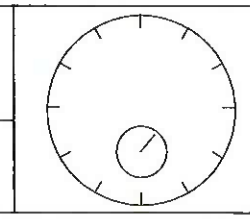
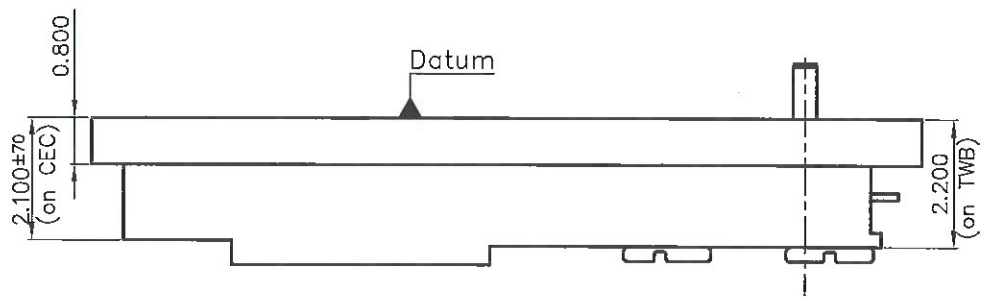
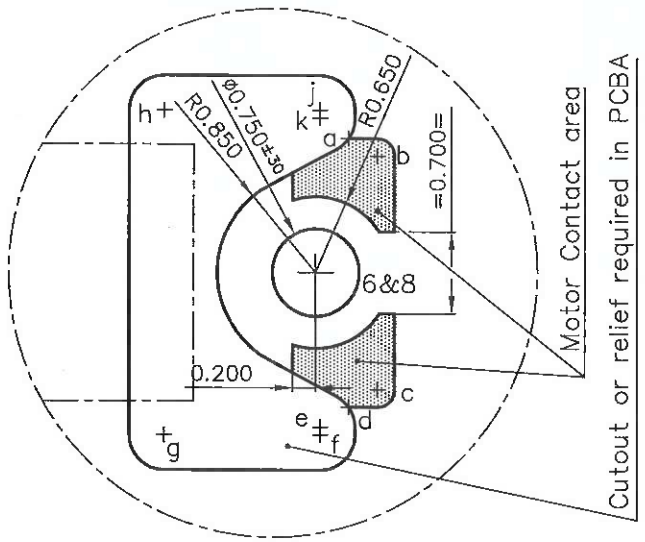
WATCH DIVISION

TECHNICAL DATA FOR TITAN (Bi-Directional) – T901A



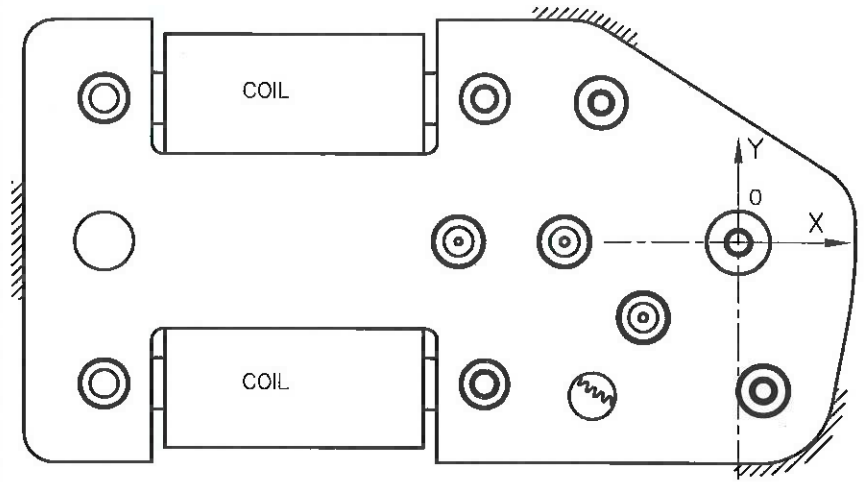


Detail at "G" (Scale 16:1)

