

F2-DEVNETS Compatibility Mode

In This Appendix. . . .

— Configuring the F2-DEVNETS-1 for F2-DEVNETS

Configuring for F2-DEVNETS Compatibility Mode

The F2-DEVNETS-1 module can replace a F2-DEVNETS module if the need arises. The F2-DEVNETS-1 can be configured to look and act like a F2-DEVNETS to the DeviceNet Master. This mode is not recommended for new applications.

1. Install both Baud Rate jumpers and Address 1 jumper only. Reinstall the module and power up.
2. The MS and NS LEDs flash red and green while powered up.
3. Power down and set the Baud Rate and the Address for the application, then power up.
4. The following message will be printed out of the F2-DEVNETS-1 serial port, indicating backwards compatibility mode is selected:

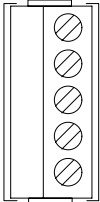
**F2-DEVNETS-1 MACID-02 CAN Baud Rate=125K V3.1 ROM 08/20/2002
FLASH 08/21/2002 Backward Compatibility with F2-DEVNETS**

Configuring for F2-DEVNETS-1 Mode (Factory Default Mode)

1. Install both Baud Rate jumpers and leave the Address jumpers off, then install the module and power up.
2. The MS and NS LEDs flash red and green while powered up.
3. Power down and set the Baud Rate and Address for the application. Reinstall the module and power up.
4. The following message will be printed out of the F2-DEVNETS-1 serial port, indicating default mode:

**F2-DEVNETS-1 MACID-02 CAN Baud Rate=125K V3.1 ROM 08/20/2002
FLASH 08/21/2002**

Connector Cross Reference

F2-DEVNETS		F2-DEVNETS-1	
Pin	Description		
5	V+ (Bus power positive)		V+ (red)
4	Ground (Bus power common)		CAN* High (white)
3	CAN_H		Shield (bare)
2	CAN_L		CAN* Low (blue)
1	Shield		V- (black)

* Controller Area Network (CAN)

I/O Module Table

Module Type	Part Number	ID Code (Hex)	F2-DEVNETS-1 Mode		F2-DEVNETs Compatibility Mode	
			Bytes Produced	Bytes Consumed	Bytes Produced	Bytes Consumed
Discrete Inputs	F2-08SIM	14	1	0	1	0
	D2-08ND3	14	1	0	1	0
	D2-16ND3-2	08	2	0	2	0
	D2-32ND3	05	4	0	4	0
	D2-08NA-1	14	1	0	1	0
	D2-08NA-2	14	1	0	1	0
	D2-16NA	08	2	0	2	0
Discrete Inputs	D2-04TD1	0A	0	1	0	1
	D2-08TD1	13	0	1	0	1
	D2-16TD1-2	06	0	2	0	2
	D2-16TD2-2	06	0	2	0	2
	D2-32TD1	0F	0	4	0	4
	D2-08TA	13	0	1	0	1
	F2-08TA	13	0	1	0	1
	D2-12TA	06	0	2	0	2
	D2-04TRS	0A	0	1	0	1
	D2-08TR	13	0	1	0	1
	F2-08TR	13	0	1	0	1
	F2-08TRS	13	0	1	0	1
	D2-12TR	06	0	2	0	2
Discrete Combo	D2-08CDR	1	1	1	1	1
Analog In	F2-04AD-1(L)	03	8	0	2	0
	F2-04AD-2(L)	03	8	0	2	0
	F2-08AD-1	01	16	0	2	0
	F2-08AD-2	01	16	0	2	0
Temperature In	F2-04RTD	16	9	0	3	0
	F2-04THM	16	9	0	3	0
Analog Out	F2-02DA-1(L)	04	0	4	0	2
	F2-02DA-2(L)	04	0	4	0	2
	F2-02DAS-1	17	0	4	0	4
	F2-02DAS-2	17	0	4	0	4
	F2-08DA-1	16	0	16	0	2
	F2-08DA-2	16	0	16	0	2
Analog Combo	F2-4AD2DA	02	8	4	2	2

Modules not supported:

F2-CP128

H2-CTRIO, H2-ERM (-F), H2-ECOM (-F)

D2-DCM, D2-CTRINT, D2-RMSM

F2-DEVNETS Compatibility Mode

DEVICENET GROUP2 ONLY EXPLICIT MESSAGES

These are used to allocate/release the connection between the master and its slave.

DEVICENET COMMANDS

The following list identifies the data being transferred. When **GET** is alone in the **SERVICE** column, either indicates the item is fixed and cannot change or that the system sets the item to reflect the system processing characteristics.

SET indicates the user can modify the item.

Unless indicated otherwise, all data is given in HEX format. Single numbers shall be considered zero filled and right justified.

