

DRAWING NUMBER  
DS49011

3rd ANGLE PROJECTION

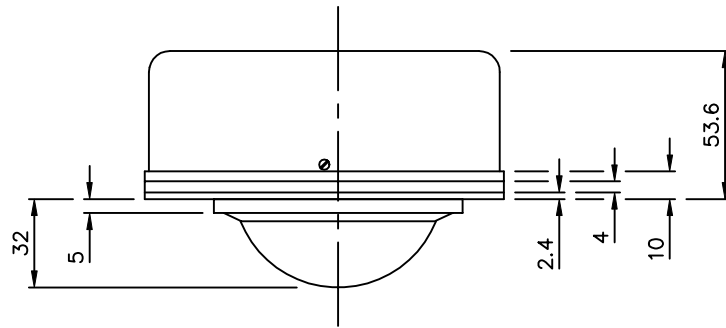
SPECIFICATION

- BALL ~  $\varnothing 3.0$ " PHENOLIC, COLOUR: YELLOW.
- CHASSIS ~ ALUMINUM ALLOY.  
FINISH: BLACK ANODISE (TOP PLATE),  
CHROMIC ANODISE (BASE & INT. SECT.).
- TOP RING ~ P.T.F.E. BALL SEAL/RESTRAINING RING (REMOVABLE).
- RESOLUTION ~ 1000 EDGES PER BALL REV.
- CONNECTOR ~ 9 WAY 'D' TYPE PLUG.
- MASS ~ 1.5Kg MAX.
- OP TORQUE ~ 100grms TYPICAL.
- SUPPLY ~ +5V D.C  $\pm 5\%$  @ 50mA MAX.
- OUTPUT ~ TTL PHASED QUADRATURE,  
CH1 LEADS CH2 BY  $90^\circ \pm 60^\circ$ .

USED ON

D or  
CAT.No

M.A./S.A.



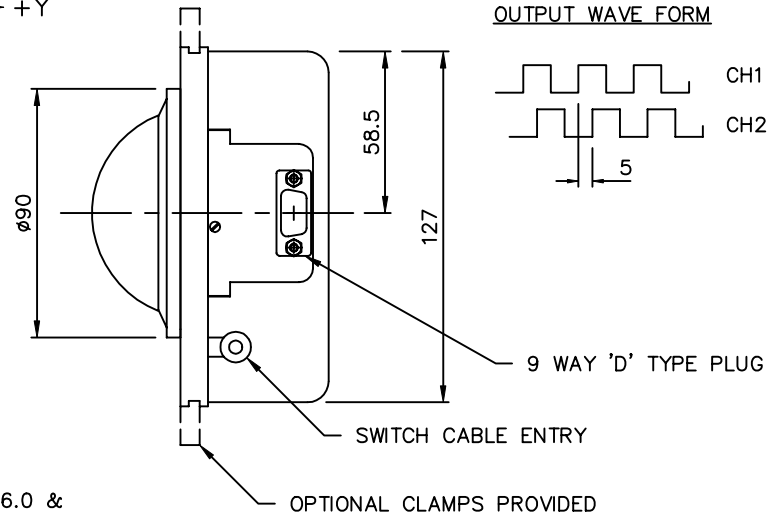
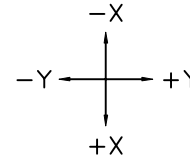
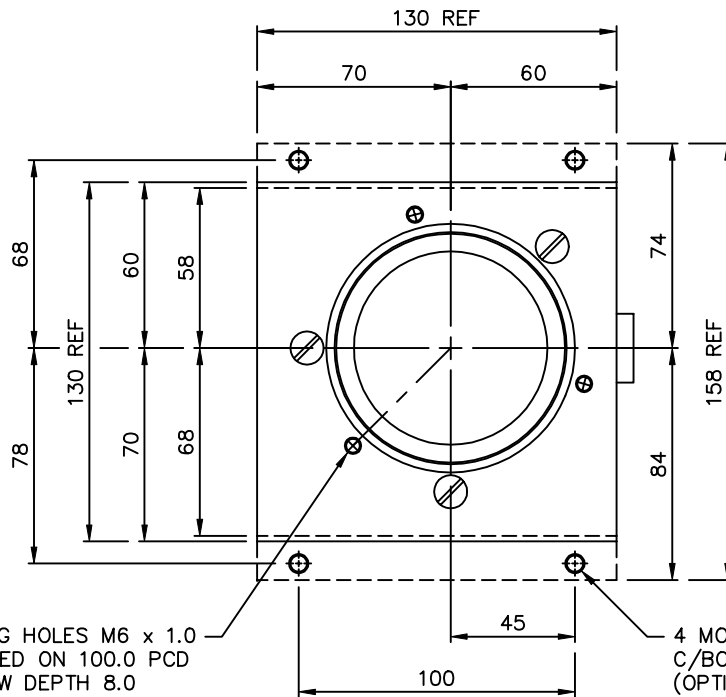
CONNECTION DETAILS

