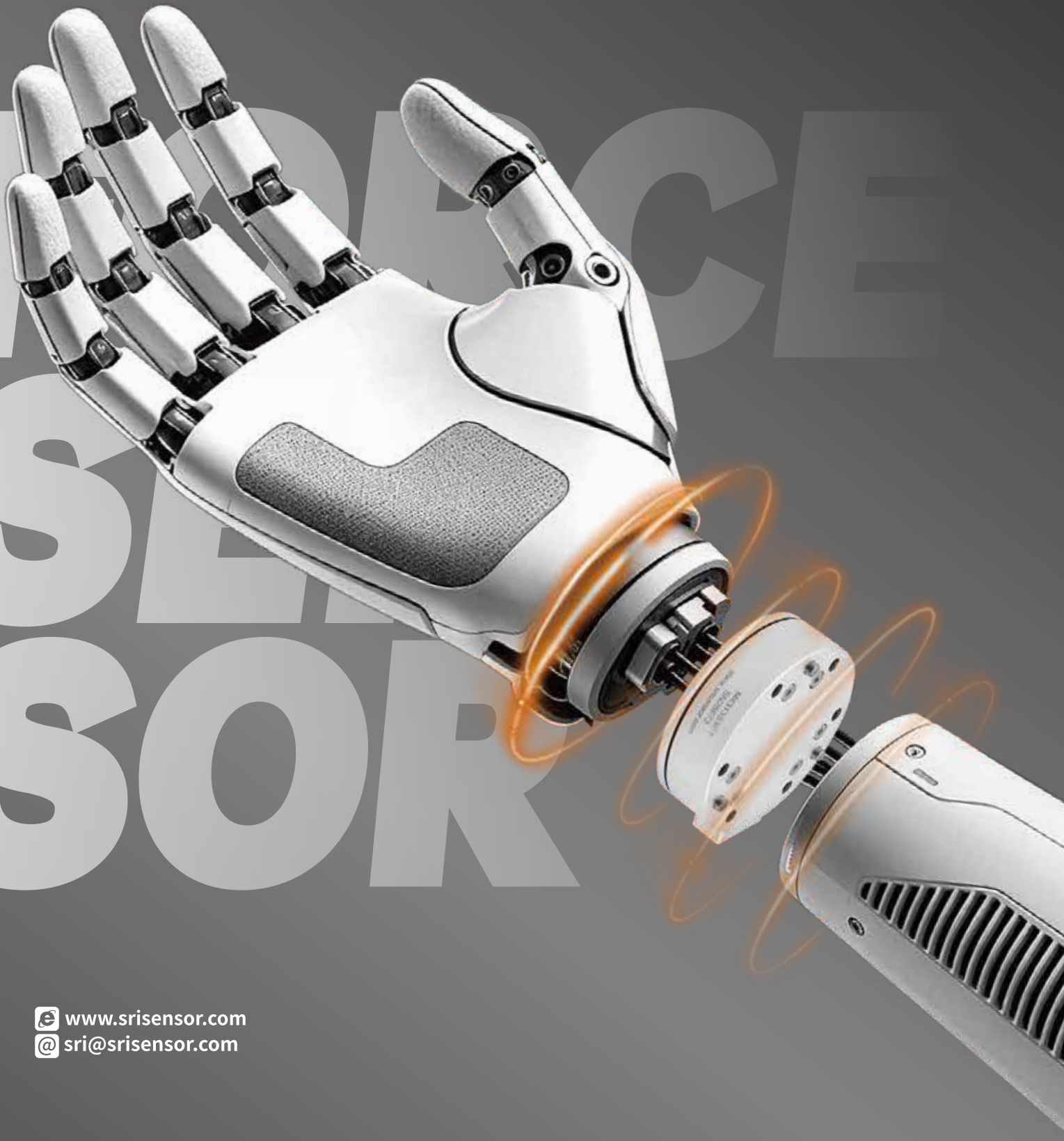




**Sunrise Instruments**  
**PRODUCT CATALOG**



# SRI Selection Guide

Robotic automation/Auto crash&durability testing/Biomechanics/General testing

## 6 AXIS FORCE/TORQUE SENSOR

**M37XX&M47XX Series:** 6 Axis F/T Sensor for Robotics&General Testing

**M43XX Series:** Industry 6 Axis Force/Torque Sensor

**M35XX Series:** Extra thin 6 axis F/T load cell for applications with limited space. Less than 10mm thick.

**M38XX Series:** 6 axis F/T sensor for low capacity & high accuracy, accuracy within 0.2% of full scale, suitable for medical robots and precision assembly, etc.

**M39XX Series:** Large capacity 6 axis F/T sensor. Capacity range is up to 300KN.

**M4313NXX Series:** Co-robot Force/Torque Sensor

**M4313SXXX Series:** Co-robot Force/Torque Sensor

**M4313MXX Series:** Co-robot Force/Torque Sensor

## 6 AXIS FORCE PLATFORM

**M3612X Series :** is a high-performance 6 axis force platform for motion analysis. Applying the same advanced strain gauge technology utilized in our 6 axis loadcells, SRI force platforms provide accurate measurements in all forces and moments from the test subject simultaneously.

## TORQUE SENSOR(TORQUE TRANSDUCER)

Torque sensors are used to measure the output torque of the motor/reducer and has the advantages of high precision, thin thickness, light weight, high rigidity and strong bending resistance.

**M22XX Series:** Torque Transducers for Robotic Joints

## UNIAXIAL & SPECIAL SENSOR

SRI manufactures special uniaxial and multiaxis force transducers. Although some models have a small range, they have a strong anti-overload capability, making them more secure to use in industrial sites.

**M21XX Series:** Uniaxial force load cell

**M36XX Series:** Specialty force load cell

## DATA ACQUISITION SYSTEM&SIGNAL AMPLIFIER

OEM / M812XSeries / M822XSeries / M830XSeries

# 6 AXIS FORCE/TORQUE LOAD CELL



## DESCRIPTION

SRI is a world leading supplier of 6 axis force sensors. SRI has an office in Michigan, United States, distributors in Korea and China Taiwan, and customers all over the world.

SRI sensors are 100% designed, manufactured and calibrated in house, and has the world's leading production line of automotive crash dummy sensors. SRI's quality system is ISO90001 certified, and the calibration laboratory is ISO17025 certified.

SRI 6 axis force sensors includes 9 series, from 1 axis to 6 axis, and more than 1000 models.

## APPLICATIONS



Robotic  
automation



Auto crash&durability  
testing



Biomechanics



General testing

# M37XX&M47XX Series 6 Axis F/T Sensor for Robotics&General Testing

## DESCRIPTION

37XX series 6 axis force/torque sensors are matrix-decoupled, diameters from 15mm to 135mm, capacities from 50 to 6400N, 0.5 to 320Nm, non-linearity & hysteresis 0.5%, crosstalk 2% and overload 300%. A 6X6 decoupling matrix is provided in the calibration report when delivered. An amplifier (M830X) can be used to provide high voltage output or an interface box (M812X) can be used to both amplification and data acquisition. Amplifiers can be embedded into some of the sensors at special request. Standard protection is IP60. Some 37XX models can be made to IP68 (10m underwater), denoted by \*P in the part number (e.g. M37162BP).

