

## SUBMERSIBLE AUTOMATIC DRAININAGE PUMPS: KTZE & KTVE

Pumps like KTZ and KTV oftentimes operate in places where water level is not consistent and influent is fluctuating due to rainfall, or seepage. Therefore, operating the pump continuously even when there is no water in the sump/tank or controlling the pump operation manually does not make sense.

To address this issue at the site, Tsurumi has introduced Electrode Control Device in KTZ and KTV pumps.



### Electric Probe

Electrode Control Device is a sensing system added to Tsurumi's standard KTZ and KTV pumps, which consists of a short stainless steel 304 electric probe protruding from the head cover and a relay unit inside. When this probe comes into contact with water (or other conductive media) for more than 1 second, it forms a continuous electric circuit between the pump body (ground) and the probe, with minuscule current flowing through this circuit. This prompts the relay to start the pump operation.

### Relay and Timer Function

When the water level drops below the probe during the operation, a built-in timer starts but the pump continues to run for 1 minute more. During this period, if the water level rises and comes into contact with the probe for more than 1 second, the pump operates continuously until water level falls below the probe.



### Probe Length Adjustment

A probe extension is available as an optional accessory to adjust the pump start water level. This extension is a coil spring, which can be cut into desired length to adjust the water level according to the requirement of the site.

Proper care should be taken to prevent the extension probe from coming into direct contact with the pump body. This may cause faulty signals and improper operation.

