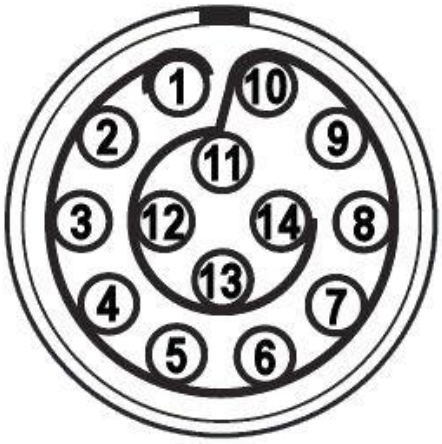
SLICE IP68 Hardware Specifications

SLICE IP68 Connector Information and Pin Assignments

SLICE IP68 Base+ UP* and DN (down) connectors
(LEMO P/N HEG.1T.314.KLLP)



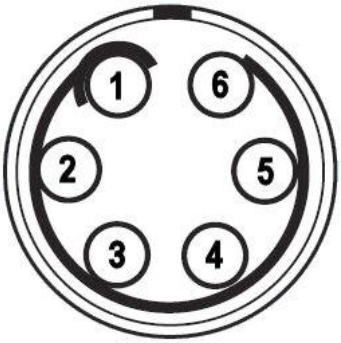
(panel view)

Suggested cable connector P/N:
FGG.1T.314.KLACxx**
Connector cap P/N: BRE.1T.200.KAZ

Pin	Function
1	/ON (contact closure input to ground)
2	/START (contact closure input to ground)
3	/EVENT (contact closure input to ground)
4	Status output (5 V via 10K with respect to ground)
5	VDC in (UP)/out (DN)
6	VDC in (UP)/out (DN)
7	Ground
8	Ground
9	USB power
10	USB_DP
11	USB_DM
12	Ground
13	No connection
14	No connection

* to PC.
** xx denotes diameter of cable to be used. See www.lemo.com for more information.

SLICE IP68 Bridge
(LEMO P/N HEG.0T.306.KLLP)



(panel view)

Suggested cable connector P/N:
FGG.0T.306.KLAC40xx*
Connector cap P/N: BRE.0T.200.KAZ

Pin	Function
1	+ Sig
2	- Sig
3	+ Ex
4	+ ID
5**	- Ex
6**	- ID/Shield

* xx denotes diameter of cable to be used.
See www.lemo.com for more information.
** -Ex/-ID/Shield are common.

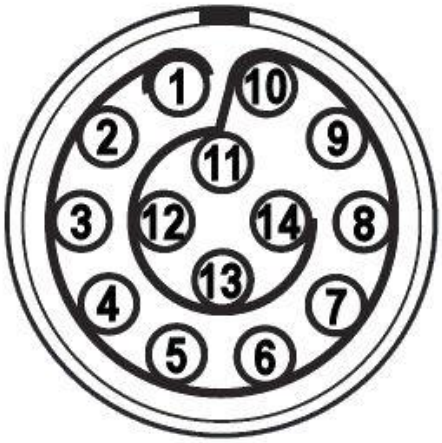
SLICE IP68 IEPE
(Pasternack P/N PE44357)

(panel view)

Connector cap P/N: 98190A170 (McMaster-Carr)

Pin	Function
Center	+ IEPE
Shell	- IEPE/case ground

SLICE IP68 Power Pack - OUT
(LEMO P/N HEG.1T.314.KLLP)

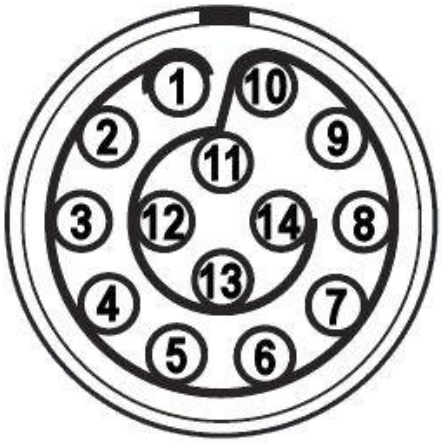


(panel view)

Suggested cable connector P/N:
FGG.1T.314.KLACxx*
Connector cap P/N: BRE.1T.200.KAZ

