

STT30 For UMPC				
00 : TT-357		Search		
ATT2200 (Duon Systems)		Com. Setting		
Info. Setup		Trim		
Status LCD Display		Trend		
Totalize	About STT30	Exit		
		Retry : 0		

Duon System Co.,Ltd



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1. Introduction

This manual describes information and usage of STT30 for UMPC program. The followings are summarized points for individual sections.

2. Connection Structure

This section describes connection between Transmitter & Power Supply, connection method of Transmitter and UMPC and the program specification.

3. Preparatory Works before operation

This section describes preparatory works essentially conducted before operating STT 30 for UMPC.

4. View Structure

This section describes sectional functions on the first view displayed on STT30 for UMPC.

5. Description of usage of each function button

This section describes which information you can get and how you can change the information with the functions STT30 for UMPC supply.

• Appendix A. Single Mode and Multi-Drop Mode

This describes basic notion of Intellectual pressure transmitter structuring method "Single Mode" and "Muti-Drop"

• Appendix B. Usage of Edit Box

This section describes how to change the figures and values with STT30 for UMPC.



2. Connection Structure



STT30 For UMPC

After connecting HART Modem to USB port of UMPC, connect two lines from Hart Modem as Fig2-1and Fig 2-2. After connecting, turn on the PC and follow the route (Start->Program-> Autrol -> STT30 For UMPC) and click the icon of STT 30 For UMPC and operate the program.

* Compatible program specification.

CPU : Pentium 800 MHz or more (1 GHz or more recommended) Memory: 512 MB or more (1 GB or more recommended) HDD : 2 GB or more (60 GB or more recommended) Communication port: one port or more (Serial port or USB Port fit to connect to Hart Modem)



3. Preparatory Works before operation

- ① Check if the Transmitter is connected as the connecting structure [Fig 2-1] or [Fig 2-2] and connect the HART Modem for USB as the connecting structures.
- ② Turn on the power of UMPC and connect the HART Modem to USB port.

[Eig 4 41 View Structure

- ③ When the windows program is operated, start STT30 and check if the indication window shows the 'Connect' mark. In case the 'Connected' sign is shown, click the 'Com. Setting button and try to set again with the Comport number to which HART Modem is connected.
- ④ Push the Search button and searching the Transmitter. Then if you use the following Function buttons, you can search information and change the settings.

4	STT30 For UMPC				
00 : TT-357			Search 2		
ATT2200 (Duon Systems)		Com. Setting ³			
G	Info. Setup		Trim		
(H	Status	LCD Display	Trend		
	Totalize	About STT30	Exit 8		
6			Retry : 0 👩		

4. View Structure.

- ① Information display part: this part shows searched Transmitter information or the condition of HART Modem connection.
- ② Search/License Function: In case the License process of STT30 is not passed, this button will show 'License sign'. In case the STT30 License process is passed, this button will show 'Search' sign.
- ③ Comport Setting Function: This button functions setting Comport and Master Type, which are necessary for search, and searched Polling Address
- **④** Function Buttons: These buttons are used to search inquiry and set Transmitter.
- **(5)** Communication Status: This shows communication start and finish
- **(6)** Retry Count: This shows the number of Retry when the communication is failed.



- ⑦ About STT 30: This shows the information of STT 30.
- 8 Exit : This button conducts finish of STT 30.

5. Description of usage for each function button

5.1 Search / License Function.

On the condition that License process is not passed, it conducts license function. After License process is passed, it conducts Search function.

5.1.1 License Function

When the License button is clicked, the License approval window is displayed as [Fig 5-1]. By typing the provided License Key and pushing the 'OK' button, the License approval process is finished. Device ID is provided in case you lose the License Key

	Fig 5-1 License Functi	on
License		
	License	×
	Device ID :	
	845 - 953 - 256	<u> </u>
	License Key :	
	0	- 0
	ок	Close

5.1.2 Search Function

After License approval process is passed, Search sign is displayed as ② on the [Fig 4-1]. As shown on the [Fig 5-2], Search button on information window is activated only just in case HART Modem is connected. In case it is not activated, you need to set with Comport number of connected HART Modem. (Refer to 5.2 Com.Setting Function). In case 'No Searched Device' Message is displayed after Search, Search is failed. In this case you need to check the connection and setting condition.