QUADRATURE OUTPUT:

PIN	DESCRIPTION
1	+5V
2	X AXIS CH1
3	X AXIS CH2
4	Y AXIS CH2
5	Y AXIS CH1
6	SWITCH 1
7	SWITCH 2
8	SWITCH 3
9	0V GND

SWITCH INPUT (PL3):

PIN	DESCRIPTION
1	N/C
2	N/C
3	0V GND
4	SWITCH 1
5	0V GND
6	SWITCH 2
7	0V GND
8	SWITCH 3



APP.	MATERIAL	FINISH	TOL.	SCALE 1:2	ISSUE	A	1				
	-	-	$\pm 0.5$		DATE	6.4.99	5.5.99				
CHKD.				DIMNS MM	CHANGE	NEW DWG	-				

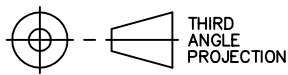


Traxsys - An Esterline Company  
Ringwood, Hampshire. BH24 1EU.  
Tel: +44 (0) 1425 463100  
Fax: +44 (0) 1425 463111  
www.traxsys.com

TITLE	SIZE	DRAWING NUMBER
PROTECTED 3" TRACKERBALL (QUADRATURE)	A3	DS49011

DRAWING NUMBER  
DS49013

DATA SHEET



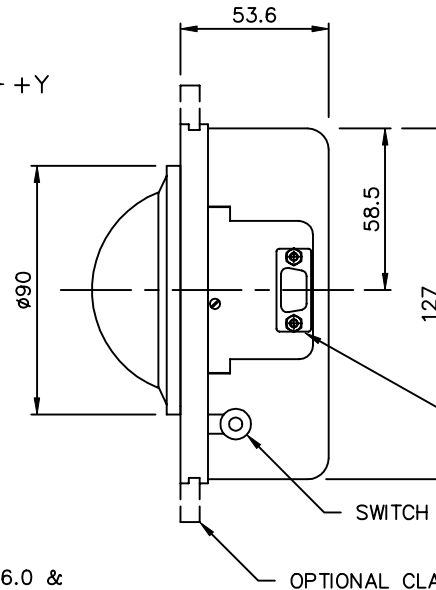
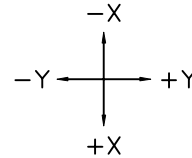
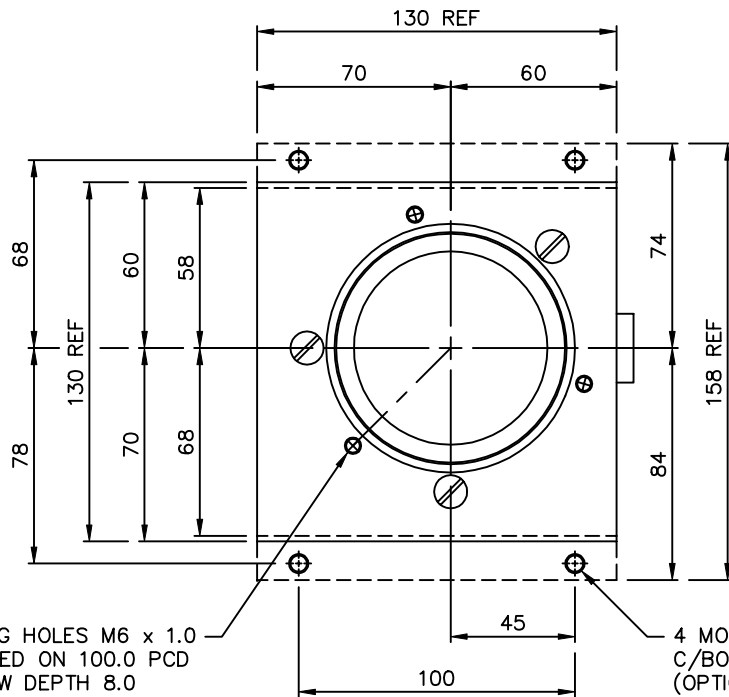
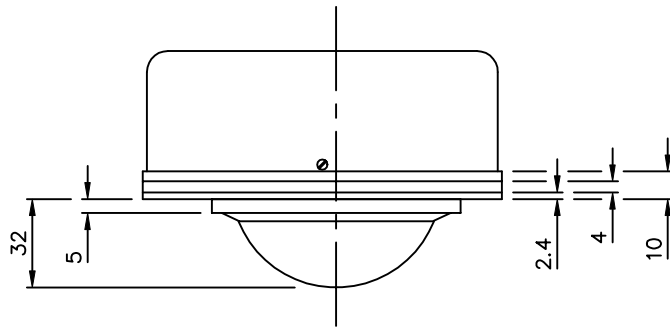
SPECIFICATION