Pin	Function
1	/ON
2	/START
3	/EVENT
4	Status in
5	VDC out
6	VDC out
7	Ground
8	Ground
9	USB power (out)
10	USB_DP (out)
11	USB_DM (out)
12	Ground
13	No connection
14	No connection

SLICE IP68 Power Pack – EOC/CHG
(LEMO P/N HEG.1T.314.KLLP)



(panel view)

Suggested cable connector P/N:
FGG.1T.314.KLACxx*
Connector cap P/N: BRE.1T.200.KAZ

Pin	Function
1	/ON
2	/START
3	/EVENT
4	Status out
5	VDC in
6	VDC in
7	Ground
8	Ground
9	USB power (in)
10	USB_DP (in)
11	USB_DM (in)
12	Ground
13	Charge Input
14	/Batt Disconnect (active low)

* xx denotes diameter of cable to be used. See www.lemo.com for more information.

SLICE IP68 Maintenance Requirements

Due to the extreme environmental operating conditions for SLICE IP68, additional inspection and maintenance are required to help prevent system compromise or failure. These include:

- O-ring gasket inspection, maintenance and/or replacement;
- Proper stack assembly to torque specifications;
- Installation of connector caps on all unused/open connectors;
- Proper mounting orientation for stack height.

See the table below for maintenance requirements.

	Frequency		
Action	**Pre-Test**	**Post-Test**	**Yearly**
Inspect O-rings*	X	X	X
Securely assemble stack to torque specs (~5 in-lb or .56 Nm dry)	X		
Inspect connectors; use caps to cover unused connectors**	X		
Mount stack properly to test fixture (vertical ≤ 1 Base + 4 Bridges; horizontal ≥ 1 Base + 5 Bridges)	X		
Clean and dry stack***; inspect connectors		X	
Lubricate O-rings*			X

* Replace immediately if nicks or scratches are found. Lubricate new O-rings prior to first use.
** SLICE IP68 IEPE connector caps are required for waterproofness.
*** Rinse stack in freshwater if it comes in contact with saltwater or other corrosive liquids.

WARNING:

A SLICE IP68 stack should be securely screwed together before applying power. The gasket used to provide environmental protection between SLICE IP68 modules prevents a secure connection if the stack is simply pressed together. An intermittent connection will result, causing failures and perhaps damage to your system.

SLICE IP68 Assembly Procedure

To prevent water/dust ingress, follow the steps below when assembling a SLICE IP68 stack:

1. Verify the O-ring is present between modules and is in good condition.
   a. Adjust the O-ring as needed to minimize wrinkles and bends in the mounting groove.
   b. Replace the O-ring (P/N 99000-00335-R) if any nicks or scratches are present. Lubricate (P/N 99000-00343-R) new O-rings prior to first use and once per year thereafter.

2. To assemble the stack and compress the O-ring, tighten the 4 screws fastening a) each module to the next and b) the stack cover to the top module using the proper torque (5 in-lb or .56 Nm dry). (The stack cover is required for all environments.)
3. Place waterproof caps on any unused connectors. (*SLICE IP68 IEPE connector caps are required for waterproofness.* Base, Bridge and Battery connector caps minimize dirt and debris in the connector.)

The maximum recommended vertical[2] mounting height for a SLICE IP68 stack is 1 Base + 4 Bridges using both thru holes when mounting the stack to the test fixture. For stacks ≥ 1 Base + 5 Bridges, DTS recommends mounting the stack horizontally[2] via the alternate threaded mounting holes on the back of each module using all mounting holes (2 per module) when mounting the stack to the test fixture. See the mounting drawing below for additional information.