## MODEL SELECTION

Model	Description	Measurement Range(N/Nm)				Dimension(mm)			Weight
		FX,FY	FZ	MX,MY	MZ	OD	Height	ID	Kg
M3701A	6 AXIS LC D15MM F50N	50	100	0.5	0.5	15	14	4.4	0.01
M3701B	6 AXIS LC D15MM F100N	100	200	1	1	15	14	4.4	0.01
M3701C	6 AXIS LC D15MM F200N	200	400	2	2	15	14	4.4	0.01
M3702A	6 AXIS LC D21MM F50N	50	100	0.75	0.75	21	17	5.4	0.01
M3702B	6 AXIS LC D21MM F100N	100	200	1.5	1.5	21	17	5.4	0.01
M3702C	6 AXIS LC D21MM F200N	200	400	3	3	21	17	5.4	0.01
M3702C1	6 AXIS LC D21MM F200N CENTRAL CABLE	200	400	3	3	21	17	*	0.01
M3703A	6 AXIS LC D45MM F50N	50	100	1.75	1.75	45	19	17	0.04
M3703A2	6 AXIS LC D45MM F50N ETHERNET UDP	50	100	1.75	1.75	45	19	*	0.04
M3703B	6 AXIS LC D45MM F100N	100	200	3.5	3.5	45	19	17	0.04
M3703B2	6 AXIS LC D45MM F100N	100	200	5	5	45	19	17	0.04
M3703C	6 AXIS LC D45MM F200N	200	400	7	7	45	19	17	0.04
M3704A9C	6 AXIS L D60MM F50N ETHERCAT	50	100	1.75	1.75	60	30	*	0.20
M3704B	6 AXIS LC D70MM F100N	100	200	5.5	5.5	70	23	30	0.12
M3704C	6 AXIS LC D70MM F200N	200	400	11	11	70	23	30	0.12
M3704C1	6 AXIS LC D70MM F200N CENTRAL CABLE	200	400	11	11	70	23	30	0.12
M3704C1A	6 AXIS LC D70MM F200N CENTRAL CABLE & CONNECTOR	200	400	11	11	70	23	30	0.12
M3704C2A	6 AXIS LC D65MM F200N CENTRAL CABLE & CONNECTOR	200	400	11	11	65	23	30	0.10
M3704S	6 AXIS LC RECTANGLE 52x57MM F200N	200	400	8	8	47	27	*	0.10
M3705B	6 AXIS LC D90MM F100N	100	200	7	7	90	23	45	0.18
M3705C	6 AXIS LC D90MM F200N	200	400	14	14	90	23	45	0.18
M3705C7	6 AXIS LC D90MM F200N DIFFERENT SCREW HOLE	200	400	14	14	90	23	45	0.18
M3705C7A	6 AXIS LC D90MM F200N CENTRAL CABLE	200	400	14	14	90	23	45	0.18
M3706B	6 AXIS LC D135MM F100N	100	200	10	10	135	25	80	0.39
M3706C	6 AXIS LC D135MM F200N	200	400	20	20	135	25	80	0.39
M3706C2	6 AXIS LC D135MM F200N CENTRAL CABLE	200	400	20	20	135	25	80	0.39
M3712A	6 AXIS LC D21MM F400N	400	800	6	6	21	17	5.4	0.02
M3712A1	6 AXIS LC D21MM F400N CENTRAL CABLE	400	800	6	6	21	17	5.4	0.02
M3712A2	6 AXIS LC D21MM F400N NO CENTER HOLE	400	800	6	6	21	17	*	0.02
M3712B	6 AXIS LC D21MM F800N	800	1600	12	12	21	17	5.4	0.02
M3713A	6 AXIS LC D45MM F400N	400	800	14	14	45	19	17	0.10
M3713A1	6 AXIS LC D45MM F400N CENTRAL CABLE	400	800	14	14	45	19	17	0.10
M3713B	6 AXIS LC D45MM F800N	800	1600	28	28	45	19	17	0.11
M4713C	6 AXIS LC D45MM F1600N	1600	3200	56	56	45	19	17	0.11
M4713D	6 AXIS LC D45MM F3200N	3200	6400	112	112	45	19	17	0.11
M3714A	6 AXIS LC D70MM F400N	400	800	22	22	70	23	30	0.29
M3714A1	6 AXIS LC D70MM F400N CENTRAL CABLE	400	800	22	22	70	23	30	0.29

# M37XX&M47XX Series 6 Axis F/T Sensor for Robotics&General Testing

## MODEL SELECTION

Model	Description	Measurement Range(N/Nm)				Dimension(mm)			Weight
		FX,FY	FZ	MX,MY	MZ	OD	Height	ID	Kg
M4722C	6 AXIS LC D30MM F1600N	1600	3200	40	40	30	23	6	0.07
M4722F	3 AXIS LC D30MM F10000N	5000	10000	NA	NA	30	*	*	0.10
M4722F1	UNIAXIAL LC D30MM F5200N	NA	5200	NA	NA	30	*	*	0.10
M3714B	6 AXIS LC D70MM F800N	800	1600	44	44	70	23	30	0.29
M3714B3	6 AXIS LC D70MM F900N CAN BUS	900	1800	100	100	70	23	*	0.29
M3714B4	6 AXIS LC D60MM F900N CAN BUS	900	1800	100	100	60	23	25	0.24
M3714B4A	6 AXIS LC D60MM F900N CAN BUS	900	1800	100	100	60	23	25	0.24
M3714B4A1	6 AXIS LC D60MM F900N CAN BUS	900	1800	100	100	60	23	25	0.24
M3714B5	6 AXIS LC D70MM F900N	900	1800	100	100	70	23	25	0.32
M3714B6	6 AXIS LC D60MM F900N	900	1800	100	100	60	23	*	0.36
M3714B7	6 AXIS LC D70MM F900N EtherCAT	900	1800	100	100	70	28	*	0.30
M3714BP	6 AXIS LC D70MM F800N IP68	800	1600	44	44	70	23	30	0.29
M4714C	6 AXIS LC D70MM F1600N	1600	3200	88	88	70	23	30	0.29
M4714C2	6 AXIS LC D70MM F1600N CAN BUS	1600	3200	88	88	70	23	*	0.29
M3715A	6 AXIS LC D90MM F400N	400	800	28	28	90	23	45	0.45
M3715B	6 AXIS LC D90MM F800N	800	1600	56	56	90	23	45	0.45
M3715BT1	6 AXIS LC D90MM F800N ETHERNET	800	1600	56	56	90	23	*	0.45
M4715C	6 AXIS LC D90MM F1600N	1600	3200	112	112	90	23	45	0.45
M4715CT1	6 AXIS LC D90MM F1600N ETHERNET	1600	3200	112	112	90	23	*	0.45
M4715D	6 AXIS LC D90MM F3200N	3200	6400	224	224	90	23	45	0.45
M4715D1	6 AXIS LC D90MM F3200N CENTRAL CABLE	3200	6400	224	224	90	23	45	0.45
M3716A	6 AXIS LC D135MM F400N	400	800	40	40	135	25	80	1.00
M3716AP	6 AXIS LC D135MM F400N IP68	400	800	40	40	135	25	80	1.00
M3716AT1	6 AXIS LC D135MM F400N ETHERNET	400	800	40	40	135	25	*	1.00
M3716B	6 AXIS LC D135MM F800N	800	1600	80	80	135	25	80	1.00
M3716BP	6 AXIS LC D135MM F800N IP68	800	1600	80	80	135	25	80	1.00
M4716C	6 AXIS LC D135MM F1600N	1600	3200	160	160	135	25	80	1.00
M4716D	6 AXIS LC D135MM F3200N	3200	6400	320	320	135	25	80	1.00
M3725A	6 AXIS LC D88MM F200N CAN BUS	200	400	50	50	88	20	13	0.54
M3733C	6 AXIS LC D35MM F120N	120	200	5	5	35	19	7	0.04
M3733C1	6 AXIS LOADCELL D35MM F200N	120	200	5	5	35	19	7	0.04
M3733C2	6 AXIS LC D35MM F200N	200	400	6	6	35	19	7	0.04