BALL ~ Ø3.0" PHENOLIC, COLOUR: YELLOW.  
 CHASSIS ~ ALUMINUM ALLOY.  
 FINISH: BLACK ANODISE (TOP PLATE),  
 CHROMIC ANODISE (BASE & INT. SECT.).  
 TOP RING ~ P.T.F.E. BALL SEAL/RESTRAINING RING (REMOVABLE).  
 RESOLUTION ~ 1000 EDGES PER BALL REV.  
 CONNECTOR ~ 9 WAY 'D' TYPE PLUG.  
 MASS ~ 1.5Kg MAX.  
 OP TORQUE ~ 100grms TYPICAL.  
 SUPPLY ~ +5V D.C ±5% @ 50mA MAX.  
 OUTPUT ~ AUTO DETECT EITHER PS2 OR USB  
 DEPENDING ON HOST

USED ON

D or  
CAT.No

M.A./S.A.



CONNECTION DETAILS

SERIAL OUTPUT (9W D TYPE):

PIN	DESCRIPTION
	PS2      USB
1	CLOCK    + DATA
2	DATA     - DATA
3	LEFT BUTTON (I/P)
4	RIGHT BUTTON (I/P)
5	MIDDLE BUTTON (I/P)
6	OV GND
7	+5V
8	N/C
9	OV GND

AUXILIARY SWITCH INPUT (CON2):  
(REMOVE BASE TO ACCESS)

PIN	DESCRIPTION
1	OV GND
2	LEFT BUTTON
3	OV GND
4	RIGHT BUTTON
5	OV GND
6	MIDDLE BUTTON

APP.	MATERIAL	FINISH	TOL.	SCALE 1:2	ISSUE	1	2				
	-	-	±0.5		DATE	25.5.99	13.11.03				
CHKD.				DIMNS MM	CHANGE	NEW DWG	ECN1116				

