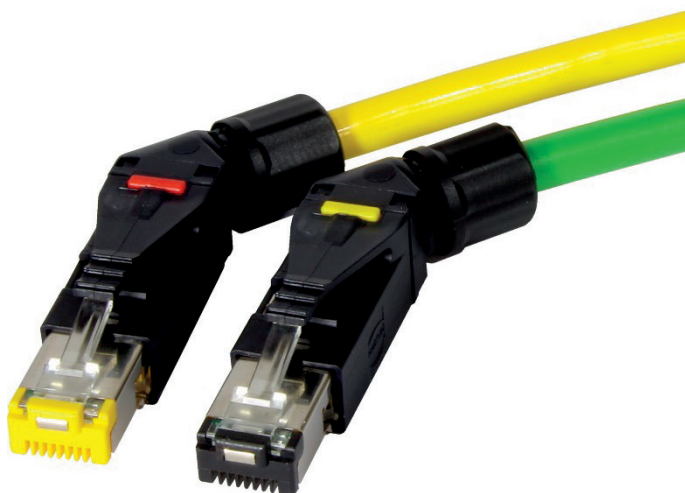
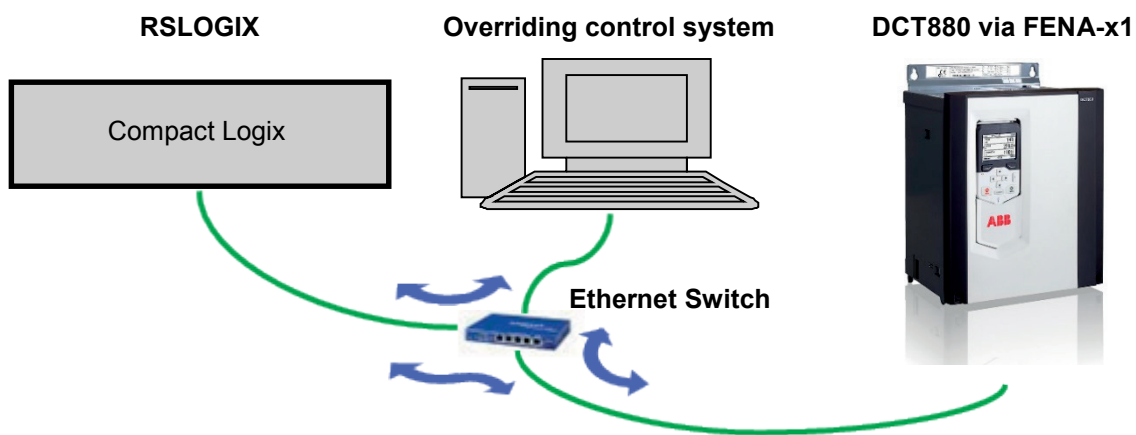


Productinformation DCT880 via FENA-01

Connection of DCT880 via FENA-x1 at Ethernet IP

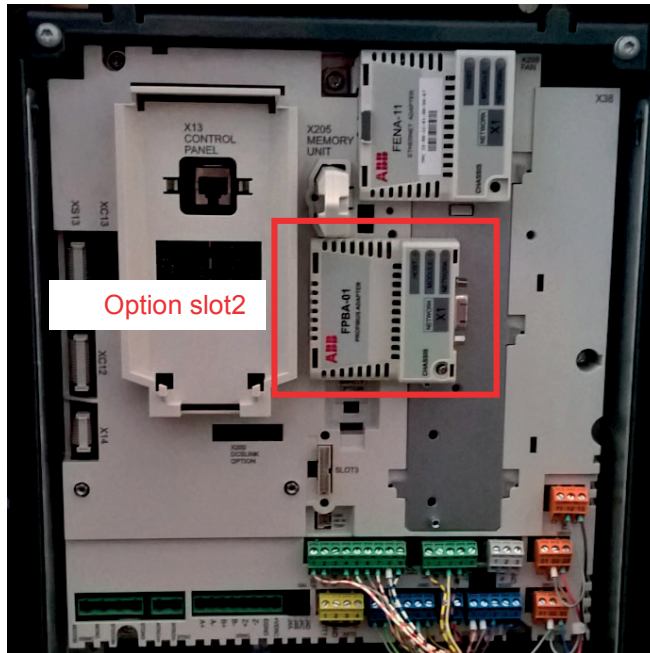


Patch Cable:
RJ45-Stecker, Harting RJ Industrial10G.

