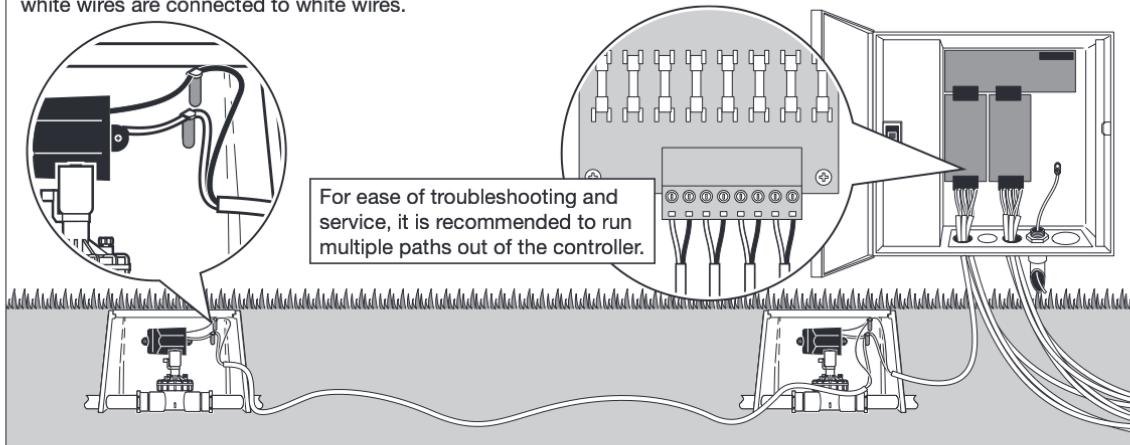


Toro TDC System

Key Practices for a Successful Installation

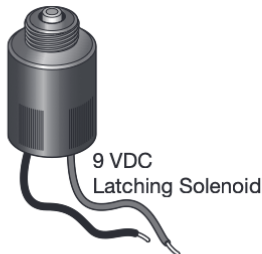
Key Installation Practice #1

All communication cable splices must always follow the color code. Black wires must be connected to black wires and white wires are connected to white wires.

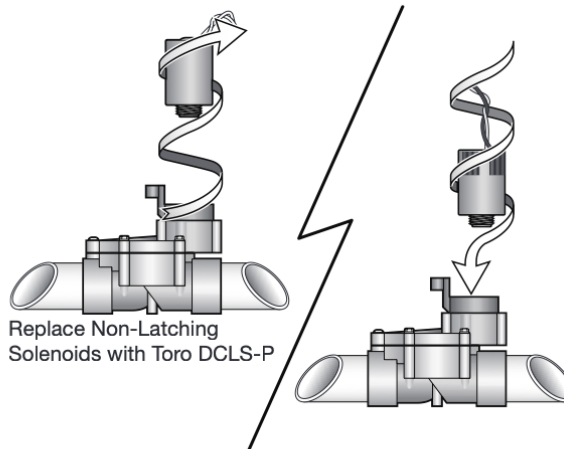


Key Installation Practice #2

Toro TDC system operates latching solenoids only. The following valves are approved to be used with Toro (model # DCLS-P) and Irritrol (model DCL) latching solenoids. Toro – EZF, P220 and 220 Brass Series. Irritrol – 2400/2600, 2500, 200B, 700 and 100P Series. The system is also compatible with competitors latching solenoids although Toro can not guarantee competitors valves and or solenoid quality.

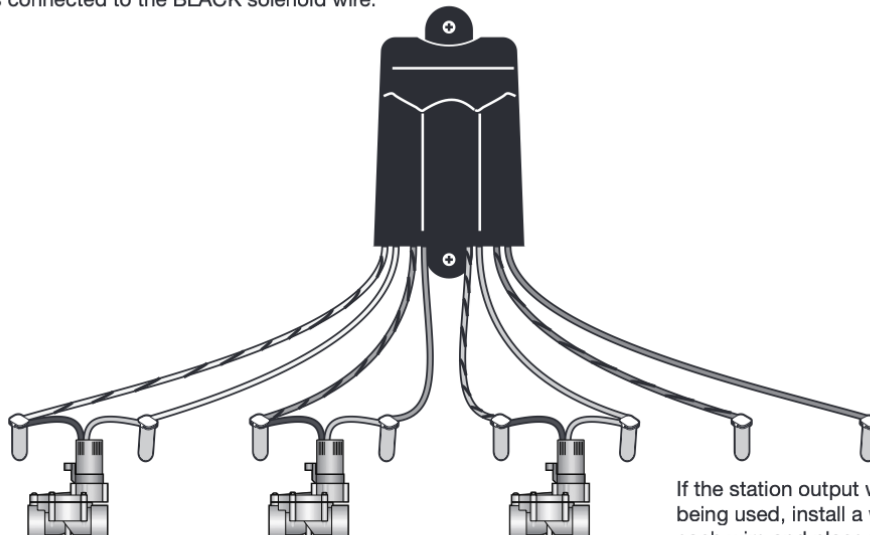


All valves must be equipped with a DC latching solenoid.
Replace solenoid if necessary.



