

# FUTEK MODEL QMA145

Custom Tri-Axial Bending Beam Load Cell with Triangular Bolt Pattern, RoHS Compliant, SPI Interface

ITEM NUMBER: QSH02041



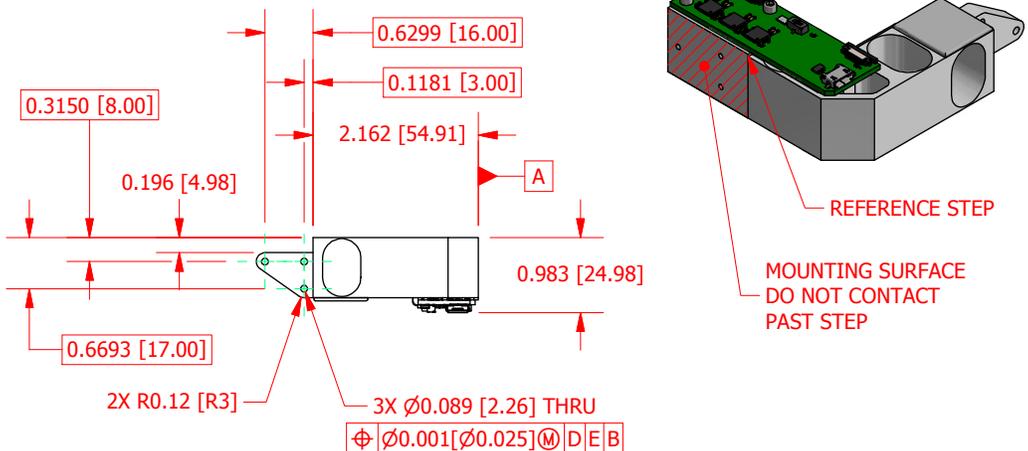
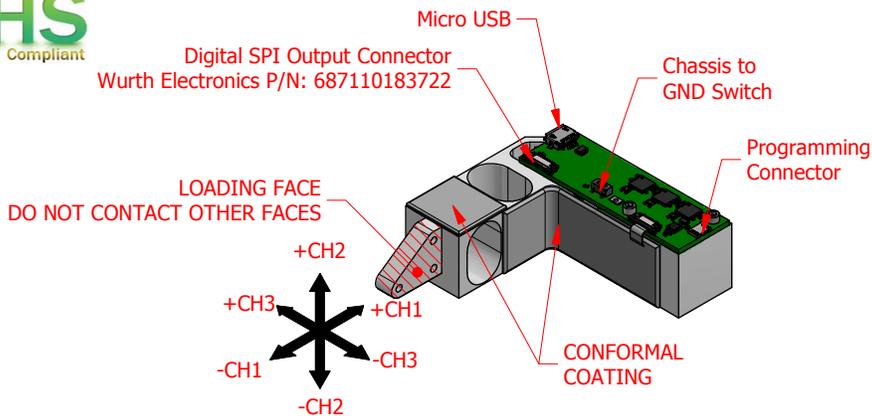
INCH [mm] | R.O.= Rated Output

## Digital SPI Output Connector

Pin	Code	Pin	Code
1	VIN	6	MOSI
2	GND	7	SCLK
3	GND	8	CS
4	GND	9	DRDY
5	MISO	10	TRIG

