

DRAWING NUMBER:
EM-10-I

USED ON

DESIGN
COPYRIGHT
RESERVED

Data Sheet

THIRD ANGLE
PROJECTION

SIZE
A3

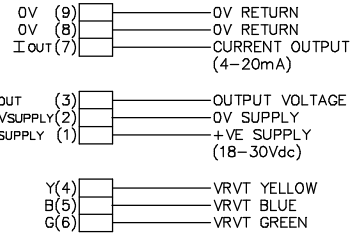
D.O.REFS.

SUB-MASTER
FROM: -

APPROVED
I.HURST

CHECKED
I.HURST
DRAWN
P.W.

TERMINAL CONNECTIONS

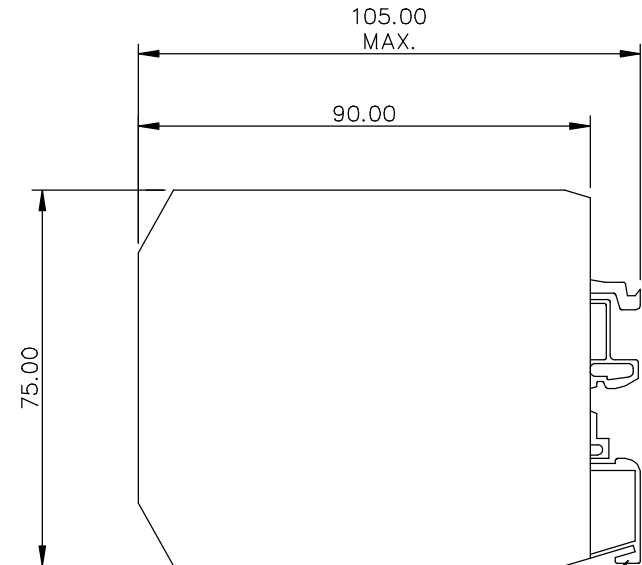
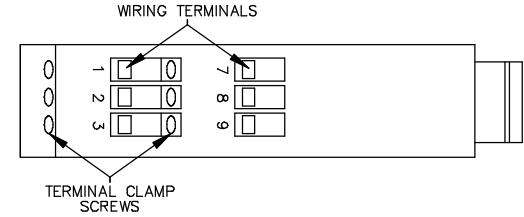
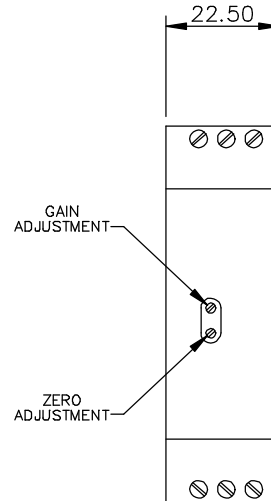


SPECIFICATION DATA

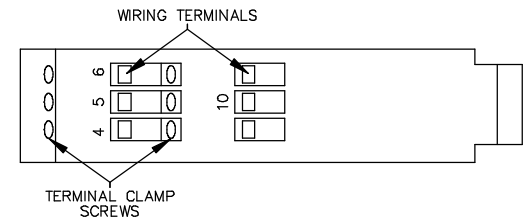
SUPPLY VOLTAGE _____ 18-30Vdc (REGULATED)
 SUPPLY CURRENT _____ <100mA MAX
 LINE REGULATION _____ <0.25% SPAN/VOLT
 POWER ON SETTLEMENT _____ <10% SPAN WITHIN 5 SECONDS
 _____ <0.25% SPAN WITHIN 3 MINUTES
 OUTPUT _____ 4mA TO 20mA (CURRENT)
 _____ 0V TO 10V (VOLTAGE)
 _____ 4mA(0V) VRVT SHAFT RETRACTED,
 _____ 20mA(10V) VRVT SHAFT EXTENDED.
 SEE PENNY & GILES DRAWING A156910
 FOR SLOPE REVERSAL SETTING
 INSTRUCTIONS.
 OUTPUT LOAD (CURRENT OUTPUT) _____ 400Ω MAXIMUM @ 18Vdc SUPPLY
 _____ 700Ω MAXIMUM @ 24Vdc SUPPLY
 _____ 1000Ω MAXIMUM @ 30Vdc SUPPLY
 OUTPUT LOAD (VOLTAGE OUTPUT) _____ 5KΩ MINIMUM (RESISTIVE TO 0V LINE)
 OUTPUT ADJUSTMENT _____ ±10% SPAN, 100% ZERO OFFSET
 OUTPUT RIPPLE _____ <5mV RMS
 TEMPERATURE RANGE OPERATIONAL _____ 0°C TO +60°C OPERATIONAL
 _____ STORAGE _____ -20°C TO +70°C
 TEMPERATURE COEFFICIENT (AVERAGE) _____ <300ppm SPAN/°C (SEE NOTE 1)
 MOUNTING _____ TO FIT DIN EN50022 OR DIN EN50035 RAILS