[Fig 5-2] Search Function		
Disconnected.	Search	
Please try to connect.	Com. Setting	
Connected.	Search	
Please try to search.	Com. Setting	

5.2 Com. Setting Function

In case Com. Setting button is clicked on the main window, the Setting window is displayed as on [Fig5-3]. In this window, Com Port, Master Type for Transmitter search and searching Polling Address will be set.

[Fig 5-3] Co	om.Setting Function		
COM Port	Master Type ② ^o Primary Master ^o Secondary Master		
Searching Polling Address : 0 ③			
Setup	Close		

5.2.1. COM Port

COM port sets Comport number of HART Modem connected to UMPC. Comport number on button ① of [Fig 5-3] is Comport number at the present time. If the main window indicates that HART Modem is disconnected, set the connected Comport by clicking the ① button. When the button ① is clicked, the window of [Fig 5-4]will be displayed and Comport presently available to be connected to PC is displayed. Among the displayed Comports. You can set it by clicking the number of Comport button connected to HART Modem among the displayed Comports .





5.2.2 Master Type

In case two masters exist on one HART communication line, each of master can be selected. As shown on the ② of [Fig 5-3], Secondary Master Type is usually used for Hand Held Terminal.

5.2.3 Searching Polling Address

This is used to set the searching polling address. The basic value is set with number 0 polling address. In case Transmitter is connected with Multi-Drop type, you need to adjust to polling address set on searched transmitter for the search to be normally conducted. In order to change the values, click the ③ of EditBox Fig 5-3 and then the selection window Fig 5-5 will be displayed. By clicking the number of the Polling Address you want, the setting value will be changed.







5.2.4 Setup

The changed setting values on Com. Setting window are completed by clicking the 4 button of [Fig 5-3]. Be informed that the changed values will not be applied if you click Close button after changing the setting values

5.3 Info. Function

In case you click the "Info" button in the main window, setting window [Fig 5-6] will be displayed. Info is abbreviation of information and you can search information and change the setting of Transmitter in this window. "Info." Function has total 4 pages from Fig 5-6 to Fig 5-9. When setting each parameter, refer to Appendix B for input method.

5.3.1 Information – 1 Page

The first page is used to change polling address, Tag, Message, Descriptor and data parameter for Transmitters.

- Polling Address: Polling address is where address values used to communicate with transmitter is set. In order to change the Polling address values, click ① Edit Box on [Fig 5-6] and the selection window of [Fig 5-5]will be displayed. Then click the button of polling address and the setting values will be changed.
- ②Tag: Tag is used to identify transmitters when the transmitters are communicated with HART and maximum 8 digits of alphabetic letters can be set on Tag
- **③Message:** it is where the instruction message for Transmitter can be left.

(4) Descriptor shows the additional information which tag can not express. Maximum 16 digits of alphabetic letters can be set on descriptor.

- **(5)** Date : It shows transmitter's manufactured date.
- ⑥ Apply : The changed setting values is applied after button⑥ of [Fig 5-6] is clicked.
- O Next : With next button, you can go to the next page.

Information			X
Polling Addr	ess:0		Apply 6
Tag : AUTR	OL	2	Next 0
Message :	APT-310	0 SERIE	S 3
Descriptor :	DP TYPE		(4)
Date : 2009	[©] / <mark>5</mark> /	12	Close

[Fig 5-6] Information – 1 Page



5.3.2 Information – 2 Page

Click the Next button on the first page and Information page [Fig 5-7] will be displayed.

With transmitter information of 1 on [Fig 5-7], the information such as Manufacturer,

Device Type, Product ID, Distributor, Final Assembly No can be inquired. Click button on [figure 5-7] and you can move to Information-1 page. Click the button and you can move to Information – 3 Page.



5.3.3 Information – 3 Page

If you click ③ button of [Fig 5-7, Information Page [Fig 5-8] will be displayed. On the part ①, Revision Level of the Transmitter such as Universal Command Revision, Specific Command Revision, Hardware Revision, Software Revision, etc. can be inquired. Click button② of [Fig5-8], you will move to Information – 2 Page. If you click ③ button, you will move to Information – 4 Page.



5.3.4 Information – 4 Page

If you click the button (3) of [Fig 5-8], the Information Page of [Fig 5-9] will be displayed. On the part (1) of [Fig 5-7], the Sensor Information of Transmitter such as Sensor Type, Sensor Serial, Minimum Span, Upper Limit, Lower Limit, etc. can be inquired. If you click button(2) of [Fig5-8], you will move to Information – 3 Page. If you click (3) button, you will move to Information – 4 Page. Becase the [Fig 5-9] is the last page of Information, button(3) is not activated.