Key Installation Practice #3

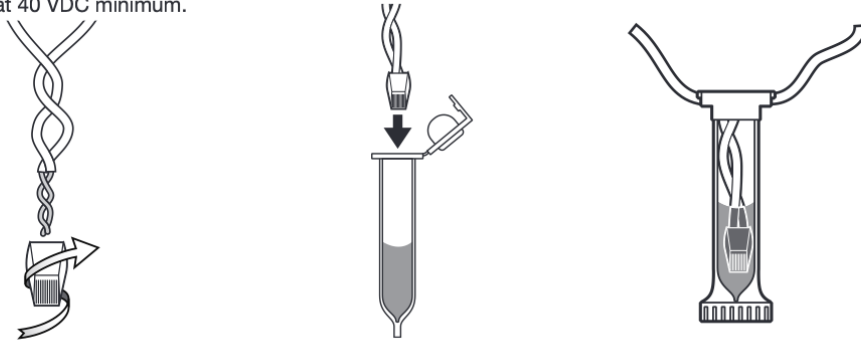
All decoder to solenoid wires must be connected with the correct polarity to properly operate the solenoid. The decoder's SOLID output wire is connected to the RED solenoid wire. The decoder's output wire with BLACK STRIPE is connected to the BLACK solenoid wire.



If the station output wires are not being used, install a wire nut on each wire and place them in a DBY.

Key Installation Practice #4

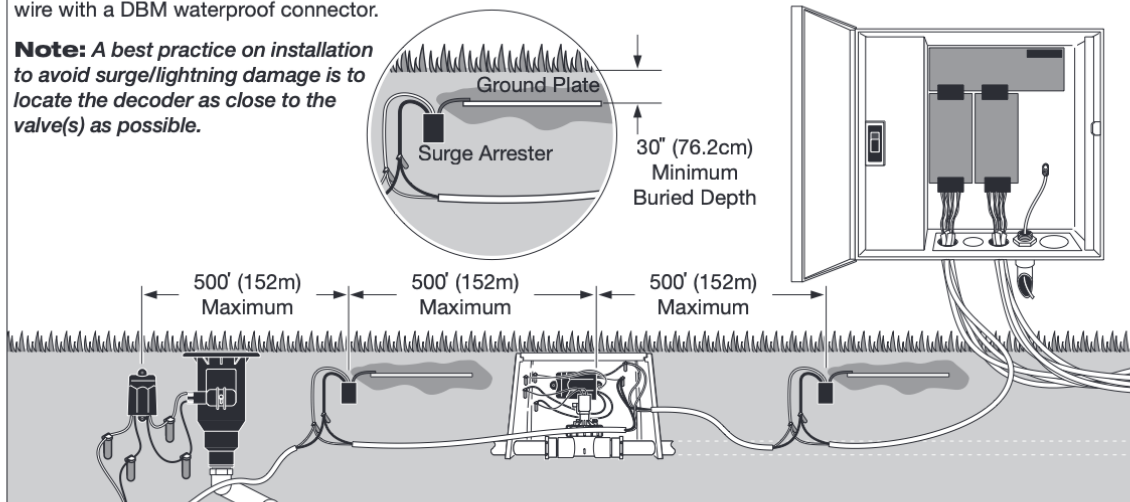
Waterproof all communication cable splices using DBY-6 and DBR-6 by 3M®. If using other waterproofing method, verify that it is rated at 40 VDC minimum.



Key Installation Practice #5

Two Wire Decoder Systems must be properly grounded in order to protect against lightning surges. The communication cable must be grounded no further than 1000' (305m) from any decoder. In high lightning areas, Toro recommends that a decoder be no more than 500' (152m) from a surge device/ground plate, or total of 1000' (305m) between ground plates. The surge device must be a Toro DEC-SG-LINE and must be grounded to a copper plate that is at least 4" x 36" x 0.064" (10.16cm x 91.4cm x 1.6mm). The minimum distance between the surge arrester and the ground plate should be 3' (91.4cm). Toro recommends a split bolt connection to be used to connect the surge device to the ground wire with a DBM waterproof connector.

Note: A best practice on installation to avoid surge/lightning damage is to locate the decoder as close to the valve(s) as possible.



Key Installation Practice #6

Do not loop or connect the decoder cable back to the controller board circuit. All wire path from the daughter board will end at a decoder. Communication cables not being used must be capped and water proofed.

