



TOTALFLOW

Technical Bulletin 138

Adding “Flow Time” to a flow computer display

Totalflow Technical Bulletin

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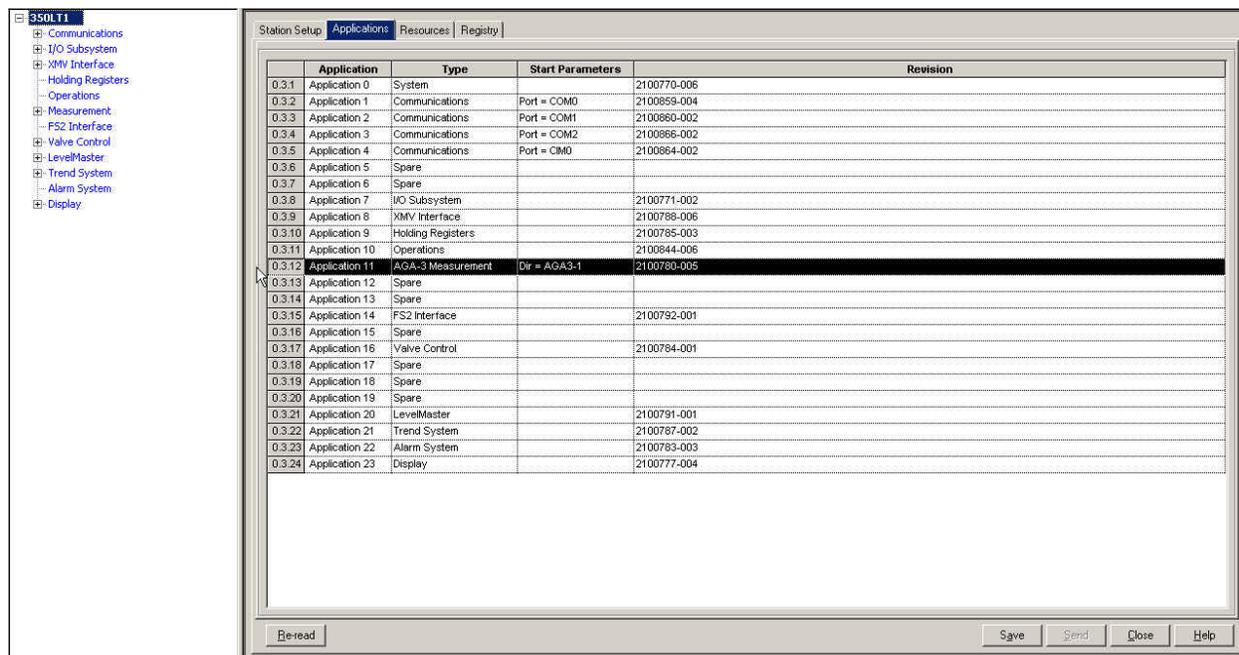
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1. Purpose

We are publishing this bulletin to help customers display flow time on their flow computers. It has come to our attention that many areas of the country have a flow time requirement. We will go over building the display and scaling it to reflect flow time in seconds, minutes and hours.