	[Fig 5-9] Information – 4 Page		
Informa	tion		×
V	*Sensor Information* Sensor Type : (H)DP-RC 4 Sensor Serial : 56995 Minimum Span : 0.38 (kPa) Upper Limit : 38 (kPa) Lower Limit : -38 (kPa)	0	>
	Close		



5.4 Setup Function

Click the Setup button on the main window and setting window [Fig 5-10] will be displayed. On this window, Parameters of Transmitters such as Range, Unit, Damping Time, Transfer Function, LowCut Mode can be inquired and changed. For input method of each parameter setting, please refer to the Appendix B.

[Fig 5-10] Setup Function			
Setup		×	
Upper Range	7.5	Unit :	
Lower Range	: 0	kPa @	
Damping :	1 (sec) Reset ³	
Transfer Fn :	line	ar 6	
LowCut Mode		Close	

5.4.1 Range

It shows the Range of Transmitter presently searched. If you click the EditBox, clicked Range Values can be changed.

5.4.2 Unit

This shows the Unit of Transmitter presently searched. Click the button ② of Fig 5-10 and unit selection window Fig 5-11 will be displayed. The selection window indicates that Unit which can be adjusted to the Type of transmitter presently searched. In case the unit is changed, the range values will be automatically transformed. So Transforming the Range and Unit at the same time can make problem.





5.4.3 Range Reset Function

If you click the ③ button of Fig 5-10, you can change Upper Range and Lower Range into Default values according to the types of searched Transmitter Sensor.

5.4.4 Damping

The Damping Second of presently searched Transmitter is shown on the 4 Edit box Fig 5-10.Damping Second eases sudden change at input part and displays the change without reflecting the actual impact of the change. In order to change the Damping Second values, click the 4 Edit box. Then Damping Second value will be changed.

5.4.5 Transfer Fn

The presently searched Transfer Function values of Transmitter are shown on the (5) button of Fig 5-10. Transfer function transforms only analog types of output (4~20mA) and it does not change PV values. In order to change the Transfer function values, click the 5 button and the Fig 5-12 will be displayed. Then click the necessary transfer function, the setting values will be changed.





5.4.6 LowCut Mode Function

In case Transfer function value is not linear, click the 6 button of Fig 5-10. Then the window Fig 5-13 will be displayed. LowCut Mode is used when selecting Transfer Function with Square Root. In the present window, it sets LowCut Mode and LowCut Range.



 LowCut Mode: Presently searched LowCut Mode values shows on ① of Fig 5-13. Using Transfer function, LowCut Mode is used to restraint large change caused by small pressure difference around 0 point when Square Root is selected. As shown on the Fig 5-14, in the linear mode the out put increases in linear shape until selected Range. Passing the selected Range, it increases in square root shape.



- ② Range: Presently searched Transfer Function values are shown on ② of EditBox. The marked values show the range from 0% to which Lowcut mode is applied. In case ③ Edit box is clicked, you can change the range values.
- ③ Apply: The changed setting values on the present window can be applied after
 ③ buttons of Fig 5-13 is clicked.

Apply: The changed setting values on the present window can be applied after 0 buttons of Fig 5-10 is clicked.

^{5.4.7} Apply



5.5 Trim Function

If you click the Setup button on the main window, Setting window will be displayed. In this window, Zero Trim, Full Trim, Zero Adjustment, CJ Linearization, Zero/Span, DAC Trim and Fixed Current functions can be conducted.



5.5.1 Zero Trim Function

Zero Trim can be conducted by clicking ① button of Fig 5-15. This is used to set the PV of Transmitter with 0. In case Zero Trim is normally conducted, the message window Fig 5-16 is displayed.

[Fig 5-16] Zero Trim Message		
STT30 For UMPC	<	
PV Zero Setting Complete!		
OK		

5.5.2 Full Trim Function

In the 2 points (Low, High Point), the operator directly can control the transmitter by adding Process values. If you click the button, Default values will be set. Because high-accuracy pressure of Calibrator is needed, you need to be careful to use this function.



