

StoneL's Eclipse features dual integrated solid state sensors with optional communications integrated into a sealed module. The function module and trigger/indicator attach directly to standard VDI/VDE 3845 (Namur) actuator accessory mounting pads quickly and conveniently. The Eclipse series is available in a nonincendive version (ECN) for hazardous division 2 areas and in a general purpose micro connector version (ECG) for non-hazardous applications.



Feature Rich Design Offers Incredible Value

- Position sensors, communication electronics and power outputs for solenoids are integrated into an extremely compact, rugged VCT.
- Red/Green visual indicator boldly displays valve status, and coordinates with Red/Green LEDs.
- Eclipse sensors and electronics are fully sealed to eliminate hazard threat and corrosion problems.
- Direct attachment to ISO/Namur mounting pads.
- High intensity red and green LEDs indicate electronic switch status to confirm electrical operation.
- Sensor triggers are adjustable in 3.5 degree increments through 360 degrees for precision and flexibility.
- All mechanical parts are made of Lexan® or stainless steel for corrosion resistance and durability.
- No moving mating parts assure long life and trouble-free operation.

ECN: The Ultimate in Convenience, Reliability and Cost Effectiveness in Class I, Div. 2 Areas

- FM & CSA approved for Class I & II, Division 2 hazardous areas.
- Rated for NEMA 4, 4X, 6 (temporary submersibility).
- Built-in terminal block and multiple conduit entries eliminate junction boxes for solenoid valve termination.
- Convenient wiring compartment and pre-labeled terminal strip enables rapid installation.
- Intrinsically safe
ATEX EEx ia IIC T5
approved for hazardous
Zone 0, 1, & 2 areas.



ECG: Convenient Micro-Connector Wiring

- Available with additional built in connector for solenoid termination.
- May be used in hazardous areas with intrinsically safe wiring.
- Micro-connectors with potted and sealed enclosure eliminate any threat of moisture contamination in wiring.



Sensing, Communication and Visual Indication

Eclipse VCTs offer incredible value and space efficiency. Communications, position sensing, power outputs and auxiliary inputs are sealed in the Eclipse function module. Select from Namur sensors, SST switching sensors, or AS-Interface, DeviceNet, Modbus or FOUNDATION Fieldbus communication terminals. All are fully solid state and sealed in the Lexan® polycarbonate module. (The Eclipse function module and Dual Module sensors/communication electronics are identical. **For more detailed information please see pages 2 through 8.**)



SST Switching Sensors (33)

Configuration	(2) SST Switching Sensors (2) Wire Terminations (Solenoids)
Output	Select either NO or NC Models
Maximum Current Inrush	2.0 Amps
Continuous	0.3 Amps
Min. On Current	2.0 mA
Max. Leakage Current	0.25 mA
Voltage Range	8 to 125VDC / 24 to 125VAC
Max. Voltage Drop	7.0 Volts @ 100 mA

Namur Sensors (44)

Configuration	(2) NAMUR Sensors (2) Wire Terminations (Solenoids)
Output	Conforms to DIN 19234
Current Ratings	Target On < 1.0 mA
Current Ratings	Target Off > 3.0 mA
Voltage Range	6 to 29 VDC

AS-Interface VCT (96)

Configuration	(2) Sensor Inputs (2) Auxiliary Inputs (2) Power Outputs (Solenoids)
Max. Current	160mA, Both Outputs Combined (Current Limited to 200mA)
Outputs, Max. Power	4 Watts, Both Outputs Combined
Outputs, Voltage	25 to 30 VDC

DeviceNet VCT (92)

Configuration	(2) Discrete Inputs (Open & Closed) (2) Power Outputs (Solenoids) (1) 4-20 mA Auxiliary Input
Outputs, Max. Power	4 Watts, Both Outputs Combined
Outputs, Voltage	24 VDC

Bus Powered

FOUNDATION Fieldbus VCT (93)

Configuration	(2) Discrete Inputs, DI (Open & Closed) (2) Discrete Outputs, DO (Piezo Valves)
Outputs	4 watts total @ 24VDC Both outputs combined; Current Limited to 200 mA (externally powered)
Other Features	Stores Number of Actuations Stores Date of Last Service Predetermined Output Fail State

Externally Powered

FOUNDATION Fieldbus VCT (94)

Configuration	(2) Discrete Inputs, DI (Open & Closed) (2) Power Outputs, DO (Solenoids)
Outputs	160mA @ 24VDC Both Outputs Combined; Current Limited to 200mA (Externally Powered)
Other Features	Stores Number of Actuations Stores Date of Last Service Pre-determined Output Fail State

Modbus VCT (95)

Configuration	(2) Discrete Inputs (Open and Closed) (2) Power Outputs (Solenoids)
Outputs	160 mA @ 24 VDC Both Outputs Combined; Current Limited to 250 mA
Other Features	Stores Number of Actuations Stores Date of Last Service Pre-determined Output Fail State

Triggering & Visual Indicator



Red/Green option



Flow line option

Red and green visual indication is viewable from 360 degrees around the automated valve and from above at distances up to 70 feet. The yellow flow line indicator is also available, which is viewable from all angles at a distance up to 30 feet.

Eclipse solid state inductive sensors are activated by stainless steel targets embedded into the visual indicator drum. Open and Closed targets may be independently adjusted in 3.5 degree increments.

