NOTATKA SŁÓŻBOWA
315-2DP

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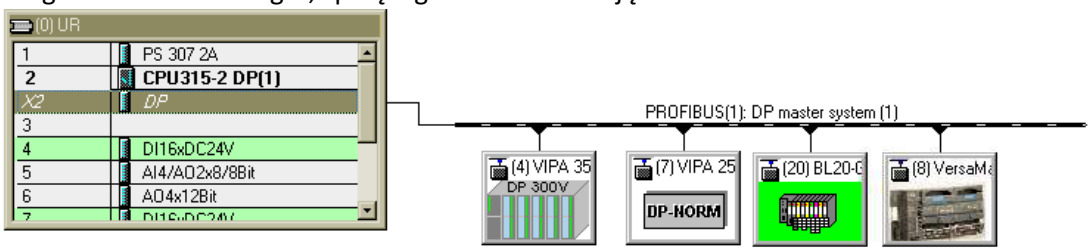
Poniedziałek 11-14

1. Cel ćwiczenia

Nauka korzystania z sieci Profibus

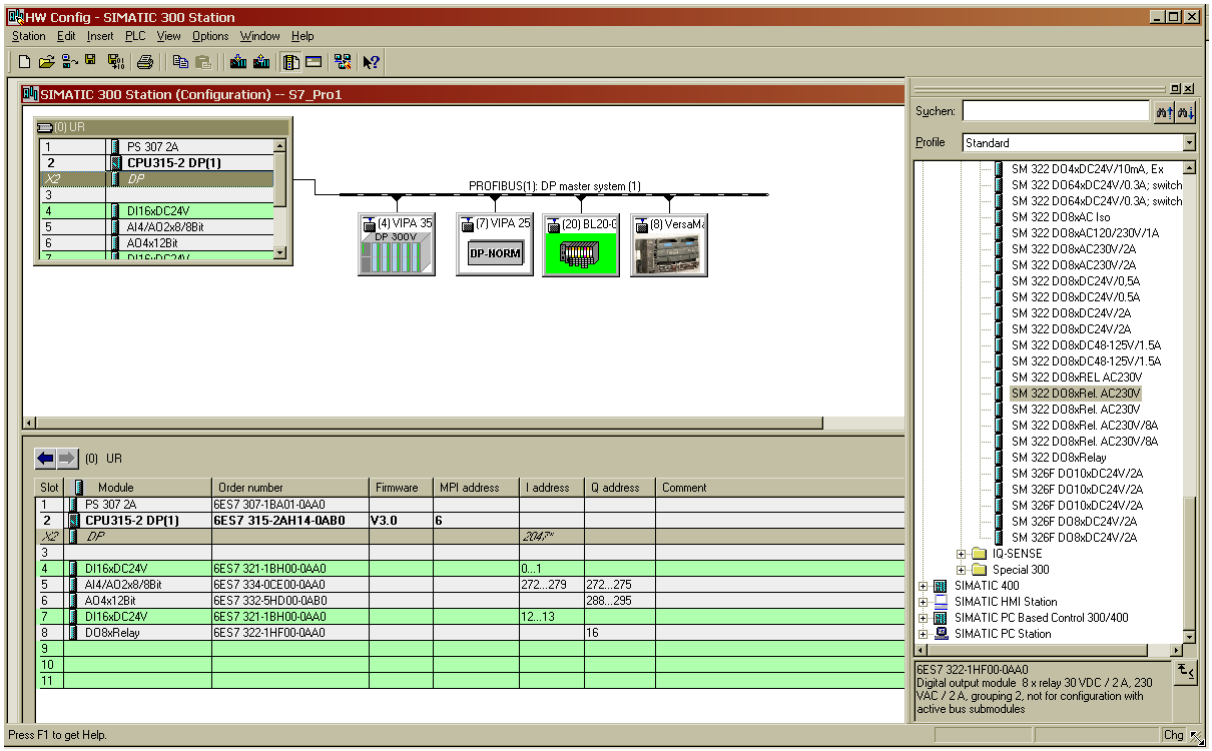
2. Sprzęt:

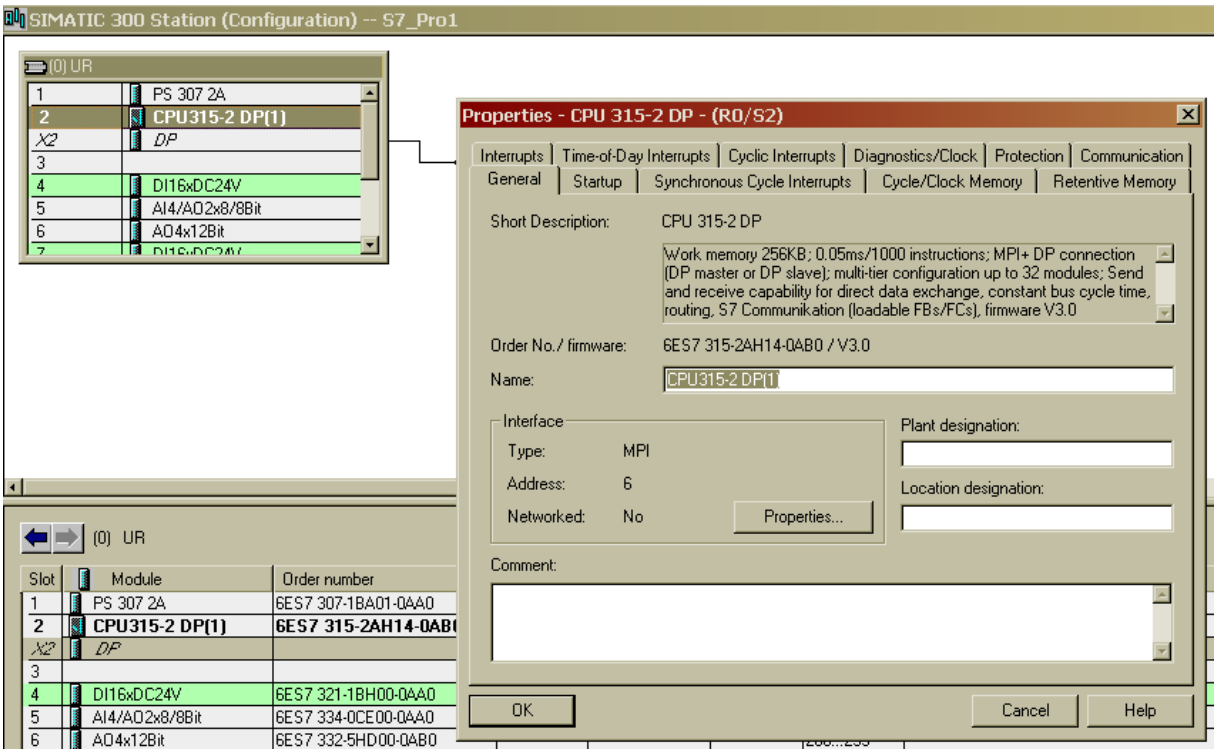
Program Simatic manager, sprzęt zgodnie z instrukcją:

