# **DVIF10** Dry or Voltage Input Interface

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## DRY VOLTAGE INTERFACE 10

### DVIF10

The Dry Voltage Interface 10 (DVIF10) is an alarm contact input device with 10 inputs that is PC programmable by the user, using the supplied Microsoft Windows<sup>™</sup> software program. The DVIF10 will accept Dry (no voltage) contact closure or Voltage, high or low, input. Voltage input range is 1 to 24 volts AC or DC. Each input is fused to protect the inputs in case voltage is applied to a contact input that has been configured for no voltage.

Each contact can be configured for a different individual pager ID (cap code), Alert type (A, B, C, or D) and repeats ranging from none, 1-4, or until Change of State. Time interval between repeats can be select from 1 minute to 59 minutes. The paging protocol is a global setting of either Scope<sup>™</sup> or Motorola<sup>™</sup> COMP2. In addition the user can select to send either Alphanumeric or Numeric messages.

The DVIF10 can be daisy chained together via RS485 Cat 5 RJ45 cabling to support up to 40 contact inputs. The Dry & Voltage Interface program will run on Microsoft Windows™ XP home or professional and the new Vista.



comPPage's DVIF10 is a unit that was Designed, Developed and Manufactured in the USA. Each unit has a <u>Limited</u> <u>Lifetime Warranty</u>.

#### INSTALLATION

- 1. Check polarity of the AC Adapter supplied with the unit.
- 2. Connect the power input observing correct polarity. (+ and -)
- 3. Insert CD into the CD-R or CD-RW drive, the CD will auto start.
- 4. If auto start does not function, Select [START], [RUN] type in {cd-rom drive letter and enter SETUP.EXE.
- 5. Press OK.

#### SETUP

- 1. Connect the DVIF10 to a computer using the supplied Null-modem cable.
- 2. Open the DVIF10 Configure program
- 3. Turn on the DVIF10 unit.
- 4. Select the communication port the DVIF10 will be connected to. [Comm Settings].
- 5. Select the baud rate of the port using the drop down menu [Transmitter baud rate].
- 6. Select [Connect]. Next to the word Connect will appear [Unit Connected] Under Configuration the Send and Receive button will be open.

	M1 📉	Send
ſ	Connect	Receive

- 7. Select the Paging Protocol from the drop down menu. Scope or Comp2.
- 8. If the configuration will have slaves attached select the number of slaves from the drop down menu.
- 9. Do not change RS485 setting unless notified by comPPage technical support.

ile Device Inputs Configuration Help	
Master Device	Input 1 Configuration
Transmitter Baud Rate: 9600-N-8-1	✓ Enabled Type: Voltage (Alert-High) ▼
RS-485 Baud Rate: 57600-N-8-1	Reset Message: ALARM DE-ACTIVATED
Protocol: Scope   Previous	Active Message: ALARM ACTIVATED
Number of Slaves: 0  Next	ID: 0300800 Repeat: 2 -
Comm Settings Configuration	Beep Type: D
Port Name: COM1  Send	Data Type: Alphanumeric 💌
Connect Receive	Baud Rate: 1200   Previous Next

#### **Programming Master Unit**

- 1. From the top menu select **Devise** Master
- 2. At the top left of the screen the word Master will appear.
- 3. On the right side of the screen Input 1 Configuration will will be shown.
- **4.** Ensure the Input is checked **Enabled**. Select the type of Input from the **Type** drop down menu.
- 5. Complete all fields. When completed select the Next Button.
- 6. Continue unit all 10 inputs have been programmed.

DVI	F10 Con	ıfig		
File	Device	Input:	s Configura	tion Help
Mas	Ma	ster	Ctrl+M	
Trar	Sla	ve 1	Ctrl+1	×
	Sla	ve 2	Ctrl+2	
F	Sla	ve 3	Ctrl+3	~
Prot	Co	nnect	Ctrl+C	Previous

out i coninguratio		
Enabled	Type:	Dry N/O 👻
Denet Mercener		Dry N/C
heset message.	ALARM DE	Voltage (Alert-High)
Active Message:	ALARM AC	CTIVATED
ID: 030	0800	Repeat: 2
eep Type: D		✓ Duration: 1 ✓
ata Type. [Aipi	lanumenc	<u> </u>
aud Rate: 120	0	Previous Next

7. When all inputs have been programmed, select the **Send** button



8. Remove Null Modem Cable and power down the DVIF10. The unit is now ready for service.

#### **Programming Slave Unit(s)**

Follow the same procedure setting up the Slave unit(s) for programming as for the Master Unit. After connecting to the unit follow the programming procedure below.