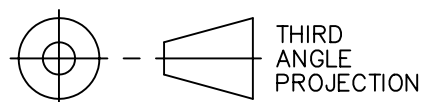


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TITLE  
 PROTECTED 3" TRACKERBALL  
 PS2 AND USB COMPATIBLE

SIZE  
 A3

DRAWING NUMBER  
 DS49013



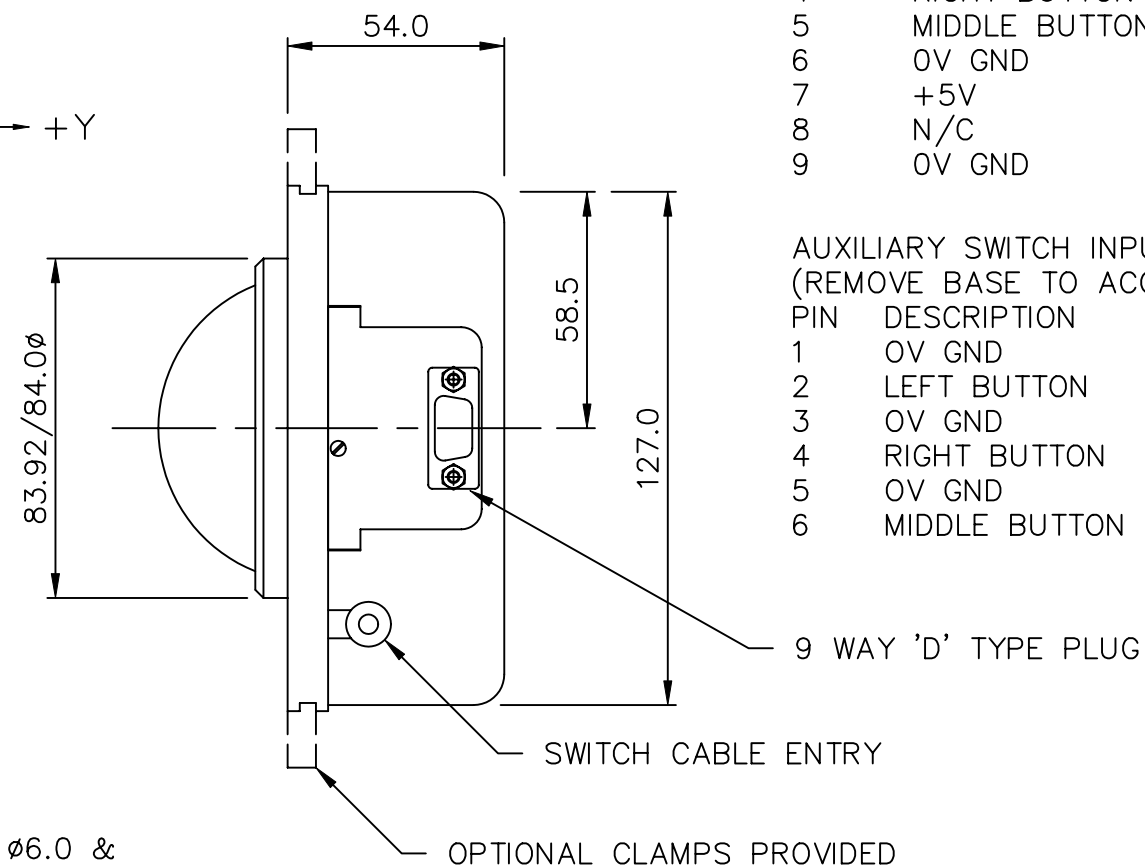
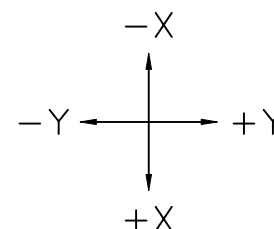
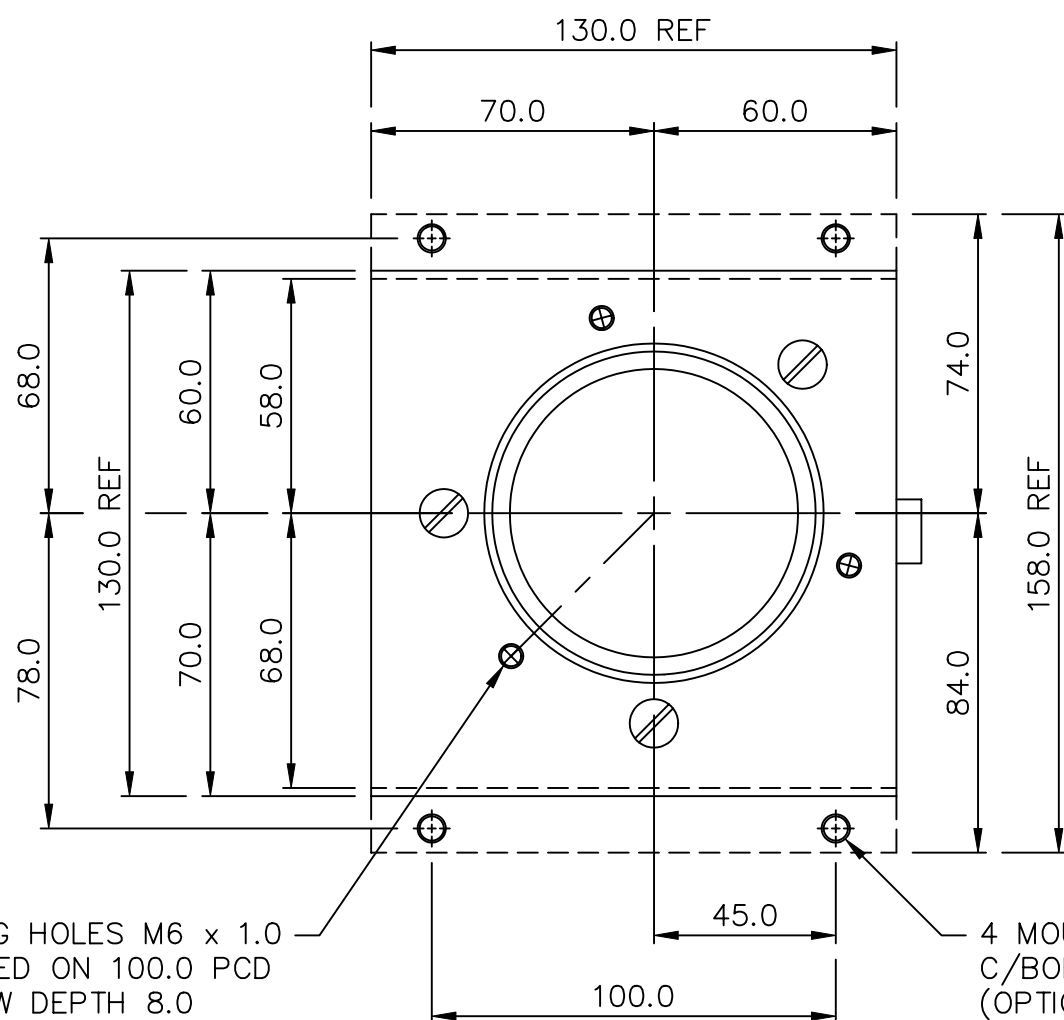
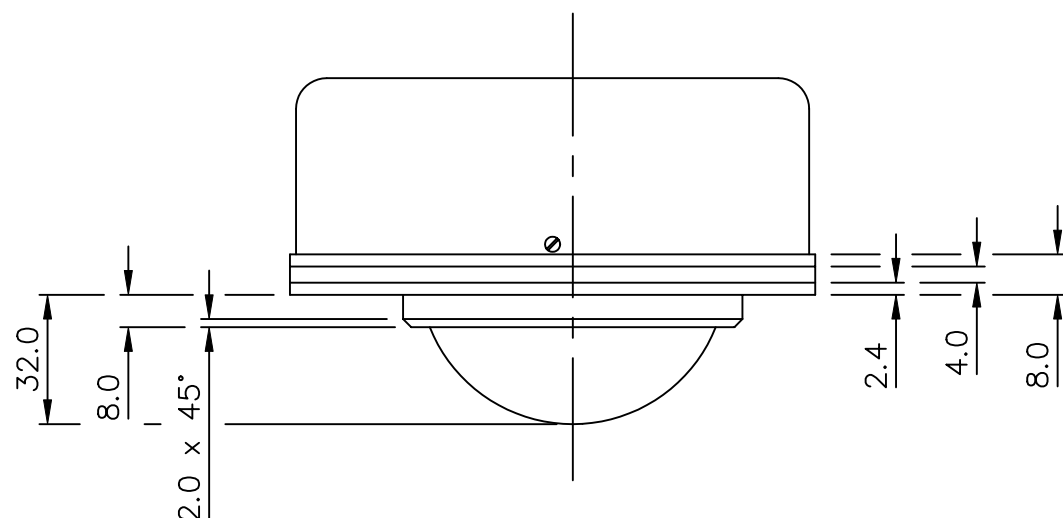
USED ON

