

SL.NO.	LUMAX PART NO.	LUMAX PART NAME	MATERIAL	QTY	FINISH	REMARK	TIAGO	HORNBILL	NEXON	EV
1	BRACKET,BASE	Q15A50100-00	PA66-GF30	1	NATURAL		○	○	○	○
2A	CUSHION LEVER	Q15A50200-00	TPC	1	NATURAL		○	○	○	X
2B	CUSHION LEVER_EV	Q15C50100-00	TPC	1	NATURAL		X	X	X	○
3	LEVER ROD ASSY_SELECT	Q15A50300-00		1			○	○	○	○
3.1	LEVER MOULDED	Q15A50301-00	PA66-GF50	1	BLACK		○	○	○	○
3.2	LEVER ROD	Q15A50302-00	EN8 OR EQUI	1	CHROME PLATED		○	○	○	○
3.3	KNOB LOCK INSERT	Q15A50303-00	POM	1	NATURAL		○	○	○	○
4	SOCKET LINER	Q15A50400-00	POM	1	NATURAL		○	○	○	○
5	ROD, DETENT	X14A50400-00	EN8 OR EQUI	1			○	○	○	○
6	DETENT, PIN SPRING	Q15A50500-00	SWPA OR EQUI	1			○	○	○	○
7	BUSH_MAGNET HOLDER	Q15A50600-00	POM	1	NATURAL		○	○	○	○
8	MAGNET	Q15A50700-00	STD.	1			○	○	○	○
9	EXTENSION_MAGNET HOLDER	Q15A50800-00	PA66-GF30	1	BLACK		○	○	○	○
10	SPG,COMPRESSION_EXTENSION	Q15A50900-00	SWPA OR EQUI	1			○	○	○	○
11	NUT, PUSH	H12E50700-00	SP565 OR EQUI	1			○	○	○	○
12	PCB ASSY	Q15A51000-00		1			○	○	○	○
13	CASING DETENT	Q15A51100-00	PA66-GF50	1	BLACK		○	○	○	○
14	PCB CABINET	Q15A51200-00	PA6-GF30	1	NATURAL		○	○	○	○
15	FIXATION SHAFT DETENT	Q14A51400-00	SAE1010 OR EQUI	2			○	○	○	○
16	FIXATION SHAFT	X12B50900-00	EN3 OR EQUI	1			○	○	○	○
17	NUT, PUSH	X14A51200-00	SP565 OR EQUI	1			○	○	○	○
18A	ADOPTER_TIAGO/HORNBILL/EV	Q15A51300-00	PA6, GF30	1	NATURAL		○	○	X	○
18B	ADOPTER_NEXON	Q15B50100-00	PA6, GF30	1	NATURAL		X	X	○	X
19A	BUSH_Ø9	Q15A51400-00	CEW TUBE OR EQUI	4			○	○	X	○
19B	BUSH_Ø6.2	Q15B50200-00	CEW TUBE OR EQUI	1			X	X	○	X
19C	BUSH_Ø8.2	Q15B50300-00	CEW TUBE OR EQUI	3			X	X	○	X
20	SCREW M3	T12E50500-00	AISI 1541 OR EQUI	2			○	○	○	○
21	BUTTON SHIFT LOCK	Q15A51500-00	ABS	1			○	○	○	○
22	BEZEL ASSY_TIAGO	Q15A51600-00		1			○	X	X	X
22.1	BEZEL_UPPER	Q15A51601-00	PMMA	1	PIANO BLACK	PAINTED	○	X	X	X
22.2	ILLUMINATION SHEET	Q15A51602-00	PC	1		PRINTED	○	X	X	X
22.3	BEZEL_CONSOLE	Q15A51603-00	PA6, GF30	1	BLACK		○	X	X	X
22.4	PCB ASSY_BEZEL	Q15A51604-00		1		WITH CONNECTOR MOLEX-987871018	○	X	X	X
22.5	SLIDER_BEZEL-1	Q15A51605-00	TPC	1	BLACK		○	X	X	X
22.6	SLIDER_BEZEL-2	Q15A51606-00	TPC	1	BLACK		○	X	X	X
22.7	SCREW M3	T12E50500-00	AISI 1541 OR EQUI	2			○	X	X	X
23	CONSOLE ASSY_BEZEL_EV	Q15C50200-00		1			X	X	X	○
23.1	BEZEL_CONSOLE_EV	Q15C50201-00	PA6, GF30	1	BLACK		X	X	X	○
23.2	CUSHION_CONSOLE_EV	Q15C50202-00	NBR	1	BLACK		X	X	X	○
23.3	SLIDER_EV	Q15C50203-00	ABS	1	BLACK		X	X	X	○

TABLE - 6		
DIAGNOSTIC TABLE		
STATE	VOLTAGE	REMARKS
DIAGNOSTIC ZONE-1	OUTPUT WILL BE EQUAL TO GND	OUTPUTS WILL BE SHORTED TO GND.
DIAGNOSTIC ZONE-2	3.155V	OUTPUTS WILL BE SHORTED AMONG THEMSELVES. NEED CLARITY ON HOW MANY OUTPUTS WILL BE SHORTED TOGETHER AT A TIME.
DIAGNOSTIC ZONE-3	OUTPUT WILL BE EQUAL TO BATTERY SUPPLY.	OUTPUTS WILL BE SHORTED TO BATTERY SUPPLY.

