

DRAWING NUMBER
EM-9

USED ON

SUB-MASTER FROM: -

DESIGN COPYRIGHT RESERVED

SIZE
A2

THIRD ANGLE PROJECTION TO B.S.308

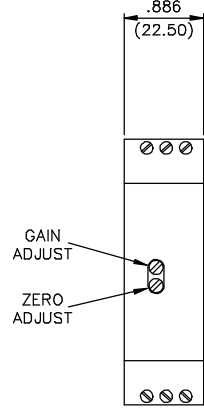
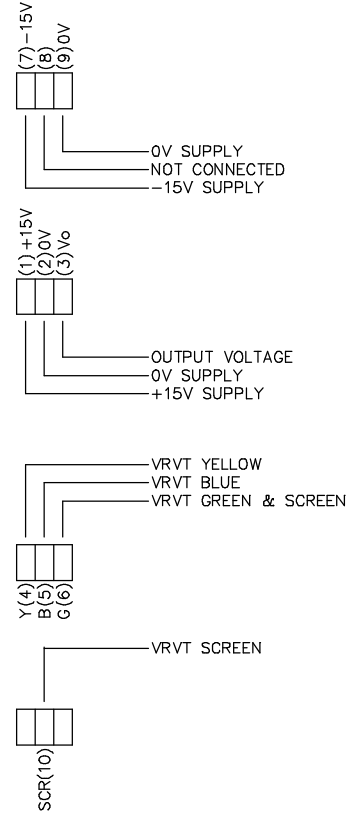
Data Sheet

D.O. REFS.

APPROVED
K.B.

CHECKED
M. BOOTE
DRAWN
I. HURST

TERMINAL CONNECTIONS



ORDERING CODE

EM9/

CORE RETRACTED CORE EXTENDED

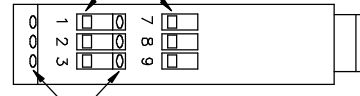
OUTPUT VOLTAGE OPTIONS A= -10V TO +10V
C= CUSTOMER DEFINED
(REFER TO ENGINEERING)

NOTE

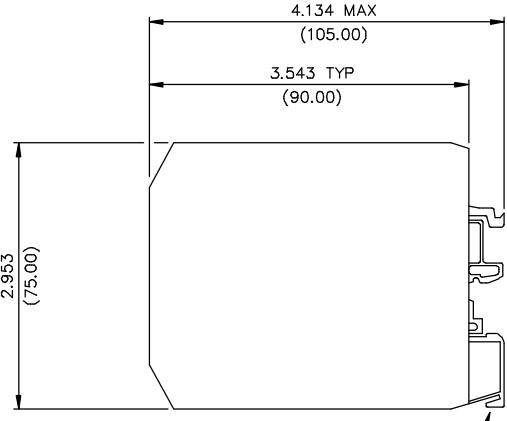
1. AVERAGE TEMPERATURE COEFFICIENT = $\frac{\Delta \text{OUTPUT} \times 10^6}{20^\circ\text{C OUTPUT SPAN} \times 60^\circ\text{C (OPERATING TEMP RANGE)}}$ ppm/°C

2. FOR USE WITH VRVT MODELS 050, 080, 100 AND 190.

WIRING TERMINALS

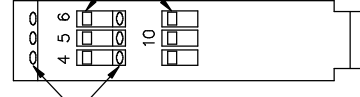


TERMINAL CLAMP SCREWS



TO FIT RAIL
DIN EN50022 OR
DIN EN50035.

WIRING TERMINALS



TERMINAL CLAMP SCREWS

SPECIFICATION DATA

SUPPLY VOLTAGE _____ ±15Vdc ±10% REGULATED
 SUPPLY CURRENT _____ <100mA MAX
 LINE REGULATION _____ <0.25%/VOLT
 POWER ON SETTLEMENT _____ <10% SPAN WITHIN 5 SECONDS
 _____ <0.25% SPAN WITHIN 3 MINUTES

OUTPUT _____ ±10Vdc FOR FULL VRVT ELECTRICAL
 _____ SHAFT DISPLACEMENT.

OUTPUT ADJUSTMENT _____ ±10% SPAN, 100% ZERO OFFSET
 OUTPUT RIPPLE _____ <5mV RMS
 OUTPUT LOAD _____ 5KΩ MINIMUM (RESISTIVE TO 0V LINE)
 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