## PROGRAMMING CONNECTOR

Pin	Code
1	MCLR
2	3V3
3	GND
4	DAT
5	CLK
6	N/C



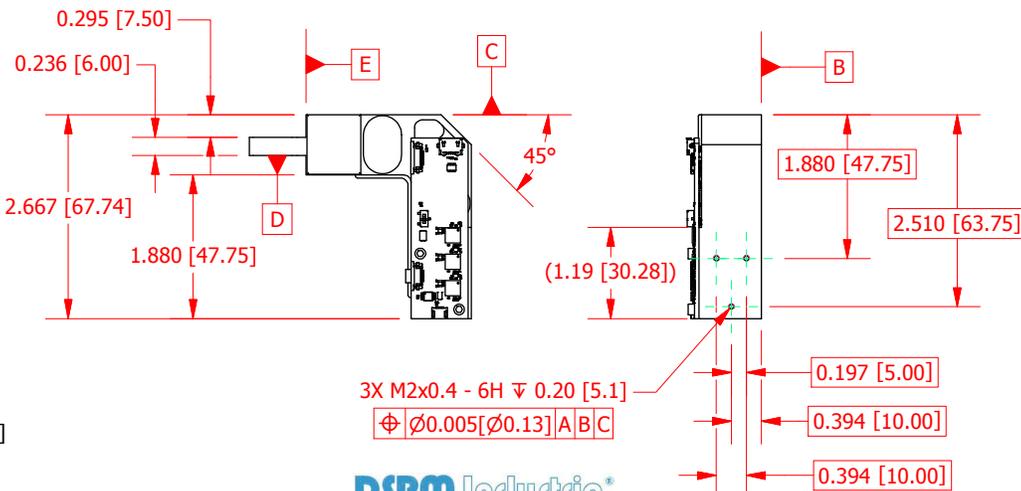
## SPECIFICATIONS:

### Electronics Specs:

Vin : 5VDC ± 10%  
 Sampling: 2400 SPS  
 Resolution: 0.03N @ 2400 SPS (Design Goal)  
 SPI Output Voltage: 3.3VDC

### Sensor Spec:

Capacity: 5 lb [22.2N]  
 Safe Overload: 500% of R.O.  
 Nonlinearity: ±0.25% of R.O.  
 Hysteresis: ±0.25% of R.O.  
 Nonrepeatability: ±0.1% of R.O.  
 Temp. Shift Zero: ±0.005% of R.O./°F  
 [±0.009% of R.O./°C]  
 Temp. Shift Span: ±0.005% of Load/°F  
 [±0.009% of Load/°C]  
 Compensated Temp: 60 to 160°F [16 to 71°C]  
 Operating Temp: 32 to 160°F [0 to 71°C]  
 Material: Anodized Aluminum  
 Approx. Total Weight: 2.0 oz [57 g]  
 RoHS 2011/65/EU



**DSPM Industria\***  
 sensori & trasduttori

Via Paolo Uccello 4 - 20148 Milano

Tel +39 02 48 009 757 Fax +39 02 48 002 070 info@dspmindustria.it www.dspmindustria.it

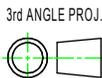
CUSTOMER APPROVAL- COMPANY:

CUSTOMER APPROVAL- NAME / DATE:

REVISIONS: (Refer to dwg # revision sheet)

## OUTLINE DRAWING

STANDARD NOTES: (Unless Otherwise Specified)  
 ALL DIMENSIONS ARE IN INCHES. METRIC FOR REFERENCE ONLY.  
 DRAWING INTERPRETATION DIMS. PER ASME-Y14.5  
 REMOVE BURRS AND BREAK SHARP EDGES .005 - .015  
 THREADS PER HANDBOOK H-28  
 DIMENSIONS ARE SHOWN AFTER PLATING



ANGLE:  
± 1/2°  
 CHAMFER:  
± 5°  
 TOLERANCE:  
 .X ± 0.1"  
 .XX ± 0.01"  
 .XXX ± 0.005"

This drawing is submitted solely for the information and exclusive use of the original addressee. It is not to be divulged in whole or in part, by any firm or individual without written permission from:



MODEL: **QMA145** DWG No.: **FO1491**

DRAWN BY: S. MICHEL CREATED DATE: 11/6/2018

APPROVED BY: R. WALKER APPROVED DATE: 11/13/2018

CHECKED BY: F. ALLAHAKBARI CAGE: 1X8M6 SHEET: 1 OF 1