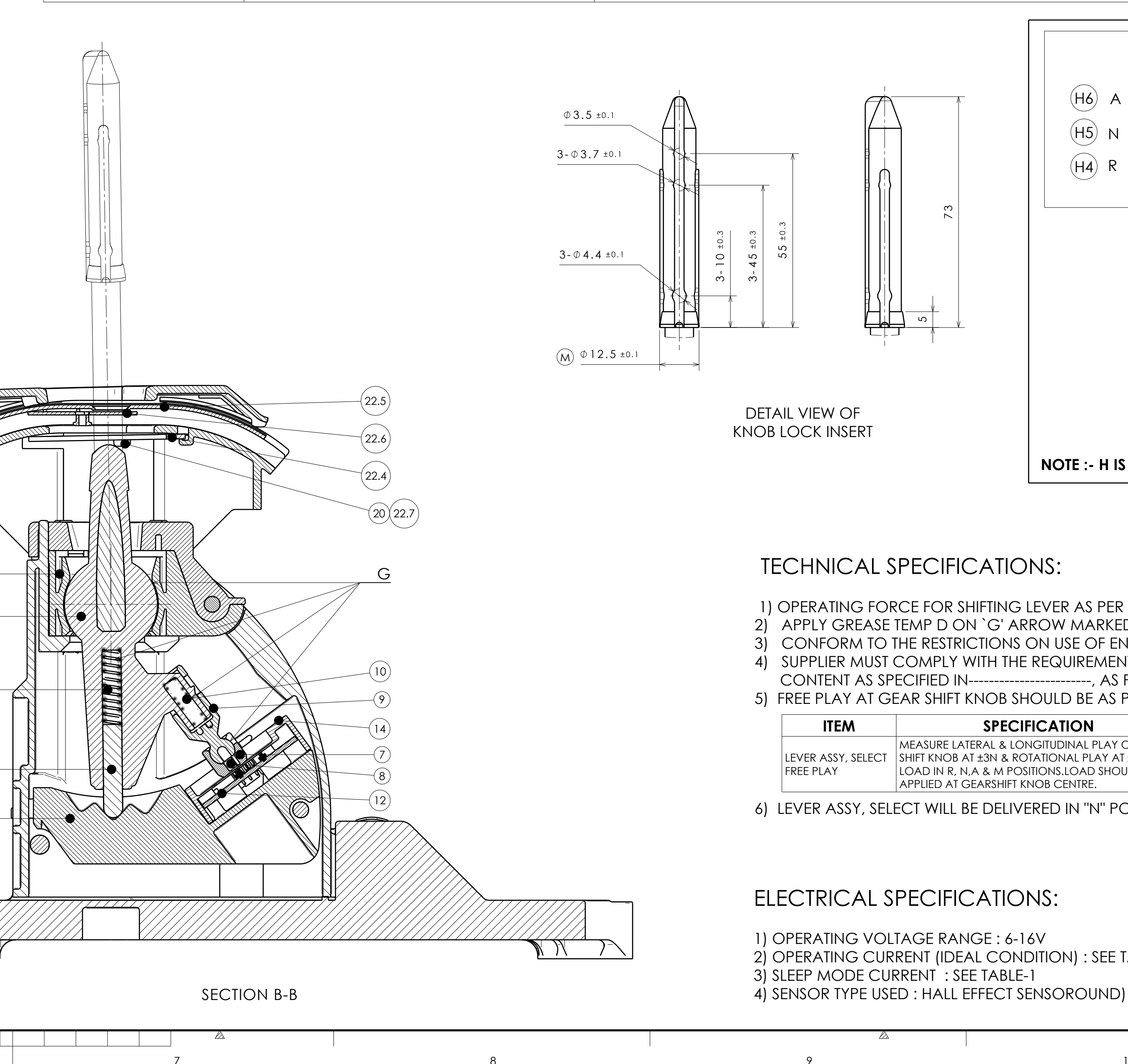


TABLE - 8

TRAVEL REQUIREMENT

PATTERN	LOAD ±10%
R→N	11N
N→R	22N
A→M	22N
N→A	16N
A→M	17.5N
M→A	17.5N
M→M+	16N
M→M-	16N

TABLE - 1

ELECTRICAL CHARACTERISTICS

CHARACTERISTICS	MIN	VALUE NOMINAL	MAX	UNIT
OPERATING VOLTAGE	6	13.5	16	Volts
*OPERATING CURRENT (ACTIVE)	---	---	80	mA

*NOTE: DEPENDS ON THE APPLIED VOLTAGE. AS THE SUPPLY VOLTAGE INCREASES, THE OPERATING CURRENT DECREASES. CURRENT VALUE WILL HAVE TOLERANCE OF +/-10mA, NOT CONNECTED TO PULL UP IN TCU.