## PICTURE



# M35XX Series 6 Axis F/T Sensor-Extra Thin

## DESCRIPTION

M35XX series is patented 6 axis F/T sensor with thickness of 9.2mm, thinnest commercially available. The sensors are matrix-decoupled, nonlinearity & hysteresis 1%, crosstalk 3%, overload 300%, IP60 protection.

## MODEL SELECTION

Model	Description	Measurement Range(N/Nm)				Dimension(mm)			Weight
		FX,FY	FZ	MX,MY	MZ	OD	Height	ID	Kg
M3535E	6 AXIS CIRCULAR LOAD CELLEXTRA THIN D58MM F200N	200	300	22	30	58	9.5	*	0.11
M3535E1	6 AXIS CIRCULAR LOAD CELLEXTRA THIN D70MM F200N	200	300	22	30	70	11.5	16	0.19
M3552B	EXTRA THIN 6 AXIS LC D30MM F150N	150	250	2.25	2.25	30	9.2	5	0.01
M3552C	EXTRA THIN 6 AXIS LC D30MM F300N SCREW HOLE	300	500	4.5	4.5	30	9.2	5	0.03
M3552C1	EXTRA THIN 6 AXIS LC D30MM F300N THROUGH HOLE	300	500	4.5	4.5	30	9.2	5	0.03
M3552D	EXTRA THIN 6 AXIS LC D30MM F600N SCREW HOLE	600	1000	9	9	30	9.2	5	0.03
M3552D1	EXTRA THIN 6 AXIS LC D30MM F600N THROUGH HOLE	600	1000	9	9	30	9.2	5	0.03
M3553B	EXTRA THIN 6 AXIS LC D45MM F150N SCREW HOLE	150	250	3.5	3.5	45	9.2	9	0.03
M3553B1	EXTRA THIN 6 AXIS LC D45MM F150N THROUGH HOLE	150	250	3.5	3.5	45	9.2	9	0.03
M3553C	EXTRA THIN 6 AXIS LC D45MM F300N	300	500	7	7	45	9.2	10	0.06
M3553D	EXTRA THIN 6 AXIS LC D45MM F600N	600	1000	13.5	13.5	45	9.2	10	0.06
M3553E	EXTRA THIN 6 AXIS LC D45MM F1200N	1200	2000	27	27	45	9.2	10	0.06
M3554C	EXTRA THIN 6 AXIS LC D60MM F300N	300	500	10	10	60	9.2	21	0.11
M3554C1	EXTRA THIN 6 AXIS LC D60MM F300N VERTICAL CABLE	300	500	10	10	60	9.2	21	0.05
M3554C2	EXTRA THIN 6 AXIS LC D60MM F300N DOWEL PIN & CONNECTOR	300	500	10	10	60	9.2	21	0.05
M3554D	EXTRA THIN 6 AXIS LC D60MM F600N	600	1000	20	20	60	9.2	21	0.11
M3554E	EXTRA THIN 6 AXIS LC D60MM F1200N	1200	2000	40	40	60	9.2	21	0.11
M3555A	EXTRA THIN 6 AXIS LC D90MM F150N	150	250	10	10	90	9.2	45	0.09
M3555D	EXTRA THIN 6 AXIS LC D90MM F600N	600	1000	40	40	90	9.2	45	0.26
M3555D5	6 AXIS CIRCULAR LOAD CELLEXTRA THIN D90MM F600N	600	1000	40	40	90	9.2	40	0.26
M3564C	EXTRA THIN 6 AXIS LC D60MM F2000N	1200	1200	40	30	60	10	*	0.06
M3564F	EXTRA THIN 6 AXIS LC D65MM F2500N THROUGH HOLE	2500	5000	200	100	65	9.2	10	0.19
M3564F1	EXTRA THIN 6 AXIS LC D65MM F2500N SCREW HOLE	2500	5000	200	100	65	10	10	0.19
M3564G-2X	EXTRA THIN 2 AXIS LC FZ & MY D65MM F1000N	NA	1000	100	NA	65	10	10	0.19
M3564K1	EXTRA THIN 6 AXIS LC D73MM F600N TOOL CHANGE PIN HOLE	600	600	20	20	73	14.5	17	0.29
M3636E	6 AXIS CIRCULAR LC EXTRA THIN D58MM F200N	200	300	22	30	58	7	*	0.11
M3636E1	6 AXIS CIRCULAR LC EXTRA THIN D70MM F200N	200	300	22	30	70	9.5	16	0.19
M3636E2	6 AXIS CIRCULAR LCL EXTRA THIN D70MM F200N	200	300	22	30	70	10	25	0.23

## PICTURE



# M38XX Series 6 Axis F/T Sensor for Low Capacity & High Accuracy

## DESCRIPTION

M38XX series 6 axis force/torque sensors are matrix-decoupled with low capacity & high accuracy, nonlinearity and hysteresis less than 0.5%, crosstalk less than 2%, overload protection from 600% to 1000%. Suited for robot applications in high-precision assembling and wind tunnel testing. Integrated amplifiers or DAQ available for models OD 75mm or larger. IP60 protection.