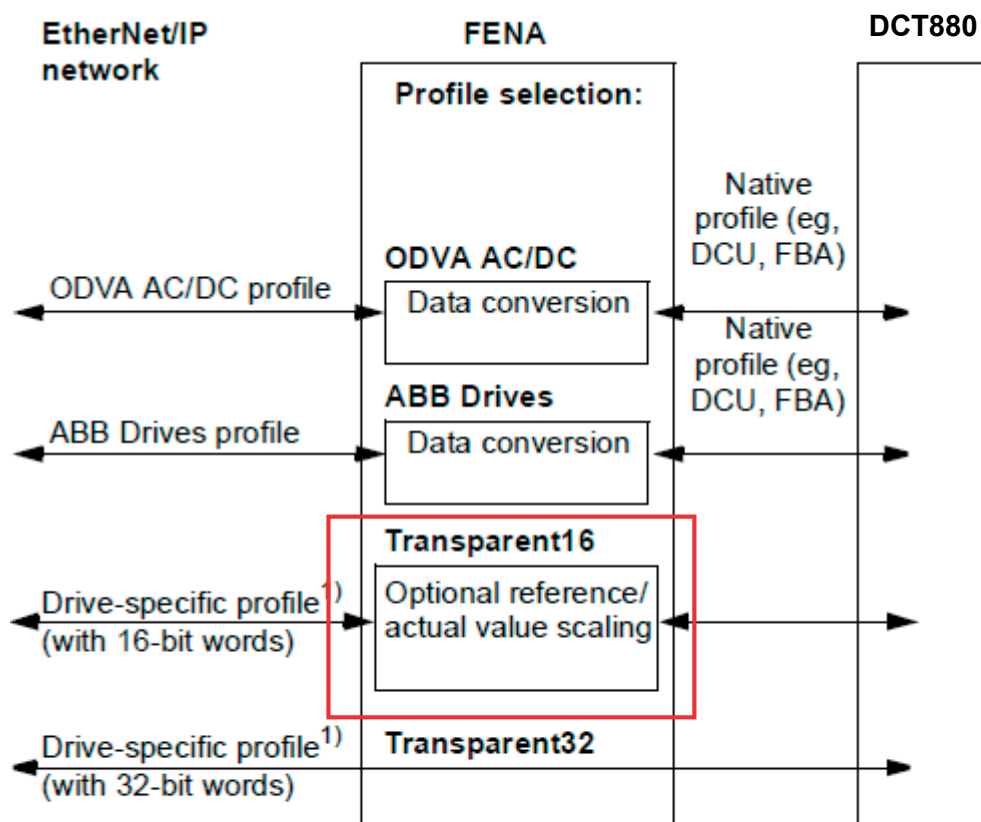
DCT880 Configuration as fieldbus device

To connect the DCT880 as fieldbus device, the following parameters need to be set:

Parameter	Setting
50.01 FBA A Enable	0: Disable; 1: Option slot1; 2: Option slot2; recommended. 3: Option slot3;
50.02 FBA A comm loss func	0: No action; 1: Fault; only for profiles ABB DRIVES and PROFIdrive. 2: Warning; 4: Fault always; also for transparent 16. 5: Warning always; also for transparent 16.
50.03 FBA A comm loss t out	0.3 6553.5 seconds.



Communication Profiles



¹⁾ Can be used if the native profile is supported by the drive.

