
Sewage Lift Pumps (Residential Single Family Dwelling)

In recent months a number of individuals have requested clarification regarding acceptable wiring methods for sewage lift pumps in single family dwelling applications.

Part of the confusion may have arisen because the Canadian Electrical Code, Part 1 currently does not address all the requirements. The intent of this bulletin is to provide additional references and clarification pertaining to these particular installations.

Section 22 indicates that a sewage tank is considered a wet and corrosive location and Rule 22-100 requires that only electrical equipment which is essential for the processes being carried out shall be installed in the lift pump tank.

Normally sewage pumps are located within the holding tank and the pump may be equipped with a factory installed cord and attachment plug or non- cord cap which connects to the branch circuit conductors.

Receptacles

If the pump comes equipped with a factory installed cord attachment plug it shall be connected to a receptacle located outside the tank.

The receptacle may be mounted on a suitable treated post or other acceptable structure located adjacent to the tank. The receptacle shall be mounted at a minimum height of 300mm above grade. The receptacle need not be GFCI protected provided a single receptacle (one female contact) not duplex is installed and is used solely to supply power to the sewage pump.

The requirements of Section 26 for receptacles exposed to the weather shall also apply.

Another acceptable method is to have the receptacle located below grade in a suitable PVC enclosure having a rating of 6P or 4X. 4X enclosures shall have a bead of RTV sealant or equivalent around the lid and any openings. The receptacle may be single or duplex and shall be installed in a PVC outlet box complete with a cover. This receptacle need not be GFCI protected.

In no case shall the factory installed cord attachment plug be cut off.

Disconnecting Means

Rule 28-604 requires that a disconnecting means be provided within sight of and within 9 m of the pump motor. Exception is that the disconnecting means can be located beyond 9 m provided the disconnect is capable of being locked in the open position. A breaker located in a panel board would not normally meet these requirements unless it is fitted with an approved lockout device.

Pump motors that are cord connected with an attachment plug meeting the requirements of Rule 28-602 (c) do not require additional disconnecting means.

General

Pump motors that do not come equipped with a factory installed attachment plug may be connected directly to a power supply in a weatherproof junction box rated as specified above, mounted either above or below grade as outlined above.

Requirements for Sewage Lift Stations and Treatment Plants see Electrical Inspection Bulletin B-22-302.