## MODEL SELECTION

Model	Description	Measurement Range(N/Nm)				Dimension(mm)			Weight
		FX,FY	FZ	MX,MY	MZ	OD	Height	ID	Kg
M3812A	6 AXIS CIRCULAR LC D30MM F40N	40	40	1.5	1.5	30	20	*	0.05
M3813A	6 AXIS LC D45MM F40N	40	40	1.5	1.5	45	31	*	0.09
M3813B	6 AXIS LCL D45MM F70N	70	70	3	3	45	31	*	0.09
M3813C	6 AXIS LC D45MM F130N	130	130	6	6	45	31	*	0.09
M3813D	6 AXIS LC D45MM F260N	260	260	12	12	45	31	*	0.09
M3813E	6 AXIS LC D45MM F520N	520	520	24	24	45	31	*	0.19
M3813E-1X	UNIAXIAL CIRCULAR LC D45MM F520N	NA	520	NA	NA	45	31	*	0.19
M3813E-3X	3 AXIS LC D45MM F520N	520	520	NA	NA	45	31	*	0.19
M3815A	6 AXIS LC D75MM F40N	40	40	3	3	75	35	*	0.41
M3815A1	6 AXIS LC D75MM F40N	40	40	3	3	75	35	*	0.41
M3815B	6 AXIS LC D75MM F70N	70	70	5	5	75	35	*	0.41
M3815B1	6 AXIS LC D75MM F70N	70	70	5	5	75	35	*	0.41
M3815C	6 AXIS LC D75MM F130N	130	130	10	10	75	35	*	0.41
M3815C1	6 AXIS LC D75MM F130N	130	130	10	10	75	35	*	0.41
M3815C2	6 AXIS LC D75MM F130N	130	130	10	10	75	35	*	0.41
M3815C3	6 AXIS LC WITH OL STOPS D75MM F130N IP60	130	130	10	10	75	35	*	0.41
M3815D	6 AXIS LC D75MM F260N	260	260	20	20	75	35	*	0.41
M3815D1	6 AXIS LC D75MM F260N	260	260	20	20	75	35	*	0.41
M3815D2	6 AXIS LCD75MM F260N	260	260	20	20	75	35	*	0.41
M3815D2A	6 AXIS LC WITH OL STOPS 8AMP D75MM F260N IP65	260	260	20	20	75	35	*	0.41
M3815E1	6 AXIS LC WITH OL STOPS 8AMP D75MM F520N IP60	520	520	40	40	75	35	*	0.58
M3816A	6 AXIS LC D100MM F40N	40	40	3.5	3.5	100	35	*	0.69
M3816A1	6 AXIS CIRCULAR LC D100MM F40N	40	40	3.5	3.5	100	35	*	0.69
M3816B	6 AXIS LC D100MM F70N	70	70	7	7	100	35	*	0.69
M3816C	6 AXIS LC D100MM F130N	130	130	14	14	100	35	*	0.69
M3816D	6 AXIS LC D100MM F260N	260	260	28	28	100	35	*	0.69
M3816D1	6 AXIS LC D100MM F260N	260	260	28	28	100	35	*	0.69
M3816E	6 AXIS LC D100MM F520N	520	520	56	56	100	35	*	0.69

## PICTURE



# M38XX Series 6 Axis F/T Sensor for Low Capacity&High Accuracy

## MODEL SELECTION

Model	Description	Measurement Range(N/Nm)				Dimension(mm)			Weight
		FX,FY	FZ	MX,MY	MZ	OD	Height	ID	Kg
M3816E1	6 AXIS LC WITH OL STOPS D100MM F260N IP60	520	520	56	56	100	35	*	0.69
M3816F	6 AXIS LC WITH OL STOPS 8 AMP D100MM F1040N IP60	1040	1040	112	112	100	35	*	1.20
M3816AH	6 AXIS LC D100MM F40N HIGH PRECISION VERSION	40	40	3.5	3.5	100	35	*	0.69
M3816BH	6 AXIS LC D100MM F70N HIGH PRECISION VERSION	70	70	7	7	100	35	*	0.69
M3816CH	6 AXIS LC D100MM F130N HIGH PRECISION VERSION	130	130	14	14	100	35	*	0.69
M3816DH	6 AXIS LC D100MM F260N HIGH PRECISION VERSION	260	260	28	28	100	35	*	0.69
M3816D7H	6 AXIS LC WITH OL STOPS 8 AMP D100MM F100N HIGH PRECISION VERSION	100	300	40	30	100	35	*	0.69
M3816EH	6 AXIS LC D100MM F520N HIGH PRECISION VERSION	520	520	56	56	100	35	*	0.69
M3816FH	6 AXIS LC D100MM F260N HIGH PRECISION VERSION	1040	1040	112	112	100	35	*	1.20
M3817EH	6 AXIS LC D150MM F520N HIGH PRECISION VERSION	520	520	84	84	150	35	*	1.40
M3818BH1	6 AXIS LC D200MM F100N	100	300	40	40	200	44	*	3.30
M3818FH1	6 AXIS LC D200MM F500N	500	1200	250	200	200	44	*	3.30
M3818FH2	6 AXIS LC WITH OL STOPS 8 AMP D200MM F1200N	1200	1200	250	200	200	44	*	3.30
M3815AA	6 AXIS LC D75MM F40N,RS485	40	40	3	3	75	35	*	0.41
M3815AC	6 AXIS LC D75MM F40N,EtherCAT	40	40	3	3	75	35	*	0.41
M3815AE	6 AXIS LC D75MM F40N,Ethernet TCP/IP	40	40	3	3	75	35	*	0.41
M3815BA	6 AXIS LC D75MM F70N,RS485	70	70	5	5	75	35	*	0.41
M3815BC	6 AXIS LC D75MM F70N,EtherCAT	70	70	5	5	75	35	*	0.41
M3815BE	6 AXIS LC D75MM F70N,Ethernet TCP/IP	70	70	5	5	75	35	*	0.41
M3815CA	6 AXIS LC D75MM F130N,RS485	130	130	10	10	75	35	*	0.41
M3815CC	6 AXIS LC D75MM F130N,EtherCAT	130	130	10	10	75	35	*	0.41
M3815CE	6 AXIS LC D75MM F130N,Ethernet TCP/IP	130	130	10	10	75	35	*	0.41
M3815DC	6 AXIS LC D75MM F260N,EtherCAT	260	260	20	20	75	35	*	0.41
M3815DE	6 AXIS LC D75MM F260N,Ethernet TCP/IP	260	260	20	20	75	35	*	0.41
M3815EC	6 AXIS LC D75MM F520N,EtherCAT	520	520	40	40	75	35	*	0.41
M3815EE	6 AXIS LC D75MM F520N,Ethernet TCP/IP	520	520	40	40	75	35	*	0.41
M3816AA	6 AXIS LC D100MM F40N,RS485	40	40	3.5	3.5	100	35	*	0.69
M3816AC	6 AXIS LC D100MM F40N,EtherCAT	40	40	3.5	3.5	100	35	*	0.69
M3816AE	6 AXIS LC D100MM F40N,Ethernet TCP/IP	40	40	3.5	3.5	100	35	*	0.69
M3816BC	6 AXIS LC D100MM F70N,EtherCAT	70	70	7	7	100	35	*	0.69
M3816BE	6 AXIS LC D100MM F70N,Ethernet TCP/IP	70	70	7	7	100	35	*	0.69
M3816BHE	6 AXIS LC D100MM F70N,Ethernet TCP/IP,High precision	70	70	7	7	100	35	*	0.69
M3816CC	6 AXIS LC D100MM F130N,EtherCAT	130	130	14	14	100	35	*	0.69
M3816CE	6 AXIS LC D100MM F130N,Ethernet TCP/IP	130	130	14	14	100	35	*	0.69
M3816DC	6 AXIS LC D100MM F260N,EtherCAT	260	260	28	28	100	35	*	0.69
M3816DE	6 AXIS LC D100MM F260N,Ethernet TCP/IP	260	260	28	28	100	35	*	0.69
M3816EC	6 AXIS LC D100MM F520N,EtherCAT	520	520	56	56	100	35	*	0.69
M3816EE	6 AXIS LC D100MM F520N,Ethernet TCP/IP	520	520	56	56	100	35	*	0.69
M3816EHC	6 AXIS LC D100MM F520N,EtherCAT, High precision	520	520	56	56	100	35	*	0.69
M3816EHE	6 AXIS LC D100MM F520N,Ethernet TCP/IP, High precision	520	520	56	56	100	35	*	0.69
M3816FC	6 AXIS LC D100MM F1040N,EtherCAT	1040	1040	112	112	100	35	*	0.69
M3816FE	6 AXIS LC D100MM F1040N,Ethernet TCP/IP	1040	1040	112	112	100	35	*	0.69

# M39XX Series 6 Axis Loadcell-Large Capacity

## DESCRIPTION

Structurally decoupled type large-range six-axis force sensor. The outer diameter range from 60mm to 135mm, and the maximum range is 291,600N. Maximum overload 200%. IP60 protection. The letter "P" at the end of the model number indicates IP68 protection level (e.g. M3965P). The M39XX series have nonlinearity and hysteresis less than 1%F.S., and crosstalk less than 5%F.S.