5.5.3 Zero ADJ. Function

If you click the ③ button of Fig 5-15, the window Fig 5-17 will be displayed. Zero ADJ is abbreviation of Zero adjustment and in this window, it is used to adjust PV on the Transmitter to the values you want. In case you change PV values, you need high-accuracy pressure Calibrator as you need for Full Trim.

[Fig	5-17] Zero	ADJ. Function	
Zero Adjustment			
Adjusting PV :	0	0	Uint :
Measured PV :	0.00	210506	(kPa)
Zero Offset :	0.04	894563	Read ⁽⁴⁾
Apply	6		Close

- (1) Adjusting PV : On (1) EditBox is used to enter PV values supposed to be changed. The present PV of the Transmitter is changed to the value entered on (1).
- ② Measured PV: ② of EditBox of Fig 5-17 shows presently measured PV values of Transmitters. After the present pressure of the Transmitter is stabilized, we recommend updating this value and conducting Zero Adjustment.
- **③** Zero Offset : This shows the offset value presently set on Transmitter.
- ④ Read : This updates the values on Fig 5-17. For the correct Trim, we recommend clicking ④ button after the present PV is stabilized and updating PV value.
- **(5)** Apply : Apply : By clicking 5 button Fig 5-17, the changed setting values are applied to Transmitter.

5.5.4 ZERO/SPAN Function

If you click (5) button of Fig 5-15 and the window Fig 5-18 will be displayed. ZERO/SPAN function can change Range with present PV.

[Fig 5-18] ZERO/SPAN Function
et Range to Current PV
Zero / Span
Set Lower Range Value to
Current PV (ZERO)
Set Upper Range Value to
Current PV (SPAN)
Current PV : 0.456513 kPa 3
Read (4) Close

- ① Set Lower Range Value to Current PV (ZERO) : If you click the ① button of Fig 5-18, you can set presently measured PV of Transmitter to be Lower Range value. Because Span keeps the same value, Upper Range value automatically moves as much as Low Range value does.
- ② Set Upper Range Value to Current PV (SPAN) : Click the 2 button on Fig 5-18 and the PV values presently measured on Transmitter will be set to be Upper Range values. The change of Upper Range values does not affect Lower Range values.
- ③ Current PV : ③of EditBox shows presently measured output of PV values. Because ZERO/SPAN Function set Range with PV values when clicking ZERO or SPAN button, we recommend you use Zero/Span Fuction after checking the pressure stability.
- ④ Read : This updates ③ of Fig 5-18. In order to establish the correct Range, we recommend checking the current PV value is stabilized by clicking ④ button.

5.5.5 DAC Trim Function

By clicking (6) button of Fig5-15, window of Fig 5-19 will be displayed. DAC Trim function conducts trim of Analog Output (4mA~20mA).Just in case if it is connected with a high-accuracy reference meter, you can conduct correct Trim. This function is described in 4 pages (from Fig5-15 to 5-19).

① DAC Trim – 1 Page : The first page is used for preparatory window. Connect a reference meter to Transmitter and check if the Loop mark indicating the condition of Fixed Current is on LCD displayer. After the connected reference meter is stabilized enough, click the next button and go to the next step.



(2) DAC Trim – 2 Page : On the second page, you can conduct trim of Analog Output (4mA). Input the current values on the connected reference meter and click the (2) button and then the Trim will be conducted. In case the current value on reference meter indicates 4mA, click the button (3) and you will move to the next step.



③ DAC Trim - 3 Page : The 3rd page is used to prepare the next step of 20mA DAC Trim. After checking the values on the reference meter is stabilized, go to the next step.

[]	Fig 5-21] DAC Trim – 3 Page	
DAC Trim		
Set	ting field devi	ce
0	utput to 20 mA	
	-	
	1	
	Close	Novt
	VIUSE	Next

④ DAC Trim – 4 Page : On the 4th page, you can conduct Trim for Analog Output(20mA). After inputting the current values on the connected reference meter on ① EditBox of Fig-22, click the ② button and then the Trim will be conducted. In case the current value on the reference meter indicates exactly 20mA, click the Close button and then the DAC Trim window will be closed.