**OPERATING CURRENT (SLEEP MODE-IGNITION OFF)

---	---	0	mA
-----	-----	---	----

**NOTE: SINCE THE IGNITION IS OFF, NO SUPPLY WILL BE APPLIED TO BOARD & NO CURRENT IS CONSUMED.

TABLE - 2

LOGIC STATES OF GEAR POSITION SIGNAL

POSITION	SIGNAL LINES			
	A1	A2	A3	A4
A	0	1	1	0
M	1	1	1	1
+	0	0	1	1
-	0	1	0	0
N	1	1	0	0
R	1	0	0	1

TABLE - 3

VOLTAGE LEVELS

DISCRIPTION	MIN.	NOM.	MAX.	UNIT
LOW LEVEL(0)	1.8	2.25	2.7	V
HIGH LEVEL(1)	3.2	3.65	4.1	V

TABLE - 4

CONNECTOR DETAIL GEAR SHIFTER

PIN NO.	DESCRIPTION (GEAR SHIFTER)
1	KL_31(GND)
2	A4
3	KL_15(IGN)
4	A1
5	A2
6	A3

TABLE - 5

CONNECTOR DETAIL BEZEL ASSY

PIN NO.	DESCRIPTION (BEZEL ASSY)
1	NA
2	NA
3	(+ve)
4	GND
5	SPORTS MODE OUTPUT
6	NA

TABLE - 7

MODEL	PART No.	WEIGHT(g) ±5%
TIAGO	Q15A50000-00-T	940
HORNBILL	Q15A50000-00-H	805
NEXON	Q15B50000-00	810
EV	Q15C50000-00	890

TECHNICAL SPECIFICATIONS:

- OPERATING FORCE FOR SHIFTING LEVER AS PER TABLE NO.5
- APPLY GREASE TEMP D ON 'G' ARROW MARKED AREAS.
- CONFORM TO THE RESTRICTIONS ON USE OF ENVIRONMENTAL IMPACT SUBSTANCES SPECIFIED IN -----.
- SUPPLIER MUST COMPLY WITH THE REQUIREMENTS OF ELV & HAZARDOUS MATERIAL CONTENT AS SPECIFIED IN-----, AS PER THE MARKET REQUIREMENTS.
- FREE PLAY AT GEAR SHIFT KNOB SHOULD BE AS PER BELOW TABLE.

ITEM	SPECIFICATION	CRITERIA
LEVER ASSY. SELECT	MEASURE LATERAL & LONGITUDINAL PLAY OF GEAR SHIFT KNOB AT ±3N & ROTATIONAL PLAY AT ±0.5 N-m	LATERAL PLAY: NEW 2mm, WORN 2.5mm
FREE PLAY	LOAD IN R, N & M POSITIONS. LOAD SHOULD BE APPLIED AT GEARSHIFT KNOB CENTRE.	LONGITUDINAL PLAY: NEW 2.2mm, WORN 2.7mm
		ROTATIONAL PLAY: NEW 2°, WORN 2.5°

6) LEVER ASSY. SELECT WILL BE DELIVERED IN "N" POSITION.

ELECTRICAL SPECIFICATIONS:

- OPERATING VOLTAGE RANGE : 6-16V
- OPERATING CURRENT (IDEAL CONDITION) : SEE TABLE-1
- SLEEP MODE CURRENT : SEE TABLE-1
- SENSOR TYPE USED : HALL EFFECT SENSOR(ROUND)

REVISION RECORD

REV NO.	REVISION	DATE	REVR
0 <td>NEW ADOPTION</td> <td>14.05.19</td> <td>V.V.</td>	NEW ADOPTION	14.05.19	V.V.

APPROVED

APPROVED	SIDDHARTH	20.06.19
CHECKED	SHAILENDRA	19.06.19
DRAWN	VIVEK	19.06.19

CHARACTERISTIC LEGEND

NO. OF PLACES

REVISION

CRD.

APPD.

DATE

MODEL:

DESCRIPTION :

SCALE : 1:1

PART NO. : SEE TABLE-7

ASSY PRODUCT PART NO. : SEE TABLE-7

CUSTOMER PART NO. :>

SEE TABLE

LEVER ASSY. SELECT

SIZE: A0

SHEET NO. : 1/2

LUMAX

LUMAX MANNOH ALLIED TECHNOLOGIES LTD.