## MODEL SELECTION

Model	Description	Measurement Range(N/Nm)				Dimension(mm)			Weight
		FX,FY	FZ	MX,MY	MZ	OD	Height	ID	Kg
M3923	6 AXIS LC D60MM F2700N	2700	5400	120	96	60	40	15	0.18
M3924	6 AXIS LC D90MM F2700N	2700	5400	180	144	90	40	35	0.36
M3924A-1X	1 AXIS LC D90MM F10000N	NA	10000	NA	NA	90	40	35	1.00
M3925	6 AXIS LC D135MM F2700N	2700	5400	270	216	135	40	70	0.72
M3925A	6 AXIS LC D135MM F2700N	2700	5400	270	216	135	40	70	0.72
M3925A1	2 AXIS CIRCULAR LC D135MM FZ &MZ	NA	2000	NA	200	135	40	*	0.94
M3932CP	6AXIS CIRCULAR LC D40MM F1000N	1000	1000	30	10	40	35	*	0.09
M3933	6 AXIS LC D60MM F5400N	5400	10800	240	192	60	40	15	0.48
M3933B2	6 AXIS LC D60MM F5400NDIGITAL OUTPUT	5400	10800	240	192	60	40	*	0.51
M3933P	6 AXIS LC D60MM F5400N IP68	5400	10800	240	192	60	40	15	0.48
M3934	6 AXIS LC D90MM F5400N	5400	10800	360	288	90	40	35	0.99
M3934-3X	3 AXIS CIRCULAR LC D90MM F5400N	5400	10800	NA	NA	90	40	35	0.99
M3935	6 AXIS LC D135MM F5400N	5400	10800	540	432	135	40	70	1.95
M3935M	6 AXIS LC D135MM F5400N	5400	10800	540	432	135	40	70	1.95
M3935N	6 AXIS CIRCULAR LC D135MM F5400N	5400	10800	540	432	135	40	*	2.20
M3935P	6 AXIS CIRCULAR LC IP68 D135MM F5400N	5400	10800	540	432	135	40	70	1.95
M3935RP	4 AXIS CIRCULAR LC D150MM F5000N	5000	NA	500	NA	150	80	92	4.58
M3935Z1	6 AXIS LC D135MM F5400N	5400	10800	540	432	135	40	70	1.95
M3943	6 AXIS LC D60MM F16200N	16200	32400	660	530	60	50	15	0.62
M3943-3X	3 AXIS LC D60MM F30000N	16200	32400	NA	NA	60	50	15	0.62
M3943F-3X	3 AXIS CIRCULAR LC D60MM F30kN	30000	50000	NA	NA	60	35	*	0.42
M3944	6 AXIS LC D90MM F16200N	16200	32400	1000	800	90	50	35	1.30
M3945	6 AXIS LC D135MM F16200N	16200	32400	1500	1200	135	50	57	2.90
M3945A-1X	1 AXIS LC D135MM F20000N	NA	20000	NA	NA	135	50	57	2.90
M3945-3X	3 AXIS LC D135MM F16200N	16200	32400	NA	NA	135	50	57	2.90
M3945-3X1	3 AXIS CIRCULAR LC D135MM F11200N	11200	22400	NA	NA	135	50	57	2.90
M3945A-1X	UNIAXIAL CIRCULAR LC D135MM F20KN	NA	20000	NA	NA	135	50	57	2.90
M3945P2	6 AXIS CIRCULAR LC D135MM F9000N, IP68	9000	18000	900	700	135	50	57	2.90
M3948	6 AXIS CIRCULAR LC D135MM F10000N	10000	20000	1000	800	135	50	57	2.90
M3954	6 AXIS LC D90MM F48600N	48600	97200	3000	2400	90	75	33	4.70
M3955	6 AXIS LC D135MM F48600N	48600	97200	4500	3600	135	75	47	4.70
M3955B1	3 AXIS LC D135MM F50000N	50000	100000	NA	NA	135	75	47	4.70
M3955B2	3 AXIS LC D135MM F50000N	50000	50000	NA	NA	135	75	47	4.70
M3955B3	3 AXIS LC D135MM F10000N	10000	50000	NA	NA	135	89	47	4.70
M3955B4	3 AXIS CIRCULAR LC D135MM FX5KN FZ75KN	5000	75000	NA	NA	135	89	47	4.70
M3955N	6 AXIS CIRCULAR LC D135MM F15000N	15000	40000	6000	3000	135	75	47	4.70
M3958P-1X	UNIAXIAL CIRCULAR LC D250MM FZ 76KN IP68(10M)	NA	76000	NA	NA	250	75	180	9.70
M3965	6 AXIS LC D135MM F145800N	145800	291600	13500	10800	135	120	47	7.40

# M39XX Series 6 Axis Loadcell-Large Capacity

## MODEL SELECTION

Model	Description	Measurement Range(N/Nm)				Dimension(mm)			Weight
		FX,FY	FZ	MX,MY	MZ	OD	Height	ID	Kg
M3965B	6 AXIS LC D135MM F100000N	100000	250000	20000	15000	135	120	47	7.40
M3965C	3 AXIS LC D135MM F400000N	150000	400000	NA	NA	135	120	47	7.40
M3965D	3 AXIS LC D135MM F600000N	200000	600000	NA	NA	135	120	47	7.40
M3965E	6 AXIS LC D135MM F600000N	200000	600000	20000	15000	135	120	47	7.40
M3965P	6 AXIS LC D135MM F145800N IP68	145800	291600	13500	10800	135	120	47	7.40
M3966A	6 AXIS LC D185MM F200kN	200000	400000	40000	20000	185	135	50	16.80
M3991	5 AXIS CIRCULAR LC D260MMFZ150KN	10000	150000	5000	NA	260	122	176	14.90
M3993P	6 AXIS LC D135MM F145800N 12 CHNS	145800	291600	13500	10800	135	120	47	7.40

## PICTURE



# M3612X Series 6 Axis Force Platform

## DESCRIPTION

M3612X series is a high-performance 6 axis force platform for motion analysis. Applying the same advanced strain gauge technology utilized in our 6 axis loadcells, SRI force platforms provide accurate measurements in all forces and moments from the test subject simultaneously.