CLASS=1

ATTR	INSTANCE	ITEM	VALUE	DESCRIPTION	SERVICE
1	1	VENDOR ID	157d	FACTS Engineering	GET
2	1	PRODUCT TYPE	0	General Purpose I/O Device	GET
3	1	PRODUCT CODE	20d	Vendor Assigned Product Code	GET
4	1	REVISION MAJOR.MINOR	3.1	Released Product Version	GET
5	1	ID STATUS	1	Current Status of Entire Device	GET
6	1	SERIAL NUMBER	XXXX	4-Digit Vendor Assigned	GET
7	1	PRODUCT NAME	F2-DEVNETS	Vendor Assigned	GET
—	1	RESET		Reset the Device	RESET

CLASS=3

ATTR	INSTANCE	ITEM	VALUE	DESCRIPTION	SERVICE
1	1	MACID	0-63	MACID (Media Access Control ID)	GET
2	1	BAUD RATE	0-2	0=125K, 1=250K, 2=500K Baud	GET
3	1	BUS OFF INTERRUPT	X	BUS-OFF INTERRUPT PROCESSING	GET
4	1	BUS OFF COUNT	X	BUS-OFF COUNT	GET/SET
5	1	ALLOCATION	X	EXPLICIT and I/O CONNECTIONS	GET

CLASS=4

ATTR	INSTANCE	ITEM	VALUE	DESCRIPTION	SERVICE
3	1	I/O DATA	8 Bytes	Read Input Data (Produced) Write Output Data (Consumed)	GET / SET
3	2	CONFIG DATA	4 Bytes + 1 Word (16 Bits) for each occupied slot. Bytes 1-4 are always supplied. Other bytes are supplied when appropriate.		GET
		BYTE 1	0-3F (63d)	MAC ID	
		BYTE 2	0-2	BAUD RATE	
		BYTE 3	0-8	SLOTS (0=Empty Rack)	
		BYTE 4	0-FFF	SLOTS FILLED (Bit 0=Slot 0, Bit 1=Slot 1, etc.)	
		BYTES 5/6	Bits 15-8 Bits 7-0	# Inputs # Outputs	
3	3	CONFIG DATA	8 Bytes	Configuration Data with the module ID for each occupied slot. 0FFH=Unoccupied	GET
		Byte 1		ID of Module in Slot 0	
		Byte 2		ID of Module in Slot 1	
		Byte 3		ID of Module in Slot 2	
		Byte 4		ID of Module in Slot 3	
		Byte 5		ID of Module in Slot 4	
		Byte 6		ID of Module in Slot 5	
		Byte 7		ID of Module in Slot 6	
		Byte 8		ID of Module in Slot 7	
3	4	PRODUCED DATA	0-0FFFFH	4 Channels (8 Bytes) of Analog Inputs (1st 4 of last 8 Analog Inputs in Base)	GET
3	5	PRODUCED DATA	0-0FFFFH	4 Channels (8 Bytes) of Analog Inputs (2nd 4 of last 8 Analog Inputs in Base)	GET
3	6	PRODUCED DATA	0-0FFFFH	4 Channels (8 Bytes) of RTD/THM Iputs	GET

CLASS=5

ATTR	INSTANCE 1=EXPLICIT 2=POLLING	ITEM	VALUE	DESCRIPTION	SERVICE
1	1/2	CNXN ATTR STATE	X	0=None, 1=Configuring, 2=Waiting, 3=Connected, 4=Timed-Out	GET
2	1/2	CONNECT TYPE	X	0=Explicit 1=I/O	GET
3	1/2	CONNECT TRIGGER	X	083H Explicit 082H I/O	GET
4	1/2	CONNECT PRODUCED	X	Connection ID that will produce...FFFF if no production	GET
5	1/2	CONNECT CONSUMED	X	Connection ID that will produce...FFFF if no consumption	GET
6	1/2	CONNECT COMM ID	021h	MSG Group2 Consuming	GET
7	1/2	PRODUCED CONNECTION SIZE	X	8 Bytes of Non-Fragmented I/O Data Up to 10 Bytes Fragmented Explicit Messaging	GET
8	1/2	CONSUMED CONNECTION SIZE	X	8 Bytes of Non-Fragmented I/O Data Up to 10 Bytes Fragmented Explicit Messaging	GET
9 (see Note)	1/2	CONNECT EXPECTED PACKET RATE	X	Number of Milliseconds	GET/SET
0C	1/2	CONNECT WD TIMEOUT	X	Watch-Dog Time-Out Action Reset Device	GET
0D	1/2	CONNECT PATH LENGTH	X	0 for Explicit 6 for I/O	GET
0E	1/2	CONNECT PATH LENGTH	X	0 for Explicit 6 Bytes for I/O	GET
0F	1/2	CONNECT CONSUMED PATH LENGTH	X	0 for Explicit 6 for I/O	GET
10	1/2	CONNECT CONSUMED ATTR ID	0/STRING	0 for Explicit 6 Bytes for I/O	GET
11	1/2	PROD INHIBIT	X		GET
—	1/2	RESET	—	Start Inactivity Timer	RESET

Note: The F2-DEVNETS has an internal timer that can be set to timeout after a selected number of milliseconds. If there is no activity during the selected time value the connection will release.

When this timer is set to zero the connection will not timeout.

Since the operation depends on the controlling actions of a Master CPU existing externally on the network, there is no none reason to allow the connection to timeout. To keep the connection(s) open, simply set the Expected Packet Rate value for each of the connections to zero.

All outputs will turn off when the connection is released. This will occur when an Expected Packet Rate value counts down to zero or when the master releases the connection. This is a fixed condition and cannot be modified.