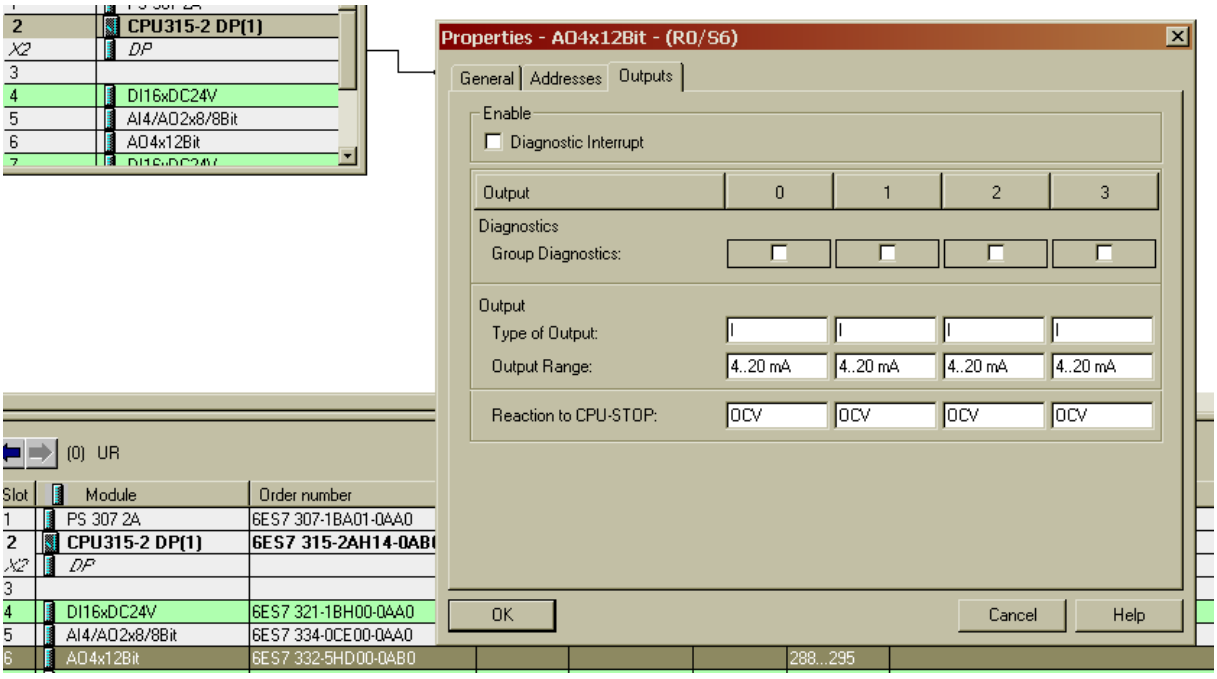


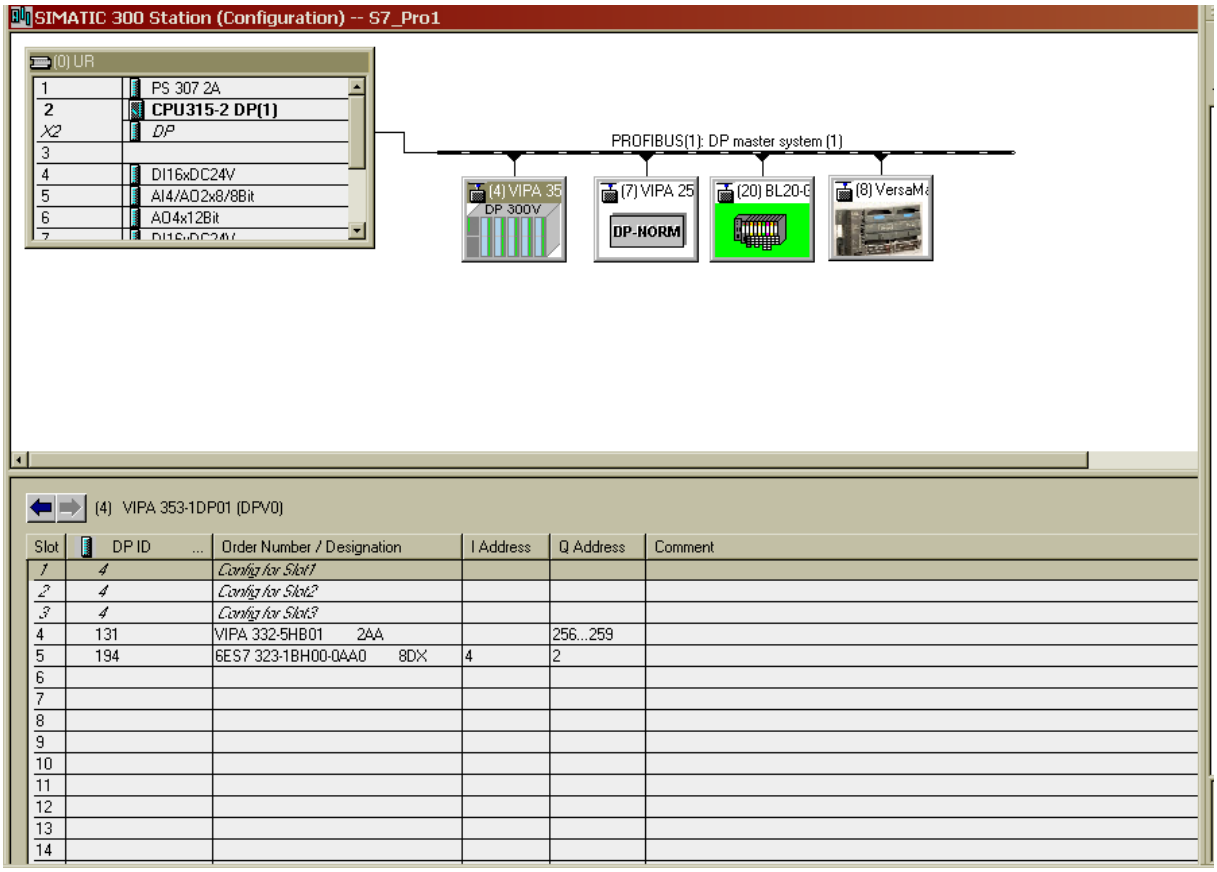
3. Wykonane ćwiczenia:

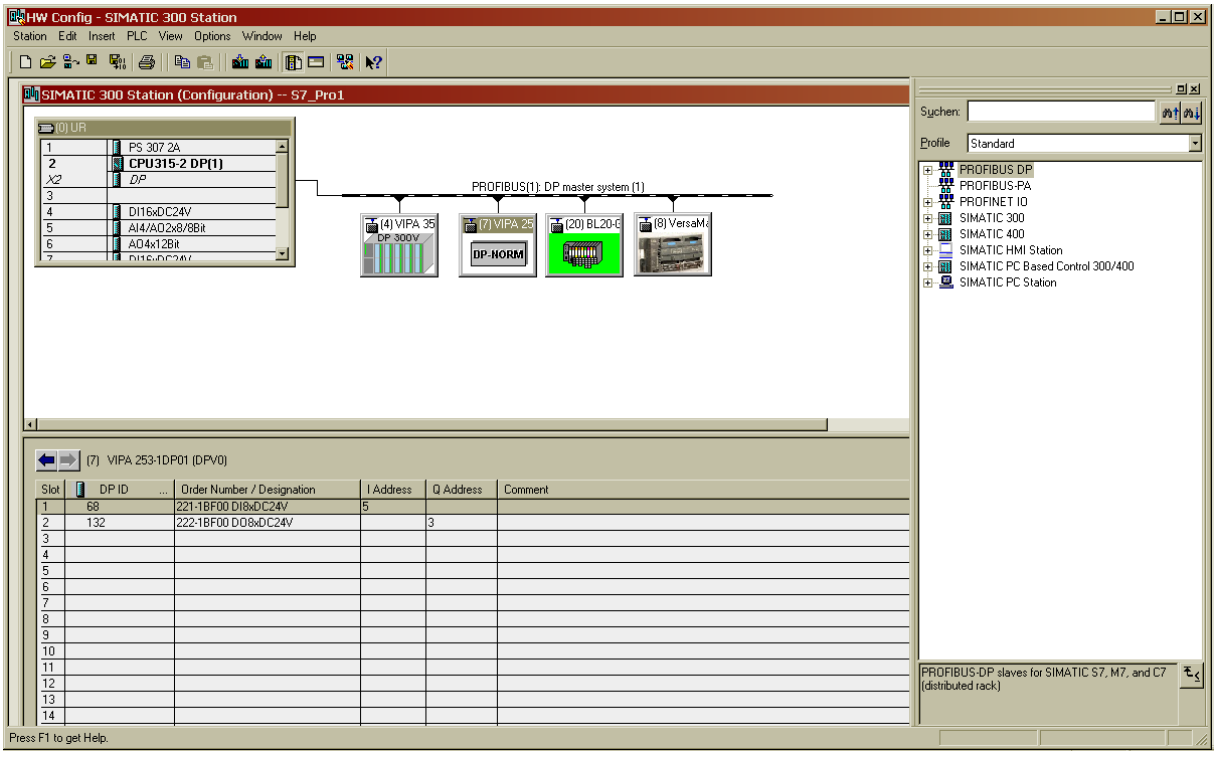
a. Przygotowanie sprzętu do pracy:

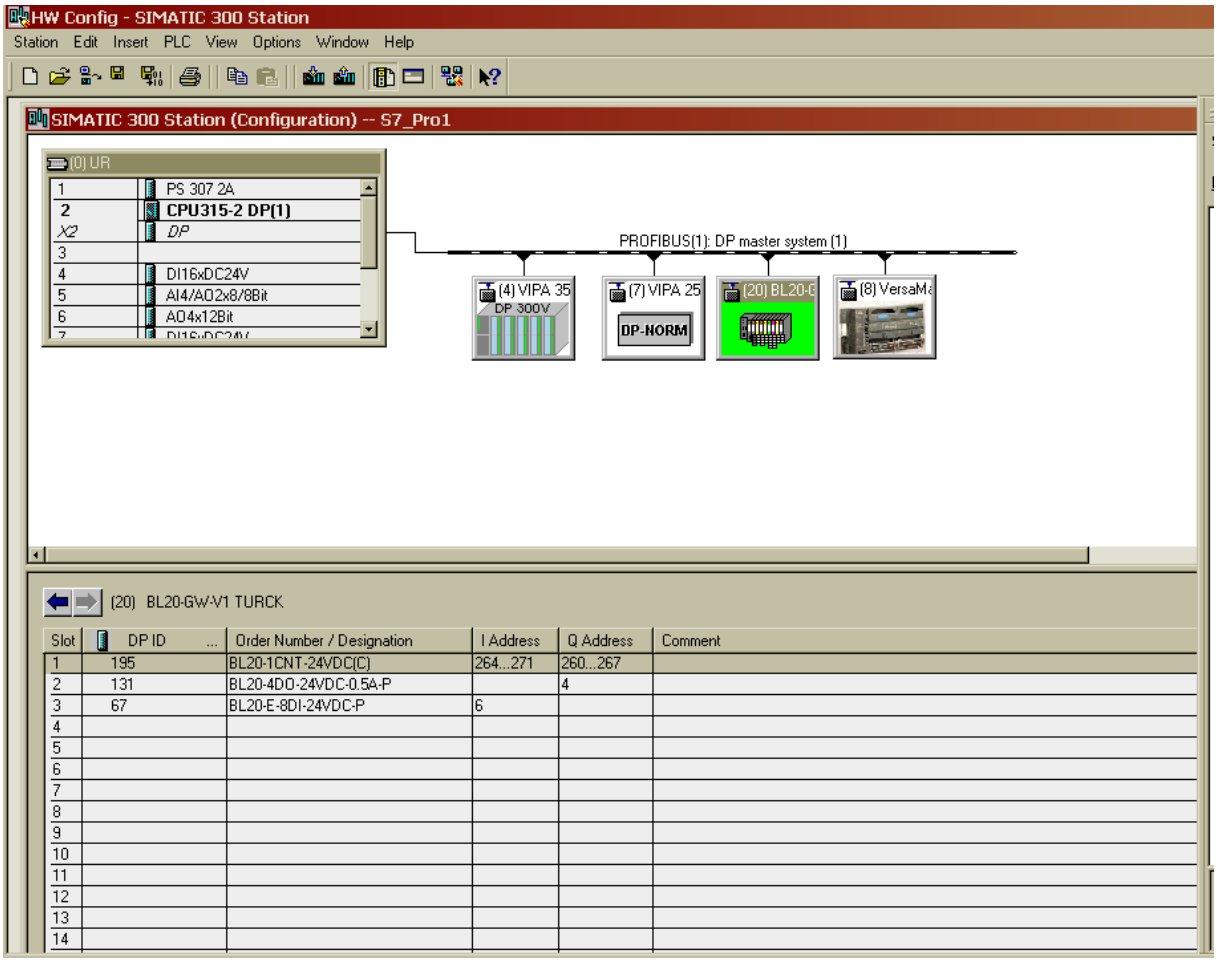



SIMATIC 300 Station (Configuration) -- S7_Pro1
(0) UR
1 PS 307 2A
2 CPU315-2 DP(1)
X2 DP
3
4 DI16xDC24V
5 AI4/AO2x8/8Bit
6 AO4x12Bit
Properties - CPU 315-2 DP - (R0/S2)
Interrupts
Time-of-Day Interrupts
Cyclic Interrupts
Diagnostics/Clock
Protection
Communication
General
Startup
Synchronous Cycle Interrupts
Cycle/Clock Memory
Retentive Memory
Short Description: CPU 315-2 DP
Work memory 256KB; 0.05ms/1000 instructions; MPI+ DP connection (DP master or DP slave); multi-tier configuration up to 32 modules; Send and receive capability for direct data exchange, constant bus cycle time, routing, S7 Communikation (loadable FBs/FCs), firmware V3.0
Order No./ firmware: 6ES7 315-2AH14-0AB0 / V3.0
Name: CPU315-2 DP(1)
Interface
Type: MPI
Address: 6
Networked: No
Properties...
Plant designation:
Location designation:
Comment:
OK
Cancel
Help
(0) UR
Slot Module Order number
1 PS 307 2A 6ES7 307-1BA01-0AA0
2 CPU315-2 DP(1) 6ES7 315-2AH14-0AB
X2 DP
3
4 DI16xDC24V 6ES7 321-1BH00-0AA0
5 AI4/AO2x8/8Bit 6ES7 334-0CE00-0AA0
6 AO4x12Bit 6ES7 332-5HD00-0AB0


2 CPU315-2 DP(1)
X2 DP
3
4 DI16xDC24V
5 AI4/AO2x8/8Bit
6 AO4x12Bit
Properties - AO4x12Bit - (R0/S6)
General
Addresses
Outputs
Enable
Diagnostic Interrupt
Output 0 1 2 3
Diagnostics
Group Diagnostics:
Output
Type of Output: I I I I
Output Range: 4..20 mA 4..20 mA 4..20 mA 4..20 mA
Reaction to CPU-STOP: OCV OCV OCV OCV
OK
Cancel
Help
(0) UR
