [m/s] 、 [ft/s] 、 [km/h] 、 [mph] 、 [knot]
- RS-485 Communication Interface, MODBUS RTU protocol
- Configuration measuring range/analog output/ station number by dip switch & RS-485
- Off SET function by bottom/ UI software
- Programmable software : DATA LOGGER, record, and chart analysis

〈 Application Field 〉

- Monitor gas and flow for industrial process
- Compressed air consumption measurement
- HVAC, building, factory, Clean room, hospital
- Semiconductor, electronics, paper, iron and steel
 , food, Pharmaceutical, biotechnology industry

Specification

Input

Input Type of Air Velocity	1 m/s ; 2 m/s ; 5 m/s ; 10 m/s ; 20 m/s ; 40 m/s ; 60 m/s
Input Type of Temperature	PT 1000, 0 ~ 80°C

Output

Output	0~20 mA / 4~20 mA / 0~1 VDC / 0~5 VDC / 0~10 VDC
Signal Connection	3-wire
Accuracy	air velocity : $\pm 3\%$ F.S. ; temp.: $\pm 0.3^\circ\text{C}$
Load resistance	Current output : $\leq 500\ \Omega$ Voltage output : $\geq 10\text{K}\ \Omega$
Response time	reach 90% of ultimate value within 3 sec.
Angular dependence	3% of measuring value (when the angle $< 10^\circ$)
Display Type	LCD Module with back light
Display Range	upon request, one decimal place double line character (up : velocity & down : temp.)
Height of character	5.56mm

Environment

Media measured	air
Measured Medium Temperature	0~80°C Working
Working Temperature	0~50°C Working
Environment Humidity	95 %RH(non-cond.)
Storage temperature	-20 ~ +60 °C
Bearable pressure for probe	10bar

Electrical

Power supply	8~35VDC & 12~30VAC
Current consumption	DC 8V : 300mA ; 24V : 100mA AC 12V : 350mA ; 24V : 180mA
Overvoltage protection	DC : $< 45\text{V}$ AC : $< 40\text{V}$
Electrical connection	M12 connector

Installation

Installation	duct/remote
Way to fix	1/2 PT outside thread

Protection

Protect degree	IP 65
Electric protection	⊙over-voltage ⊙polarity

Certification

Certification	CE
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Material

Case	PC fire-proof class
Probe	SUS304
Filter	POM
Cable	PTFE(FTS85)
Option	SUS Fitting thread / SUS Flange type
Weight	FTS84 : 380g ; 404g(display) / FTS85 : 391g ; 415g(display)

Ordering Guide

Ordering code -----> **FTS 84 - 40 1 1 - 1 M**

Installation

Range

Output

Power supply

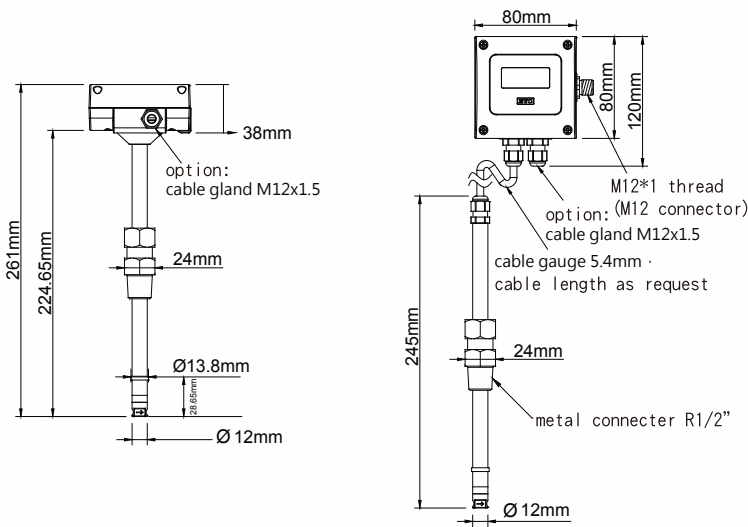
Modbus

Option

【Ordering item】

Installation	code	Range	code	Output	code	Power supply	code	Modbus	code	Option	code
duct	84	1 m/s	01	4~20mA	1	8~35VDC & 12~30VAC	1	Analog	0	non	N
remote	85	2 m/s	02	0~20mA	2			RS-485	1	4P M12 connector	M
		5 m/s	05	0~10V	6			RS-485 & Analog	2	8P M12 connector	Q
		10 m/s	10	0~5V	7					2 m cable(FTS85)	2
		20 m/s	20	0~1V	8					5 m cable(FTS85)	5
		40 m/s	40							display	D
		60 m/s	60								

