

PLC M221 Scanning Memory dengan Drum Controller, SoMachine Basic

What is the purpose Mengetahui cara menjadwalkan eksekusi beberapa Function Block komunikasi menggunakan Drum Controller (%DR), secara bergantian dan berulang

What units are related

1. M221 controller
2. ATV61 Variable Speed Drive
3. SoMachine Basic

Details Application note ini dibagi dalam beberapa bagian:

Section	Judul
1	Daftar Komponen
2	Penjelasan Topology
3	Langkah programming dalam SoMachine Basic

Section 1: Daftar Komponen

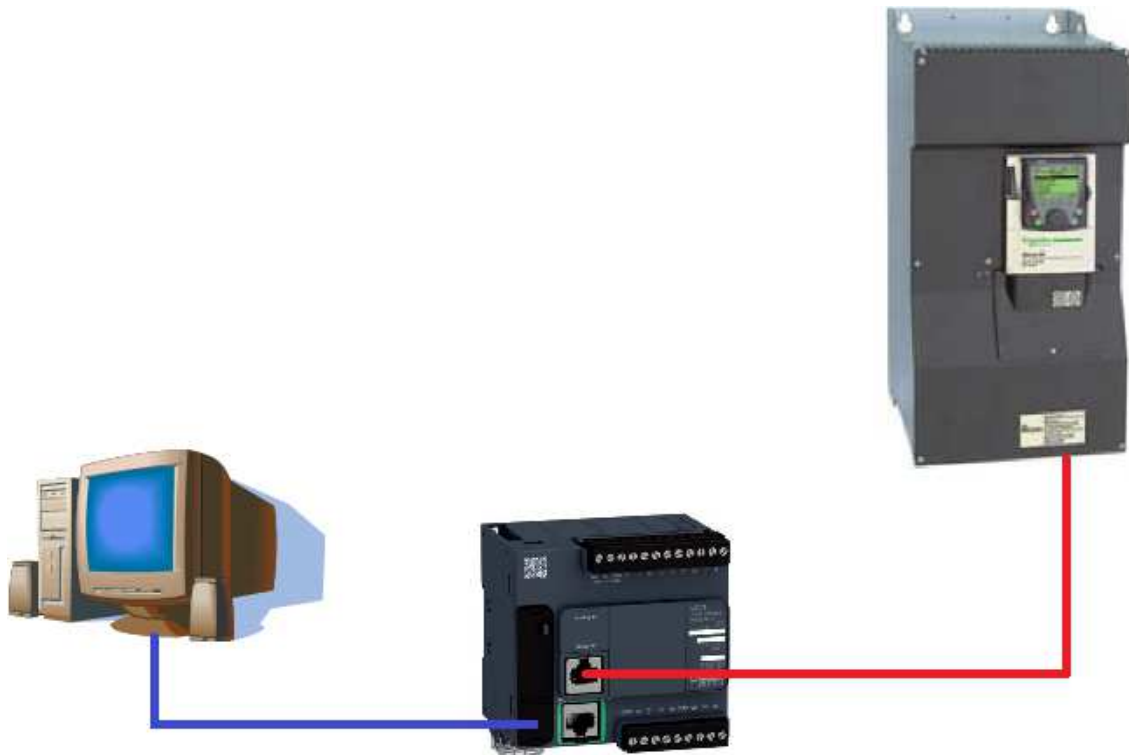
Tabel Komponen Komponen yang digunakan pada pengujian

Komponen	Type	Keterangan
M221 Controller	<ul style="list-style-type: none"> • TM221C**** • TM221M**** 	M221 type apapun (Brick atau Book)
Variable Speed Drive	ATV61HD55N4	Altivar 61
SoMachine Basic	So Machine Basic	-