Slot Module Order number
1 PS 307 2A 6ES7 307-1BA01-0AA0
2 CPU315-2 DP(1) 6ES7 315-2AH14-0AB
X2 DP
3
4 DI16xDC24V 6ES7 321-1BH00-0AA0
5 AI4/AO2x8/8Bit 6ES7 334-0CE00-0AA0
6 AO4x12Bit 6ES7 332-5HD00-0AB0
288...295


SIMATIC 300 Station (Configuration) -- S7_Pro1
(0) UR
1 PS 307 2A
2 CPU315-2 DP(1)
X2 DP
3
4 DI16xDC24V
5 AI4/AO2x8/8Bit
6 AO4x12Bit
PROFIBUS(1): DP master system (1)
(4) VIPA 35
DP 300V
(7) VIPA 25
DP-NORM
(20) BL20-C
(8) VersaMa
(4) VIPA 353-1DP01 (DPV0)
Slot | DP ID | Order Number / Designation | I Address | Q Address | Comment
1 | 4 | Config for Slot1
2 | 4 | Config for Slot2
3 | 4 | Config for Slot3
4 | 131 | VIPA 332-5HB01 2AA | | 256...259
5 | 194 | 6ES7 323-1BH00-0AA0 8DX | 4 | 2


HW Config - SIMATIC 300 Station
Station Edit Insert PLC View Options Window Help
SIMATIC 300 Station (Configuration) -- S7_Pro1
(0) UR
1 PS 307 2A
2 CPU315-2 DP(1)
X2 DP
3
4 DI16xDC24V
5 AI4/AO2x8/8Bit
6 AO4x12Bit
PROFIBUS(1): DP master system (1)
(4) VIPA 35
DP 300V
(7) VIPA 25
DP-NORM
(20) BL20-C
(8) VersaMa
Suchen:
Profile Standard
PROFIBUS DP
PROFIBUS-PA
PROFINET IO
SIMATIC 300
SIMATIC 400
SIMATIC HMI Station
SIMATIC PC Based Control 300/400
SIMATIC PC Station
PROFIBUS-DP slaves for SIMATIC S7, M7, and C7 (distributed rack)
(7) VIPA 253-1DP01 (DPV0)
Slot | DP ID | Order Number / Designation | I Address | Q Address | Comment
1 | 68 | 221-1BF00 DI8xDC24V | 5
2 | 132 | 222-1BF00 DO8xDC24V | | 3
Press F1 to get Help.


