

67M25A

SENSOR OVERVIEW

The 67M25 is a member of the **JR3** family of six axis force and torque transducers with internal electronics. It is 67mm in diameter and 25mm thick. The ISO40mm variant uses the mechanical interface specified by the International Standard ISO 9409-1 — A 40, other variants to match the interfaces of industrial robots are available.

The 67M25 has signal conditioning electronics integrated into the sensor body. Included in the electronics are amplifiers, an analog to digital converter, an EEPROM containing calibration data and RS-485 serial drivers. The 67M25 outputs a 2 megabit per second serial data stream which contains complete 6 axis data at 8 kHz and can be read by any of **JR3's** serial receivers.

The 67M25 is machined from a solid billet of aluminum. The resulting monolithic structure produces a transducer with unsurpassed hysteresis and precision properties. The 67M25 uses metal foil strain gages bonded to strain rings as the sensing element. This produces linearity, and thermal performance superior to other strain sensing technologies and geometries. The mechanical structure of the 67M25 also produces a transducer with exceptional stiffness.

As can be seen on the interface drawing, the 67M25 has captive bolts which allow direct connection to the user's tool flange. The top of the transducer contains a copy of the tool flange. This feature eliminates the need for adapter plates, which saves weight and lowers the installed height.

The 67M25 can interface to a variety of receiver electronics. **JR3** has DSP-based receiver electronics available for several industry standard computer busses. These receivers are able to process the force and moment data at the full 8 kHz data rate. They provide decoupling, coordinate transformation, low-pass filtering, vector calculation, threshold monitoring, peak capture and rate calculations.

Available interfaces (bolt patterns) for 67M25:
ISO40mm, Puma 560 and Puma 562



JR3 Model NO. 67M25A-I40

Capacities, Resolutions, Stiffnesses and Permissible Single Axis Overloads:

15 lb Model: (Stiffness & overloads = 25 lb model)

Fx, Fy	Fz		Mx, My	Mz	
15	30	lbs	40	40	in-lbs
63	130	N	4	4	N-m
0.006	0.01	lbs	0.02	0.02	in-lbs

25 lb Model:

Fx, Fy	Fz		Mx, My	Mz	
25	50	lbs	65	65	in-lbs
100	200	N	6.3	6.3	N-m
0.01	0.02	lbs	0.03	0.03	in-lbs
29	295	klbs/in	190	48	kin-lbs/rad
110	435	lbs	235	190	in-lbs

50 lb Model:

Fx, Fy	Fz		Mx, My	Mz	
50	100	lbs	130	130	in-lbs
200	400	N	12.5	12.5	N-m
0.02	0.04	lbs	0.06	0.06	in-lbs
73	740	klbs/in	470	130	kin-lbs/rad
210	870	lbs	510	430	in-lbs

Weight: 0.4 lb (180g)

Options: Clean Room Version

JR3, Inc. has been designing and manufacturing six axis loadcells since 1983. We have manufactured six axis loadcells ranging in diameter from 2 to 13 inches, and with load capacities from 2 to 25,000 lbs and 0.25 to 22,000 ft-lbs. Please feel free to call our applications engineers to discuss your particular needs.