Model Selector and Specifications

Nonincendive Eclipse Models

Model Example: ECN9202R

ECN	Sensor/Communication	Conduit/Connectors	Indicator and Trigger
	Switching Output Models 33 (2) SST N.O. Sensors 34 (2) SST N.C. Sensors Intrinsically Safe Models 44 (2) Namur Sensors (DIN 19234) (not available with connector option 12) Valve Communication Terminals (VCT) 92 DeviceNet 93 FOUNDATION Fieldbus (Bus Powered; I.S.) 94 FOUNDATION Fieldbus (Externally Powered) 95 Modbus 96 AS-Interface	01 (1) 1/2" NPT Conduit 02 (2) 1/2" NPT Conduits 04 (1) M20 Conduit 05 (2) M20 Conduits 11* (1) 5-Pin Mini Connector 12* (1) 5-Pin Mini and (1) 3-Pin Mini Connector *Wiring chamber fully potted. Not suitable for nonincendive.	R Red Closed F Flow Line 1 or 2 Three Way Flow Path X Special See Visual Indications Designations chart on page 15

General Purpose Eclipse Models

Model Example: ECG9613F

ECG	Sensor/Communication	*Micro Connectors	Indicator and Trigger
	Switching Output Models 33 (2) SST N.O. Sensors (available with connector options 13, 16, 23, or 26) 34 (2) SST N.C. Sensors (available with connector options 13, 16, 23, or 26) Intrinsically Safe Models 44 (2) Namur Sensors (DIN 19234) (available with connector option 13 or 23) Valve Communication Terminals (VCT) 92 DeviceNet (available with connector options 15, 16, 25, or 26) 93 FOUNDATION Fieldbus (Bus Powered; available with connector options 13, 14, 23, or 24) 94 FOUNDATION Fieldbus (Externally Powered; available with connector options 15, 16, 25 or 26) 95 Modbus (available with connector options 15, 16, 25, or 26) 96 AS-Interface (available with connector options 13, 14, 23, or 24)	13 (1) 4-Pin Connector 14 (2) 4-Pin Connectors 15 (1) 5-Pin Connector 16 (1) 5-Pin and (1) 4-Pin Connector 23 (1) 4-Pin Connector, metallic 24 (2) 4-Pin Connectors, metallic 25 (1) 5-Pin Connector, metallic 26 (1) 5-Pin and (1) 4-Pin Connector, metallic *size M12	R Red Closed F Flow Line 1 or 2 Three Way Flow Path X Special See Visual Indications Designations chart on page 15

Eclipse Mounting (Required for all Eclipse)

960701 Namur Sizes 1 and 2

960710 Namur Size 3

960704 Namur Size 4

795702 Jamesbury VPVL 350 to 500

795703 Jamesbury VPVL 550 to 700

Consult factory for other non-Namur applications.

- Kits conform to standard ISO/NAMUR actuator patterns.
- All kits stainless steel.
- Namur size 3 kit 960710 fit all shaft sizes. Namur size 3 kit 960703 is obsolete.

Specifications

Operating Life	Unlimited
Temperature Range	-40° C to 80° C (-40° F to 176° F)

Materials of Construction

Housing	Lexan® Polycarbonate
Drum Components	Lexan® Polycarbonate
Fasteners	Stainless Steel
Triggers and Coupling	Stainless Steel

Warranty

Function Module	Five Years
Indicator and Triggering	Two Years

Lexan® is a registered trademark of General Electric Corporation.

Enclosure Protection

NEMA 4, 4X and 6; IP67 (IP68 optional)

North American Approvals & Ratings

Visit www.stonel.com/valvepoint/approvals for more information.

Hazardous Locations

Nonincendive (ECN) Class I, Div. 2, Groups A, B, C, D
Class II, Div. 2, Groups F, G

Eclipse ECN Series

ECN3301_ & 02_
ECN3401_ & 02_
ECN4401_ & 02_
ECN9201_ & 02_
ECN9301_ & 02_
ECN9501_ & 02_
ECN9601_ & 02_



European Approvals & Ratings

ECN/ECG "44" Series

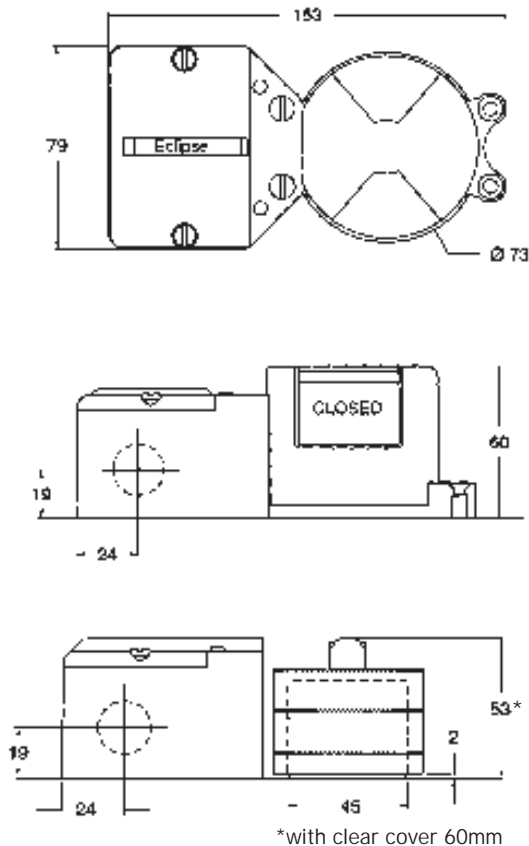
ECN4404_ & 05_
ECG4413_

CE 0344 II 1 G EEx ia IIC T5

Note: ECN/ECG "44" series is in conformity with the protection requirements of Council Directive: 94/9/EC (ATEX Directive) concerning equipment and protective systems intended for use in potentially explosive atmospheres, and 89/336/EEC (EMC Directive) relating to Electromagnetic Compatibility.

Dimensions (mm)

Eclipse ECN



Eclipse ECG