Section 2: Penjelasan Topology

Penjelasan
diagram topology

Diagram topology


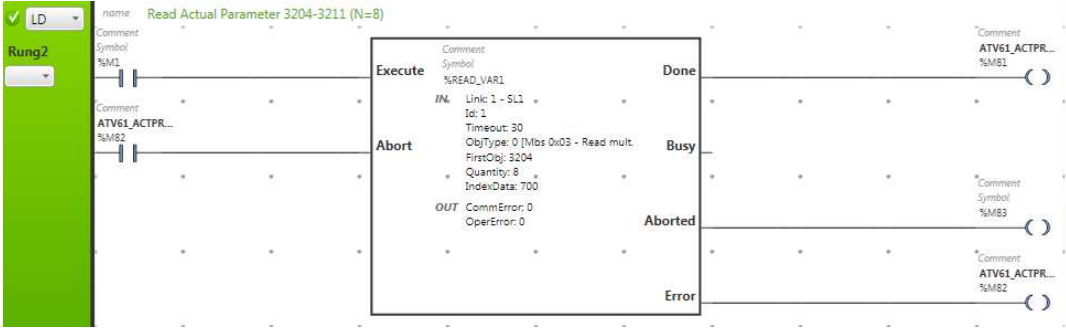

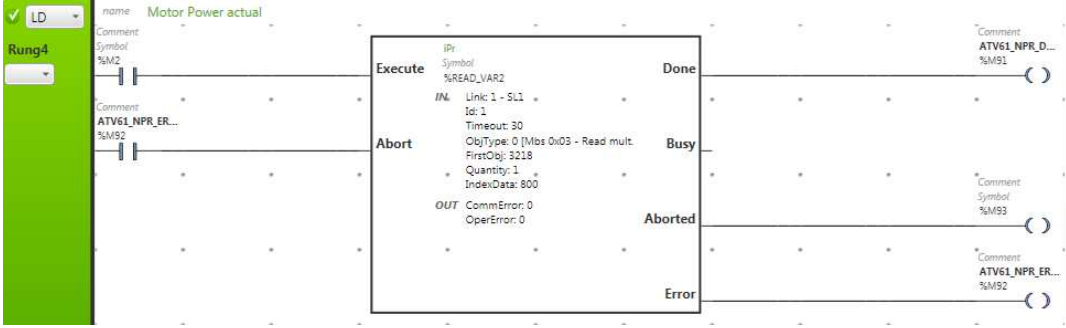



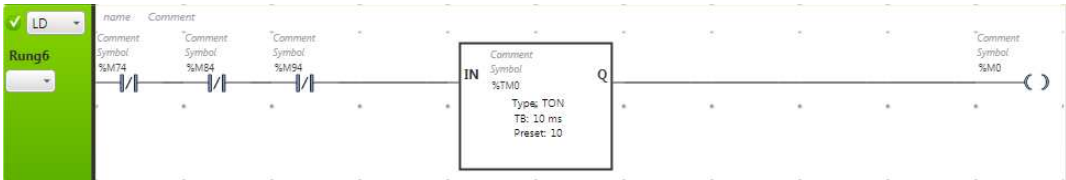
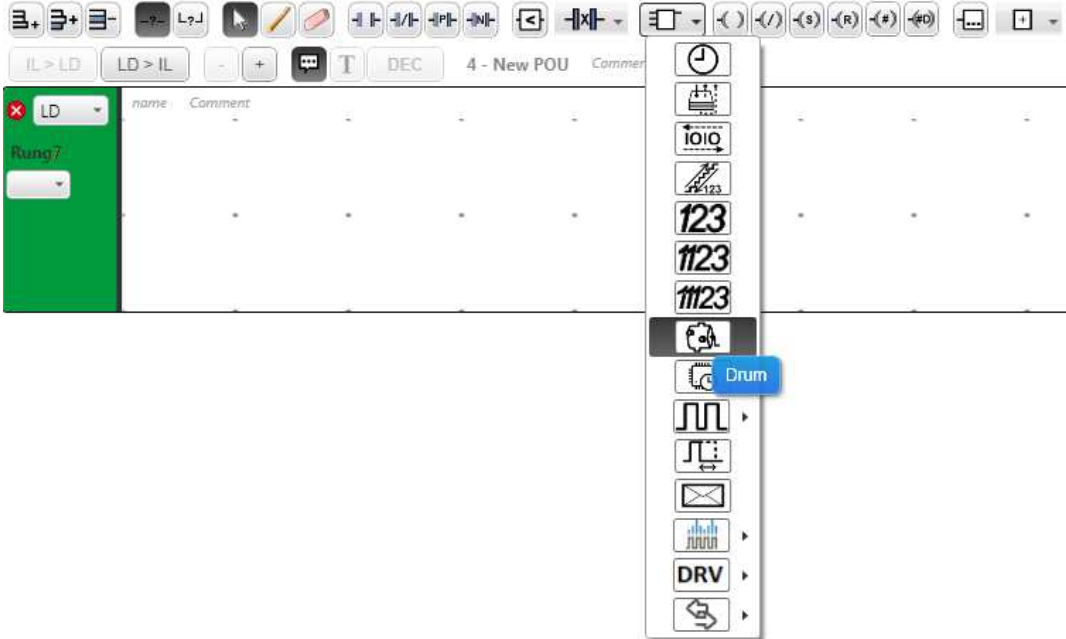
Port mini USB PLC M221 terhubung ke port USB-A di computer.
Port serial RJ45 PLC M221 terhubung ke port serial RJ45 di ATV61
(Variable Speed Drive). Pada pengujian, ATV61 digunakan sebagai smart
device.

