



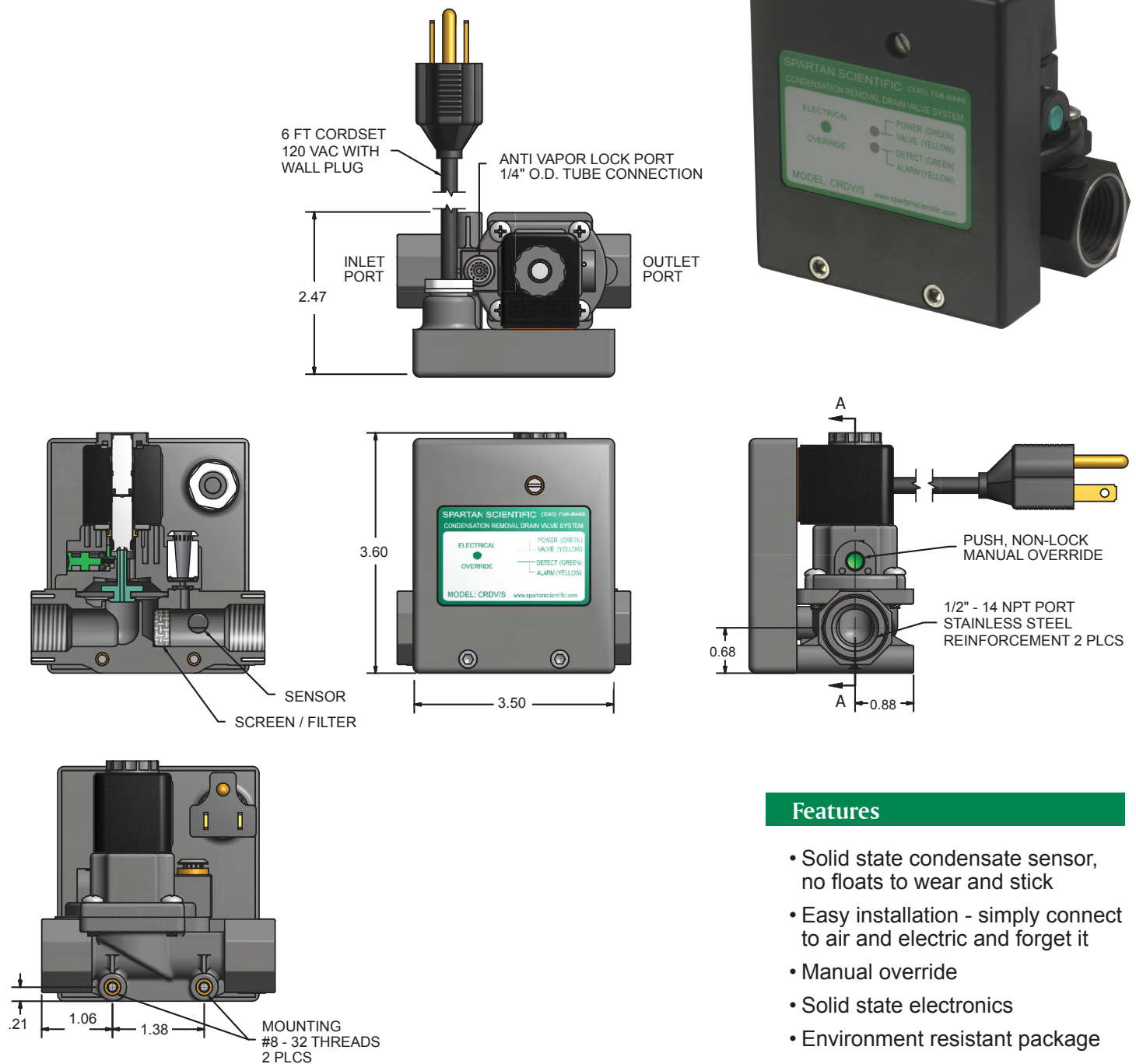
# CRDV/S

## Closed Loop Demand Solenoid Drain Valve

The Spartan Scientific CRDV/S is an electronic on-demand drain which couples an electronic sensor integrated with a solid-state logic analysis circuit to determine the exact amount of time the modular solenoid valve should be energized to empty condensate from the pneumatic system. As opposed to the hit-and-miss adjustments with traditional timed electric drain valves; the CRDV/S has incorporated a technological breakthrough that allows only the necessary amount of compressed air needed to purge excess fluid. The CRDV/S reduces the wear and tear on expensive compressors, air dryers and filters by reducing the loss of compressed air. It also reduces rust and clogged air components while increasing compressor cycling and machine life by eliminating dirty condensate buildup. This product includes a status light for power, an indicator light to denote the purge cycle, and an environment resistant package for long life. The utility, size, ease of installation and price rival the features and cost of conventional timed electric drains.

### Dimensional Data

ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED



### Features

- Solid state condensate sensor, no floats to wear and stick
- Easy installation - simply connect to air and electric and forget it
- Manual override
- Solid state electronics
- Environment resistant package

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### Technical Data

<b>Function:</b>	2-way, 2-position normally closed diaphragm, internal pilot
<b>Port Size:</b>	1/2" NPT
<b>Pressure Range:</b>	0 to 180 psi
<b>Flow Factors:</b>	1/2" orifice, Cv 2.45
<b>Temp. Range:</b>	Ambient +10° to 50°C This device is not recommended for use in below freezing temperatures.
<b>Response Time:</b>	20 to 80ms complete cycle
<b>Materials:</b>	Operator: AISI 400 Series Stainless and Brass Shading Ring: Copper Seals: Viton standard Valve Body: Zytel, Nylon Timer Enclosure: ABS Cable: PVC
<b>Media:</b>	Air, Oil, Gas, Water, Emulsion
<b>Mounting:</b>	On pipe or #8-32 mounting holes on valve base

### Electrical Data

<b>Voltage:</b>	120 VAC 50/60 Hz
<b>Transient Suppression:</b>	MOV
<b>Power Consumption:</b>	8 Watts max.
<b>6 ft.cord with grounded wall plug</b>	