- 1. From the top menu select **Devise Slave 1-3.**
- 2. At the top left of the screen the word <u>Slave 1</u> will appear.
- 3. On the right side of the screen Input 1 Configuration will will be shown.
- 4. Ensure the Input is checked **Enabled**. Select the type of Input from the **Type** drop down menu.
- 5. Complete all fields. When completed select the **Next** Button.
- 6. Continue unit all 10 inputs have been programmed

Transmitter Baud Rate:	9600-N-8-1	~
RS-485 Baud Rate:	57600-N-8-1	~
Protocol: Scope	- M	Previous
Number of Slaves: 0		Next
Comm Settings	Cor	nfiguration

7. When all inputs have been programmed, select the **Send** button



8. Remove Null Modem Cable and power down the DVIF10. The unit is now ready for service.

🛃 DVIF10 Config File Device Inputs Configuration Help Mas Master Ctrl+M Slave 1 Ctrl+1 Tran V Ctrl+2 Slave 2 × Slave 3 Ctrl+3 Prot Connect Ctrl+C Previous

#### **Connecting Master / Slave Unit(s)**

- 1. Connect input wiring to the Master Unit.
- 2. Connect input wiring to the Slave Unit(s).
- 3. Connect the Master to the 1<sup>st</sup> Slave using a standard RJ45 Cross Over Cable. Out on the Master and In on the 1<sup>st</sup> Slave.
- 4. If additional Slave units are installed use a standard RJ45 Patch Cable to connect the remaining slaves to the 1<sup>st</sup> Slave.
- 5. Using a Null Modem Cable connect the RS232 output from the Master Unit to the Paging Transmitter.

#### **Power Up Sequence**

- 1. Turn the power on in the following sequence.
  - a. Master Unit
  - b. Slave 1-3
- 2. It will take approximately 30 Second to 1 minute for the units to initialize.
- 3. Units will be fully operational.

#### **Reading and Modifying DVIF10 Data**

- 1. Connect the RS232 output of the DVIF10 to the computer using a 9 Pin Null Modem cable.
- 2. Activate the DVIF10 Configuration program.
- 3. Turn the DVIF10 power on.
- 4. From the top menu select Master or Slave 1-3 according to the unit to be programmed.
- 5. Select Connect.
- 6. Select Receive
- 7. When completed the program data will appear on the screen from the unit.

Comm Settin	gs		Configuration
Port Name:	COM1	*	Send
	Conn	ect	Receive

- 8. From the top menu select **Inputs** and select the input to be modified.
- 9. When completed ensure Input 1 is showing before writing data back to the DVIF10.

File Device	e Inp	uts Config	juration Hel	P
Master Devi	ce	Input 1	Alt+F1	
Transmitter I	Bau	Input 2	Alt+F2	
		Input 3	Alt+F3	
RS-485 Bau	Bai	Input 4	Alt+F4	
Protocol:	Sci	Input 5	Alt+F5	Previous
		Input 6	Alt+F6	TICVIOUS
Number of 9	ilav	Input 7	Alt+F7	Next
		Input 8	Alt+F8	
Comm Settir	ngs	Input 9	Alt+F9	n
Port Name:	6	Input 10	Alt+F10	

#### **COMP2** Programming

When programming the DVIF10 for Comp2 Paging Protocol only 3 digit pager IDs are used with or without the Beep type. Data Type and Baud Rate is not required.

DVIF10 (Firmware Rev 2.0.0) - (Database Rev 1.1)	
File Device Inputs Configuration Help	
Master Device	Input 1 Configuration
Transmitter Baud Rate: 9600-N-8-1	Enabled Type: Dry N/O
RS-485 Baud Rate: 57600-N-8-1 👻	Reset Message: ALARM DE-ACTIVATED
Protocol: Comp2   Previous	Active Message: ALARM ACTIVATED
Number of Slaves: 0  Next	ID: 400 Repeat: 2
Comm Settings Configuration	Beep Type: D
Port Name: COM1   Send	Data Type: Alphanumeric +
Connect Receive	Baud Rate: 1200 - Previous Next
Unit Connected.	

#### Single Unit Installation

- 1. Mount DVIF10 in selected location with supplied hardware.
- 2. Connect Alarm inputs to the DVIF10.
- 3. Connect DVIF10 to Transmitter using the cable supplied.
  - Note: All Scope equipment requires a Null Modem Cable. Other Equipment uses a Standard Serial Cable (straight through).
    - a. When using the Scope ConneXions Transmitter No External Power is required.
    - b. When using the following paging transmitters, External Power is required. 1). Scope XLUSA
      - 2.) SPS5V7
      - 3.) TX125-EN
- 4. Turn on the DVIF10 alarm unit.
- 5. Test DVIF10 alarm unit by triggering an alarm.
- 6. Programming and installation complete.