## MODEL SELECTION

Model	Description	Measurement Range(N/Nm)				Dimension(mm)			Weight
		FX,FY	FZ	MX,MY	MZ	OD	Height	ID	Kg
M3612T1	6 AXIS FORCE PLATE 500 X 600MM LIGHT WEIGHT Ethernet & CAN	1400	6000	2400	500	500	600	45.9	10.20
M3612T1F	6 AXIS FORCE PLATE 500 X 600MM LIGHT WEIGHT Ethernet & CAN	1400	6000	2400	500	500	600	45.9	24.00
M3612A	6 AXIS FORCE PLATE 400 X 600MM	1250	2500	500	500	400	600	100	36.00
M3612B	6 AXIS FORCE PLATE 400 X 600MM	2500	5000	1000	1000	400	600	100	36.00
M3612BT	6 AXIS FORCE PLATE 400 X 600MM COUPLED	2500	5000	1000	1000	400	600	100	36.00
M3612C	6 AXIS FORCE PLATE 400 X 600MM	5000	10000	2000	2000	400	600	100	36.00
M3612G	6 AXIS FORCE PLATE 400 X 600MM	2500	5000	800	600	400	600	134	46.00
M3612M	6 AXIS FORCE PLATE 400 X 600MM	10000	10000	6000	6000	400	600	134	49.00
M3612Q1P	3 AXIS FORCE PLATE 300 X 300MM	50000	50000	NA	NA	300	300	134	23.00
M3613B	6 AXIS FORCE PLATE 400 X 600MM + WINDOW	2500	5000	1000	1000	400	600	120	40.10
M3614BT	6 AXIS FORCE PLATE 450 X 450MM COUPLED	2500	5000	800	600	450	450	100	30.00

## PICTURE



# M43XX Series 6 Axis F/T Sensor for Industrial Application

## DESCRIPTION

M43XX series 6 axis force/torque sensor provides 3 to 10 times overload protection. IP65 protection, integrated with low-noise amplifiers for some models, nonlinearity & hysteresis 0.5%, crosstalk 2.5%.

## MODEL SELECTION

Model	Description	Measurement Range(N/Nm)				Dimension(mm)			Weight
		FX,FY	FZ	MX,MY	MZ	OD	Height	ID	Kg
M4314A	6 AXIS LC D104MM F165N 10X OVERLOAD IP65 PWR±15V	165	495	15	15	104	40	*	1.60
M4314A3	6 AXIS LC D104MM F165N 10X OVERLOAD IP65 PWR 24V	165	495	15	15	104	40	*	1.60
M4314AC	6 AXIS LC D104MM F165N 10X OVERLOAD IP65, ETHERCAT	165	495	15	15	104	40	*	1.60
M4314B	6 AXIS LC D104MM F330N 10X OVERLOAD IP65 PWR±15V	330	990	30	30	104	40	*	1.50
M4314C	6 AXIS LC D104MM F660N 10XOVERLOAD IP65 PWR±15V	660	1980	60	60	104	40	*	1.70
M4314C2	6 AXIS LC D104MM F660N 10X OVERLOAD IP65, CABLE EXIT	660	1980	60	60	104	40	*	1.50
M4314CC	6 AXIS LC D104MM F660N 10X OVERLOAD IP65 ETHERCAT	660	1980	60	60	104	40	*	1.70
M4314G	6 AXIS LC D168MM F1250N 10X OVERLOAD IP65 PWR±15V	1250	3125	200	200	168	62	*	5.80
M4314H	6 AXIS LC D168MM F2500N 10X OVERLOAD IP65 PWR±15V	2500	6250	400	400	168	62	*	5.80
M4314H1	6 AXIS LC D168MM F2500N FOR XYZ 10X OVERLOAD IP65 PWR±15V	2500	2500	400	400	168	62	*	5.80
M4314H2	6 AXIS LC D168MM F3000N 10X OVERLOAD IP65 PWR±15V	3000	4000	150	150	168	62	*	5.80
M4314HC	6 AXIS LC D168MM F2500N 10X OVERLOAD IP65 ETHERCAT	2500	6250	400	400	168	62	*	5.80
M4314KC	6 AXIS LC WITH OL STOPS ETHERCAT,D199MM F3600N IP65	3600	9000	700	700	199	65	*	8.60
M4314LC	6 AXIS LC WITH OL STOPS, ETHERCAT D199MM F7200N IP65	7200	18000	1400	1400	199	65	*	8.60
M4314LZ	6 AXIS LC WITH OL STOPS ETHERCAT D199MM F7200N IP65	7200	18000	1400	1400	199	65	*	8.60
M4314MC	6 AXIS CIRCULAR LC D280MM F7500N	7500	15000	3000	3000	280	55	*	16.2
M4314NC	6 AXIS CIRCULAR LC D280MM F15kN	15000	30000	6000	6000	280	55	*	16.2
M4314S2	6 AXIS LC D199MM F3600N 10X OVERLOAD IP65 PWR±15V	3600	9000	700	700	199	65	*	8.60
M4314S2A	6 AXIS LC, D199MM F3600N 10X OVERLOAD IP65 ETHERNET	3600	9000	700	700	199	65	*	8.60
M4314S3	6 AXIS LC D199MM F7200N 10X OVERLOAD IP65 PWR±15V	7200	18000	1400	1400	199	65	*	8.60
M4314S3A	6 AXIS LC D199MM F7200N 10X OVERLOAD IP65 NO AMPLIFIER	7200	18000	1400	1400	199	65	*	8.60
M4324A	6 AXIS LC D68MM F300N ETHERCAT	300	300	30	30	68	30	17	0.30
M4324A1	6 AXIS LC D68MM F300N NO AMPLIFIER	300	300	30	30	68	30	17	0.30
M4324A2	6 AXIS LC D68MM F150N ETHERCAT	150	150	15	15	68	30	17	0.19
M4324B	6 AXIS LC D68MM F800N	800	800	90	90	68	28.2	17	0.35
M4324R	6 AXIS LC D90MM F1250N	1250	1250	250	250	90	25.7	35	0.78
M4325B	6 AXIS LC D91MM F200N AMP PWR±15V	200	400	20	20	91	36	*	0.77
M4325BT1	6 AXIS LC D91MM F200N RS485	200	400	20	20	91	36	*	0.77
M4325K	6 AXIS LC D91MM F200N AMP PWR 24V CENTRAL CABLE	200	400	20	20	91	31	32	0.56
M4325K1	6 AXIS LC D91MM F200N NO AMPLIFIER	200	400	20	20	91	31	32	0.56
M4325M	6 AXIS LC D91MM F400N AMP PWR 24V IP65	400	800	40	40	91	31	32	0.56
M4325M1	6 AXIS LC,D91MM F400N NO AMPLIFIER IP65	400	800	40	40	91	31	32	0.56
M4325N	6 AXIS LC D91MM F200N, AMP PWR 24V IP65	200	400	20	20	91	31	32	0.56
M4325N2	6 AXIS LC D91MM F100N AMP PWR 24V IP65	100	200	10	10	91	31	25	0.58
M4325N3X	3 AXIS LC D91MM F200N ETHERCAT IN & OUT IP65	200	400	NA	NA	91	31	32	0.56
M4325N4	6 AXIS LC D91MM F50N ETHERCAT IN & OUT IP65	50	50	5	5	91	31	32	0.56
M4325N5	6 AXIS LC D91MM F200N CABLE SIDE EXIT ETHERCAT IP65	200	400	20	20	91	31	*	0.70
M4325N6	6 AXIS LC D91MM F100N CABLE SIDE EXIT ETHERCAT IP65	100	200	10	10	91	31	*	0.70
M4325N7	6 AXIS LC D94MM F400N CENTRAL CABLE ETHERCAT IP65	400	800	22	22	91	36.5	*	0.71

