FPWINPRO7 FP0R-C14MRS A5 SERVO İLE HABERLEŞME ÖRNEĞİ

PLC modelini seçerek açtığımız yeni projemize A5 servo ile haberleşme yapması için Library dosyasını aşağıdaki gösterilen konumdan ekliyoruz.



Library dosyasını ekledikten sonra Sağ tarafta Instructions bölümüne, PEW-CONTROL-DRIVER-A5-VIA-RS485 servo kütüphanemiz geldi.



Yine Sağ tarafta görülen servo library içinde MC_0_5_Read_Driver_Model Bloğunu çalışma alanına çekiyoruz.

EN bacağı aktif olması için direk bağlanıyoruz. bStart ucu Start alması için başlama biti R0 ın yükselenini bağladık, iComport a 1 yazarak COM1 kullanacağımızı seçtik, iNoSlave, bDone, bError, wErrorCode, sDriverModel hepsi değişkendir.



Bağlantılarımızda aşağıdaki gibi yapılmalıdır. Öncelikle PLC nin Bağlantı ayarlarını yapmak zorundayız.2 bağlantı içinde haberleşme kablolarının uçları gösterilmiştir.

Biz RS485 ile haberleşeceğimiz için (S Artı ucu), (R Eksi ucu), (G Toprak ucu) dur.



Buraya kadar ayarları ve bağlantıları yaptık. PLC nin iç kısmında 2 tane switch mevcuttur.1. anahtar off kısmında 19200 baud hızı ile on konumunda ise 115200 baud hızı ile haberleştirilmektedir. Biz 1. Dip sivici OFF konumuna alarak 19200 bit/s baud hız haberleşme yapacağız.



RS485 baud rate switch



Application	Symbol	Connector Pin No.	Contents
Signal ground	GND	1	Connected to ground of control circuit.
NC	_	2	Do not connect.
BS000 signal	TXD	3	RS232
nozoz signai	RXD	4	The transmission / reception method.
	485–	5	
DC405 signal	485+	6	RS485
no465 Signal -	485–	7	The transmission / reception method.
	485+	8	
Frame ground	FG	Shell	Connected with protective earth terminal in the servo driver.

Yukarıdaki resimde de gösterildiği gibi şuan kullanılan uçlar 5-6 dır. Bunlara paralel olarak 7-8 bacaklarını kullanabiliriz.



İletişim parametre ayarları aşağıdaki gibidir. Gösterilen ayarların aynısı plc den haberleşme yapacağız port a yapılmalıdır.

RS485 hattına 31 adet sürücü bağlanılabilir.

Communication parameter

Setting for communication port on the plc

	RS-485
Communication baud rate	2400,4800,9600,19200,38400,57600,115200
Data	8 bit
Parity	none
Start bit	1 bit
Stop bit	1 bit

Below, there are the other settings for serial port on the plc side.

COM port 1 communication mode	Program controlled [General Purpose]
COM port 1 station number	1
COM port 1 sending start code	NO-STX
COM port 1 sending end code / reception done confition	NONE
COM port 1 modem connection	Disable

In the MINAS A5 is sufficient setting the parameter [05-030] [RS485 Baud rate setup] at the same velocity of

communication baud rate.

Sol tarafta Project kısmından System Register menüsü altında Serial Ports a girerek, COM1'i tıklayarak bir önceki sayfadaki gibi belirtilen şekilde ayarlar girilmelidir.Ayrıca 412 nolu Communication Mode a tıklayarak Program controlled [General purpose] seçilmelidir.