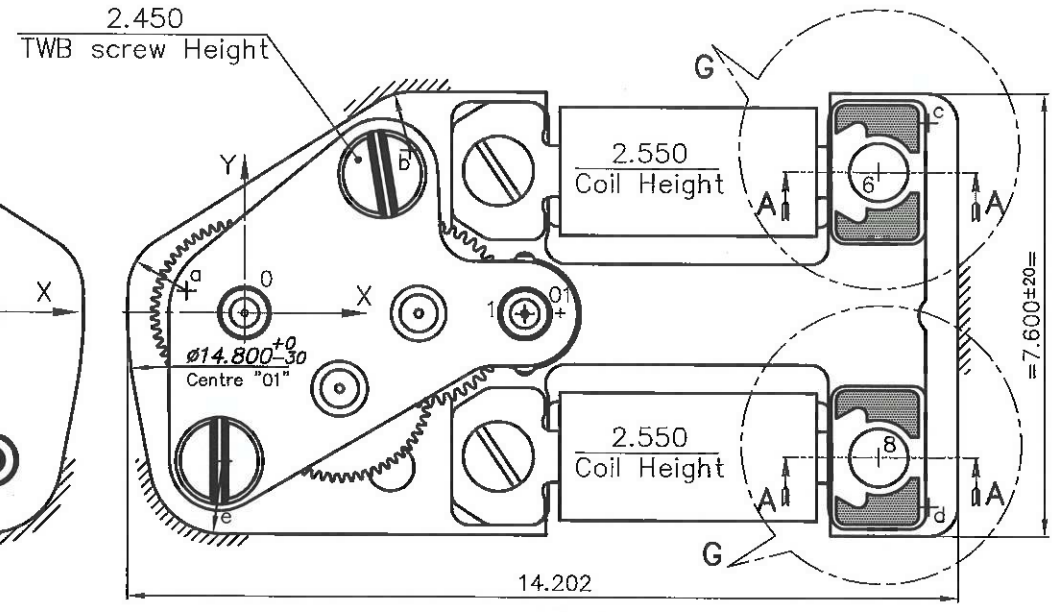


POS	X–AXIS	Y–AXIS	RADIUS
8	0.000	0.000	
a	0.285	1.150	
b	0.530	1.000	R0.150
c	0.530	–1.000	R0.150
d	0.285	–1.150	
e	0.040	–1.323	R0.300
f	0.040	–1.390	R0.300
g	–1.300	–1.390	R0.300
h	–1.300	1.390	R0.300
j	0.040	1.390	R0.300
k	0.040	1.323	R0.300

Functions	1 Hand
Angular rotation per pulse	2°
No of steps for 360° rotation	180
Direction	BI–DIRECTIONAL
Movement size	14.202 x 7.600 mm
Movt Thickness	2.550 (on COIL)
No. of jewels	06
Coil resistance	1.350 K ohms
Effective temperature range	0 to +55°C
Shock resistance	As per NIHS 91/10
Resistance to magnetic field	18.8 Oe