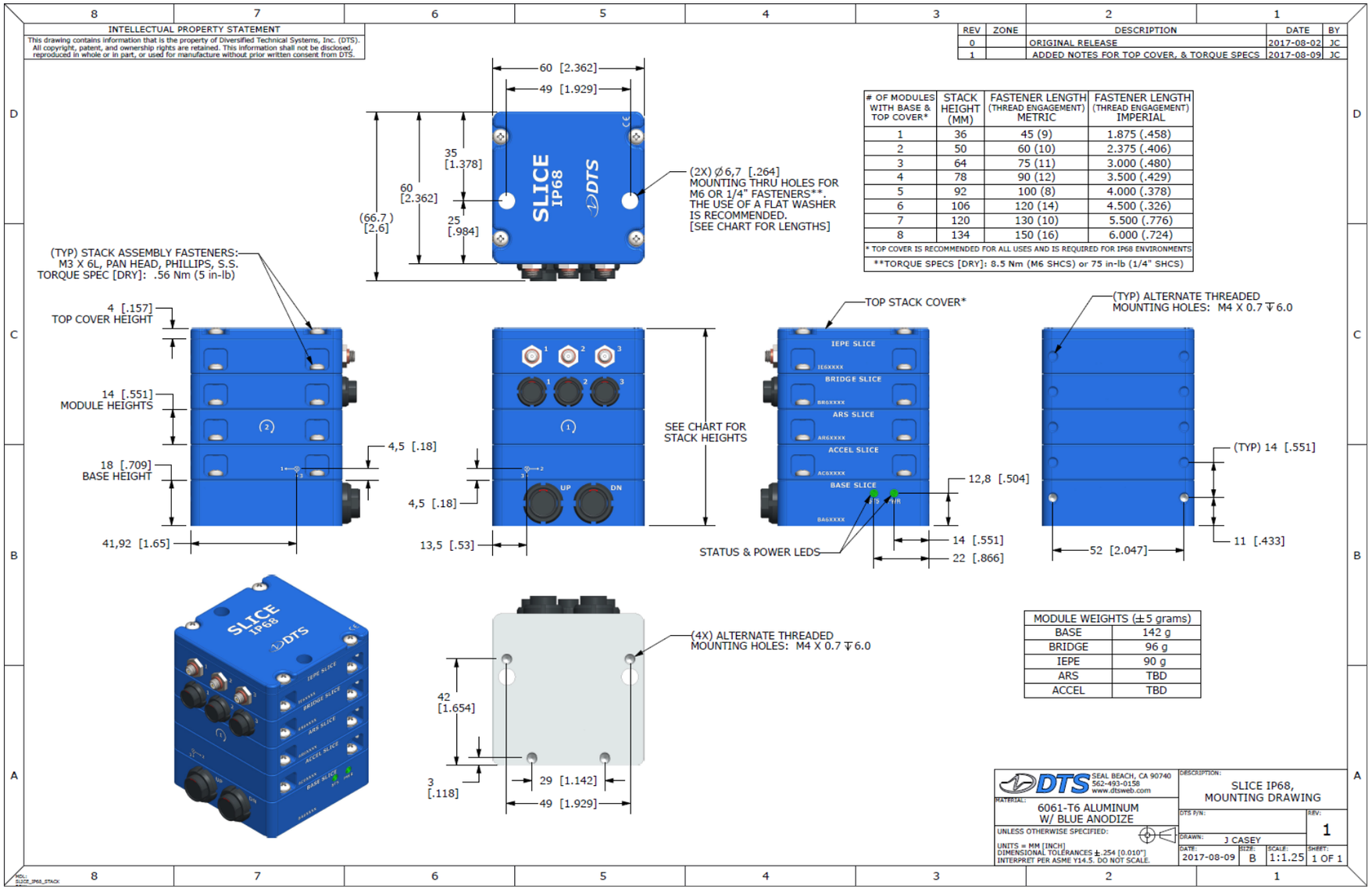
[2] Impact force is perpendicular to the direction of the mounting bolts.

