Melt Pressure Transmitter Instruction Manual

CYR or CYRR with “MA” or “V” output designation.

Before Proceeding

Check to insure that the model number of the Skylark melt pressure transmitter is suitable for your application. Skylark melt pressure transmitters are available in two (2) unique designs. The CYRR style is a rigid stem only version of the melt pressure transmitter or the CYR style which also has a rigid stem but additionally incorporates 18” of flexible capillary. The next designation is a numeric number indicating the rigid stem length in inches. This is followed by the output designation “S” (3.3mV/Volt). This is then followed by the pressure range designation (i.e -10K = 0-10,000 psi, -5K = 0-5000 psi). If you are unsure please contact Skylark.

Quality and Conformity

Your Skylark melt pressure transmitter comes complete with a certificate of quality and conformity. This certificate includes detailed information regarding the specific accuracy, non-linearity, hysterisis, and repeatability of your melt pressure transmitter. Please refer to this certificate for detailed product information. Your Skylark melt pressure transmitter is fully compatible with all melt pressure transmitters incorporating the Bendix style 6 pin bayonet connector.

Operating Principle

Skylark melt pressure transmitters (output designation “MA” or “V”) are used to make pressure measurements of molten polymers up to 750ºF (400ºC). These melt pressure transmitters incorporate a four-arm, 350-Ohm, bonded foil Wheatstone bridge strain gauge. The transmitter is designed to provide an output which is proportional to the melt pressure. These models include an internal shunt calibration feature (“R-Cal”) that is used to simulate a signal of 80% of full scale output. This eliminates the need for a calibrated pressure source when scaling associated instrumentation.

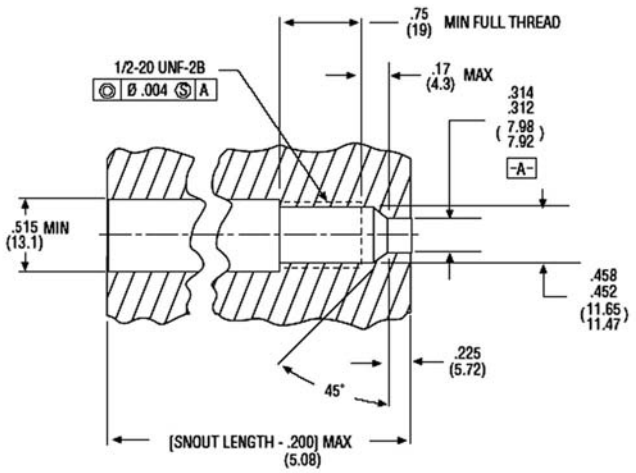
Installation

Do not remove protective cap covering transmitter threads until ready to install. Prior to initial installation, verify correct machining of the 1/2-20UNF mounting hole. Detailed mounting hole information is available at www.skylarkcontrols.com (under the technical section). When reinstalling make sure that the mounting hole is clear of material. A Skylark Cleaning Tool Kit (CLEANKIT - CYR), should be used. To prevent galling, lightly coat the gauge threads with a high temperature anti-seize material. An adequate seal, in a properly machined and maintained mounting well, is obtained in 100 in-lbs (8.3 ft-lbs) mounting torque. Maximum recommended torque is 500 in-lbs (41.6 ft-lbs). The electronics housing should be secured, in an area where the ambient temperature will not exceed 160ºF (70ºC).

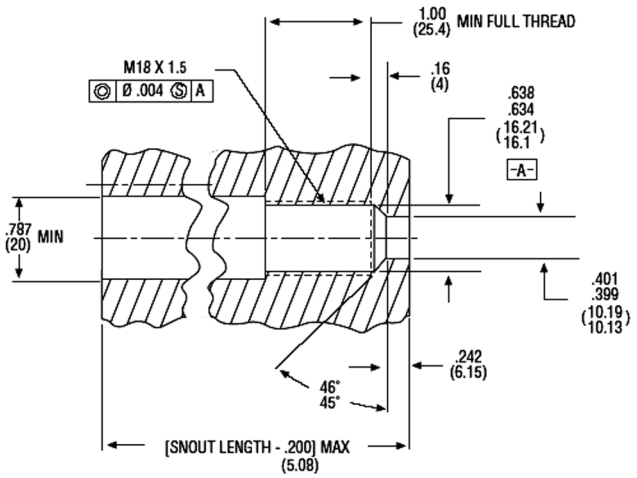
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Mounting Hole (1/2-20 UNF)



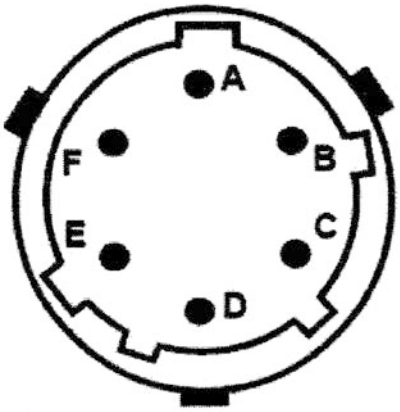
Optional Mounting Hole (M18 x 1.5)



Wiring

The standard electrical termination on this series is a 6-pin connector, Bendix PT02A-10-6P (or equivalent). A mating plug, Bendix PT06A-10-6S (SR) (or equivalent), is required or can be part of the appropriate Skylark cable assembly. Models with output designation “MA” or “V” can be wired in the “3-wire” configuration by referencing the signal (+) to the input (-). Recommended excitation voltage for either the 0-10 Vdc or 4-20 mA output transmitters is 24Vdc.

6 Pin Connector



	mA Output	Vdc Output
Pin A/Red	Input/Signal (+)	Signal (+)
Pin B/Black	Input/Signal (-)	Signal (-)
Pin C/White	not used	Input (+)
Pin D/Green	not used	Input (-)
Pin E/Blue	Cal	Cal
Pin F/Orange	Cal	Cal

Excitation Voltage - 24Vdc

Start-Up

Bring system to operating temperature, with no pressure, and adjust the ZERO balance potentiometer, under the seal screw on amplifier housing until output is 0Vdc or 4mA, depending on model. Next short the leads from the “R-Cal”, pins E and F, and adjust the SPAN potenitometer until the output is 80% of full scale, i.e. (8Vdc or “V” output transmitters or 16.8mA for “MA” output transmitters). Allow sufficient “soak time” to assure that any material at the transmitter tip is molten before extruder driveis started.

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Removal

The melt pressure transmitter should only be removed when polymer is hot and liquid. Wipe tip with a soft cloth immediately. The melt pressure transmitter must be removed before using an abrasive material or wire brush to clean the extruder barrel. Clean mounting hole completely before reinstalling the gauge by using the Skylark Cleaning Tool Kit. (CLEANKIT - CYR)

Thermocouple Option

The CYRG Style Skylark melt pressure transmitter might also incorporate a thermocouple in the rigid stem (designation -J or -K). The standard (-J), Type J (iron-constantan) T/C junction is located just behind the flush diaphragm at the tip of the gauge. This senses the temperature at that point.

Transmitter Repair

Questions concerning warranty, repair cost, delivery, and requests for an RMA# should be directed to the Skylark Service Department, (416) 444-6614 or by email to curtroberts@skylarkcontrols.com. Please call for a return authorization number (RMA#) before returning any product. Damaged melt pressure transmitters should be returned to:

Skylark Controls
Attn: Service Department
RMA#_____
12 Upjohn Road, Unit 8
Don Mills, Ontario, M3B 2V9

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