

Recommended Remote Operation Distances for IIS Micro and Mini Inverter Systems

Inverters are designed to operate one or more emergency fixtures across a facility at varying distances. Additionally, it is often desirable to use an inverter to operate fixtures exterior to the facility or installed within extreme temperature or harsh duty environments. For these reasons, it is beneficial to have an understanding of the remote operating capabilities of your IIS inverter. Refer to the Tables below for recommended operating distances for your application.

Influencing Factors

There are three primary factors that influence the allowable mounting distance of the inverter:

Load size (wattage) - The load demand required of the inverter determines overall capability. The more wattage the inverter needs to deliver results in less distance allowed to service the load.

Load voltage - The connected load will operate either 120-volts or 277-volts. Higher 277 AC voltage will travel a longer distance.

Wire gauge - The larger the wire size, the greater the capacity to deliver power to the load.

Micro-Inverters (<100W)

Micro-inverters are usually intended to operate at the fixture level, but can be remotely mounted from the fixture it is operating. Note that the test switch provided with the IIS micro-inverter is not IP-rated and should be installed accordingly. It is recommended that the test accessory be installed within the same location as the inverter unit.

	Watts	120V			277V*
		14 gauge	12 gauge	10 gauge	14 gauge
IIS 25	25W	3198 ft	4924 ft	8174 ft	17267 ft
IIS 35	35W	2284 ft	3518 ft	5841 ft	12325 ft
IIS35 HE	35W	2284 ft	3518 ft	5841 ft	12325 ft
IIS 50	50W	1600 ft	2468 ft	4084 ft	8623 ft

Mini-Inverters (100W-1000W)

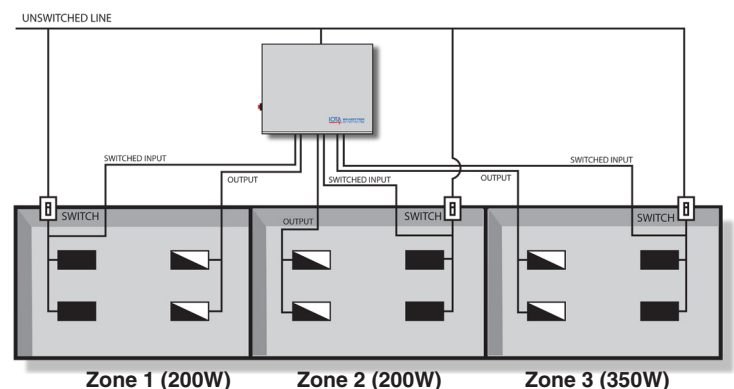
IIS Series inverter wattage ratings are based on a 90-minute runtime. However, all inverters can be de-rated (ie. used with a lesser-rated load size) to extend the total operating time while in the emergency mode, if desired. If this is the case in your application, remote mounting distance will be determined by the smaller load size connected to the inverter.

	Watts	120V			277V*
		14 gauge	12 gauge	10 gauge	14 gauge
IIS 125	50W	1600 ft	2468 ft	4084 ft	8623 ft
	100W	809 ft	1249 ft	2066 ft	4311 ft
	125W	646 ft	997 ft	1649 ft	3445 ft
IIS 250	150W	537 ft	829 ft	1372 ft	2874 ft
	200W	404 ft	624 ft	1033 ft	2155 ft
	250W	323 ft	493 ft	827 ft	1722 ft
IIS 375	300W	268 ft	414 ft	686 ft	1437 ft
	350W	230 ft	356 ft	589 ft	1230 ft
	375W	214 ft	331 ft	548 ft	1146 ft
IIS 550	550W	146 ft	226 ft	374 ft	779 ft
IIS 750**	750W	107 ft	166 ft	274 ft	571 ft

**Distances shown are for a single zone at maximum capacity. Greater distances can be achieved based on application of the IIS 750 3-Zone distribution capability (see below.)

3-Zone Distances for the IIS 750

The IIS 750 delivers up to 750W of emergency power that can be distributed among three distinct zones. The remote distance to each zone will be determined by that zone's individual load size. Refer to the Tables for the corresponding distance for that zone's load. For example: In the illustration to the right, the two zones rated at 200W can be up to 1033 feet from the inverter (120VAC using 10 gauge wire) while the third zone can be 589 feet for a combined output of 750W.



*Incandescent lamps are not generally operated above 140 volts except by special permission by the authority having jurisdiction.