Dimension



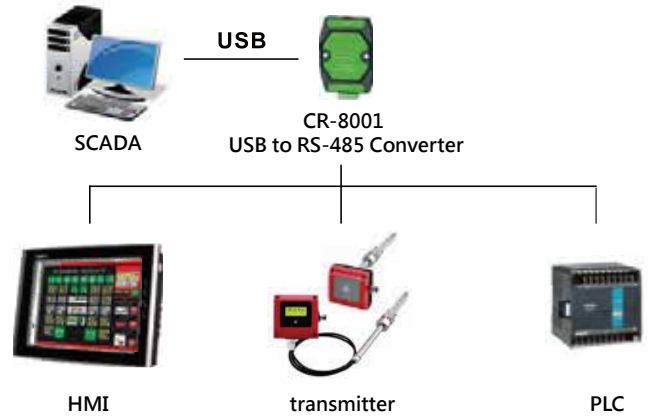
FTS84(duct)

FTS85(remote)

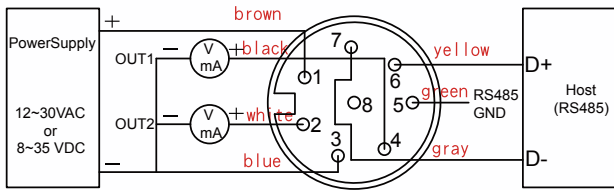
USB to Isolated RS485 Application

※ Device :

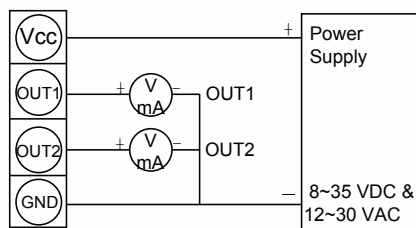
1. PC
2. USB to RS-485 Converter
3. Power supply
4. FTS84/85 UI software



Diagram

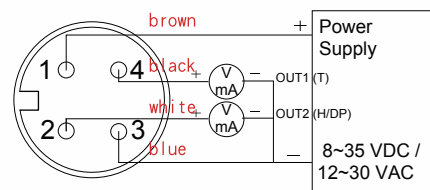


8P (Analogue + RS485) M12 Connector



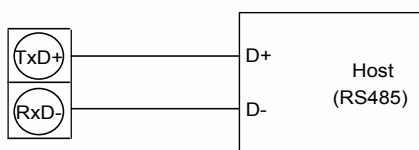
4P terminal

Analogue Output

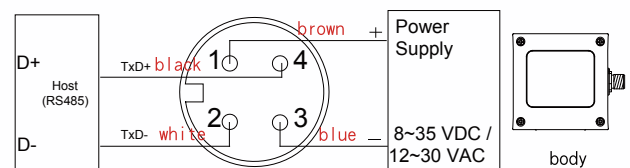


M12 connector

M12 Connector-Analogue Output



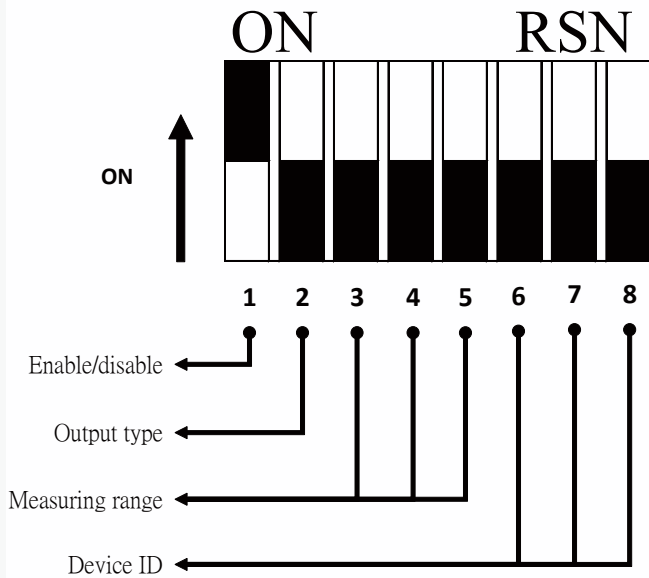
RS485 Signal connector



RS-485, M12, 4P

※ FOR RS-485 CONNECTION ONLY

DIP Switch



For FTS84 /85 products, the setting status of DIP switch will be read by software while power on, and this reading action will not happen later on. Thus in order to read the DIP switch status again by software, the user must to reboot again if re-setting the DIP switch.

The function of DIP Switch_2 ~ 8 only be effective while setting the DIP switch_1 as "On" .

- ① 1. DIP Switch Active / Deactivate :
Set the DIP switch as On/ Off

STATUS	ON	OFF
DIP switch 1		

- ② 2. The Type for Analog Output: Analog output type for Out1 & Out2

STATUS	OFF	ON
DIP switch 2	 current output 4~20mA	 voltage output 0~10V

- ③ 3. Setting the Output Measuring Range :
Set the maximum value for analog output
(The output physical type must be "Air Flow Velocity")

DIP Switch 3	DIP Switch 4	DIP Switch 5	RANGE (m/s)
			1
			2
			5
			10
			15
			20
			40
			60

- ④ 4. Setting the Device ID :
Set the slave device ID for Modbus RTU.

DIP Switch 6	DIP Switch 7	DIP Switch 8	Device ID
			1
			2
			3
			4
			5
			6
			7
			8