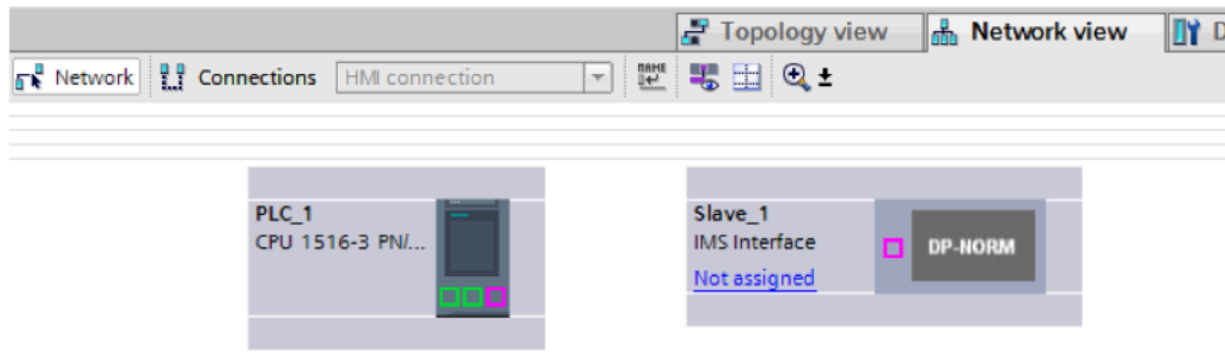


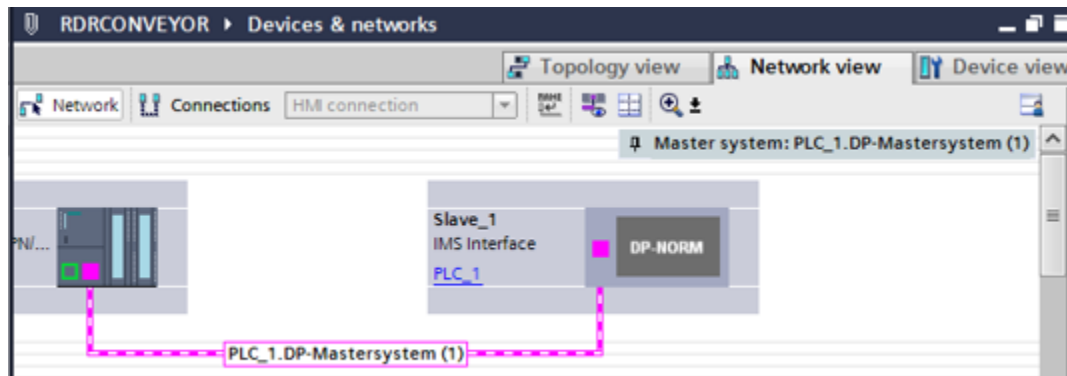
# PR: S7 300 With PROFIBUS

## Procedure:

1. Open TIA Portal, Create new project
2. Click on portal View, Add new device
3. Select CPU S 300-CPU 314C-2PN/1 DP -314-6EH04-0ABO
4. Go to devices and networks, see PLC, Double click on it, Change IP address to 0, Default may be 136
5. To be able to insert the conveyor belt system as a slave, the corresponding .gsd file has to be imported. Subsequently the slave can be inserted in the network view of the equipment configuration out of the catalogue and connected with the S7-300.
6. **Untick the filter on right side**-Go to other field devices-**Profibus DP- I/O**-Lucass Nulle-IMS interface-IMS interface-IMS Interface. Select the **IMS interface**(cms 1243-5-slave 1) and drag it into topology view

