

C3 Latching Solenoid Driver Card

This note describes what is required in order to install the C3 Latching Solenoid Driver Card in conjunction with an Observant C3 Actuator Enabled Telemetry Module.

Application

When installed in conjunction with a C3 Actuator Module, Solenoid Latching Driver can control up to 4 latching 12 VDC solenoids. The solenoids can be 2 or 3 wire type and used in turn to switch irrigation valves under most typical irrigation scenarios.

Ordering

Product code	Description
01702	<ul style="list-style-type: none"> Latching DC Solenoid Driver Card. 2 x mounting screws. 2-part wiring loom for C3.

Electrical

The Driver Card is supplied with the required cable connections to the C3 only. The cable required for connection of the solenoids themselves must be provided by the installer (see "Not Supplied" below).

Mechanical

The Driver Card is designed to be mounted on the inside of the door of the C3 outdoor enclosure with the supplied screws. If the C3 module is being used without the enclosure, the card can be directly mounted on the wall below or beside the C3 module, using the appropriate screw for the wall material. Note, in this case the wall surface must be non-conductive.

Not Supplied

- Wire/cable for connection between the driver card (via screw terminal blocks) and the solenoid(s) should be at least 18 AWG. If a distance great than ~ 300 ft (100 m) must be covered, then an increase in the size of the cable may be required. If the installation is contained within a small area (e.g., a pump shed), any type of sheathed or figure-8 cable may be used. If the cabling has to be routed outdoors, then a sheathed, UV stable, direct-burial style cable is recommended. It is common for suppliers to refer to this as "irrigation" or "sprinkler" cable. Standard cable can be used if it is contained within electrical conduit to protect it from damage.
- Appropriate tools for cutting and stripping solenoid cabling.
- Small, flat-bladed screwdriver for connection of solenoid cable to driver card terminal blocks.
- Small, Phillips-head screwdriver for mounting the driver-card to the inside of the C3 enclosure door with the supplied screws.

Notes

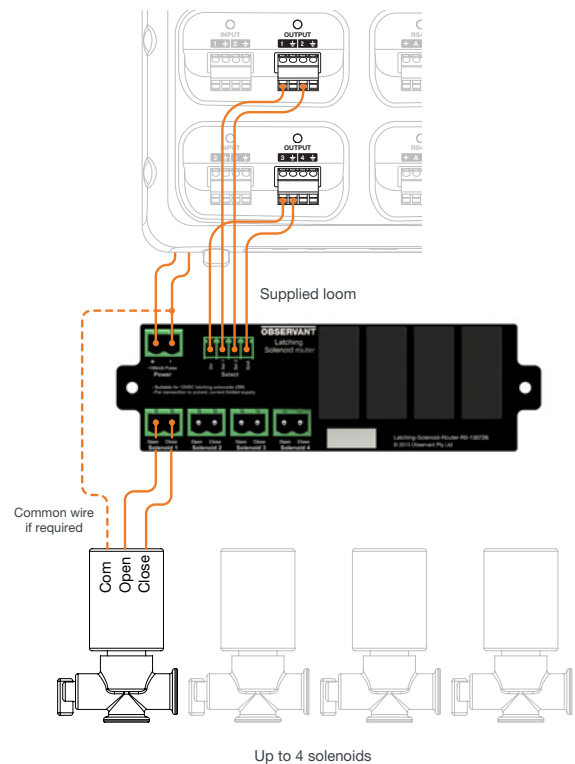
- The Driver Card can support only 12 VDC latching solenoids. These require far less power than continuous types and don't require any additional, voltage-boosting circuitry.
- Most solenoids of the latching, DC type require a pulse of between 50 and 100 ms and will draw no more than 3-4 A at peak. The C3-A can supply up to 7 A. The default pulse width setting is 50 ms but can be adjusted if a longer pulse is required.
- Some examples of valves having been successfully tested with the driver card are:

Manufacturer	Model
Hunter	DCSOL
Irritrol/Richdel	205MT
Netafim	AquaNet Plus

OBS-USR-TN001-R1



Electrical Schematic



Door Mounting