5.5.6 Fixed Current Function

Fixed Current is used to fix the Analog Output. Regardless of present PV, this can change Analog Output values into values of $\widehat{\mathcal{T}}$ EditBox. The range with which Analog Output values are fixed is from 3.8~23mA. In case of Multi-Drop type that Analog Output is only fixed to 4mA, you can not use this function. In order to use Fixed Current Function, adjust the values on $\widehat{\mathcal{T}}$ of EditBox to the values you want

to fix and click the (8) button and then you can check it is changed to Fixed Current Mode, showing Loop on LCD displayer. In case you set it with fixed Current Mode, letters on (8) button changes from 'Set' to 'Exit'. When the (8) button shows 'Exit', click the (8) button, the Fixed Current Mode will be removed.

5.6 Status Function

When you click the Status button on the main window, the window Fig 5-23 will be displayed. In this window, you can control and inquire the setting conditions. Status Function is described on the 4 pages from Fig 5- 23 to Fig 5-26.

5.6.1 Status – 1 Page

The First page describes how to change the setting conditions of Alarm Selection, Wire Protect and how to conduct Self Test, Master Reset, Factory Initialize functions.

(1) Alarm Selection : Alarm Selection: You can use this function to set Alarm. By clicking the (1) button, you can change the setting values. The base values are low. This function can change the setting values only two models, ATT-2100 and ATT-2200.

(2) Write Protect : Write Protect is used to set whether the change of setting values is possible or not. By clicking the 2 button on the Fig 5-23, you can change the setting values. In case you set with Write Protect, you can not change the setting values. The basic values are No Writer Protected. Like Alarm Selection Function, this function can change the setting values for only two model ATT-2100 and ATT-2200.

③ Self Test Function : By clicking the ③ button, you can conduct the Self Test.

- (4) Master Reset Function : By clicking the 4 button Fig 5-23, you can conduct the Master Reset functions.
- (5) Factory Initialize Function : It is the function to initialize all the setting values with basic values. By clicking the 5 button of Fig 5-23, you can conduct Factory Initialize. Because this can initialize all the setting values, this should be used carefully.

(6) Next : By clicking Next, you can move to the next Status page.

[Fig 5	5-23] Status – 1 Page
Status	
Alarm Selection :	: low 1
Write Protect :	No Write Protected (h/w)2
Self Test	3 Factory Initialize ⁵
Master Reset	Close Next 6



5.6.2 Status – 2 Page

The second page shows the Status of the Transmitter. Clicking Next move you to the next Status Page and Clicking Prev move you to the previous Status Page.

Status	Fig 5-24] Si	tatus – 2 Page	×
Status 0 :	0A	Status 4 :	00
Status 1 :	20	Status 5 :	00
Status 2 :	01	Op Mode 1 :	00
Status 3 :	00	Prev	Next

5.6.3 Status – 3 Page

The third page shows the Status of the Transmitter. If you click Next, you will move to the next Status Page. If you click Prev, you will move to the previous Status Page.

[Fig 5-25] St	atus – 3 Page
Status	
Op Mode 2 : 00	Status 15 : 00
A/O Status : 000000	Status 16 : 00
A/O Fixed : 000000	Status 17 : 00
Status 14 : 00	Prev Next

5.6.4 Status – 4 Page

The fourth page shows the Status of the Transmitter. Clicking Next move you to the next Status Page and Clicking Prev move you to the previous Status Page.

(F	ig5-26] Sta	ntus – 4 Page	
Status			
Status 18 :	00	Status 22 :	00
Status 19 :	00	Status 23 :	00
Status 20 :	00	Status 24 :	00
Status 21 :	00	Prev	Close

5.7 LCD Display Function

By clicking the LCD Display button, the setting window Fig 5-27 will be displayed. In this window, you can inquire and change all the settings for LCD displayer of the Transmitter.

	[Fig 5-27] LCD D	isplay Function	
LCD Display			
LCD Mode Normal Engr. Flow	Display Rot PV %F mA	Variable ate Fixed ixed address	Engineer Mode ³
Decimal Pla	ace :	Aut	0
Apply	5	CI	ose

5.7.1 LCD Mode

On LCD Mode, you can set values on LCD. You can choose the LCD mode by clicking the items on 1 part on Fig 5-27. In case you choose the normal mode, PV is shown on the LCD with Range and Unit which are set on present PV. In case of Engr. Mode, PV mapped with Range and Unit on the Setting window of 3 Engineer mode is shown on the LCD. The Flow mode is used for only APT-3100F model and it is set to show the values concerning flow quantity on LCD.