### How It Works

#### Normal Mode:

When the CRDV/S is first connected to electricity, the unit automatically energizes the solenoid valve for 1 second to indicate the presence of electricity and to self-test. As condensate is generated, the water and effluent falls by gravity through the piping to the inlet of the CRDV/S. Nothing happens until the CRDV/S solid-state sensor senses the presence of condensate. At that time the electronics sends the signal to energize the solenoid valve, which opens and exhausts the condensate from the pneumatic system. After a 1 second purge interval the valve de-energizes and the sensor no longer senses water at the inlet port. The CRDV/S then goes dormant for a minimum of 30 seconds after which the unit will stand ready to purge condensate again, only when it is sensed. As condensate once again builds up, the sensor senses the presence of condensate and the purge cycle continues.

#### High Flow Mode:

If, during Normal mode, there is a high production of condensate, the CRDV/S functions change to accommodate the increased need to remove the water from the system. As in Normal Mode, the CRDV/S remains dormant, sensing for condensate. As there is a high amount of condensate at the inlet port, so much so that the 1 second purge will not remove it all from the port, the CRDV/S "learns" and opens for a 4 second purge interval. The unit then goes into a 30 second wait cycle after which the CRDV/S, if it continues to sense condensate, re-cycles once again at 4 second purge interval. The sensor goes into alarm mode. During alarm mode the CRDV/S repeats a 4 second purge interval and 30 second wait until such time as the sensor stops sensing condensate. When the sensor runs free of condensate the CRDV/S then returns to normal mode.

#### Electrical and Manual Override:

The CRDV/S is equipped with both a manual override and an electrical override. The manual override is the green push button found on the side of the valve at the back of the unit. Pressing this button allows for drainage of the condensate line without the need for electricity. The electrical override is a button found at the front of the unit which energizes the solenoid and drains the condensate line. Both overrides are momentary contact, spring return.

#### One 1 Second Purge Cycle Every 24 Hours

There is one 1 second purge cycle every 24 hours just to ensure that the condensate lines are clear and effluent is flowing to the CRDV/S.

### How To Order

CRDVS - 3071