Parameter Group 51

Parameter	Setting																																		
51.01 FBA A type	128: Ethernet ; This parameter is read-only.																																		
51.02 Protocol/Profile	0 ... 7 for Modbus TCP 10 ... 14 for PROFINET IO 100 ... 103 for Ethernet/IP using 100 = EIP AC/DC EtherNet/IP protocol: ODVA AC/DC drive profile 101 = EIP ABB Pro EtherNet/IP protocol: ABB Drives profile 102 = EIP T16 EtherNet/IP protocol: Transparent 16-bit profile 103 = EIP T32 EtherNet/IP protocol: Transparent 32-bit profile																																		
51.03 Commrates	0: Auto ; Sets the bit rate for the Ethernet interface.																																		
51.04 IP configuration	0: Static IP ; example. 1: Dyn IP DHCP;																																		
51.05 IP address 1	192 ; example.																																		
51.06 IP address 2	168 ; example.																																		
51.07 IP address 3	1 ; example.																																		
51.08 IP address 4	10 ; example.																																		
51.08 Subnet CIDR	24 ; example. <table border="1"> <thead> <tr> <th>Dotted decimal</th> <th>CIDR</th> </tr> </thead> <tbody> <tr><td>255.255.255.254</td><td>31</td></tr> <tr><td>255.255.255.252</td><td>30</td></tr> <tr><td>255.255.255.248</td><td>29</td></tr> <tr><td>255.255.255.240</td><td>28</td></tr> <tr><td>255.255.255.224</td><td>27</td></tr> <tr><td>255.255.255.192</td><td>26</td></tr> <tr><td>255.255.255.128</td><td>25</td></tr> <tr><td>255.255.255.0</td><td>24</td></tr> <tr><td>255.255.254.0</td><td>23</td></tr> <tr><td>255.255.252.0</td><td>22</td></tr> <tr><td>255.255.248.0</td><td>21</td></tr> <tr><td>255.255.240.0</td><td>20</td></tr> <tr><td>255.255.224.0</td><td>19</td></tr> <tr><td>255.255.192.0</td><td>18</td></tr> <tr><td>255.255.128.0</td><td>17</td></tr> <tr><td>255.255.0.0</td><td>16</td></tr> </tbody> </table>	Dotted decimal	CIDR	255.255.255.254	31	255.255.255.252	30	255.255.255.248	29	255.255.255.240	28	255.255.255.224	27	255.255.255.192	26	255.255.255.128	25	255.255.255.0	24	255.255.254.0	23	255.255.252.0	22	255.255.248.0	21	255.255.240.0	20	255.255.224.0	19	255.255.192.0	18	255.255.128.0	17	255.255.0.0	16
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255.255.192.0	18																																		
255.255.128.0	17																																		
255.255.0.0	16																																		
51.19 T16 scale	0 ; Scaling: 10,000 == 100.00 %.																																		