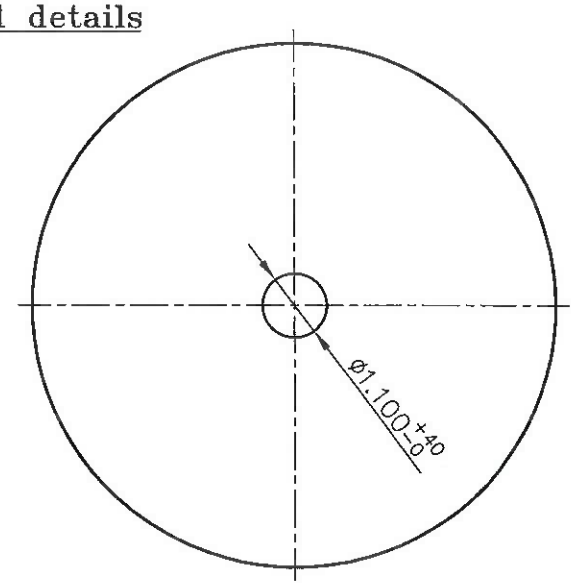
DIAL SIDE



BIRDGE SIDE

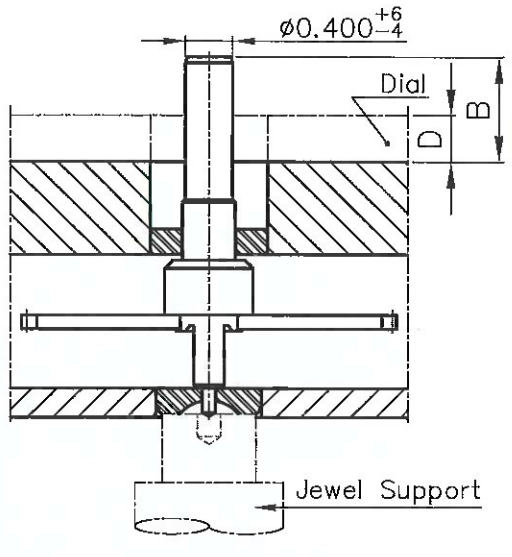
POS	X–AXIS	Y–AXIS	RADIUS
0	0.000	0.000	
01	5.395	0.014	
a	–0.995	0.374	R1.000
b	2.819	2.800	R1.000
c	11.697	3.300	R0.500
d	11.697	–3.300	R0.500
e	–0.377	–2.550	R1.250
6	10.847	2.450	
8	10.847	–2.450	

Dial details



Note: Hands shape to be followed according to the dial holes.

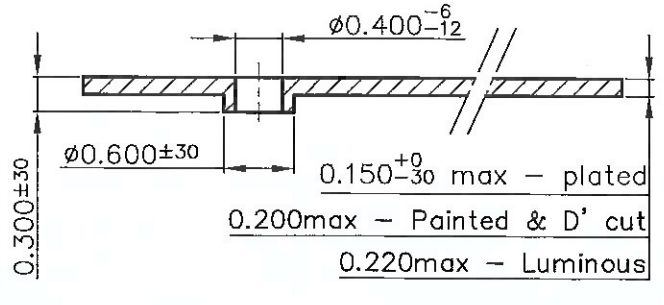
Hand fitting dimensions



Calibre	B	D max
LOW	0.760	0.300
STD	0.900	0.400
HIGH–1	1.320	0.800
HIGH–2	1.830	1.200
HIGH–3	2.330	1.600

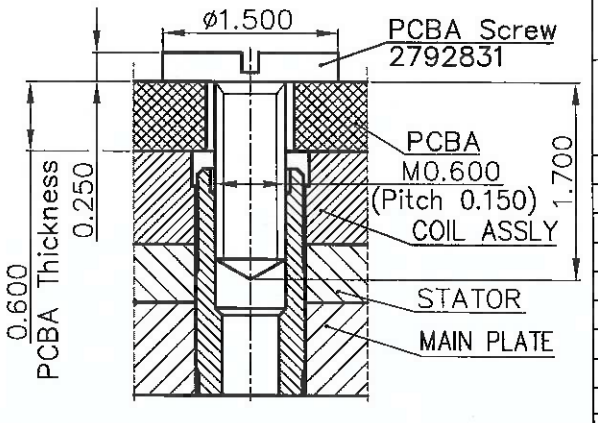
(Scale 16:1)

Hand Details



(Scale 16:1)

Section "A–A"



Note: PCBA Screw is not a part of Motor BOM

(Scale 16:1)

HAND	DESCRIPTION		HAND
	Imbalance mg.mm		60
	Inertia mg.mm²		–
	Weight mg (max).		350
	Length mm(max)	Brass	15

Notes :
1) All dimensions are in mm.
2) Tolerances in um.

