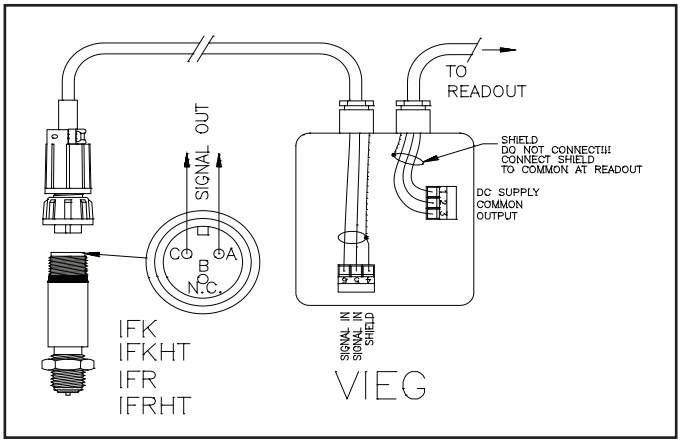
IF Series Inductive Pickup with Amplifier Installation Guide

The IF series inductive pickup and VIEG amplifier are applied in high temperature applications beyond the normal operating range of standard magnetic pickups. The inductive sensor generates a sinusoidal output signal with an amplitude between 0.5mV to 0.5V. The VIEG is designed to amplify and shape this signal providing a square wave output voltage of 8V pp.



Application of the IF Series Inductive Pickups

The selection of an inductive pickup is recommended when the operating temperature exceeds 176°F/80° C. Operation can be expected up to 360°F/180°C with the standard version and up to 465°F/240°C using the HT version.

Because of the low signal levels involved, the following guidelines should be followed:

- Only use braided, shielded cable. The shield should only be connected at the amplifier module as indicated. The distance between the amplifier and sensor should not exceed 3 meters/10 feet.
- Because of the low signal levels, direct the electronics as far as possible from other electromagnetic field sources.
- The pickup should be inserted until hand tight, then turned back 1/4rev. Tighten the lock nut to secure this position.
- The meter can be mounted in any manner, however, every effort should be made to minimize vibrations. Strong vibrations can have a microphonic effect on the pickup sensor. Flexible connections will help to reduce pipeline vibrations considerably where this is a concern.

VIEG Technical Data

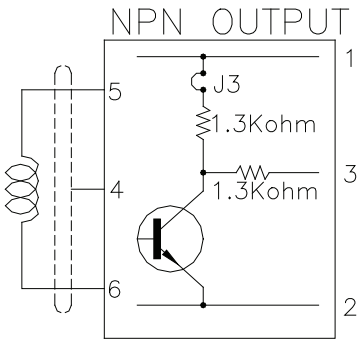
In:	Voltage pulses of amplitudes 0.5mV - 0.5V. Impedance 100 Ohms.
Out:	8V square wave pulse. Impedance 5.6K Ohms
Supply:	7-29 Volts DC .5mA
Dimensions	L=64mm; W=58mm; H=37mm
Weight:	0.13lb.

Technical Data

VIEG Amplifier

Operating temp: -20°C to + 80°C
Supply voltage: U_B: 7 to 29V/DC
Current consumption: I_R < 4mA
Output: Square wave frequency output
Electrical data: Voltage level NPN/PNP (three-wire connection)

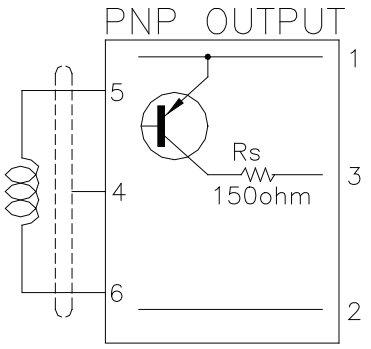
A) Active output NPN
High level: $U_{High} > U_B - 0.6V - (2.6k\ \Omega x\ I_{out})$
Low level: $U_{Low} > 0.6V + (1.3k\ \Omega x\ I_{out})$



B) Passive output NPN (OC-output)
High level: $U_{High} = U_B$
Low level: $U_{Low} < 0.6V + (1.3k\ \Omega x\ I_{out})$
U_B is the applied voltage at the output. 29V max.

C) Active output PNP
High level: $U_{High} > U_B - 0.6V - (150\ \Omega x\ I_{out})$
Low level: U_{Low} = cut off

D) Passive output PNP (OC-output)
High level: $U_{High} > U_B - 0.6V - (150\ \Omega x\ I_{out})$
Low level: U_{Low} = cut off
U_B is the applied voltage at the output. 29V max.
I_{max} = 60mA; P_{max} on R_s = 1W; R_s = 150Ω



Current level (two-wire connection)
High level: I_{High} > 2.2mA
Low level: I_{low} < 1.4mA

Input impedance: < 100Ω
Input: 0.5mV up to 0.5V
Frequency range: 7-3000 Hz according to flowmeter type
Electrical connection: Terminals 1, 2, 3 for supply voltage, ground & signal outlet
Terminals 4, 5, 6 for shield and inductive pickup

Housing: Aluminium
IP65 (DIN40050)
L = 64mm; W = 58mm; H = 37mm
two cable glands PG7, plastic

VIEG Amplifier

Jumper Setting and Terminals

Version	J3	J4	J5	J6	Terminal
2-Wire	Off	On	Off	Off	1, 2
3-Wire active NPN	On	Off	Off	On	1, 2, 3
3-Wire active PNP	On	Off	On	Off	1, 2, 3
3-Wire passive NPN	Off	Off	Off	On	1, 2, 3