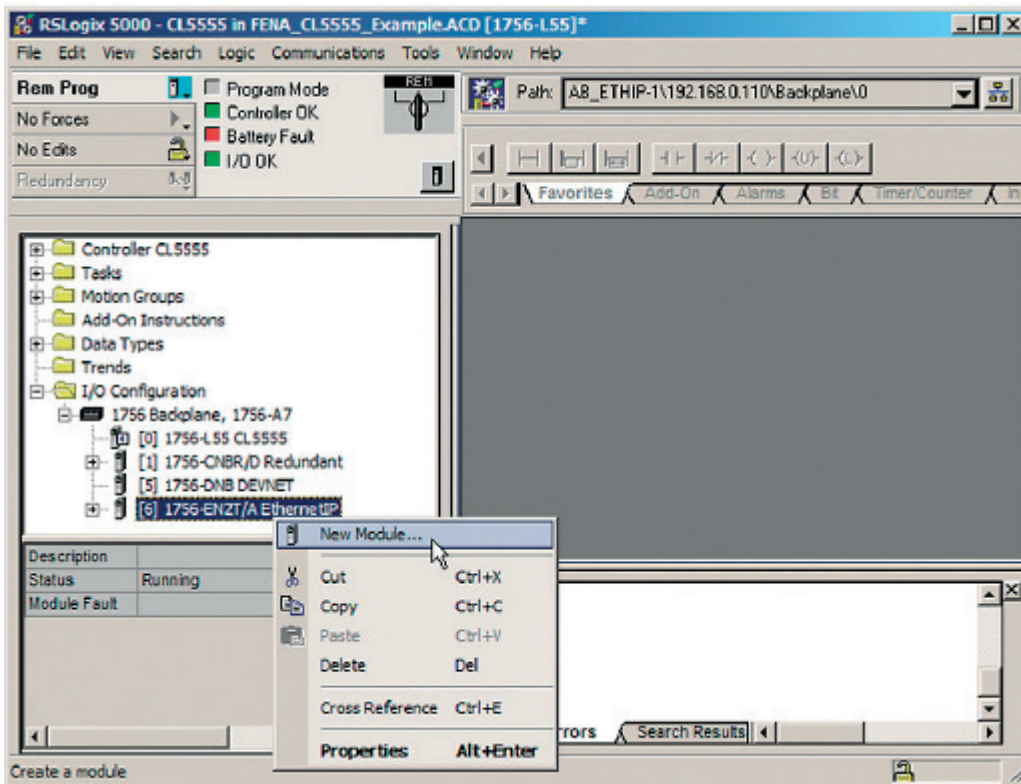
Transparent 16 with one assembly plus drive parameters

Instance 111 (Transparent 16 profile) PLC → DCT880									
Byte	Bit7	Bit6	Bit5	Bit4	Bit3	Bit2	Bit1	Bit0	Drive Paramater
0	Drive Profile 16-bit Control Word (Low Byte)								6.03 FB A CW
1	Drive Profile 16-bit Control Word (High Byte)								
2	Drive Profile 16-bit Reference 1 Word (Low Byte)								3.05 FB A Reference 1
3	Drive Profile 16-bit Reference 1 Word (High Byte)								
4	DATA OUT 1 Value (Low Byte)								53.01 FB A data out1 (Pointer)
5	DATA OUT 1 Value (High Byte)								
~									
22	DATA OUT 10 Value (Low Byte)								53.10 FB A data out10 (Pointer)
23	DATA OUT 10 Value (High Byte)								

