



Electrodes and Electrode Holders



Solid Rod Electrodes



Solid rod electrodes are generally used for applications which require relatively short lengths—six feet or less. Threaded at one end to fit any specified electrode holder, they are available in a choice of corrosion resistant materials as listed below and can be supplied either bare or insulated.

Standard insulation materials are polyvinyl chloride for temperatures up to 190°F, and Teflon for use up to 550°F. These materials provide excellent insulation between electrodes and ground, protect personnel against shock hazards, reduce corrosion, and make the electrodes insensitive to foam.

Material Selector Table

Material	Liquids To Be Controlled
Brass	Soft Water, Condensate
#316 Stainless	Water, Sewage, Alkaline Solutions
Monel or Nickel	Salt Water, Acid Solutions
Carpenter #20	Acid Solutions
Hastelloy C	Acid Solutions, Hypochlorite

Other special materials available on request.

Wire Suspension Electrodes

Wire suspension electrodes are designed for use in applications requiring long lengths or where limited head room prevents installation of solid rod electrodes. Generally used with cast flanged, cord grip, or conduit type holders (P. 17), they are suspended in the liquid by Type SW insulated suspension wire. Available in all of the materials listed above, they can be supplied with or without molded plastic shields for use at operating temperatures up to 150° and 190° respectively.

Type E-1P—Shielded: This electrode is approximately 4" long and assembled in a molded plastic insulating shield 1 1/16" in diameter. Designed for general purpose use, it is ideal for elevated tanks, sewage pumping stations, and deep well installations.

Type E-1P—Less Shield: This 4" electrode is used in hydropneumatic and condensate return tanks where limited head room prevents use of rod electrodes and where vertical spacing between electrodes is 4" or more.

Type E-1S—Shielded: A 2" long electrode assembled in a molded plastic shield 3/16" in diameter. Ideal for use in submersible pump installations and other applications where little clearance is provided for installation.

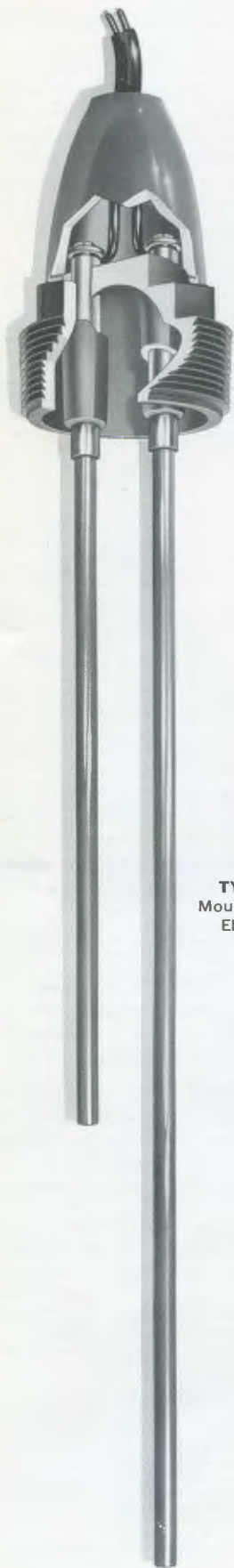
Type 13-064700: This special electrode for highly corrosive liquids can be furnished in any desired material. It is 3" long by 1/2" diameter and is insulated with PVC which completely bonds to the insulation of Type SW suspension wire. Since it is only furnished assembled to the SW wire, please specify desired electrode material and overall length of suspension wire.

Type SW Suspension Wire: Designed to provide maximum strength and insulation, this wire should always be used with B/W wire suspension electrodes to assure that a watertight seal is accomplished by the packing in the electrode. Wire is single conductor 18 gauge, 41 strand, copper with 4/64" vinyl insulation.





Electrodes and Electrode Holders



Molded Electrode Holders

B/W molded electrode holders are available in four basic types designed to meet the requirements of many diversified applications where operating temperatures and pressures do not exceed those listed at right.

Temperature/Pressure Limitations

Type of Holder	Number of Electrodes	Operating Temperature	Maximum Pressure
CE-2	2	100°F	200 psi
CE-3	3	160°F	0 psi
AE-2	2	100°F	250 psi
		180°F	0 psi
SE-1	1	200°F	50 psi
SE-2	2	200°F	50 psi
SE-3	3	200°F	50 psi
SE-4	4	200°F	50 psi
KF-1	1	180°F	10 psi
KF-2	1 to 4	180°F	10 psi
KF-3	1 to 7	180°F	10 psi
KF-4	1 to 7	180°F	10 psi

Type CE-2 Holders are designed primarily for use in original equipment applications where available space is limited and where desired level control can be obtained with only two short solid rod electrodes. These holders are molded of a hard thermoplastic material and are furnished with a flexible watertight cover to protect the lead wire junctions.

Type AE-2 Holders are ideal for use in controlling many corrosive liquids. Made of a thermoplastic material, they may be used with either two solid rod or two wire suspension electrodes and are furnished complete with a protective watertight cover.

Type SE Holders are designed for use in dairy, food processing and other sanitary applications. Made of thermosetting plastic, they are available in models to accommodate from one to four solid rod electrodes. Use of $\frac{3}{8}$ " or $\frac{1}{2}$ " rods are recommended for best results.