#### Installing Master and Slave Units for Paging

# Note: Ensure jumper settings are correct for the paging transmitter you are using. See jumper setting chart page 10.

- 1. Scope ConneXions 2 XLite Paging Transcoder SPS5V7
  - a. Mount Master and Slave Units.
  - b. Connect alarm inputs for all units.
  - c. Connect the <u>DB9 Null Modem cable</u> from the Master unit to the Paging Transmitter.
  - d. Power ON the Scope ConneXions transmitter.
  - e. Connect the **Cat 5 Cross Over Cable** from the **Ouput** RS485 RJ45 connector of the master to the **first Slave** units, input RJ45 connector.(see diagram 1)
  - f. If additional slaves are installed connect using **standard Cat 5 cable**, from output to input RJ45 connectors.
  - g. Power on the **Slave unit(s)**, **then the Master**. If this procedure is not followed the units will not initialize. It will take approximately 30 Seconds to 1 minutes for the unit to initialize.
  - h. Test Units.
- 2. TX125EN Paging Transcoder
  - a. Mount Master and Slave Units.
  - b. Connect alarm inputs for all units.
  - c. Connect the <u>DB9 Serial Cable</u> from the Master unit to the Paging Transmitter.
  - d. Power **ON** the paging transmitter.
  - e. Connect the **Cat 5 Cross Over Cable** from the **Output** RS485 RJ45 connector of the master to the **first Slave** units, input RJ45 connector.(see diagram 1)
  - f. If additional slaves are installed connect using **standard Cat 5 cable**, from output to input RJ45 connectors.
  - g. Power on the **Slave unit(s)**, **then the Master**. If this procedure **<u>is not</u>** followed the units **<u>will not initialize</u>**. It will take approximately 30 Seconds to 1 minute for the unit to initialize.
  - h. Test Units.

#### <u>Inputs</u>

- 1. Dry Normally Closed (N/C).
  - a. Alarm Message **OPEN state**.
  - b. Reset Message Closed State.
  - c. Repeats will occur on **Open state**.
- 2. Dry Normally Open (N/O)
  - a. Alarm Message CLOSED state.
  - b. Reset Message OPEN state.
  - c. Repeats will occur on CLOSED state
- 3. Voltage Low
  - a. Alarm Message when voltage (1-24 Volts AC/DC) is Removed
  - b. Reset Message when voltage (1-24 Volts AC/DC) is Applied
  - c. Repeat will occur when voltage is **Removed.**
- 4. Voltage High
  - a. Reset Message when voltage (1-24 Volts AC/DC) is Removed
  - b. Alarm Message when voltage (1-24 Volts AC/DC) is Applied
  - c. Repeat will occur when voltage is Applied

#### Jumper Setting

DVIF10 (Single or w/Slave) Scope Transmitters		On Slave 2 & 3
Cable	Null Modem	Cat 5 Standard LAN
Jumper - Shorted	JP1, JP2, JP18, JP19, JP14	JP18 JP19, JP14
Jumper – Removed	JP13, JP15	JP1, JP2, JP13, JP15
Jumper - Pins	1 & 2 , JP16, JP17	Same

#### DVIF10(Single or w/Slave) TX125-EN and SPS5v7 On Slave 2 & 3

2 1 1 10 (Dingro 01 111)		
Cable	Standard Serial Straight Through	Cat 5 Standard LAN
Jumper - Shorted	JP1, JP2,	
Jumper – Removed	JP18, JP19, JP13, JP14, JP15	JP1, JP2, JP18, JP19, JP13,14,
		JP15
Jumper - Pins	1 & 2 , JP16, JP17	Same

#### Note: If connecting directly to a computer serial port, Use the Cable and Jumper settings as shipped.



JP2

# **Specifications**

Input Voltage	12 Volts DC
Current	750 mA maximum, Normal – 425mA
Input Contacts	10 per unit, Maximum 40
Input Selection	No jumper Voltage
_	Jumper <b>Dry</b>
	Fused Inputs – 125 Volts DC / 450mA
Input	No Voltage (dry)
_	Voltage – AC or DC 1-24 Volts
	Inputs can be Mixed
Connection	RJ45 Cable using RS485 Total 4 Units
Protocol	Scope and Motorola Comp2
Programming	PC software via RS232 9 pin connector
Repeat Message	0-4 or Change of State, with intervals of 1-59
	minutes
Message	Open state and Closed state
Message Length	Each message has a maximum length of 80
	characters
Pager Cap Code	Each Contact has Individual Pager ID
Message Alert Type	A,B,C or D selectable for each Contact
Approval	FCC Part 15, RoHS Compliant
Size	7.10 in x 3.52 in x 1.17 in
Warranty	Life

#### RS232 Cable Pin Out

Null Modem (Special)	1-nc, 2-3,3-2,4-6,6-4,5-5,7-8,8-7, 9-9
9-Pin F/F	
Serial Straight Through 9-Pin M/F	1-1,2-2,3-3,4-4,5-5,6-6,7-7,8-8, 9-nc

#### Diagram #1