D or  
CAT.No

M.A./S.A.

SPECIFICATION

BALL ~  $\phi 3.0$ " PHENOLIC, COLOUR: YELLOW.  
 CHASSIS ~ ALUMINUM ALLOY.  
 FINNISH: BLACK ANODISE (TOP PLATE),  
 CHROMIC ANODISE (BASE & INT. SECT.).  
 RESOLUTION ~ 1000 EDGES PER BALL REV.  
 CONNECTOR ~ 9 WAY 'D' TYPE PLUG.  
 MASS ~ 1.5Kg MAX.  
 OP TORQUE ~ 30grms MAX.  
 SUPPLY ~ +5V D.C  $\pm 5\%$  @ 180mA MAX.  
 OUTPUT ~ AUTO DETECT EITHER PS2 OR USB  
 DEPENDING ON HOST.



CONNECTION DETAILS

SERIAL OUTPUT (9W D TYPE):


PIN	DESCRIPTION	
	PS2	USB
1	CLOCK	+ DATA
2	DATA	- DATA
3	LEFT BUTTON (I/P)	
4	RIGHT BUTTON (I/P)	
5	MIDDLE BUTTON (I/P)	
6	0V GND	
7	+5V	
8	N/C	
9	0V GND	

AUXILIARY SWITCH INPUT (CON2):  
(REMOVE BASE TO ACCESS)

PIN	DESCRIPTION
1	0V GND
2	LEFT BUTTON
3	0V GND
4	RIGHT BUTTON
5	0V GND
6	MIDDLE BUTTON

3 MOUNTING HOLES M6 x 1.0  
EQUI-SPACED ON 100.0 PCD  
MAX. SCREW DEPTH 8.0

4 MOUNTING HOLES  $\phi 6.0$  &  
C/BORED  $\phi 7.0$  x 1.0 DEEP  
(OPTIONAL)

APP. <i>AND</i>	MATERIAL	FINISH	TOL.	SCALE 1:2	ISSUE	2A	2B	2C	3	3A	4		
	-	-	$\pm 0.5$		DATE	15.2.96	15.5.96	11.8.97	30.07.99	24.10.03	13.11.03		
CHKD. <i>AND</i>					DIMNS MM	CHANGE	CH348.4	CH348.5	ECN062	VARIOUS	ECN0947	ECN1116	
DRAWN R.HARNETT	 <p>Traxsys - An Esterline Company Ringwood, Hampshire. BH24 1EU. Tel: +44 (0) 1425 463100 Fax: +44 (0) 1425 463111 www.traxsys.com</p>				TITLE				SIZE	DRAWING NUMBER			
									LOW PROFILE 3" TRACKERBALL PS2 AND USB COMPATIBLE				A3

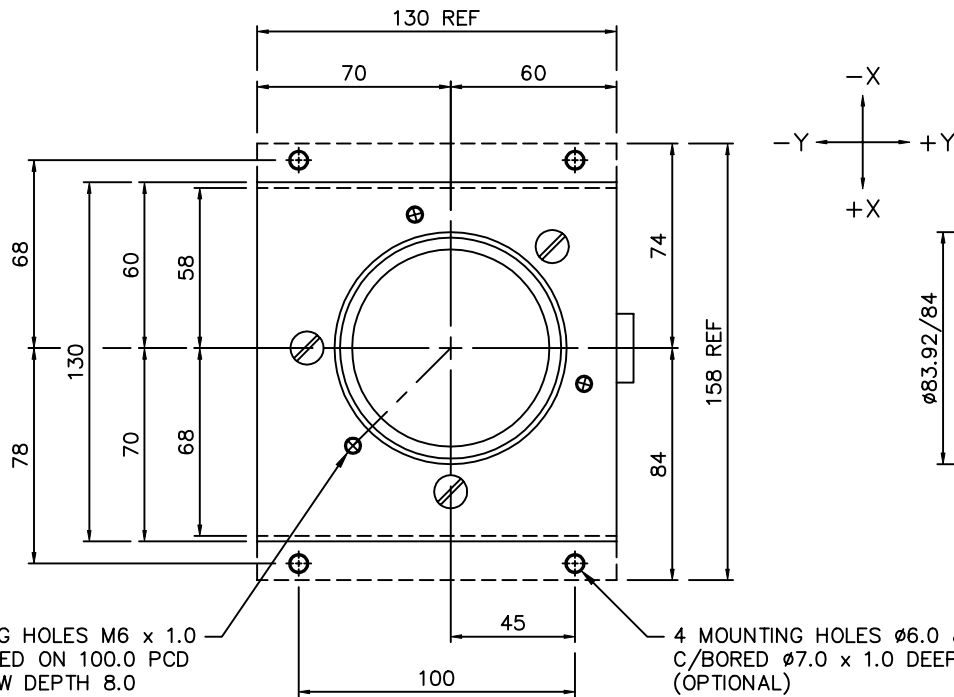
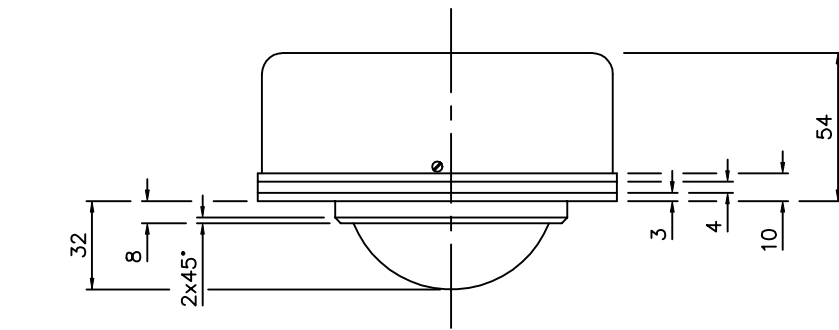
DRAWING NUMBER  
DS48288