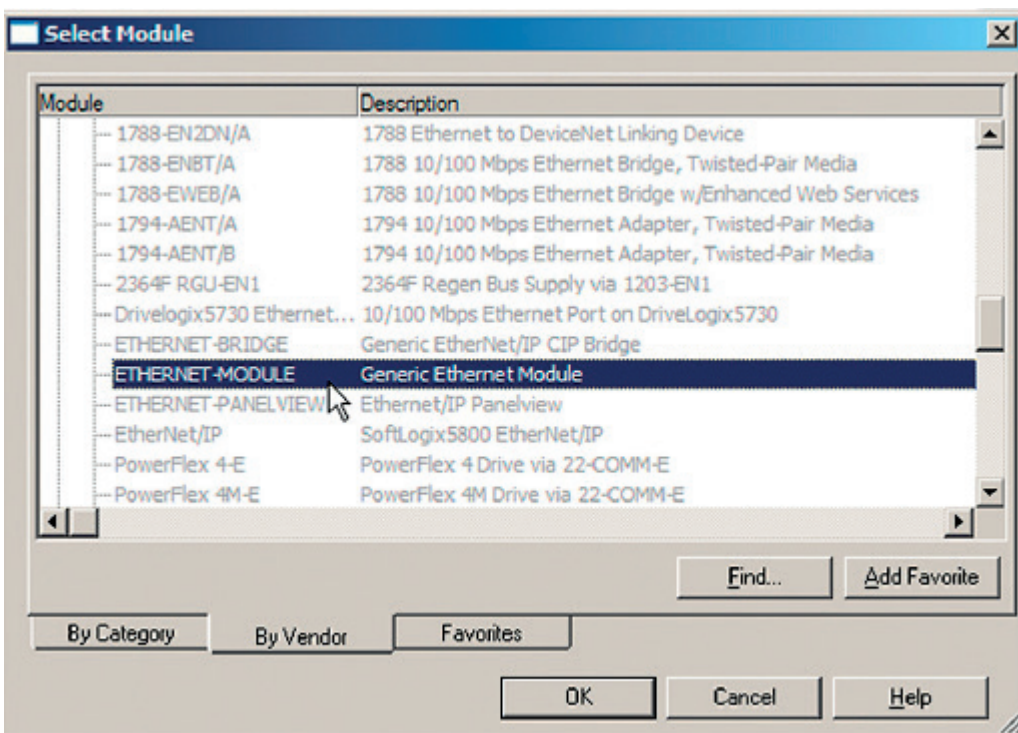
Instance 161 (Transparent 16 profile) PLC ← DCT880									
Byte	Bit7	Bit6	Bit5	Bit4	Bit3	Bit2	Bit1	Bit0	Drive Paramater
0	Drive Profile 16-bit Status Word (Low Byte)								50.09 FB A SW transparent source
1	Drive Profile 16-bit Status Word (High Byte)								
2	Drive Profile 16-bit Actual 1 Word (Low Byte)								50.10 FB A act1 transparent source
3	Drive Profile 16-bit Actual 1 Word (High Byte)								
4	DATA IN 1 Value (Low Byte)								52.01 FB A data out1 (Pointer)
5	DATA IN 1 Value (High Byte)								
~									
22	DATA IN 10 Value (Low Byte)								52.10 FB A data out10 (Pointer)
23	DATA IN 10 Value (High Byte)								