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Project [Untitled]	412	Communication mode	ntrolled [General purpose]	•	MEWTOCOL-COM master	The PLC can be a MEWTOCC	Filter settings: <all> / <a< th=""><th>LL> / <all></all></th></a<></all>	LL> / <all></all>
PLC (FPOR 16k C10,C14,C16)	410	Station number	MEWTOCOL-COM master/s	lave [Com	puter link]	Station numbers are the num		-
System registers	415	Baud rate	Program controlled [General	purpose]		Specifies the baud rate of the	► 🛼 PEW-CONTROL-	DRIVER-A5-VIA-RS485
Memory size	413	Data length	PLC link (MEWNET-W0)			Selects the data length.	🕨 🗁 🕞 IEC standard libr	ary
Hold on/off	413	Parity	Modbus RTU master/slave			Selects the parity check.	🕨 🕞 🕞 FP library	
Act on error	413	Stop bits	1 bit		1 bit	Specifies the number of stop	🕨 🕞 🕞 FP tool library	
A Link medawater	413	Start code	No-STX		No-STX	Selects the start code.	🖡 🎉 🕞 FP pulsed library	
A Time speed counter,	413	End code/reception done condition	CR		CR	Selects the end code.		
Time constants	416	Receive buffer starting address	0		0 to 12314	Specifies the starting address		
	417	Receive buffer capacity	0	word	0 to 2048	Specifies the number of word		
COM1	412	Modem connection	Disable		Disable	Specifies if a modem is conn-		
Erogram cone	46	PLC link 0 and 1 allocation setting	Use PLC link 0		Use PLC link 0			
Libraries	47	PLC link 0 - Highest station number i	16		1 to 16			
System libraries	40	PLC link 0 - Link flags - Send/receiv	0	word	0 to 64	This area is not shared by the		
PEW-CONTROL-DRIVER-	42	PLC link 0 - Link flags - Send area	0	addr	0 to 63	No data from this area will be		
- Mai Tasks	43	PLC link 0 - Link flags - Send area	0	word	0 to 64			
DUTs	41	PLC link 0 - Link registers - Send/rec	0	word	0 to 128	This area is not shared by the		
Global variables	44	PLC link 0 - Link registers - Send are	0	addr	0 to 127	No data from this area will be		
POUs	45	PLC link 0 - Link registers - Send are	0	word	0 to 127			
	57	PLC link 1 - Highest station number i	16		1 to 16			
	50	PLC link 1 - Link flags - Send/receiv	0	word	0 to 64	This area is not shared by the		
	52	PLC link 1 - Link flags - Send area	64	addr	64 to 127	No data from this area will be		
	53	PLC link 1 - Link flags - Send area	0	word	0 to 64			
	51	PLC link 1 - Link registers - Send/rec	0	word	0 to 128	This area is not shared by the		
	54	PLC link 1 - Link registers - Send are	128	addr	128 to 255	No data from this area will be		
	55	PLC link 1 - Link registers - Send are	0	word	0 to 127			
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Yapılan ayarlardan sonra COM1 port bilgileri aşağıdaki gibi görüntülenmektedir.

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Image: PLC (FP0R 16k C10,C14,C16)	410	Station number	1		1 to 99	Station numbers are the num		-			
🌢 🦫 System registers	415	Baud rate	19200	baud	115200	Specifies the baud rate of the	PEW-CONTROL-	DRIVER-A5-VIA-RS485			
🥭 Memory size	413	Data length	8 bits		8 bits	Selects the data length.	IEC standard libra	IIV			
Je Hold on/off	413	Parity	None		None	Selects the parity check.	P library				
Act on error	413	Stop bits	1 bit		1 bit	Specifies the number of stop	FP tool library				
- J Time-out	413	Start code	No-STX		No-STX	Selects the start code.	FP pulsed library				
High-speed counter,	413	End code/reception done condition	None		CR	Selects the end code.					
Time constants	416	Receive buffer starting address	0 DT0 i ifade et	tmekted	0 to 12314	The data registers DT0 to DT1					
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COM1	412	Modem connection	Disable		Disable	Specifies if a modem is conn-					
Program code (1555 step	46	PLC link 0 and 1 allocation setting	Use PLC link 0		Use PLC link 0						
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PEW-CONTROL-DRIVER-	42	PLC link 0 - Link flags - Send area	0	addr	0 to 63	No data from this area will be					
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DUTs	41	PLC link 0 - Link registers - Send/rec	0	word	0 to 128	This area is not shared by the					
🚽 🚰 👘 Global variables (22 steps)	44	PLC link 0 - Link registers - Send are	0	addr	0 to 127	No data from this area will be					
POUs (82 steps)	45	PLC link 0 - Link registers - Send are	0	word	0 to 127						
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	52	PLC link 1 - Link flags - Send area	64	addr	64 to 127	No data from this area will be					
	53	PLC link 1 - Link flags - Send area	0	word	0 to 64						
	51	PLC link1 - Link registers - Send/rec	0	word	0 to 128	This area is not shared by the					
	54	PLC link 1 - Link registers - Send are	128	addr	128 to 255	No data from this area will be					
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Bütün adımları yapıldığı halde bu hata alınmaktadır.

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Yukarıdaki hataya sebep olan gawBuffer değişkeni aşağıdaki gibi Global variables kısmına eklenerek gerekli adres verilir.

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Global variables kısmına eklediğimiz gawBuffer adresinin TYPE kısmından tipini ARRAY OF Word [0...19] olarak seçiyoruz.



Değişkenin son hali aşağıdaki ekranda gösterildiği gibidir.



Gerekli düzeltmelerin sonunda programı derlediğimizde Error uyarısı kalmadığını görünce PLC ye projemizi yükleyebiliriz. PLC ye projeyi yükledikten sonra RO bitini tetiklediğimizde "sDriverModel" kısmına veri geldiğini görebiliriz.