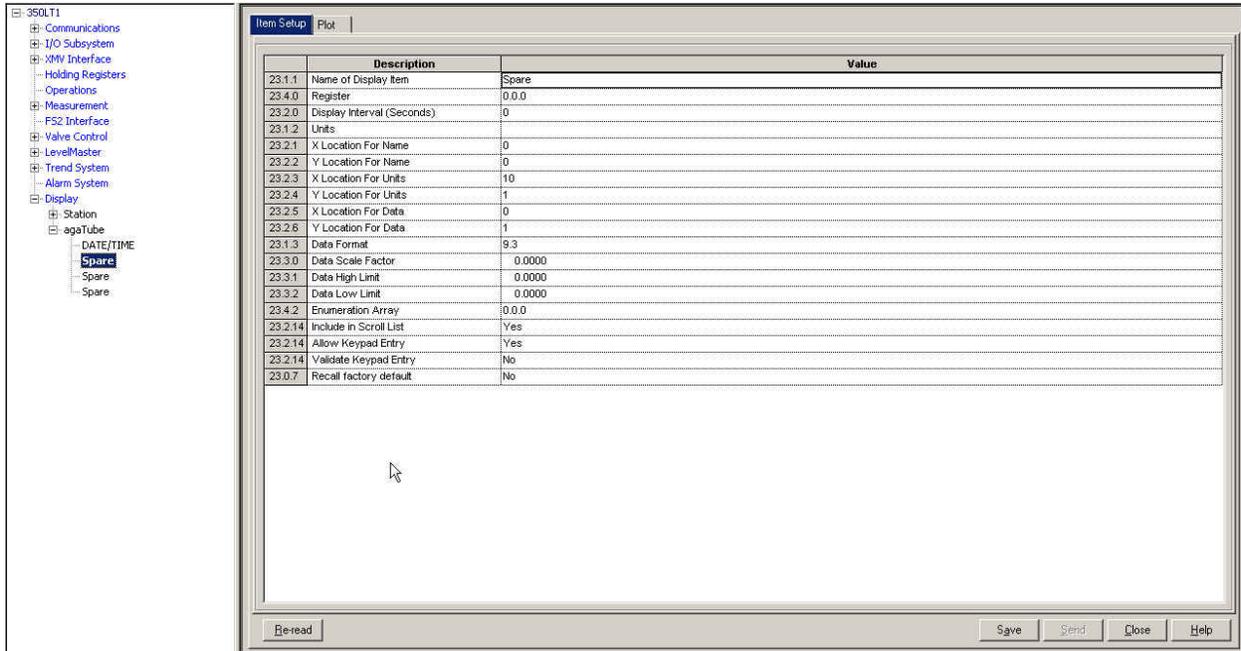
2. Description

Flow time is a valid Totalflow register it has been up until this point a register that is hidden in the system. The current day flow time register is 11.227.0 yesterday would be 11.227.1 and the day before would be 11.227.2 for each day you go back you add one number to the last register position. It is important to note that the “11” is an application designator. This first number could be different on your flow computer. To determine your application connect with PCCU and go into entry mode. Once there highlight the meter ID at the top of the tree on the left. Then click on the applications tab. As you can see app 11 is our AGA3 tube, so you start with 11.xxx.xx when pulling flow time for this tube.



Application	Type	Start Parameters	Revision
0.3.1 Application 0	System		2100770-006
0.3.2 Application 1	Communications	Port = COM0	2100859-004
0.3.3 Application 2	Communications	Port = COM1	2100860-002
0.3.4 Application 3	Communications	Port = COM2	2100866-002
0.3.5 Application 4	Communications	Port = CIM0	2100864-002
0.3.6 Application 5	Spare		
0.3.7 Application 6	Spare		
0.3.8 Application 7	I/O Subsystem		2100771-002
0.3.9 Application 8	XMV Interface		2100788-006
0.3.10 Application 9	Holding Registers		2100785-003
0.3.11 Application 10	Operations		2100844-006
0.3.12 Application 11	AGA-3 Measurement	Dir = AGA3-1	2100780-006
0.3.13 Application 12	Spare		
0.3.14 Application 13	Spare		
0.3.15 Application 14	FS2 Interface		2100792-001
0.3.16 Application 15	Spare		
0.3.17 Application 16	Valve Control		2100784-001
0.3.18 Application 17	Spare		
0.3.19 Application 18	Spare		
0.3.20 Application 19	Spare		
0.3.21 Application 20	LevelMaster		2100791-001
0.3.22 Application 21	Trend System		2100787-002
0.3.23 Application 22	Alarm System		2100783-003
0.3.24 Application 23	Display		2100777-004

Now the correct application has been determined it can be added to the display list. Click on the + sign next to display and highlight the section you would like to display flow time. Look for the item that says spare. If no spare is available highlight the group name and where it says “number of displays” add one and hit send. Now spare should be the bottom option in that group. Highlight spare as shown below:



Change the name of the display item to “flow time” and enter the appropriate register. In this case it is 11.227.1 for yesterdays flow time. Also, enter the number of seconds you want the item to be displayed by changing the “Display Interval”. It is important to note that the default flow time is in seconds. If flow time is preferred in minutes or hours the most efficient way to accomplish this is to use the “Data Scale Factor” just over halfway down the item page.

	Description	Value
23.1.1	Name of Display Item	Flowtime
23.4.0	Register	11.227.1
23.2.0	Display Interval (Seconds)	5
23.1.2	Units	
23.2.1	X Location For Name	0
23.2.2	Y Location For Name	0
23.2.3	X Location For Units	10
23.2.4	Y Location For Units	1
23.2.5	X Location For Data	0
23.2.6	Y Location For Data	1
23.1.3	Data Format	9.3
23.3.0	Data Scale Factor	0.0000
23.3.1	Data High Limit	0.0000
23.3.2	Data Low Limit	0.0000
23.4.2	Enumeration Array	0.0.0
23.2.14	Include in Scroll List	Yes
23.2.14	Allow Keypad Entry	Yes
23.2.14	Validate Keypad Entry	No
23.0.7	Recall factory default	No



This scale factor will scale the flow time to reflect what is deemed necessary. For flow time in minutes divide 1 by 60 ($1/60$) and you get your scale factor which is .01667. If you would like this in hours then you scale it as 1 divided by 3600 or $1/3600$. This gives a scale factor of .0002778. Now you'll notice when you plug in these numbers that when you hit send it will round up. Do not worry, the flow computer will NOT round up for any of its calculations. Once you do this change the "units" portion of the screen to reflect whether you are using hours, minutes or seconds.

3. **Conclusion**

We realize flow time is becoming increasingly important to our customers and is not typically visible in Totalflow products. We will try to incorporate this into our displays and flow computer software at a later date.