

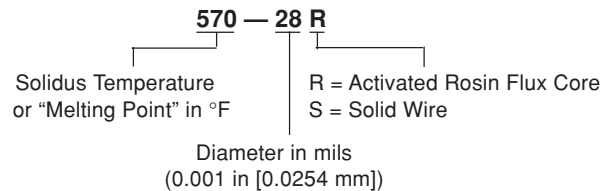
Solders, Fluxes, Kits and Soldering Units for Transducer Applications

The quality of the solder joints is a critical element in the performance of any strain gage installation. Because of special requirements associated with strain gage circuitry, many commercial soldering stations, solders and fluxes are not satisfactory for this purpose. Micro-Measurements

stocks and distributes two special soldering stations, a selection of solders, and soldering fluxes which have been carefully tested and qualified for use with strain gages. See Micro-Measurements Catalog A-110 for additional solder types available for special applications.

SOLDERS

M-LINE strain gage solders are listed at right, along with their compositions and principal properties. For ordering purposes, the solders are specified according to the coding system shown below. All solders listed are supplied on spools.



SOLDER SELECTION CHART

Solder Type	Packaging		Solidus/ Liquidus Temperature	Dia.
	Order No.	Unit Size		
361A-20R 63% Tin 36.65% Lead 0.35% Antimony	361A-20R-25	25 ft [7.6 m]	361°/361°F [183°/183°C]	0.020
	361A-20R	1 lb [450 g]		
450-20S 95% Tin 5% Antimony	450-20S-25	25 ft [7.6 m]	450°/460°F [232°/238°C]	0.020
	450-20S	1 lb [450 g]		
450-20R 95% Tin 5% Antimony	450-20R-25	25 ft [7.6 m]	450°/460°F [232°/238°C]	0.020
	450-20R	1 lb [450 g]		
570-28R 93% Lead 5.2% Tin 1.5% Silver	570-28R-20	20 ft [6.1 m]	565°/574°F [296°/301°C]	0.028
	570-28R	1 lb [450 g]		

FLUXES

Although some of the solders described in the table have rosin-flux cores, it is often necessary to use separate, externally applied fluxes. This may be the case, for instance, when soldering fine jumper wires to gage tabs or printed-circuit terminals, because not enough flux is released from the cored solder. It may also be necessary to supplement the cored flux in high-temperature solders such as Type 570.

Two fluxing compounds are available for strain gage soldering applications. M-Flux AR is an activated rosin flux which is effective on constantan, copper, nickel, and K-alloy

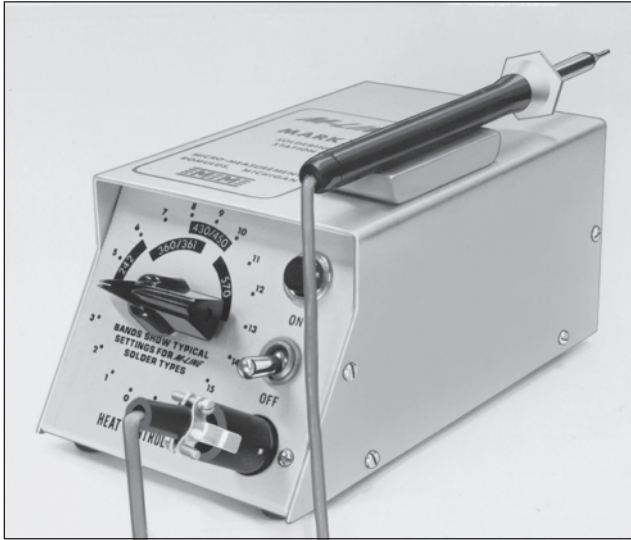
gages with DP soldering pads. M-Flux SS is a very active acid flux which is used primarily with solid-wire solders applied to isoelastic, Nichrome®, and stainless steel. The two fluxes should never be mixed. Whether the rosin or acid flux is used, it must be completely removed immediately after soldering to prevent degradation of protective coatings and corrosion of the metals, and to eliminate conductive flux residues. Rosin residues are best removed with M-LINE Rosin Solvent. Removal of M-Flux SS requires two steps: liberal applications of M-Prep Conditioner A, which must be blotted dry; and then M-Prep Neutralizer 5A, also to be blotted dry.

FLUX AND ROSIN SOLVENT KITS

M-Flux AR Kit FAR-1
2 1-oz (30-ml) brush-cap bottles M-Flux AR
2 1-oz (30-ml) brush-cap bottles M-LINE Rosin Solvent
M-LINE Rosin Solvent Kit RSK-4
4 1-oz (30-ml) brush-cap bottles
M-Flux SS Kit FSS-1
1 1-oz (30-ml) applicator cap bottle M-Flux SS
1 1-oz (30-ml) brush-cap bottle M-Prep Conditioner A
1 1-oz (30-ml) brush-cap bottle M-Prep Neutralizer 5A

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MARK V SOLDERING STATION



A time-proven precision soldering instrument for miniature and/or delicate soldering applications. Full 25-watt rating in 17 selector positions to handle all M-LINE solder alloys listed on page 28. Magnetic solder pencil holder and flexible, burn-resistant cord. Lightweight soldering pencil [1.1 oz (31 g)]. Operates on 50 or 60 Hz. Specify 115 or 230 Vac.

- M5S-1** Mark V Soldering Station, Complete
- M5S-2** Mark V Control Unit Only
- M5S-3** Mark V Soldering Pencil Only

Soldering Tips for Mark V

- M5S-A** Type A, general-purpose 1/16 in (1.5 mm) screwdriver.
- M5S-B** Type B, miniature 1/16 in (1.5 mm) chisel.
- M5S-C** Type C, heavy duty 1/8 in (3 mm) screwdriver.
- M5S-D** Type D, high-temperature 3/32 in (2.5 mm) chisel.

Types A, B, and C tips are pretinned, ironclad copper, overplated with nickel/chromium to retard oxidation. Type D is nickel-plated copper, particularly suited to high-temperature soldering.

MARK VIII SOLDERING STATION



Manufactured for Vishay Micro-Measurements, the Mark VIII is a compact soldering unit with a lightweight soldering pencil. The modular design of the pencil allows for easy changing of tips, and heating element replacement. Includes both the M8S-A and M8S-B soldering tips, selected for ease of use with strain gages. The Mark VIII incorporates closed-loop control technology for precise tip temperature management. Tip temperature range of +500° to +800°F [+260° to +425°C] is ideal for most laboratory and field strain gage applications. The temperature control is color-coded for proper tip temperatures for all Micro-Measurements soft solders. Not for use with Type 1240-FPA solder.

- M8S-1-XXX Mark VIII Soldering Unit, Complete,**
XXX = Voltage 115 or 230 (Vac).

SOLDERING TIPS FOR MARK VIII

- M8S-A** Narrow tip 0.047 in [1.2 mm] screwdriver.
- M8S-B** Wide tip 0.062 in [1.6 mm] screwdriver.
- M8S-RS** Replacement Sponge, package of 1.