



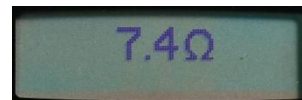
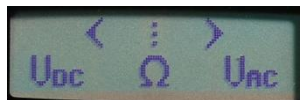
APPLICATION NOTE

May 2019 Rev A

Using the Pro50's Meter to Identify Valve Solenoids by Type and Vendor

You can tell a number of things about an irrigation system using an ohm-meter right at the controller. One useful test is to verify that all of the solenoids are alike, are AC or DC operated and even who manufactured them. You can use the ohms function on the Armada Pro50 to do this or any number of electrical multimeters.

Set your Pro50 to the Ohms function and take a reading –



A fairly complete table of values for AC and DC-latching solenoids is seen below, but generally the readings for 24 Vac solenoids are ...

<u>Condition</u>	<u>Meter Shows</u>	<u>Possible Fault</u>
Open	Letter displayed - OL / KM / I	Cut/Broken Circuit
Short	0 - 6 ohms	Shorted Circuit
Multiple Valves	7- 19 ohms	
Healthy Reading	20 - 60 ohms	
Partial	Over 60 ohms	Corrosion

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Typical Valve Solenoid Resistances

Courtesy John Eggleston, ServiceFirst Irrigation

Solenoid Brand	Operating Voltage	Resistance (ohms)
Asco/Bermad/ClaVal	AC	14 - 15
Buckner	AC	21 - 22
Champion	AC	21 - 22
Greenlawn	AC	22 - 23
Griswold	AC	21 - 22
Hardie/Irritrol	AC	24 - 25
Hunter	AC	24 - 25
K-Rain	AC	32 - 33
NetaFim	AC	24 - 25
NDJ/Jain	AC	33 - 34
RainBird	AC (Black w/ white stripe wires)	54 - 55
RainBird	AC (White wires)	21 - 22
Signature/Nelson	AC	22 - 23
Superior	AC	22 - 23
Toro	AC (240-260 series screw mount)	53 - 54
Toro	AC (250 series w/ red & black wires)	28 - 29
Toro	AC (220 series)	24 - 25
Toro	AC (Flo-Pro)	53 - 54
Toro	AC (Actuator w/ blue & black wires)	23 - 24
WeatherMatic	AC (Standard Duty)	33 - 34
WeatherMatic	AC (Heavy Duty)	32 - 33
Hunter	DC	4 - 5
Irritrol	DC	9 - 10
K-Rain	DC	10 - 11
RainBird	DC	4 - 5
Signature/Nelson	DC	4 - 5
Toro	DC	9 - 10