Section 3: Langkah Programming dalam SoMachine Basic

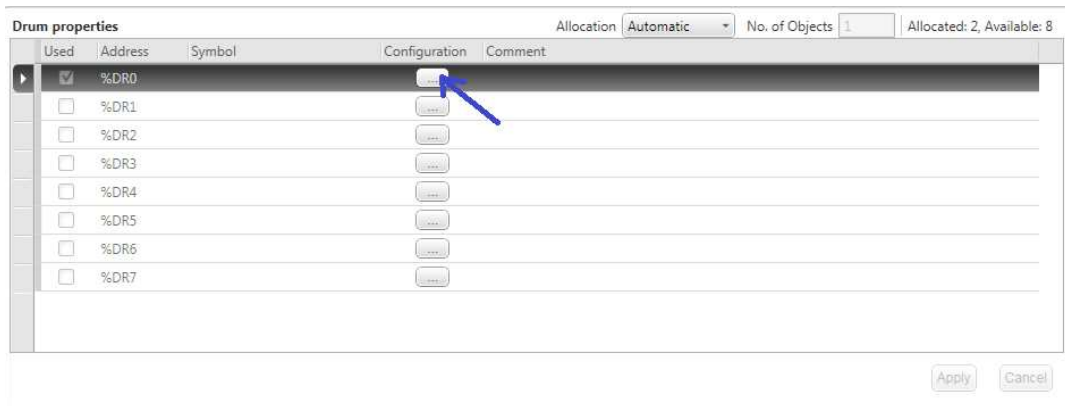
Setup Penjelasan program di SoMachine Basic.

Step	Action																																																																																																																																																																																																																								
1	<p>Jika register yang akan diambil di Smart device terletak di alamat-alamat yang tidak berurutan, maka diperlukan satu function block (%READ_VAR atau %WRITE_VAR) untuk setiap kelompok register.</p> <table border="1"> <thead> <tr> <th>Code</th> <th>Name</th> <th>Logic address (Dec)</th> <th>Category</th> <th>Access</th> <th>Type</th> <th>Units</th> <th>Range</th> </tr> </thead> <tbody> <tr> <td>SPM</td> <td></td> <td>8491</td> <td>Configuration and settings</td> <td>R/W/S</td> <td>WORD (Enumeration)</td> <td>-</td> <td>-</td> </tr> <tr> <td>CMD</td> <td>Control word</td> <td>8501</td> <td>Control parameters</td> <td>R/W</td> <td>WORD (BitString16)</td> <td>-</td> <td>-</td> </tr> <tr> <td>LFR</td> <td>Frequency setpoint</td> <td>8502</td> <td>Setpoint parameters</td> <td>R/W</td> <td>INT (Signed16)</td> <td>0.1 Hz</td> <td>-3276.7 Hz ... 3276.7 Hz</td> </tr> <tr> <td>PISP</td> <td>PD regulator setpoint</td> <td>8503</td> <td>Setpoint parameters</td> <td>R/W</td> <td>UINT 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<p>2</p>	<p>Jika pengambilan data oleh %READ_VAR0 selesai atau pembatalan pengambilan data oleh %READ_VAR0 selesai, %M74 diset.</p> 
<p>3</p>	<p>Untuk membaca memory di alamat 3204 dan 3211, dibuatlah %READ_VAR1.</p> 
<p>4</p>	<p>Jika pengambilan data oleh %READ_VAR1 selesai atau pembatalan pengambilan data oleh %READ_VAR1 selesai, %M84 diset.</p> 
<p>5</p>	<p>Untuk membaca memory di alamat 3218, dibuatlah %READ_VAR2.</p> 