NOTE

1. AVERAGE TEMPERATURE COEFFICIENT = $\frac{\Delta \text{OUTPUT} \times 10^6}{20\% \text{ OUTPUT SPAN} \times 60\text{°C (OPERATING TEMP RANGE)}}$ ppm/°C
2. FOR USE WITH VRVT MODELS 050, 080, 100 AND 190



TO FIT RAIL
DIN EN50022 OR
DIN EN50035.



Penny+Giles POSITION SENSORS LIMITED,
Christchurch,
Dorset, U.K.

| | | | | | |
|-----------|--------|----------|----------|----------|----------|
| ISSUE | A | 1 | 2 | 3 | 4 |
| DATE | 1/4/97 | 23/4/97 | 9/4/98 | 09.05.00 | 29/08/01 |
| CHANGE | NEW | CH9766/1 | CH9766/4 | 9766/5 | CH9766/6 |
| FINISH: - | - | | | | |

| | | |
|--|------------|--------------------------------|
| MATERIAL: - | TOLERANCES | SCALE: 1:1 |
| - | ± 0.25 | DIMS: mm |
| TITLE: EM-10 WITH INTEGRATED E TO I | | DRAWING NUMBER: EM-10-I |

| | | | | | | | |
|----------------------------------|-----------|------------------------------------|---|-----------|--|----------|--|
| DRAWING NUMBER A156910 | | THIRD ANGLE PROJECTION TO B.S. 308 | FOR GENERAL TOLERANCES & FINISHES SEE PENNY & GILES STANDARD 55-301. FOR GEOMETRIC TOLERANCES SEE B.S. 308 Pt.3 | HOLE DATA | | | |
| APPROX. GRID REF | HOLE REF. | No. OF HOLES | DESCRIPTION | | | POS. TOL | |

USED ON EM-10 E TO I IF IN DOUBT ASK

D or CAT.No D44994

M.A or S.A

D.I.S or M.R.I

D.O.REFS.