Configure an Allen-Bradley PLC

- 1) Register a new module

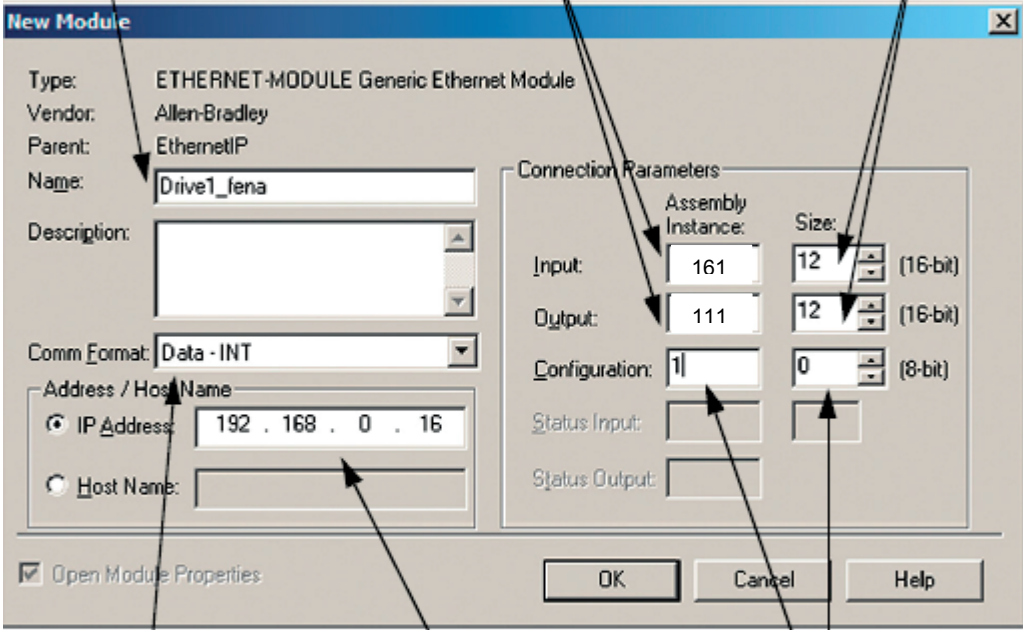


- 2) In the select Module window, select ETHERNET – Module



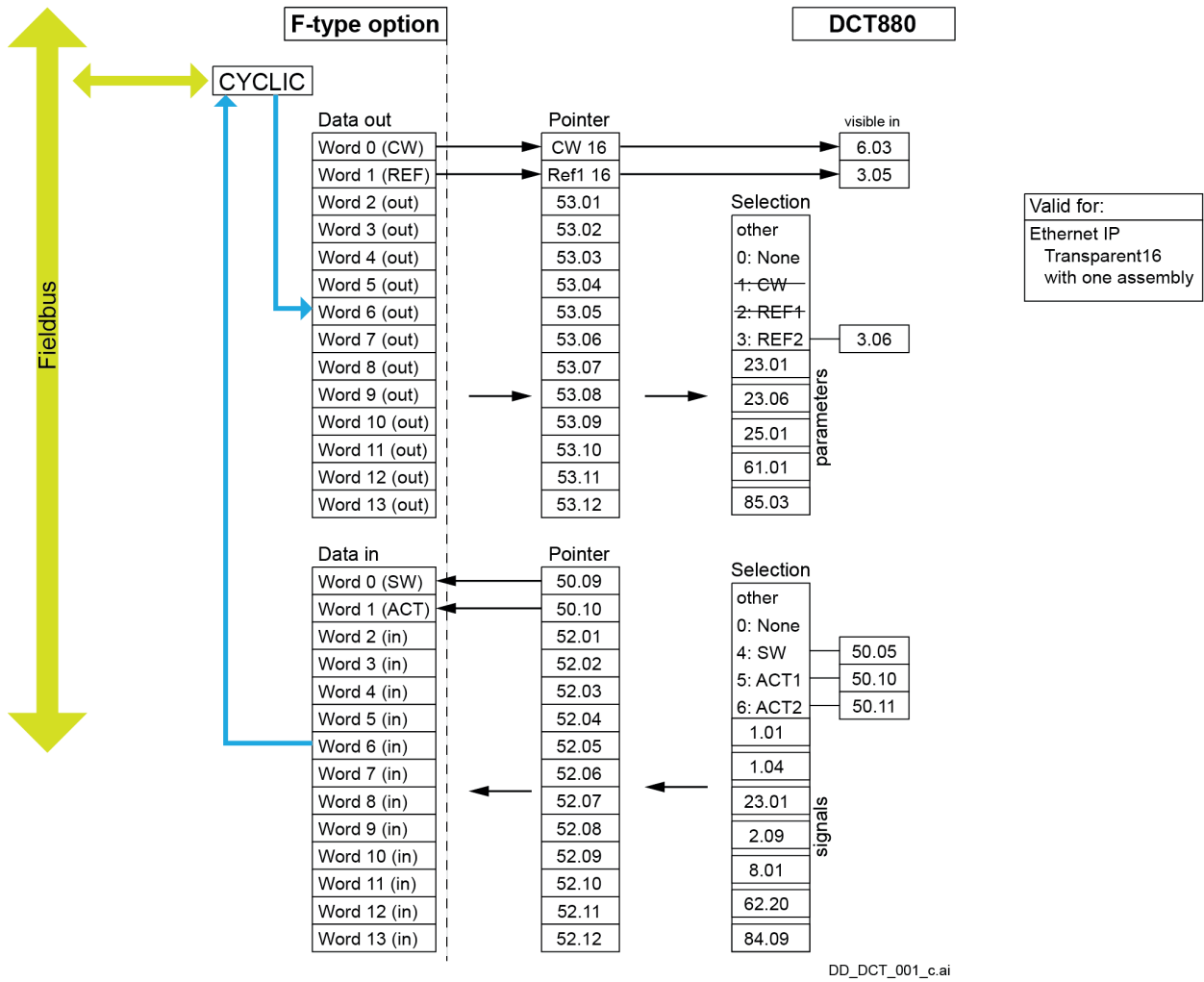
3) Enter the following information


Type a name for the adapter module.	Type the Input and Output Assembly Instance numbers.	Select the sizes of the Input and Output words for the adapter module.
-------------------------------------	--	--