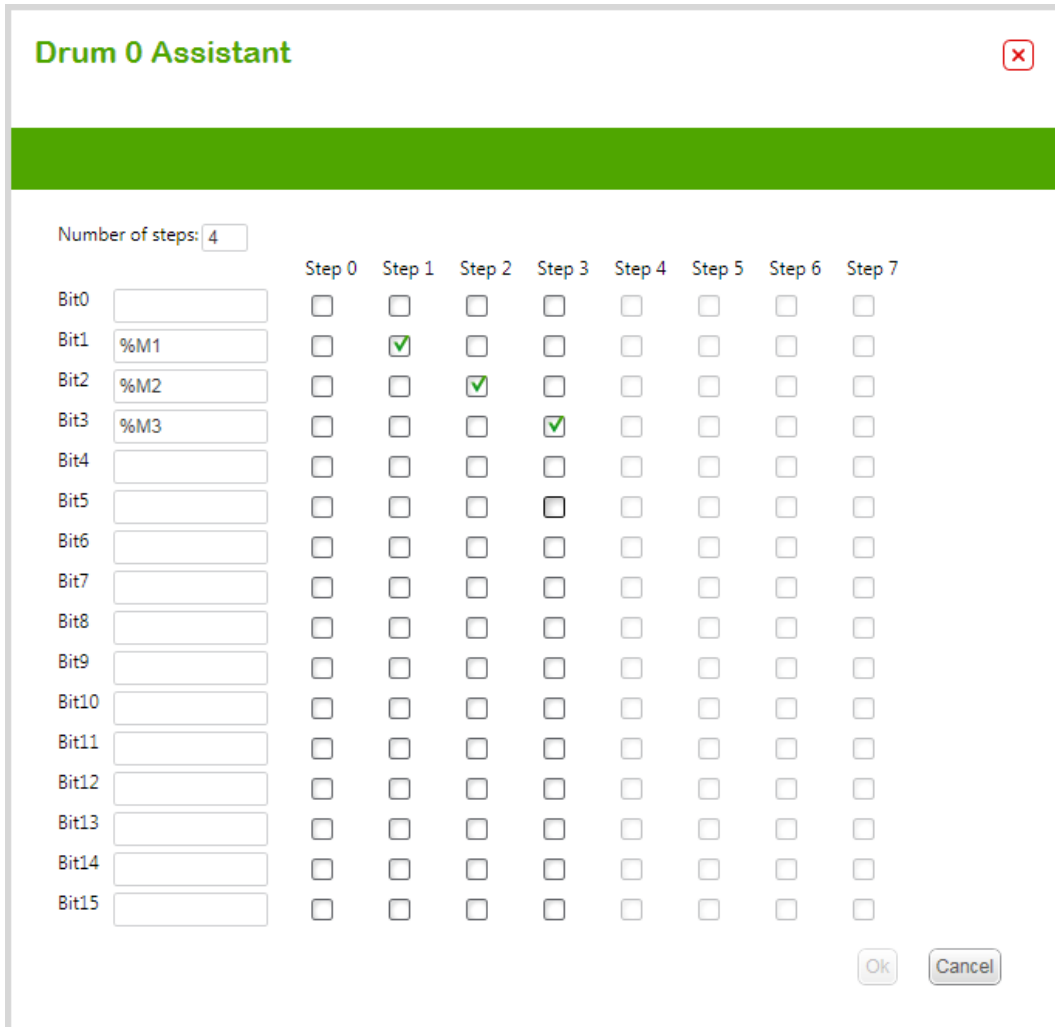
<p>6</p>	<p>Jika pengambilan data oleh %READ_VAR2 selesai atau pembatalan pengambilan data oleh %READ_VAR2 selesai, %M94 diset.</p> 
<p>7</p>	<p>%M0 akan menjadi '1' jika %M74, %M84 dan %M94 semuanya bernilai '0' lebih lama daripada 100 ms.</p>  <p>%M0 ini yang menjalankan %READ_VAR0 di rung0.</p>
<p>8</p>	<p>Tempatkan function block %DR pada program dari menu berikut ini:</p> 