Penny+Giles POSITION SENSORS LIMITED
Christchurch
Dorset U.K

ISSUE	2A			
DATE	9/9/98			
CHANGE	CH9556/7			
TOLERANCES:	±.010(.25)	DIMS:	INS(mm)	SCALE:
				1:1

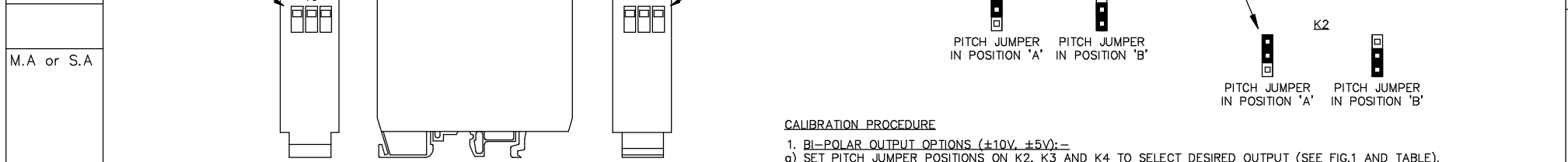
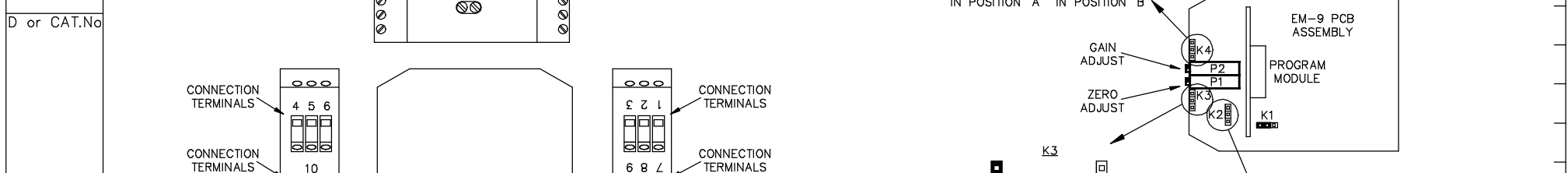
MATERIAL: -	FINISH: -	TITLE: -	DRAWING NUMBER
		VRVT	EM-9
		ELECTRONIC MODULE	

DRAWING NUMBER A156236	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-9 IF IN DOUBT ASK

PICTORIAL VIEW OF EM-9

ZERO ADJUST GAIN ADJUST

D.I.S or M.R.I

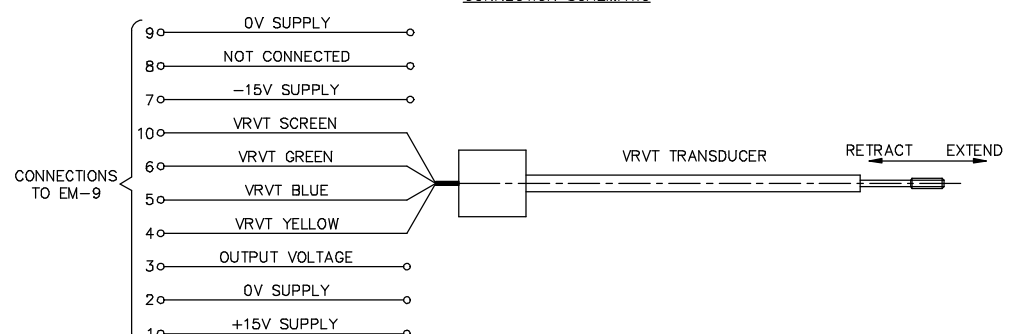
SPECIFICATION DATA

SUPPLY VOLTAGE _____ ±15Vdc ±10% REGULATED
 SUPPLY CURRENT _____ <100mA MAX
 LINE REGULATION _____ <0.25%/VOLT
 POWER ON SETTLEMENT _____ <10% SPAN WITHIN 5 SECONDS
 _____ <0.25% SPAN WITHIN 3 MINUTES
 OUTPUT _____ SEE TABLE FOR FULL VRVT ELECTRICAL SHAFT DISPLACEMENT.
 OUTPUT ADJUSTMENT _____ ±10% SPAN, 100% ZERO OFFSET
 OUTPUT RIPPLE _____ <5mV RMS
 OUTPUT LOAD _____ 5kΩ MINIMUM (RESISTIVE TO 0V LINE)

CALIBRATION PROCEDURE

- BI-POLAR OUTPUT OPTIONS (±10V, ±5V):-
 - SET PITCH JUMPER POSITIONS ON K2, K3 AND K4 TO SELECT DESIRED OUTPUT (SEE FIG.1 AND TABLE).
 - MECHANICALLY POSITION VRVT SHAFT TO MID STROKE AND ADJUST ZERO TRIMPOT (P1) TO SET OUTPUT TO 0V.
 - MECHANICALLY POSITION VRVT SHAFT TO EXTEND POSITION AND ADJUST GAIN TRIMPOT (P2) TO GIVE THE DESIRED FULL RANGE OUTPUT VOLTAGE.
- UNI-POLAR OUTPUT OPTIONS (0 TO 10V, 0 TO 5V etc):-
 - SET PITCH JUMPER POSITIONS ON K2, K3 AND K4 TO SELECT DESIRED OUTPUT (SEE FIG.1 AND TABLE).
 - MECHANICALLY POSITION VRVT SHAFT TO DESIRED 0V POSITION AND ADJUST ZERO TRIMPOT (P1) TO SET OUTPUT TO 0V.
 - MECHANICALLY POSITION VRVT SHAFT TO OTHER END OF ELECTRICAL STROKE AND ADJUST GAIN TRIMPOT (P2) TO GIVE DESIRED OUTPUT VOLTAGE.

CONNECTION SCHEMATIC



OUTPUT VOLTAGE OPTIONS		PITCH JUMPER POSITION		
SHAFT RETRACT	SHAFT EXTEND	K2	K3	K4
-10V	+10V	A	A	A
+10V	-10V	B	A	A
0V	+10V	A	B	A
+10V	0V	B	B	A
-10V	0V	A	B	A
0V	-10V	B	B	A
-5V	+5V	A	B	A
+5V	-5V	B	B	A
0V	+5V	A	B	B
+5V	0V	B	B	B
-5V	0V	A	B	B
0V	-5V	B	B	B

APPROVED	K.B.	MATERIAL: -	FINISH: -	TOLERANCES	SCALE: NTS	ISSUE	1	2												
CHECKED M. BOOTE	TRACED				DIMS: -	DATE	26/10/95	18/4/96												
DRAWN I. HURST			POSITION SENSORS LIMITED			TITLE	EM-9 SETTING INSTRUCTIONS				SIZE	A3	DRAWING NUMBER	A156236						