5.7.2 Display Variable

This sets how to show the values set on LCD Mode on LCD display. By clicking the 2 part on the Fig 5-27, you can select this. In Rotate Mode, Values of PV, %, mA/address is shown in order of procedure. PV Fixed Mode and % Fixed Mode show only each of their value. In Muliti-Drop Mode, only the address is shown on the LCD window.

5.7.3 Engineer Mode Function

If you click the 3 button of Fig 5-27, the setting window of Fig 5-28 will be displayed. Engineering Mode Function sets PV and Range & Unit, which will be mapped, when Engr. Mode is selected

[Fig 5-28] Engineer I	Mode Function
Engineer Mode	
Engr. TRFC : ^{0,} Linea	r Square Root
Engr. Upper Range :	100 ②
Engr. Lower Range :	1 3
Engr. Unit :	bar @
Apply 5	Close

① Engr. TRFC : This is used to select the delivery functions, when mapping PV with Engineering Value. By clicking letters on 1 part, you can choose this.

(2) Engr. Upper Range : In Engineer Mode, PV and Upper Range, which will be mapped, are shown. By clicking the 2 EditBox, you can adjust to the setting values you want.

③ Engr. Lower Range: In Engineer Mode, PV and Upper Range, which will be mapped, are shown. By clicking the 3 EditBox, you can adjust to the setting values you want.

④ Engr. Unit This shows the Unit set on Engineer Mode of the transmitter. By clicking the 4 button of Fig 5-27, Unit selection window will be displayed as Fig 5-11. By clicking the Unit you want, the setting values can be changed.

(5) Apply : The changed setting values on the present setting window can be applied just in case the 5 button is clicked.



5.7.4 Decimal Place

The Decimal Place values are shown on the 4 button of Fig 5-28. This is used to set the Decimal place. By clicking the 4 button, the setting window Fig 5-29 is displayed. The maximum decimal palace is four and the minimum is 0. In case it is set with Auto, it will display the decimal places according to the figure.



5.7.5 Apply

The changed setting values on the present window will be applied just in case the button (5) is clicked.

5.8 Trend Function

If you click the Trend button on the main window, the setting window Fig 5-30 will be displayed. In this window, you can inquire the values of Transmitter.

5.8.1 Range

In the 1 part of Fig 5-30, Range and Unit set on the present PV is shown. 5.8.2 PV

In 2 of the Fig 5-30 EditBox, presently measured PV values are displayed. The PV is updated per ever 2 seconds.

[Fig 5-30] Tr	end Function
Trend	×
Range : 0 ~ 7.3549	9 [©] (kPa)
PV : 2 0.459622	kPa
SV : 3 23.125	°C
Current : 4.99986 @	(mA) Logging
Percent : 6.24912	(%) Close



5.8.3 SV

In 3 of the Fig 5-30 EditBox, presently measured SV is displayed. The SV value is updated per ever 2 seconds.

5.8.4 Current

In 4 of the Fig 5-30 EditBox, presently measured Current values are displayed. The Current values are updated per ever 2 seconds.

5.8.5 Percent

In 5 of the Fig 5-30 EditBox, presently measured Percent values are displayed. The Percent values are updated per ever 2 seconds.

5.8.6 Logging

If you click the 6 button of Fig 5-30, you can assign the saving place and files for the data presently on Trend. The logged file is saved in Excel-compatible file. So the logged values are shown on Excel program.

5.8.7 Next

When you click the $(\overline{0})$ on [Fig 5-30], setting window of [Fig 5-31]will be displayed. In this window, you can see the graph of PV during Trend Graph Mode.



[Fig 5-31]Trend Graph Mode

① PV : ①PV: ①part of [Fig 5-31] shows on-time measured PV. PV is updated every 2 seconds.

(2) Graph Range : With graph range button, indicating ranges on the graph can be set. But the ranges which you can change are only values on the graph. You can not change ranges of transmitter with Graph Range button. When Set button is pushed after change, the value will be updated immediately.



5.9 Totalize Function

If you click the Totalize button on the main window, the setting window of Fig 5-31 will be displayed. In this window, you can conduct setting concerning integration flow quantity. This function can be used only for APT-3100F model.

5.9.1 Unit

Instantaneous value Unit on the Transmitter is shown on the 1 button of Fig 5-31. If you click the 1 button, Unit selection window of Fig 5-11 will be displayed. If you click the Unit button you want, the setting values will be changed. The integration values is automatically set with the selected Unit deducting Time.