9 Double click pada Function Block %DR tersebut sehingga tabel %DR muncul.



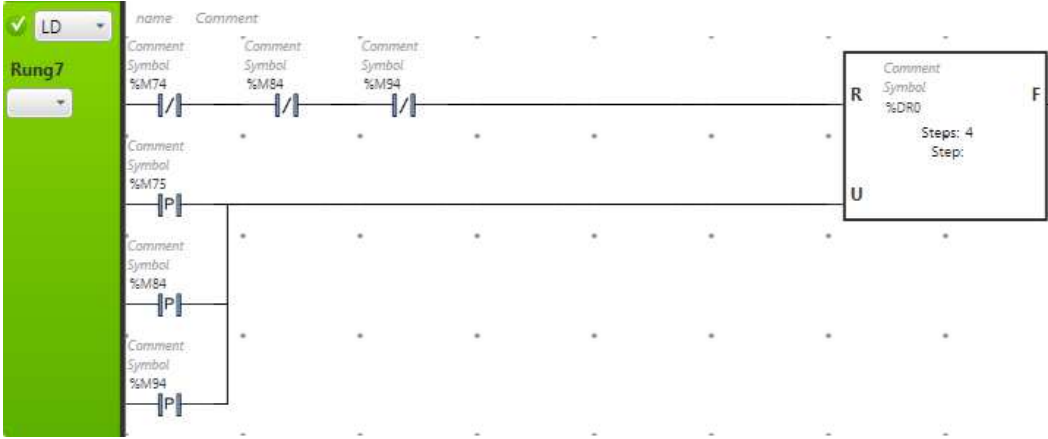
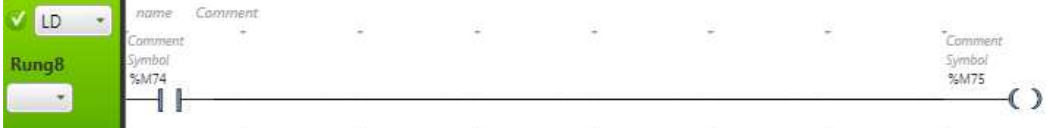
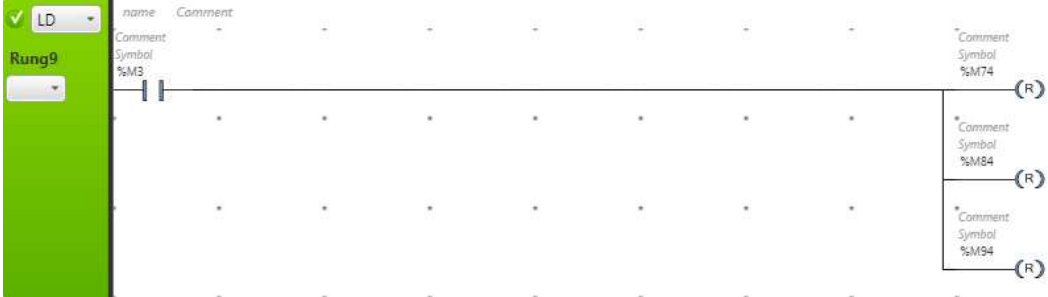
Klik pada tombol “Configuration” %DR yang dipakai, pada contoh %DR0.

10 Pada window “Drum Assistant”, buat konfigurasi seperti terlihat pada gambar di bawah ini:



Jumlah Step 4, di mana Step 0 tidak mengaktifkan bit apapun.

Pada %DR0, Step 1 mengaktifkan %M1 yang akan menjalankan %READ_VAR1 di Rung 2,

	<p>Pada %DR0, Step 2 mengaktifkan %M2 yang akan menjalankan %READ_VAR2 di Rung 4 dan</p> <p>Pada %DR0, Step 3 mengaktifkan %M3 yang akan mereset %M74, %M84 dan %M94 pada Rung 9 (lihat Step 9 Application Note ini).</p> <p>Tekan tombol “Ok” setelah selesai.</p>
11	<p>Selama %M74, %M84 dan %M94 semuanya bernilai ‘0’, maka %DR0 tidak tetap di Step 0.</p> 
12	<p>Rising edge %M75 akan menaikkan Step %DR0 dari Step 0 ke Step 1.</p>  <p>Rising edge %M84 akan menaikkan Step %DR0 dari Step 1 ke Step 2</p> <p>Rising edge %M94 akan menaikkan Step %DR0 dari Step 2 ke Step 3</p>
13	<p>%M3 (Step 4 pada %DR0) akan mereset %M74, %M84 dan %M94.</p>  <p>Hal ini akan me-reset %DR0 sehingga %TM0 menunggu 100 ms sebelum menyalakan %M0 yang akan menjalankan %READ_VAR0 lagi, lihat Rung 6 dan Rung 0.</p>