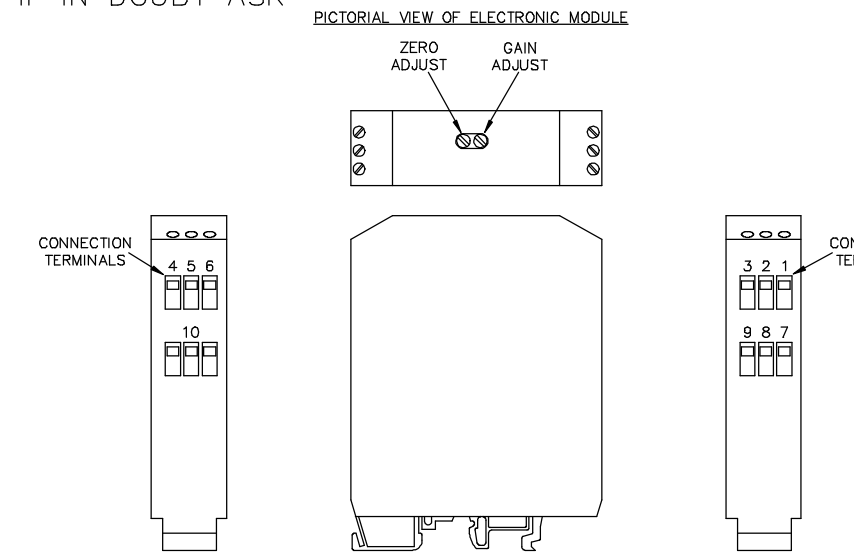
APPROVED

M.BENTLEY

CHECKED M.BENTLEY

TRACED

DRAWN M.BOOTE

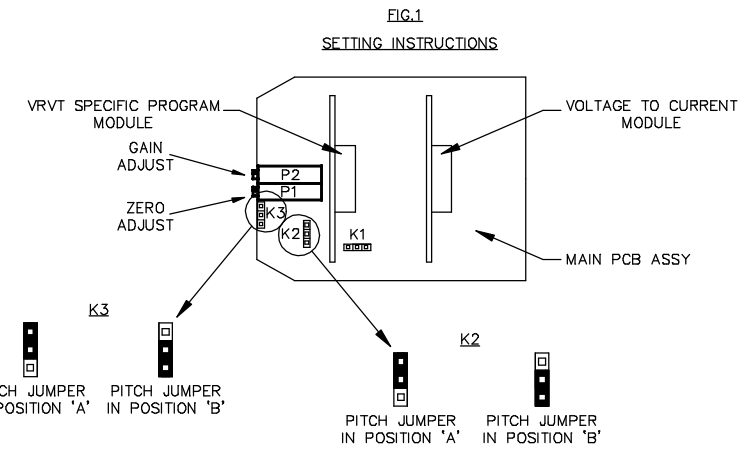


SPECIFICATION DATA

| | |
|------------------------------|--|
| SUPPLY VOLTAGE | 18-30Vdc (REGULATED) |
| SUPPLY CURRENT | <100mA MAX |
| LINE REGULATION | <0.25% SPAN/VOLT |
| POWER ON SETTLEMENT | <10% SPAN WITHIN 5 SECONDS |
| OUTPUT | <0.25% SPAN WITHIN 3 MINUTES |
| OUTPUT ADJUSTMENT | SEE TABLE FOR FULL VRVT ELECTRICAL SHAFT DISPLACEMENT. |
| OUTPUT LOAD (CURRENT OUTPUT) | ±10% SPAN, 100% ZERO OFFSET |
| | 400Ω MAX @ 18V SUPPLY |
| | 700Ω MAX @ 24V SUPPLY |
| | 1000Ω MAX @ 30V SUPPLY |

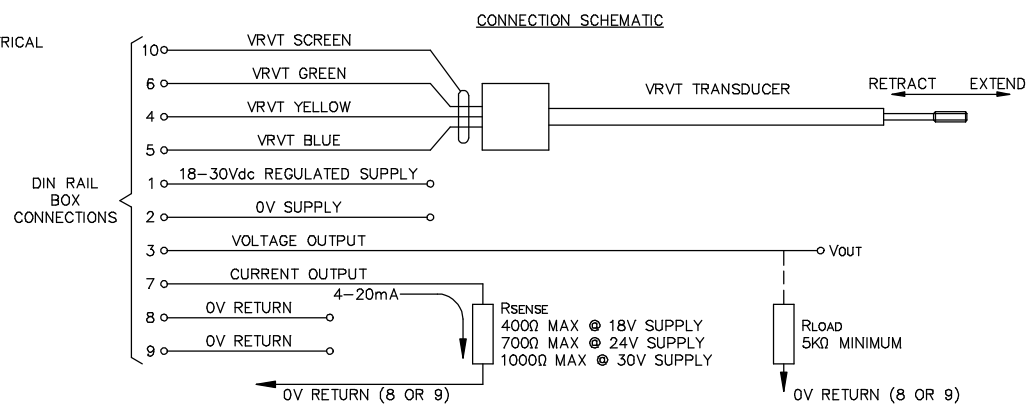
NOTE:- WHEN CALIBRATED TO GIVE 4 TO 20mA OUTPUT CURRENT THE VOLTAGE OUTPUT (3) WILL BE APPROXIMATELY 0 TO 10V

| OUTPUT CURRENT OPTIONS | | PITCH JUMPER POSITION | |
|------------------------|--------------|-----------------------|----|
| SHAFT RETRACT | SHAFT EXTEND | K2 | K3 |
| 4mA (0V) | 20mA (10V) | A | A |
| 20mA (10V) | 4mA (0V) | B | A |



CALIBRATION PROCEDURE

- SET PITCH JUMPER POSITIONS ON K2 AND K3 TO SELECT DESIRED OUTPUT FORMAT (SEE FIG.1 AND TABLE).
- MECHANICALLY POSITION VRVT SHAFT TO DESIRED 4mA POSITION AND ADJUST ZERO TRIMPOT (P1) TO GIVE 4mA OUTPUT CURRENT, (TAKE CARE NOT TO INTRODUCE DEADBAND).
- MECHANICALLY POSITION VRVT SHAFT TO DESIRED 20mA POSITION AND ADJUST GAIN TRIMPOT (P2) TO GIVE 20mA OUTPUT.



| | | | | | | | | | | | | | | | | | | |
|-------------|-----------|------------|--------|--------|--------|----------|--|--|--|--|--|--|--|--|--|--|--|--|
| MATERIAL: - | FINISH: - | TOLERANCES | SCALE: | ISSUE | 1 | 1A | | | | | | | | | | | | |
| | | | DIMS: | DATE | 3-2-97 | 19/6/97 | | | | | | | | | | | | |
| | | | | CHANGE | 9703/1 | CH9703/2 | | | | | | | | | | | | |



POSITION SENSORS LIMITED

TITLE SETTING INSTRUCTIONS

SIZE A3

DRAWING NUMBER A156910