3rd ANGLE PROJECTION

USED ON

D or  
CAT.No

M.A./S.A.



3 MOUNTING HOLES M6 x 1.0  
EQUI-SPACED ON 100.0 PCD  
MAX. SCREW DEPTH 8.0

4 MOUNTING HOLES  $\phi 6.0$  &  
C/BORED  $\phi 7.0$  x 1.0 DEEP  
(OPTIONAL)

SPECIFICATION

BALL ~  $\phi 3.0$ " PHENOLIC, COLOUR: YELLOW.  
CHASSIS ~ ALUMINUM ALLOY.  
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CONNECTOR ~ 9 WAY 'D' TYPE PLUG.  
MASS ~ 1.5Kg MAX.  
OP TORQUE ~ 30grms MAX.  
SUPPLY ~ +5V D.C  $\pm 5\%$  @ 50mA MAX.  
OUTPUT ~ TTL PHASED QUADRATURE,  
CH1 LEADS CH2 BY  $90^\circ \pm 60^\circ$ .

CONNECTION DETAILS

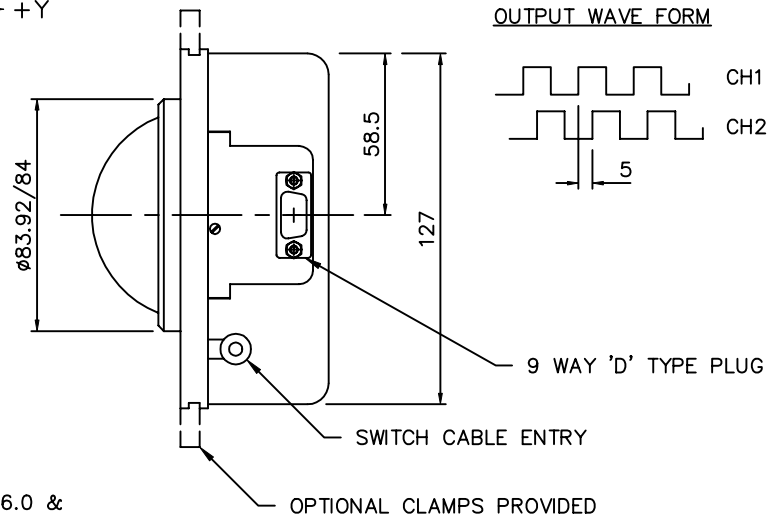
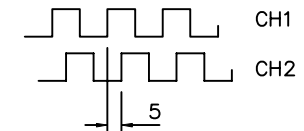
QUADRATURE OUTPUT:

PIN	DESCRIPTION
1	+5V
2	X AXIS CH1
3	X AXIS CH2
4	Y AXIS CH2
5	Y AXIS CH1
6	SWITCH 1
7	SWITCH 2
8	SWITCH 3
9	0V GND

SWITCH INPUT (PL3):

PIN	DESCRIPTION
1	N/C
2	N/C
3	0V GND
4	SWITCH 1
5	0V GND
6	SWITCH 2
7	0V GND
8	SWITCH 3

OUTPUT WAVE FORM



APP.	MATERIAL	FINISH	TOL.	SCALE	ISSUE						
					1	2	2A	2B	3		
	-	-	$\pm 0.5$	1:2	DATE	8.10.91	5.11.92	15.2.96	15.5.96	15.4.98	
CHKD.				DIMNS MM	CHANGE	CH225	CH225.2	CH225.5	CH225.6	VARIOUS	



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TITLE  
LOW PROFILE 3" TRACKERBALL  
(QUADRATURE)

SIZE  
A3  
DRAWING NUMBER  
DS48288