FENA uses 16-bit words. Change Comm Format to Data - INT (16 bits).	Type the IP address of the adapter module.	Set Configuration as 1 and Size as 0.
---	--	---------------------------------------

Configuration using Ref1




	<p>Setting of parameters 53.01 ... 53.10 see above drawing.</p> <p>For parameters 53.01 ... 53.10 use Other; source selection. Mappings</p> <p>1: CW 16bit; 2: Ref1 16bit; are not allowed.</p>
---	---

Parameter Settings

Defining the reference values in group 53: PLC ⇒ DCT880.			
Word	Pointer	Setting	Remarks
0	Fixed	CW 16bit;	Control Word; visible in 6.03 FBA A CW.
1	Fixed	Ref1 16bit;	Reference value 1; visible in 3.05 FB A reference 1. Scaling: 10,000 == 100.00 %.
2	53.01	Ref2 16bit;	Reference value 2; visible in 3.06 FB A reference 2. Scaling: 10,000 == 100.00 %.
3	53.02	Other; e.g. 21.11	Reference value 3; visible in 21.11 Ext reference 1. Scaling: 10,000 == 100.00 %.
	...		
11	53.10	...	Reference value 10; ... Scaling: 10,000 == 100.00 %.

Defining the actual values in group 50 & 53: PLC ⇐ DCT880.			
Word	Pointer	Setting	Remarks
0	50.09	4: SW 16bit;	50.09 FBA A SW transparent source = Other; e.g. 06.13 Global Status Word.
1	50.10	Other; e.g. 01.53	Actual value1; e.g. 01.53 Leg 1 Power relative actual. Scaling: 10,000 == 100.00 %.
2	52.01	Other; e.g. 01.54	Actual value 2; e.g. 01.54 Leg 2 Power relative actual. Scaling: 10,000 == 100.00 %.
3	52.02	Other; e.g. 01.55	Actual value 3; e.g. 01.55 Leg 3 Power relative actual. Scaling: 10,000 == 100.00 %.
	...		
11	52.10	...	Actual value10; ... Scaling: 10,000 == 100.00 %.

	Each change in parameter groups 50, 51, 52 and 53 must be validated using 51.27 FBA A par refresh = Refresh.
---	---

Scaling the reference values

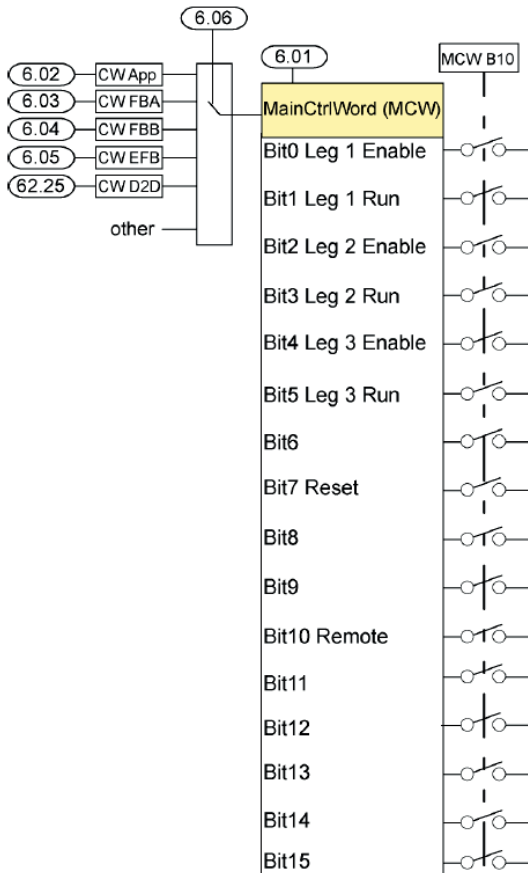
The reference values are scaled to ±10,000 (decimal), this equals ±100.00 %.