# M43XX Series 6 Axis F/T Sensor for Industrial Application

## MODEL SELECTION

Model	Description	Measurement Range(N/Nm)				Dimension(mm)			Weight
		FX,FY	FZ	MX,MY	MZ	OD	Height	ID	Kg
M4325P	6 AXIS LC D91MM F200N ETHERCAT IN & OUT	200	400	20	20	91	31	*	0.66
M4325Q	6 AXIS LC D91MM F200N ETHERCAT OUT	200	400	20	20	91	31	*	0.66
M4325S9P	6 AXIS LC D100MM F400N IP68	400	400	25	25	100	30	*	0.45
M4326B	6 AXIS LC, D91MM F200N NO AMPLIFIER IP65	200	400	20	20	91	37.2	*	1.03
M4326C	6 AXIS LC D91MM F400N NO AMPLIFIER IP65	400	800	40	40	91	37.2	*	1.03
M4341A	6 AXIS LC 60 X 60MM F9N NO AMPLIFIER	9	10	0.3	0.15	60	15	*	0.10
M4341B	6 AXIS LC 60 X 60MM F13N NO AMPLIFIER	13	20	1.2	0.6	60	15	*	0.10
M4341C	6 AXIS LC 60 X 60MM F25N NO AMPLIFIER	25	50	2.5	2.5	60	15	*	0.10
M4341DP	6 AXIS LC D90MM F20N NO AMPLIFIER IP67	8	20	1.5	1.5	90	16	*	0.20
M4342R2	6 AXIS LC D160MM F30KN OVERLOAD PROTECTION	30000	30000	3000	3000	160	50	*	5.90
M4344A	6 AXIS LC D180MM F400N AMP OUTPUT $\pm 1.5V$	400	400	50	50	180	37.2	85	1.60
M4344A1	6 AXIS LC D180MM F400N AMP OUTPUT $\pm 10V$	400	400	50	50	180	37.2	85	1.60
M4344AP	6 AXIS LC D180MM F400N AMP OUTPUT $\pm 1.5V$ IP65	400	400	50	50	180	37.2	85	1.60
M4344B	6 AXIS LC D180MM F800N AMP OUTPUT $\pm 1.5V$	800	800	120	120	180	37.2	85	1.60
M4344B9	6 AXIS LC D180MM F800N NO AMPLIFIER	800	1600	120	120	180	37.2	85	1.60
M4344BP	6 AXIS LC D180MM F800N AMP OUTPUT $\pm 1.5V$ IP65	800	1600	120	120	180	37.2	85	4.00
M4344C	6 AXIS LC D180MM F1600N AMP OUTPUT $\pm 1.5V$	1600	1600	240	240	180	37.2	85	3.10
M4344C2	6 AXIS LC D180MM F1600N CONNECTOR TO +X	1600	1600	240	240	180	37.2	85	3.10
M4344C4	6 AXIS LC D180MM F1600N CONNECTOR TO -X	1600	1600	240	240	180	37.2	85	3.10
M4344D	6 AXIS LC D180MM F3200N AMP OUTPUT $\pm 1.5V$	3200	3200	480	480	180	37.2	85	3.10
M4344D4	6 AXIS LC D180MM F3200N NO AMPLIFIER	3200	3200	480	480	180	37.2	85	3.10
M4344D6	6 AXIS LC D180MM F4500N, AMP OUTPUT $\pm 1.5V$	4500	4500	700	700	180	37.2	85	3.10
M4344E5	6 AXIS LC D180MM F7200N NO AMPLIFIER	7200	14400	1000	1000	180	37.2	85	3.10

## PICTURE



# M43XX Series 6 Axis F/T Sensor for Industrial Application

## MODEL SELECTION

Model	Description	Measurement Range(N/Nm)				Dimension(mm)			Weight
		FX,FY	FZ	MX,MY	MZ	OD	Height	ID	Kg
M4344M	6 AXIS LC D180MM F10KN AMP OUTPUT $\pm 10V$	10000	10000	2400	2400	180	40	70	5.00
M4344R	6 AXIS LC D180MM F15KN NO AMPLIFIER	5000	15000	500	500	180	60	70	7.70
M4344R2	6 AXIS LC D180MM FX8KN FZ30KN NO AMPLIFIER	8000	30000	800	800	180	60	70	7.70
M4344R3	6 AXIS LC D180MM FX15KN FZ30KN NO AMPLIFIER	15000	30000	800	800	180	60	70	7.70
M4344R4	6 AXIS LC D180MM F5KN SINGLE ENDED OUTPUT 0-10V	5000	5000	500	500	180	60	70	7.70
M4344R5	6 AXIS LC D180MM F6KN SINGLE ENDED OUTPUT 0-10V	4000	6000	1000	1000	180	60	70	7.70
M4344R6	6 AXIS LC 180MM F50KN NO AMPLIFIER	13000	50000	1300	1300	180	60	70	8.30
M4344T2	6 AXIS ROBOT BASE LC D190MM F1600N AMP	1600	1600	450	450	190	48	*	6.20
M4344T2C	6 AXIS ROBOT BASE LC D190MM F1600N ETHERNET UDP	1600	1600	450	450	190	48	*	6.20
M4344T3	6 AXIS ROBOT BASE LC D190MM F1600N NO AMPLIFIER	1600	1600	450	450	190	48	*	6.20
M4344T4	6 AXIS ROBOT BASE LC D190MM F1000N NO AMPLIFIER	1000	1000	250	250	190	48	*	6.20
M4344T5	6 AXIS ROBOT BASE LC D250MM F4000N AMP	4000	4000	1800	1800	250	59	50	12.50
M4344T5C	6 AXIS ROBOT BASE LC D250MM F2400N ETHERCAT	2400	2400	675	675	250	59	50	12.50
M4344T6	6 AXIS ROBOT BASE LC D180MM F1600N NO AMPLIFIER	1600	1600	450	450	180	48	50	5.60
M4346M	6 AXIS LC D250MM F33KN NO AMPLIFIER	33000	33000	8280	8280	250	60	*	14.90
M4346N	6 AXIS LC D280MM F42KN NO AMPLIFIER	42000	42000	15000	15000	280	60	*	19.00
M4347B	6 AXIS LC D280MM F4000N OUTPUT $\pm 10V$	4000	4000	800	800	280	51	*	9.90
M4347B2	6 AXIS LC D280MM F4000N OUTPUT $\pm 10V$ , CENTER HOLE	4000	4000	800	800	280	51	100	9.90
M4347B3	6 AXIS LC D280MM F4000N ETHERNET, IP65	4000	4000	800	800	280	51	*	9.90
M4347D	6 AXIS LC D280MM F15KN OUTPUT $\pm 10V$	15000	30000	6000	6000	280	51	*	9.90
M4347D1	6 AXIS LC D280MM F15KN OUTPUT $\pm 10V$ CENTER LOCATION HOLE	15000	30000	6000	6000	280	54	*	10.00
M4347D2	6 AXIS LC D280MM F6KN OUTPUT $\pm 5V$ CENTER LOCATION HOLE	6000	12000	2500	2500	280	55	120	9.90
M4347D5	6 AXIS LC D280MM F5KN OUTPUT $\pm 10V$	5000	5000	2000	2000	280	51	*	9.90
M4347D6	6 AXIS LC D280MM F6KN OUTPUT $\pm 10V$	6000	12000	2500	2500	280	51	*	9.90
M4347D7	6 AXIS LC D280MM F3600N OUTPUT $\pm 10V$	3600	9000	1000	1000	280	51	*	9.90
M4347D8	6 AXIS LC D280MM F4000N NO AMPLIFIER	1000	4000	1000	400	280	51	*	9.90
M4347D9	6 AXIS LC D280MM F4000N OUTPUT $\pm 10V$	1000	4000	1000	400	280	51	*	9.60
M4347DABB	6 AXIS LC D280MM F15KN OUTPUT $\pm 10V$ , PWR $\pm 15V$	15000	30000	6000	6000	280	51	*	9.90
M4385DT1	6 AXIS LC D180MM F4000N ETHERNET	4000	4000	1000	1000	180	101	80	8.40
M4385E	6 AXIS LC D180MM F10KN OUTPUT $\pm 10V$	10000	10000	2400	2400	180	121	80	10.60

## PICTURE



# Uniaxial and special loadcell

## DESCRIPTION

SRI manufactures special uniaxial and multiaxis force transducers. Although some models have a small range, they have a strong anti-overload capability, making them more secure to use in industrial sites.