5.9.2 Range

If you click the EditBox when instantaneous value Range is shown, the clicked Range Values can be changed. For Upper Range and Lower Range, input respectively instantaneous values for each 100% pressure (20mA) and 0% pressure (4mA).

	[]	Fig 5-31]Totalize Functi	on	
Totalize				
Unit :		ImperialGall	ons	/day 0
Upper	Range :	300		5
Lower	Range :	10		I otal Reset
Pulse	Scale :	0.01	3	Apply 6
Pulse	Width :	10ms	4	Close

5.9.3 Pulse Scale

The Pulse Scale of the Transmitter is shown on the 3 button of Fig 5-31. Whenever the value is accumulated on 3 button, the Pulse is output. And the Pulse Scale can be from a multiple number of 10 among 0.001~10000.

5.9.4 Pulse Width

The Pulse Width of the Transmitter is shown on 4 button of Fig 5-31. This is the value of the width for Pulse outputting. You can set one value among 10ms, 50ms, 100ms.

5.9.5 Total Reset

If you click the 5 button, the accumulated values on the Transmitter will be initialized with 0.

5.9.6 Apply

Just in case you click 6 of Fig 5-31, the changed setting values are applied on the present window.

Appendix A. Single Mode와 Multi-Drop Mode

There are two structure methods of intellectual pressure transmitter. The first method is Single Mode structured as Fig 2-1 or Fig 2-2. Single Mode must match hardware structure and software setting. Hardware structure should be followed as Fig 2-1 or Fig 2-1 and Soft ware should be set with Polling Address of 0. The second method is Multi-Drop Mode, which is structured like Fig A-1. The Multi-Drop Mode also must match hardware structure and software setting. The hardware must be structured as Fig A-1 and the software value must be set with polling address from 1 to 15.

The biggest difference between two modes is that in Multi-Drop Mode, Analog Output is fixed to 4mA. If the hardware is not structured like Fig A-1 but Polling address value is set from 1 to 15, the Transmitter will be automatically fixed to 4mA. So be careful for the polling address setting.





Appendix B. EditBox Usage

When you input letters or figures on the Transmitter through STT30 for UMPC, you will use the EditBox. When you want to amend the letters of tag, click the EditBox. Then the virtual keyboard Fig B-1 will be shown. After you finish the input through the virtual keyboard, click the 7 button of Fig B-1. Then the input process is completed.

				[Fig B	-1]Input	Letter			
K	eyboard								
	A ⊕ J	BK	C L	D M	E N	F	G P	H Q	I R
	S	Т	U	V	W	X	Y	Ζ	BŠ
	Cle AU	3 ar TRO	@ (SPA	CE	6	Nun	n E ENTE	sit [®] ER 7
	1						L		

- 1 Keyboard Key : After clicking the key button of the letters you want, check the letters are input as you want.
- ② BS : With this button, you can erase letters from the last.
- ③ Clear : You can erase all the letters presently input with Clear button.
- ④ SPACE : SPACE With space button, we can make one space.
- **(5)** Num If you click the Num button, you can move to window of figure and special letter input.
- 6 Edit Box: Input letters are shown.
- O ENTER : ENTER: When you click the ENTER button, the data on input space will be entered on the clicked EditBox.
- ⑧ Exit : If you push the Exit button, the presently input data will be cancelled and data on clicked Editbox will be returned to the previous status.

[Fig B-2]Input No and special symbol								
Keyboard								×
1	2	3	@	&	•	+	1	!
4	5	6	•	()	-	%	?
7	8	9	0	<	>	*	#	BS
Clear @ SPACE ENG Exit®								
AU.	TRO	L			6	E	INTE	

- ① Keyboard Key : After clicking the key button of the letters you want, check the letters are input as you want.
- ② BS : With this button, you can erase letters from the last.
- ③ Clear : You can erase all the letters presently input with Clear button.
- **④** SPACE : With space button, we can make one space.
- **(5)** ENG : ENTER: When you click the ENTER button, the data on input space will be entered on the clicked EditBox.
- 6 Edit Box: Input letters are shown.
- O ENTER : When you click the ENTER button, the data on input space will be entered on the clicked EditBox.
- ⑧ Exit : If you push the Exit button, the presently input data will be cancelled and data on clicked Editbox will be returned to the previous status.