SLICE IP68 Accessories/Support Equipment*

13000-80100: SLICE IP68 Stack Cover
13000-80110: SLICE IP68 Stack Assembly Screw Kit
13000-80120: Cable, USB for SLICE IP68 DAS (1 m)
13000-80130: Power supply; 15 VDC, 4 A (90-240 VAC in, mini Molex term)
13000-80140: Cable, adapter, SLICE IP68 Base+ to EOC (1 m)
13000-80150: Cable, SLICE IP68 Base/Battery to pigtail termination (2 m)
13000-80160: Cable, SLICE IP68 Base-to-Base/Battery daisy-chain (15 cm)
13000-80170: Cable, adapter, SLICE IP68 Battery to EOC + Batt Charger (1 m)
13000-80180: Battery charger for SLICE IP68 Power Pack
13000-80190: SLICE IP68 1 Ch Sensor Conn Assy (LEMO, w/ID separately)
13000-80200: SLICE IP68 DAS Base Cable Kit
13000-80210: SLICE IP68 Battery Add Cable Kit
13000-80220: SLICE IP68 1 Ch Sensor Cable Assy (+ID, pigtails; 25 ft, 30 AWG)
13000-80230: Cable, SLICE UI/EI to SLICE IP68 Base (4 m)
22005-00001(-R): Microcard, DS2401X1; 125 x 75 x 50 mil, 30 AWG, 1"
80000-02222: LEMO 1T connector cap for SLICE IP68 Base and Power Pack
80000-02223: LEMO 0T connector cap for SLICE IP68 Bridge
90000-N0019(-R): 10-32 connector cap for SLICE IP68 IEPE
99000-00335-R: O-ring gasket for all SLICE IP68 DAS
99000-00343-R: Dielectric grease for O-ring gasket (0.17 oz single-use pack)

* Not all items are IP68 rated.

REV	ZONE	DESCRIPTION	DATE	BY
0		ORIGINAL RELEASE	2017-08-02	JC
1		ADDED NOTES FOR TOP COVER, & TORQUE SPECS	2017-08-09	JC



# OF MODULES WITH BASE & TOP COVER*	STACK HEIGHT (MM)	FASTENER LENGTH (THREAD ENGAGEMENT) METRIC	FASTENER LENGTH (THREAD ENGAGEMENT) IMPERIAL
1	36	45 (9)	1.875 (.458)
2	50	60 (10)	2.375 (.406)
3	64	75 (11)	3.000 (.480)
4	78	90 (12)	3.500 (.429)
5	92	100 (8)	4.000 (.378)
6	106	120 (14)	4.500 (.326)
7	120	130 (10)	5.500 (.776)
8	134	150 (16)	6.000 (.724)

* TOP COVER IS RECOMMENDED FOR ALL USES AND IS REQUIRED FOR IP68 ENVIRONMENTS

**TORQUE SPECS [DRY]: 8.5 Nm (M6 SHCS) or 75 in-lb (1/4" SHCS)

MODULE WEIGHTS (±5 grams)	
BASE	142 g
BRIDGE	96 g
IEPE	90 g
ARS	TBD
ACCEL	TBD

DTS SEAL BEACH, CA 90740 562-493-0158 www.dtsweb.com

MATERIAL: 6061-T6 ALUMINUM W/ BLUE ANODIZE

UNLESS OTHERWISE SPECIFIED:
UNITS = MM [INCH]
DIMENSIONAL TOLERANCES ±.254 [0.010"]
INTERPRET PER ASME Y14.5. DO NOT SCALE.

DESCRIPTION: SLICE IP68, MOUNTING DRAWING

DTS P/N:

REV: 1

DRAWN: J CASEY

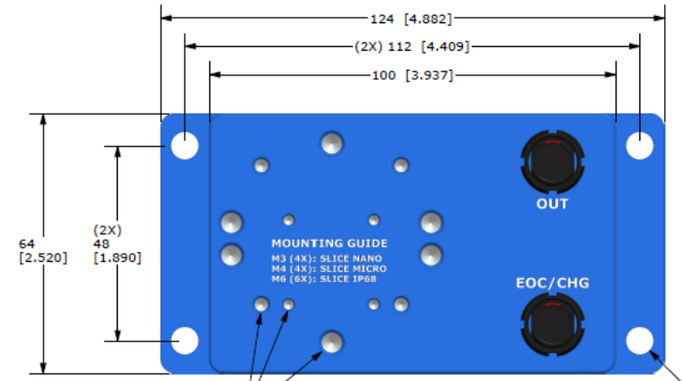
DATE: 2017-08-09

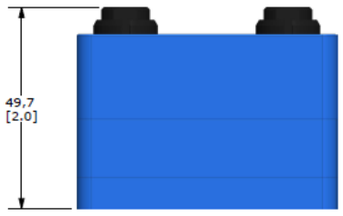
SIZE: B

SCALE: 1:1.25

SHEET: 1 OF 1

REV	ZONE	DESCRIPTION	DATE	BY
0		ORIGINAL RELEASE	2017-08-15	JC
1		SWITCHED CONNECTOR CALL-OUT & COMPLETED BOM	2018-01-29	JC





