Addendum for Instruction Manuals 354020 and 354022

This addendum applies to Granville-Phillips Instruction Manual 354020 for the Series 354 Micro-Ion® Vacuum Gauge Module with DeviceNet™ Digital Interface, and Instruction Manual 354022 which is for the Mini-Convectron®, and Micro-Ion Gauge Modules with DeviceNet Interface.

The following applies to Instruction Manual 354020 for the Micro-Ion® Vacuum Gauge Module with DeviceNet™:

Revise page 2-5, paragraph 7, to read as follows:
Proceed with Configuring Polled Input I/O Data Format.

Revise page 2-5, Configuring Polled I/O Data Format title, to read as follows:
Configuring Polled Input I/O Data Format

Revise page 2-5, Table 2-5 title, to read as follows:
Table 2-5: Configuring Polled Input I/O Data Format

Revise page 2-6, Table 2-6 title, to read as follows:
Table 2-6: Configuring Polled Input I/O Data Format

Revise page 2-6 to insert the following paragraph and table before the paragraph in the manual entitled "Emission Current":

Configuring Polled Output I/O Data Format

The Micro-Ion Vacuum Gauge Module can receive one byte of output data from the network to control the status of the ion gauge. In the default setting, this path does not exist.

Table 2-5A: Configuring Polled Output I/O Data Format

Parameter	Service	Class	Instance	Attribute	Data
NULL	10hex	5	2	10hex	None
1 byte structure	10hex	5	2	10hex	20 04 24 01 30 03 hex

Revise page 2-9 to insert the following paragraphs and table after the table in the manual entitled "Table 2-11: Reading Pressure Data – Polled I/O":

Writing Ion Gauge Control Data – Polled I/O

If the polled output I/O data format is enabled, the master can output data to the device to control Ion Gauge Status.

Table 2-11A: Writing Ion Gauge Control Data – Polled I/O

Assembly number	One Byte Format							
1	Bit 7 High Emission	Bit 6 Ion Gauge	Bit 5 Medium Emission	Bit 4 0	Bit 3 0	Bit 2 Enable Filament 2	Bit 1 Enable Filament 1	Bit 0 Degas

Ion Gauge Control Bits – Polled I/O

Degas: When bit 0 is set to 1, degas will start if the gauge is on.

Enable Filament 1: When bit 1 is set to 1, filament 1 will light when the gauge is on.

Enable Filament 2: When bit 2 is set to 1, filament 2 will light when the gauge is on. If both bits 1 and 2 are 1, both filaments will light when the gauge is on. If both bits 1 and 2 are 0, the last programmed value will be used to light filaments.

Bits 3 and 4 are reserved and should always be 0.

Medium Emission: When bit 5 is set to 1, the ion gauge will operate at medium emission when the gauge is on.

Ion Gauge: When bit 6 is set to 1, the ion gauge will be on and allow the reading of pressure. If a fault condition occurs, the state of the ion gauge will be off and the fault condition must be cleared before pulling this bit to 0 then 1 again to re–light the ion gauge.

High Emission: When bit 7 is set to 1, the ion gauge will operate at high emission when the gauge is on. The state of bit 5 is irrelevant when bit 7 is 1. If both bits 5 and 7 are 0, the ion gauge will operate at low emission.

The following applies to the 354022 Programmer's Guide for the Mini-Convectron and Micro-Ion Modules with DeviceNet Interface:

Revise page 2-2, Device Type: 00hex title, to read as follows:

Device Type: 28 (1Cx)

Revise Table 2-1, Object Model Class (Assembly), on page 2-2 to read as follows:

Object Class	Subclass	Optional/Required	# of Instances
Assembly		Required	4 Input, 1 Output I/O Poll***

*** Output poll not supported by the 275 *MINI-CONVECTRON*® module

Revise Table 2-2, How Objects Affect Behavior (S-Trip Point), on page 2-3 to read as follows:

Object	Class ID	Effect on behavior
Trip Point	35 hex or C7 hex	Provides a process trip point comparator for the S-Analog Sensor value. Two instances are linked to the S-Analog Sensor instance for the 275 *MINI-CONVECTRON*® Module. Three instances are linked to the S-Analog Sensor for the 354 *MICRO-ION*® Module.