HW Config - SIMATIC 300 Station
Station Edit Insert PLC View Options Window Help
SIMATIC 300 Station (Configuration) -- S7_Pro1
(0) UR
1 PS 307 2A
2 CPU315-2 DP(1)
X2 DP
3
4 DI16xDC24V
5 AI4/AO2x8/8Bit
6 AO4x12Bit
PROFIBUS(1): DP master system (1)
(4) VIPA 35
DP 300V
(7) VIPA 25
DP-NORM
(20) BL20-G
(8) VersaMa
(20) BL20-GW-V1 TURCK
Slot DP ID ... Order Number / Designation I Address Q Address Comment
1 195 BL20-1CNT-24VDC(C) 264...271 260...267
2 131 BL20-4DO-24VDC-0.5A-P 4
3 67 BL20-E-8DI-24VDC-P 6
4
5
6
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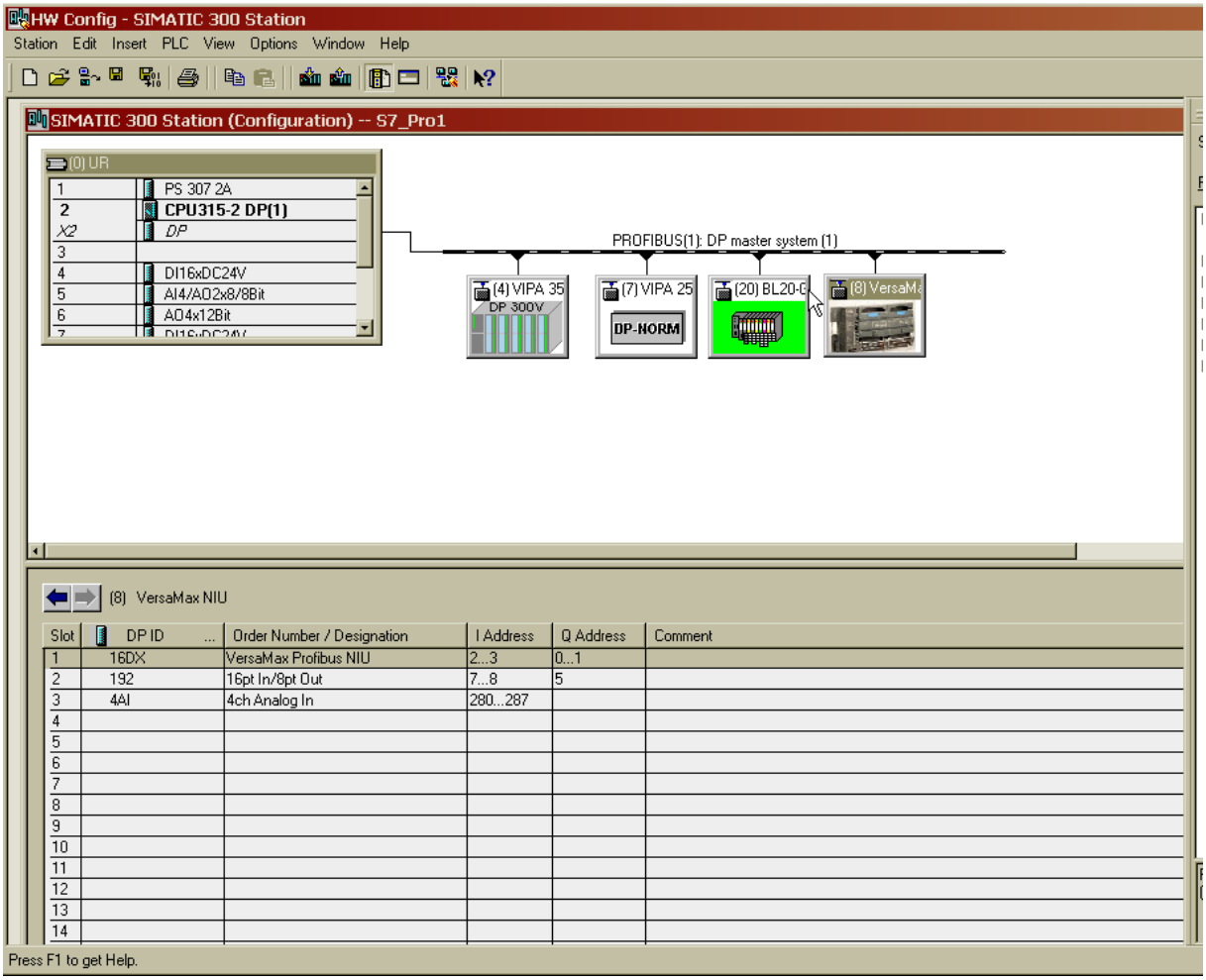
12
13
14