WEIGHT: 600 g (±10%)

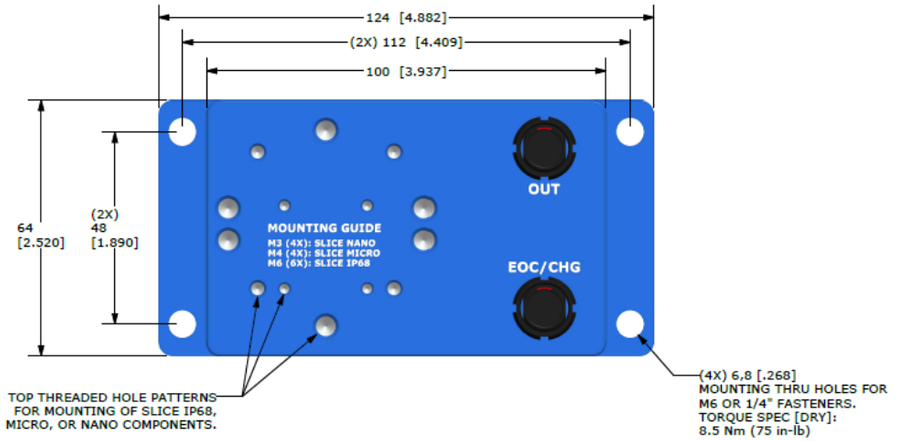
DTS SEAL BEACH, CA 90740 562-493-0158 www.dtsweb.com

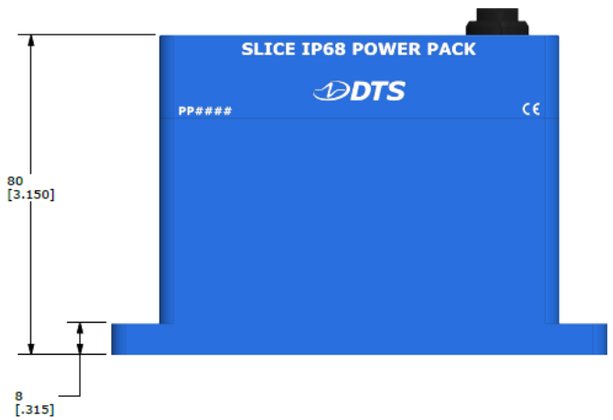
MATERIAL: 6061-T6 ALUMINUM W/ BLUE ANODIZE

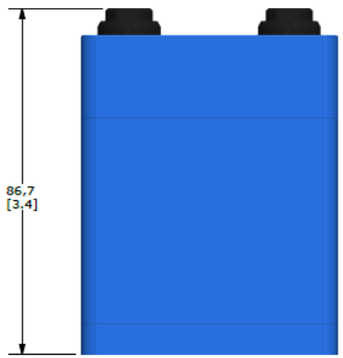
UNLESS OTHERWISE SPECIFIED:
UNITS = MM [INCH]
DIMENSIONAL TOLERANCES ±.254 [0.010"]
INTERPRET PER ASME Y14.5. DO NOT SCALE.

DESCRIPTION: SLICE IP68, POWER PACK, 2,200 mAh
DTS P/N: 13000-80062
REV: 1
DRAWN: J CASEY
DATE: 2018-01-29
SIZE: B
SCALE: 1:1
SHEET: 1 OF 1

REV	ZONE	DESCRIPTION	DATE	BY
0		ORIGINAL RELEASE	2017-08-15	JC
1		SWITCHED CONNECTOR CALL-OUTS & COMPLETED BOM	2018-01-29	JC







WEIGHT: 1000 g (±10%)

DTS SEAL BEACH, CA 90740 562-493-0158 www.dtsweb.com

MATERIAL: 6061-T6 ALUMINUM W/ BLUE ANODIZE

UNLESS OTHERWISE SPECIFIED: UNITS = MM [INCH] DIMENSIONAL TOLERANCES ±.254 [0.010"] INTERPRET PER ASME Y14.5. DO NOT SCALE.

DESCRIPTION: SLICE IP68, POWER PACK, 6600 mAh

DTS P/N: 13000-80063

REV: 1

DRAWN: J CASEY

DATE: 2018-01-29 | SIZE: B | SCALE: 1:1 | SHEET: 1 OF 1