Revise Table 2-3, Defining Object Interfaces (S-Trip Point), on page 2-4 to read as follows:

Object	Interface
Trip Point	Assembly or Message Router

Revise page 2-5 to change the paragraphs following the “Instances” title as follows:

This device type will allow input connections to either INT or REAL based Assembly instances and an Output connection to a BYTE based Assembly instance.

Note: The Output Assembly is *Vendor Specific* to Granville-Phillips products.

The *S-Analog Sensor* object definition specifies a behavior that modifies the *Data Type* of certain attributes based upon the first valid I/O connection established to an Assembly Object instance. Once a valid connection is established, attempts to configure connections to a different type of Assembly instance will return an error.

The following table identifies the I/O assembly instances for POLLED I/O communications.

Revise Table 2-5, Instances, on page 2-5 to read as follows:

Number	Type	Name
1	Input	INT Pressure Value
2	Input	Exception Status, INT Pressure Value
4	Input	REAL Pressure Value
5	Input	Exception Status, REAL Pressure Value
1	Output	BYTE, Ion Gauge control bit structure***

***Not supported by the 275 *MINI-CONVECTRON*® module

Revise page 2-6, Table 2-6 title, to read as follows:

Table 2-6: I/O Input Assembly Object Data Attribute Format

Revise page 2-6 to insert the following table after Table 2-6 as follows:

Table 2-6A: I/O Output Assembly Object Data Attribute Format***

Instance	Byte	Bit 7	Bit 6	Bit 5	Bit 4	Bit 3	Bit 2	Bit 1	Bit 0
1	0	High Emission	Ion Gauge	Medium Emission	0	0	Enable Filament 2	Enable Filament 1	Degas

*** Not supported by the 275 *MINI-CONVECTRON*® module

Revise Table 3-1, Instance Attributes (Attribute ID 2 and 3), on page 3-1 as follows:

Attr ID	Access Rule	NV*	Name	DeviceNet Data Type	Description of Attribute	Semantics of Values
2	Get	NV	Device Type	UINT	Indication of General Type of Product	1C
3	Get	NV	Product Code	UINT	Identification of a particular product of an individual vendor	00 01

Revise Table 6-1, Instances Attributes, on page 6-1 as follows:

Attr ID	Access Rule	NV*	Name	DeviceNet Data Type	Description of Attribute	Semantics of Values
3	Get	V	Data	Get BYTE, REAL	Get Exception Status, Pressure Data	Get Same as I/O Input Assembly 5
	Set			Set BYTE***	Set Gauge Control***	Set Same as I/O Output Assembly 1***
*NV = Nonvolatile; attribute value is maintained through power cycles *V = Volatile attribute value is not maintained through power cycles						

***Not supported by the 275 *MINI-CONVECTRON*® module

Revise Table 7-2, Instance 1, Explicit Connection (Attribute 8, 15 and 16), on page 7-2 as follows:

Attr ID	Access Rule	NV*	Name	DeviceNet Data Type	Description of Attribute	Semantics of Values
8	Get	NV	consumed_ connection_ size	UINT	Maximum number of bytes received across this Connection	00 01
15	Get	NV	consumed_ connection_ path_length	UINT	Number of bytes in the consumed_connection_path_l ength attribute	00 06
16	Set	NV	consumed_ connection_ path	EPATH	Specifies the Application Object(s) that are to USINT receive the data consumed by this Connection Object	Null or 20 04 24 01 30 03 hex

Revise page 12-1, Section 12 title, to read as follows:

Section 12 – Trip Point Object

Revise page 12-1, Class Code heading, to read as follows:

Class Code: 53 (35x) or 199 (C7x)

Revise page 12-1, first and second paragraphs after the Class Code heading, to read as follows:

The Trip Point Object models the action of trip points for the 354 ion gauge device, corresponding to physical outputs. The Trip Point instance has a pointer (S-Analog Sensor Object Instance attribute) to the S-Analog Sensor instance. A trip point value, designated as a Low trip point, is compared to the S-Analog Sensor *Value* attribute. This trip point is intended to be used as a process control indicator only, as distinguished from the S-Analog Sensor Object's Alarm and Warning trip points.

The Class code C7 hex is *vendor specific.* Class Code 35 hex is assigned to this object as approved by ODVA. These Class codes are interchangeable.