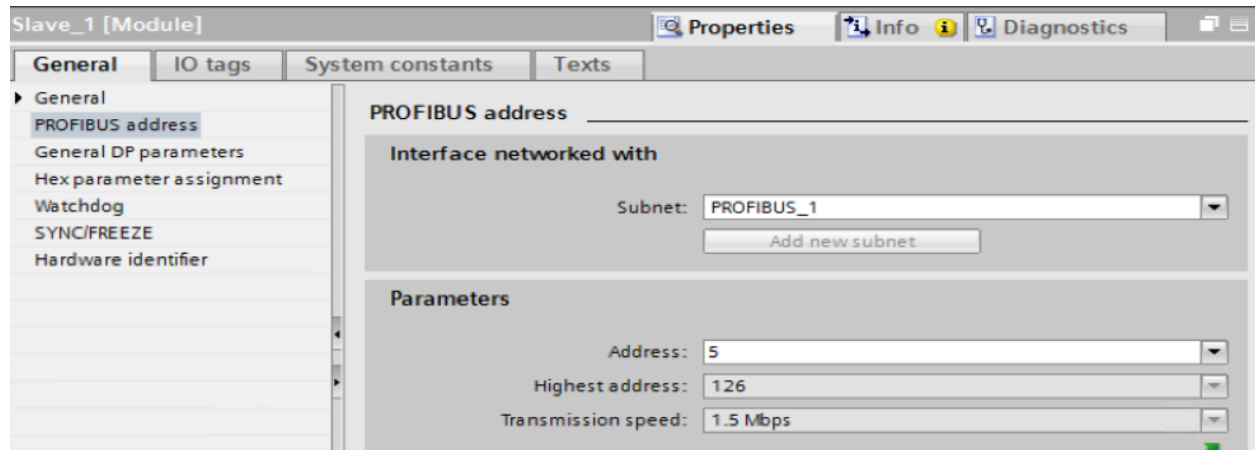


7. Now in network view do the connection using **PROFIBUS point**(Violet port)



8. The address of the DP slave (conveyor belt transport system) also has to be set. To do this select the slave in the equipment window and set the **Profibus address to 5** (corresponding to the address set on the transport system).

9. Double click on IMS interface -in **parameters set address to 5**



10.. check the I/O addresses of slave. Click on device view. see address. Input address may be 3-4 and output address may be 2-3. To select the I/O addresses for the slave, double click on the slave. The I/O addresses of the DP slave are automatically set depending on how the I/O addresses of the PLC are set, but can also be selected randomly within a certain value range.

Module	Rack	Slot	I address	Q address	Type	Article no.
Slave_1	0	0	2043*		IMS Interface	
2 Byte Out, 2 Byte In_1_1	0	1		2...3	2 Byte Out, 2 Byte In	
2 Byte Out, 2 Byte In_2_1	0	2	3...4		2 Byte Out, 2 Byte In	

11. For finding the I/O address of slave, see the charts and make tag table accordingly. Here only the variables which are used for communication between the transport system and the S7-300 are changed. Variables which are assigned to the push buttons remain unchanged

SUB-D9 (X1): Position 9 in Fig.			
Pin	Assignment	Pin	Assignment
1	I(X+1).3	6	Q(X+1).1
2	I(X+1).4	7	Q(X+1).2
3	I(X+1).5	8	0V
4	I(X+1).6	9	+24V DC
5	Q(X+1).0		

e.g For input X=3

so for, start\_belt address is  $I(X+1).3 = I(3+1).3 = I4.3$

end\_belt  $I(X+1).4 = I4.4$

For output X=2

right\_move  $Q(X+1).0 = Q(2+1).0 = Q3.0$

left\_move  $Q(X+1).1 = Q(2+1).1 = Q3.1$

11. Prepare the tag table as given below

Default tag table							
	Name	Data type	Address	Retain	Visibl...	Acces...	Comment
1	start_belt	Bool	%I4.3		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
2	end_belt	Bool	%I4.4		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
3	right_mov	Bool	%Q3.0		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
4	left_mov	Bool	%Q3.1		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
5	start	Bool	%I0.5		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
6	store	Bool	%M0.0		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
7	store1	Bool	%M0.1		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
8	<Add new>				<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	

12. Write the program for given logic

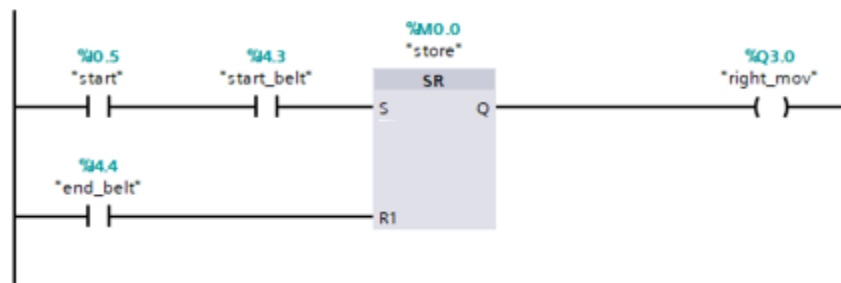
13. Right click on PLC -Compile, check for any errors

14. Right click on PLC load it. Select proper options PN/IE etc depending on the means used for establishing communication

15. Put the PLC on Run mode

16. Press the corresponding START button of PLC to check the output

**Code**



▼ Network 2: .....

Comment