Additional Parameters

Start / Stop

Parameter	Setting
06.06 MCW Source	1: FBA A (6.03);
19.10 Leg 1 Command Location Selector	0: MCW 6.01;
19.11 Leg 2 Command Location Selector	0: MCW 6.01;
19.12 Leg 3 Command Location Selector	0: MCW 6.01;

06.01 Main Control Word active



Reference Chain

Parameter	Setting
22.15 Leg 1 Cha A Main Ref Selector	4: FB A reference 1 (3.05);
24.15 Leg 2 Cha A Main Ref Selector	5: FB A reference 2 (3.06);
26.15 Leg 3 Cha A Main Ref Selector	Other; e.g. 21.11 Ext reference 1.

Known Issues

- EDS File generated by Drive Composer PRO is not compatible with RS Logix programming tool
 - Solution: use Generic Ethernet Module

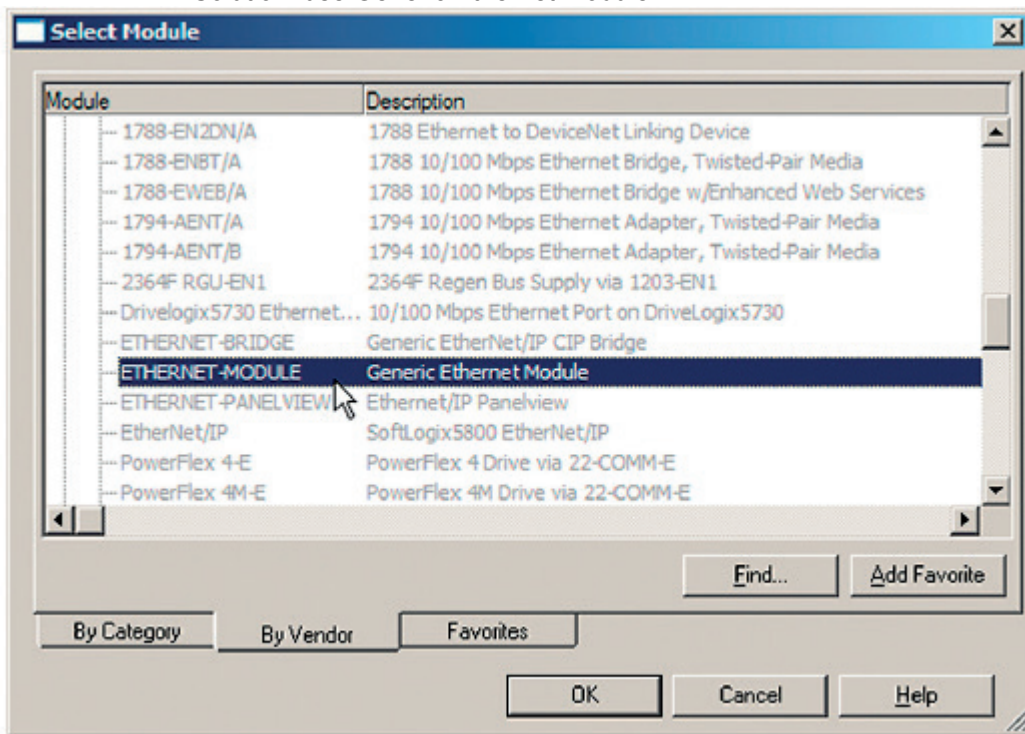


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