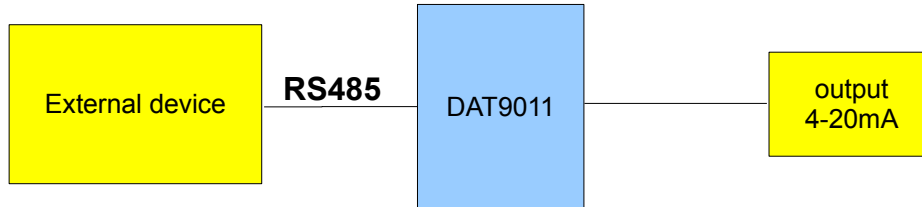
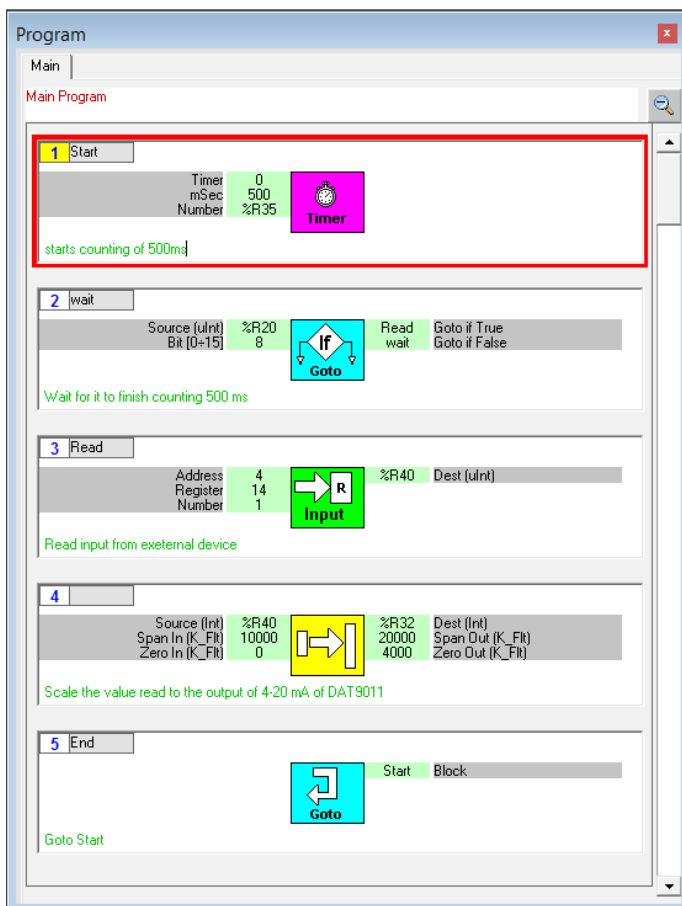


Read external device on RS485 network and scale the value to DAT9011 4-20mA analog output with delay (500ms)



Dev9k Project



The screenshot shows a ladder logic program with the following steps:

- Step 1: Start** - A Timer block is configured with Timer mSec set to 500 and Number set to %R35. The comment below the block reads "starts counting of 500ms".
- Step 2: wait** - An If Goto block is configured with Source (uint) Bit [0-15] set to %R20 8. The comment below reads "Wait for it to finish counting 500 ms".
- Step 3: Read** - An Input block is configured with Address Register Number set to 4 14 1 and Dest (uint) set to %R40. The comment below reads "Read input from external device".
- Step 4: Scale** - A Scale block is configured with Source (int) Span In (K_Flt) Zero In (K_Flt) set to %R40 10000 0, and Dest (int) Span Out (K_Flt) Zero Out (K_Flt) set to %R32 20000 4000. The comment below reads "Scale the value read to the output of 4-20 mA of DAT9011".
- Step 5: End** - A Goto Start block is configured with Start Block set to Start. The comment below reads "Goto Start".

Block1: "Timer" → This function block resets the timer 0 (%R20 bit 8) when the count starts. Set timer 0 (bit 8 register 20), when the count is complete.

- *Timer*: timer that you use (refer to the user guide of Dev9k).
- *mSec*: counting time (delay in this application).

Block2: "if(bit) Goto" → This function block go to label "Read" when the count is finished (bit 8 register 20 is True).

Else wait for it to finish counting before proceeding (goto on itself->bit 8 register 20 False).

Block3: "Read input" → Read the value from external device.

- *Address*: modbus node of external device on RS485 network
- *Register*: starting register to read
- *Number*: number of registers to read
- *Dest*: internal register destination of DAT9011

Block4: "Scale" → Performs scaling the value on the "Source" register in relation to *Zero In* and *Span In* into the "Dest" register in relation to *Zero Out* and *Span Out*.

- "*Source*": will be the internal input register of previous step (Block3), *Zero In* and *Span In* will be the effective minimum and maximum value of input.
- "*Dest*": the user will insert the first or second register of output (%R32 or %R33). *Zero Out* and *Span Out* will be respectively the value 4000 and 20000.

Format data of value:

Source: the format data of input

Zero in, Span in, Zero out and Span out as K_ft

Dest as integer (int)

Block5: "Goto" → *jump* to the beginning of the main program identified from by the label "Start"

Writing the project to the DAT9011

Save the project, reconnect the controller and set the DAT9011 in Debug mode (click on Debug button, the yellow led starts blinking).

Click on the Download button and in the Download form click on Ok. This could take a few minutes.

At the end, set in Release mode.

Now, the Project should run.