

PERTRONIC INDUSTRIES LTD

INSTALLATION DATASHEET

Solenoid Interfaces

**ARCSI, ARCSI-MM, BUR-2509-10K, BUR-2509-47K,
HIR-GDM-10K, HIR-GDM-47K**

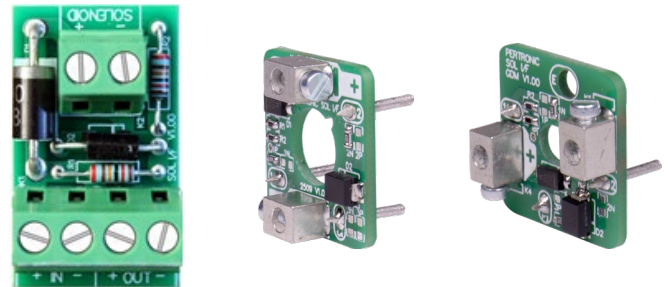


Overview

Pertronic Solenoid Interfaces allow analogue addressable control modules and the Pertronic Agent Release Controller to activate and supervise a wide range of solenoids.

There are two groups of solenoid interfaces:

- » **ARCSI, BUR-2509-10K, HIR-GDM-10K:** For use with the Pertronic Extinguishing Agent Release Controller, the Pertronic Loop Relay, and the Pertronic Multi-Function Loop Responder
- » **ARCSI-MM, BUR-2509-47K, HIR-GDM-47K:** For use with System Sensor modules such as the M500S or SC-6



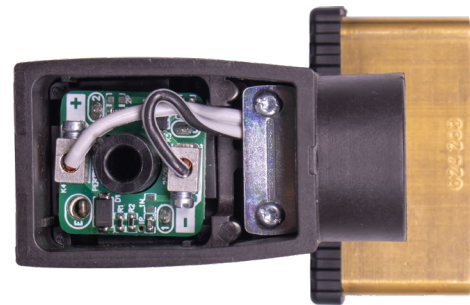
Above
Pertronic Solenoid Interfaces (from left): ARCSI, BUR-2509-xxx, and HIR-GDM-xxx

Below
Burkert 2509 connector fitted with a Pertronic BUR-2509-xxx solenoid interface

These interfaces have end-of-line (EOL) resistors which allow reverse-polarity fault supervision systems to detect open-circuit faults including disconnected or open-circuit solenoids. The fault supervision system will also identify a short-circuit fault in the cabling between control module and solenoid interface, but not a short-circuit across the solenoid itself.

Operation

In the normal state (solenoid inactive), the control module applies a small reverse polarity voltage for fault supervision. To energise the solenoid, the control module applies a voltage with polarity as marked on the interface input terminals.



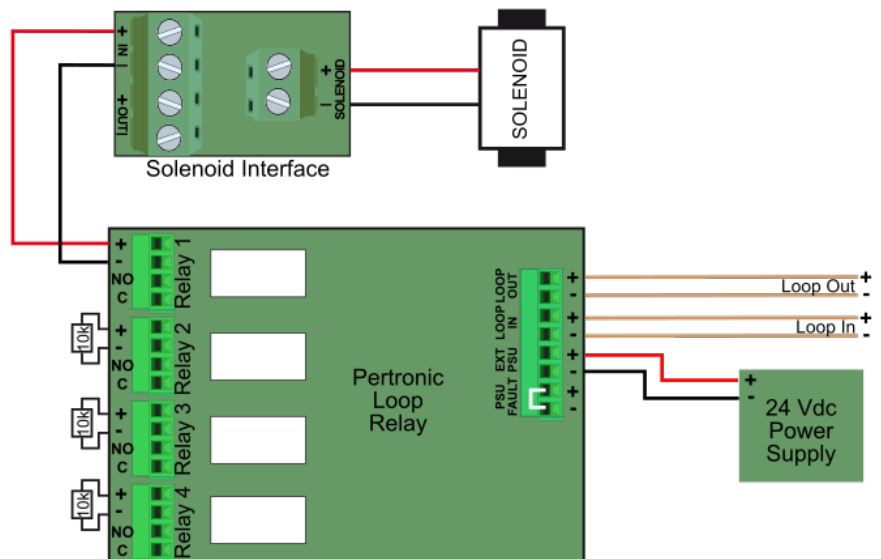
Typical Connection to a Pertronic module

The diagram (below right) shows a solenoid interface connected to the “Relay 1” output (K1) of a Pertronic Loop Relay. Additional interfaces may be connected to relays 2-4. The current per Loop Relay output must not exceed 1 Amp.

Mount the solenoid interface as close as practicable to the solenoid.

The interface may also be connected to the Multi-Function Loop Responder’s relay output or to the Agent Release Controller’s detonate output. Please refer to the relevant technical manual for current specification and connection details.

Note that the solenoid current may exceed the analogue addressable loop current capacity. If using a Loop Relay or Multi-Function Loop Responder, an external power supply may be required.