Type KF Holders are recommended for applications involving highly corrosive liquids. Made of unplasticized PVC, they are designed for bare or insulated $\frac{1}{4}$ " dia. rod electrodes which are assembled to holders at factory. $\frac{1}{4}$ -20 female studs are optional.



TYPE CE-2—CE-3 HOLDERS
Mounting thread: 1"—14 straight.
Electrode Studs: 6-32 male.



TYPE AE-2 HOLDER
Mounting thread: Std. 2" pipe.
Electrode Studs: $\frac{1}{4}$ —20 female.



TYPE SE-1—SE-4 HOLDERS
Mounting: 2" sanitary fitting.
Electrode Studs: $\frac{1}{4}$ —20 male.

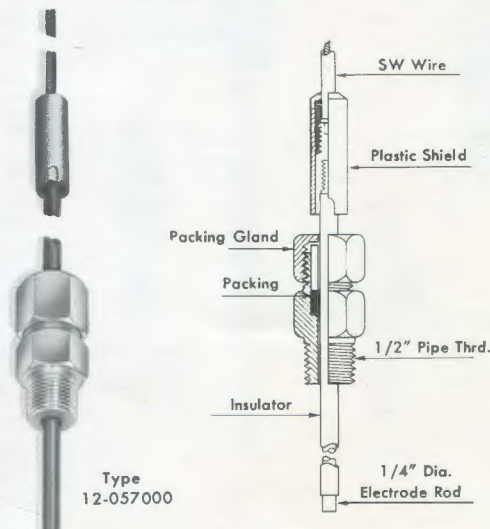


TYPE KF-1—KF-4 HOLDERS
Mounting 1", 2", 3" or 4" flange.
Electrodes factory assembled.

Adjustable Gland Electrode Holders

B/W adjustable gland type electrode holders are designed for use in applications which require occasional changing of the high or low level control settings. Conveyor feed, liquid proportioning, and container filling machines are typical of such installations.

Made of #303 stainless steel with positive, pressure tight $\frac{1}{2}$ " pipe thread mounting with Teflon or Neoprene insulation and packing, these holders are used with solid rod electrodes $\frac{1}{4}$ " in diameter and cut to any length desired. To adjust level settings, simply loosen the top part of the holder and slide the electrode up or down to required depth. In use, electrodes must be fully insulated over the full range of adjustability.



Type 12-057000



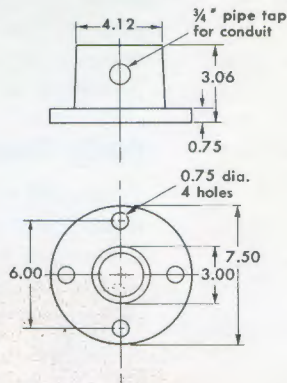
Cast Flanged Electrode Holders

These B/W cast flanged holders are designed for use with E-1P wire suspension electrodes in such applications as elevated tanks, water reservoirs, and sewage pumping stations, etc. Available in three basic sizes to accommodate from 1 up to 13 electrodes of varying lengths,

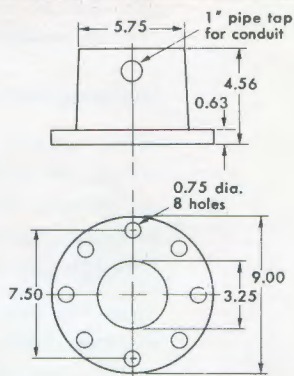
these holders feature a removable inner plate which facilitates cleaning and adjustment of the electrodes when required. While they are normally furnished in cadmium plated cast iron, all three standard sizes can be made of brass or stainless steel on special order.



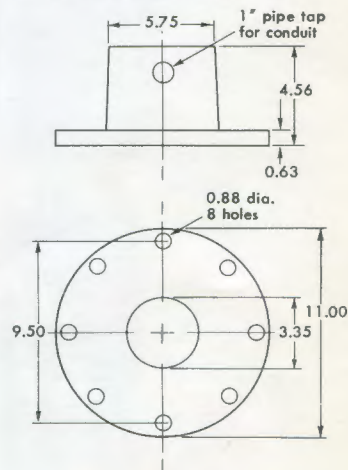
TYPE E-55-3
3" standard flange.
For use with one to seven electrodes



TYPE E-55-4
4" standard flange.
For use with one to thirteen electrodes



TYPE E-55-6
6" standard flange. For use with one to thirteen electrodes



Note: All flanges meet American Standard 125 pound cast iron or 150 pound steel flange specifications.

Condulet Electrode Holders

This electrode holder is recommended for use in underground drainage sumps, septic dosing tanks, open sumps, and many other similar applications. It may be located in areas where flooding is apt to occur—and it can also be furnished in a material suitable for use in highly corrosive atmospheres.

Designed for use with Type E-1P wire suspension electrodes, these versatile, low-cost holders are available in cadmium plated cast iron or rigid molded polyvinyl chloride in sizes to accommodate from one to four electrodes.



Type
12-056900

Cord Grip Electrode Holders

B/W cord grip electrode holders are designed to provide a simple, low-cost, positive means of sealing lead wire openings against leakage of gases and liquids in non-pressure applications requiring use of wire suspension electrodes. These include submersible pump installations with low level cutoff control, underground water storage tanks, covered sumps, and sewage pumping stations. Made of aluminum machined for 1/2" pipe thread mounting, they are furnished with compressible Neoprene packing to support either one or two wire suspension electrodes.



Type 12-055900
for one electrode
Type 12-056000
for two electrodes