b. Napisanie programów w języku drabinkowym zgodnie z instrukcją

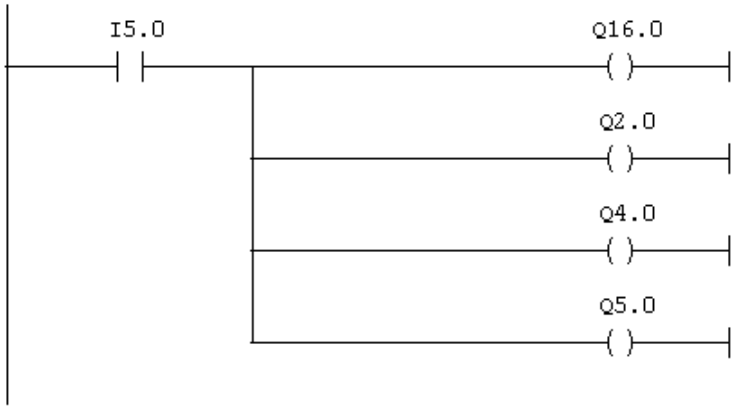
OB1 -- "Cycle Execution" -- S7_Pro1\SIMATIC 300 Station\CPU315-2 DP(1)\...\OB1

OB1 : "Main Program Sweep (Cycle)"

Comment:

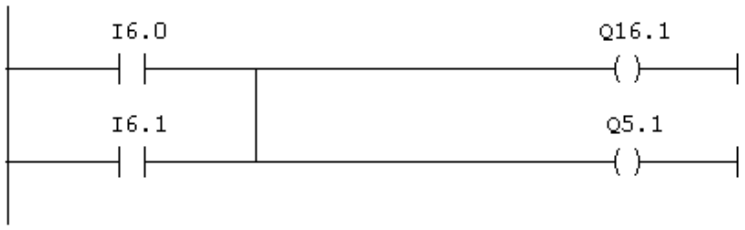
Network 1 : Title:

vipa200 rozsylanie



Network 2 : Title:

Czujnik i wlacznik

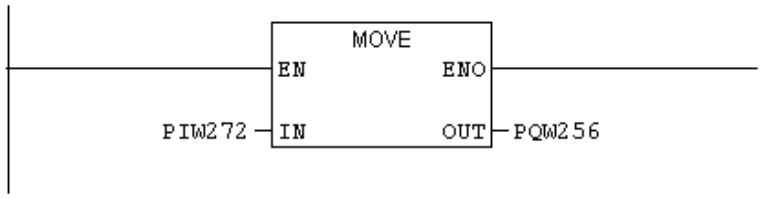


Network 3 : Title:

master do trucka i vipy 300

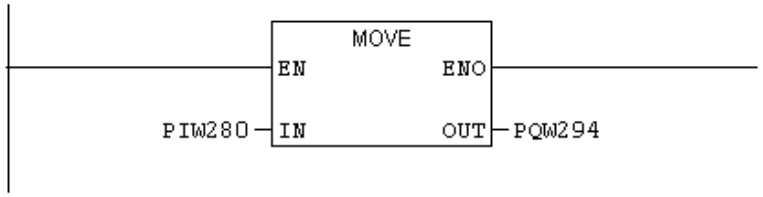
Network 4 : Title:

master do vipy300 analogowy sygnal



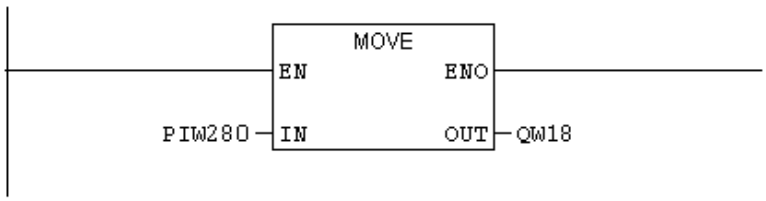
Network 5 : Title:

VersaMax do mastera analogowy sygnal



Network 6 : Title:

VersaMax do mastera analogwy sygnał na słowo z przestrzeni odwzorowania wyjśc binarnych



Network 7 : Title:

VersaMax do vipy 300 analogowy sygnal