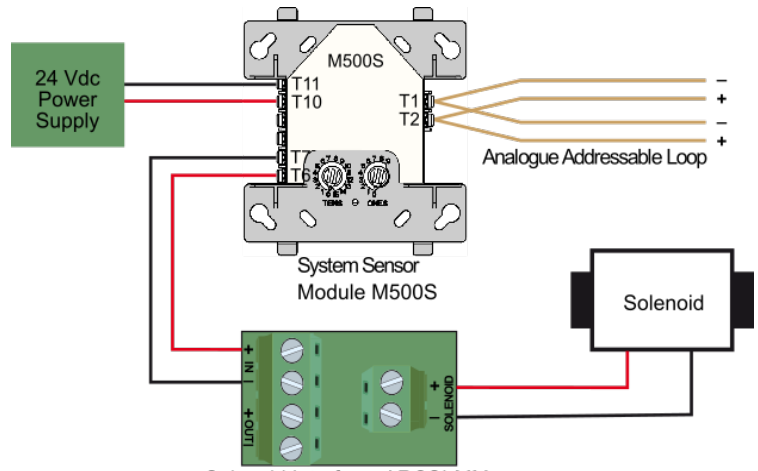


Typical Connection to System Sensor Modules

The diagram (right) shows a Pertronic Solenoid Interface (ARCSI-MM, BUR-2509-47k, or HIR-GDM-47K) connected to a System Sensor M500S Module. Mount the solenoid interface as close as practicable to the solenoid.

Note that the solenoid current may exceed the analogue addressable loop current capacity. If so, an external power supply will be required, as shown in the diagram.

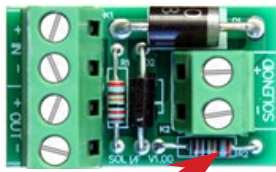
These solenoid interfaces may also be connected to System Sensor SC-6 modules.



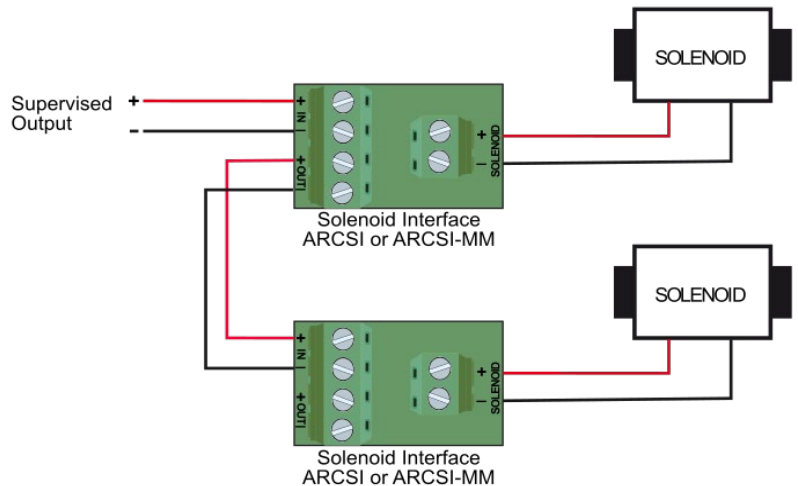
Connecting Two ARCSI or ARCSI-MM Interfaces & Solenoids in Parallel to a Single Output

Up to two solenoids may be connected in parallel (right). Each solenoid must have a separate solenoid interface. Remove resistor R2 (below right) on each interface to obtain the correct EOL resistance.

Note: BUR-2509-xxx and HIR-GDM-xxx interfaces should not be connected in parallel.



When connecting two ARCSI or ARCSI-MM interfaces in parallel, remove resistor R2 on both interfaces



Solenoid Interface Specification

Operating Voltage	0 Vdc to 30 Vdc
Operating Current	Up to 3 Amps (see note)

Dimensions	PCB (L x W)	Overall Height	End of Line Resistor Values	
ARCSI, ARCSI-MM	20.5 x 35.5 mm	15 mm	ARCSI, BUR-2509-10K, HIR-GDM-10K	10 kΩ
BUR-2509-xxx, HIR-GDM-xxx	20.2 x 20.2 mm	14.5 mm	ARCSI-MM (2 x 120 kΩ in parallel)	60 kΩ
			BUR-2509-47K, HIR-GDM-47K	47 kΩ

Note: Usable current capacity is limited by the capacity of the control module's relay output. These interfaces are suitable only for solenoids without built-in bridge rectifiers.

Ordering Information

Product Code	Description	Product Code	Description
ARCSI	Agent Release Solenoid Interface	ARCSI-MM	Agent Release Solenoid Interface - Module Monitored
BUR-2509-10K	Solenoid I/F for Burkert 2509 Cable Plug (10k EOL)	BUR-2509-47K	Solenoid I/F for Burkert 2509 Cable Plug (47k EOL)
HIR-GDM-10K	Solenoid Interface for Hirschmann GDM Valve Connector (10k EOL)	HIR-GDM-47K	Solenoid Interface for Hirschmann GDM Valve Connector (47k EOL)

The information in this document must not be treated as partial or complete instructions for the design, construction, installation, commissioning, or maintenance of fire detection, fire alarm, or building evacuation systems. Fire and evacuation systems must be designed and installed by properly qualified persons, in accordance with all regulatory requirements.

Unless explicitly stated otherwise, this document provides typical specifications and nominal dimensions. Actual product performance and dimensions may vary.

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