Index	Alteration	Date	Sign
a	Electrical Parameters updated for 0.140mm Pivot modification	21.8.19	AF

	Prepared	Checked	Approved
Name			
Date	21/8/19	21/8/19	21/8/19

T-2946 a

Scale 10:1

Sheet 1 of 2

TITAN COMPANY LIMITED HOSUR 635 126

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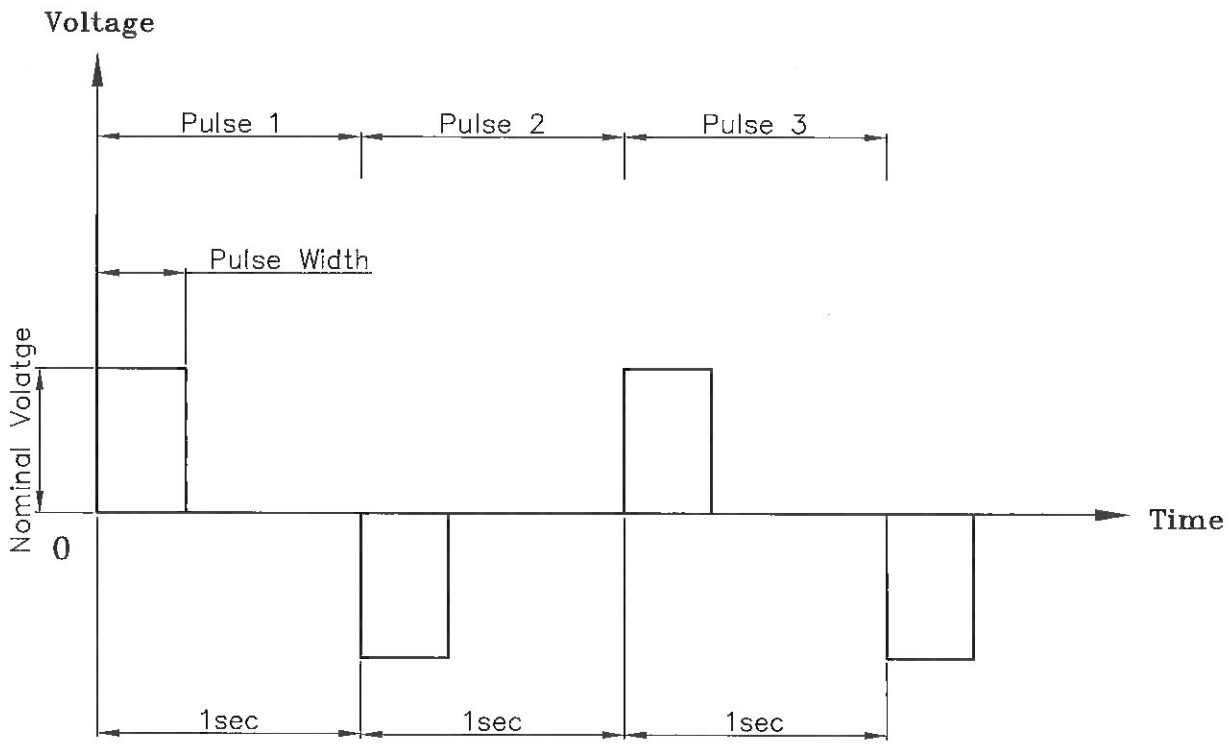
K:\Drawings\INHOUSE GEAR BOX\Twin Coil\2D\General\T90X_Technical Data latest.dwg

WATCH DIVISION

TECHNICAL DATA FOR TITAN (Bi-Directional) – T901A

Wave forms

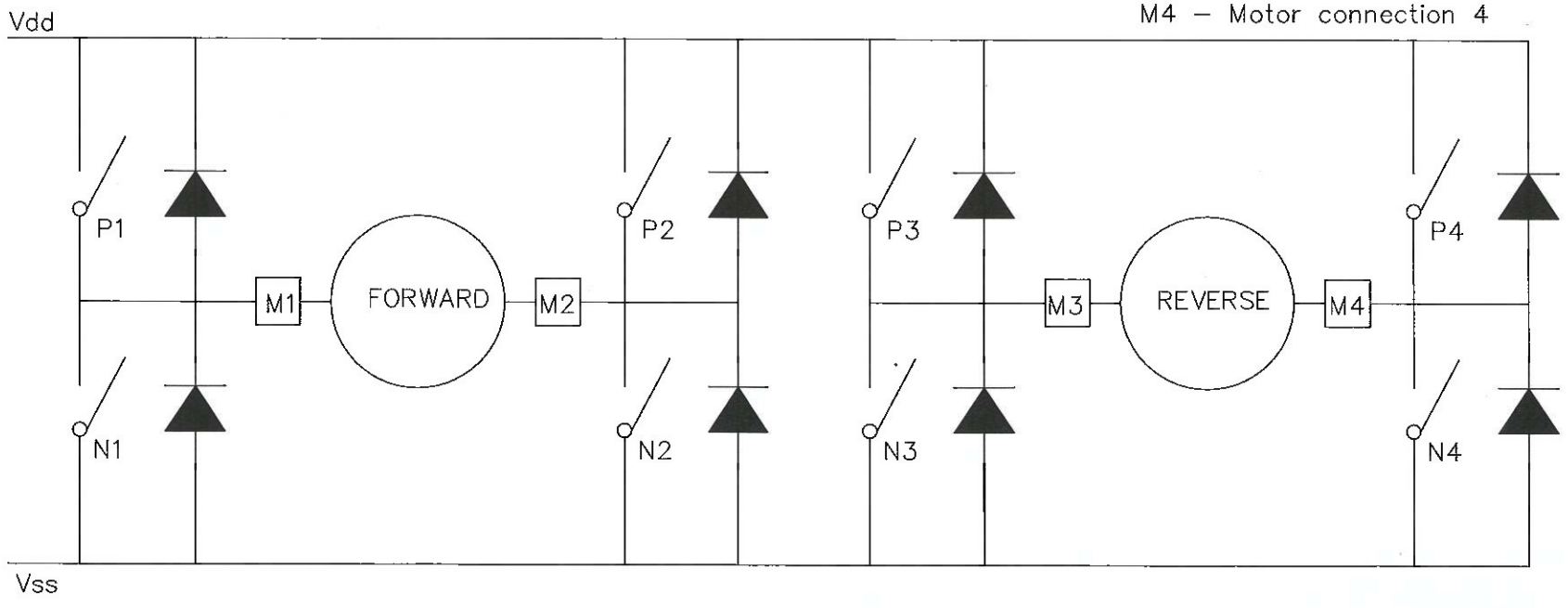


Motor driving parameters

SL	Description	Unit	Nominal Voltage (V)	
			2.10	3.00
01	Pulse Width	ms	4.5	3.0
02	Duty Cycle	%	100%	100%
03	Current consumption @ 64Hz	µA	335(Typ)~385(Max)	335(Typ)~385(Max)
04	Current Consumption @ 1Hz	µA	5.1(Typ)~5.3(Max)	4.9(Typ)~5.4(Max)
05	Driving torque (typ)	µNm	36 (Min)	36 (Min)
06	Voltage Range	V	1.6 ~ 2.5	1.8 ~ 4.0

M1 – Motor connection 1
M2 – Motor connection 2
M3 – Motor connection 3
M4 – Motor connection 4

Motor Driving Circuit



Notes :
1) All dimensions are in mm.
2) Tolerances in um.
3) Jewel support to be provided while hand fixing
4) Motor consumption is measured in WITSCHI AQ2

Index	Alteration	Date	Sign

	Prepared	Checked	Approved
Name			
Date			

a | T-2946 | Scale 10:1 | Sheet 2 of 2

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