## MODEL SELECTION

Model	Description	Measurement Range(N/Nm)				Dimension(mm)			Weight
		FX,FY	FZ	MX,MY	MZ	OD	Height	ID	Kg
M2104B	UNIAXIAL TOUCH LOADCELL W/OL STOPS 10N	NA	10	NA	NA	10	10	50	0.01
M2106A	UNIAXIAL TOUCH SENSOR W/OL STOPS	NA	5	NA	NA	14	8.5	47	0.01
M2106A1	UNIAXIAL TOUCH SENSOR W/OL STOPS	NA	5	NA	NA	14	8.5	43.1	0.01
M2106B	UNIAXIAL TOUCH SENSOR W/OL STOPS	NA	10	NA	NA	14	8.5	47	0.01
M2106B1	UNIAXIAL TOUCH LC WITH MECHANICAL OVERLOAD STOPTON	NA	10	NA	NA	14	8.5	47	0.01
M2106F	UNAXIAL LC WITH MECHANICAL OVERLOAD STOP, 100N	NA	100	NA	NA	15	20	60	0.07
M2106P1	UNIAXIAL LC WITH MECHANICAL OVERLOAD STOP, 1N	NA	1	NA	NA	16	10	32	0.01
M2108	UNIAXIAL SENSOR W/OL STOPS FOR RB120	NA	100	NA	NA	89	33	*	0.24
M2108B	UNIAXIAL SENSOR W/OL STOPS FOR RB120	NA	100	NA	NA	89	33	*	0.24
M2108C1	UNIAXIAL LC 100N W/OL STOPS	NA	200	NA	NA	89	33	*	0.24
M2108D	UNIAXIAL LC 100N W/OL STOPS	NA	100	NA	NA	89	33	*	0.24
M2108E	UNIAXIAL LC 100N WITH OVERLOAD PROTECTION	NA	100	NA	NA	89	33	*	0.24
M2108M	UNIAXIAL LC 500N W/OL STOPS	NA	500	NA	NA	89	33	*	0.41
M2109	UNIAXIAL LC 100N WITH OVERLOAD PROTECTION	NA	100	NA	NA	42.6	48	17	0.15
M2109B	UNIAXIAL LC 2000N	NA	2000	NA	NA	50	30	*	0.26
M2109C	UNIAXIAL LC 1000N	NA	1000	NA	NA	50	30	*	0.26
M2109E	UNIAXIAL LC 100N D64MM T20MM	NA	100	NA	NA	64	20	*	0.11
M2110B	UNIAXIAL TOUCH SENSOR W/OL STOPS	NA	5	NA	NA	60	11.2	*	0.13
M2112B	UNIAXIAL SENSOR W/OL STOPS FOR RB120	NA	200	NA	NA	89	33	*	0.24
M2112B1	UNIAXIAL TOUCH LC W/OL STOPS 200N	NA	200	NA	NA	89	33	*	0.24
M2115A	UNIAXIAL TOUCH LC 10N	NA	10	NA	NA	12.7	26	*	0.01
M2115B	UNIAXIAL TOUCH LC 10N	NA	10	NA	NA	31	22	*	0.03
M2116A	UNIAXIAL LC 40N WITH OVERLOAD PROTECTION	NA	40	NA	NA	25	22	*	0.08
M2125	UNIAXIAL SENSOR SMALL HIGH CAPACITY	NA	4500	NA	NA	21.6	8.9	*	0.15
M2126D	UNIAXIAL LC 1200N	NA	1200	NA	NA	25	41	*	0.05
M3602	4 CHANNEL FOOT LC	NA	25	NA	NA	112	5.5	*	0.08
M3603A	6 CHANNEL FOOT LOAD CELL	2000	2000	120	120	120	170	*	0.50
M3615B	3 AXIS FORCE D130MM F45KN	45000	60000	NA	NA	130	60	*	3.40
M3615C	3 AXIS FORCE D130MM F20KN	20000	50000	NA	NA	130	52	*	2.50
M3616C	6 AXIS FORCE D90MM F2700	2700	4000	180	144	90	36	40	0.32
M3619A	UNIAXIAL LC IP68	NA	12000	NA	NA	25	55	*	0.10
M3619A1	UNIAXIAL LC 20KN	NA	20000	NA	NA	25	66	*	0.12
M3619A2	UNIAXIAL LC 35KN	NA	35000	NA	NA	25	66	*	0.12
M3619B	UNIAXIAL LC 40KN	NA	40000	NA	NA	50	100	*	0.58
M3619B1	UNIAXIAL LC 20KN	NA	20000	NA	NA	50	70	*	0.50
M3619B2	UNIAXIAL LC 25KN	NA	25000	NA	NA	50	70	*	0.50
M3619C	UNIAXIAL LC IP68	NA	80000	NA	NA	50	100	*	0.58
M3619D	UNIAXIAL LC IP68	NA	100000	NA	NA	50	100	*	0.58

# Uniaxial and special loadcell

## MODEL SELECTION

Model	Description	Measurement Range(N/Nm)				Dimension(mm)			Weight
		FX,FY	FZ	MX,MY	MZ	OD	Height	ID	Kg
M3621B	UNIAXIAL LC 10000N	NA	10000	NA	NA	15	11	*	0.01
M3621P	UNIAXIAL LC WITH AMPLIFIER D45MM F5000N	NA	5000	NA	NA	45	21	*	0.17
M3621P1	UNIAXIAL LC WITH AMPLIFIER D45MM F2500N	NA	2500	NA	NA	45	21	*	0.06
M3622	COMPRESSION-TENSION LC 20KN	NA	20000	NA	NA	260	60	*	18.00
M3623C	UNIAXIAL LC 70KN	NA	70000	NA	NA	282	50	200	5.70
M3624A	UNIAXIAL LC IP68	NA	13000	NA	NA	25	43	*	0.10
M3624A1	UNIAXIAL LC 13000N	NA	13000	NA	NA	25	43	*	0.07
M3624A2	UNIAXIAL LC 8000N	NA	8000	NA	NA	25	43	*	0.10
M3624A3	UNIAXIAL LC 5000N	NA	5000	NA	NA	25	43	*	0.10
M3624BP	UNIAXIAL LC 13000N	NA	13000	NA	NA	24	100	*	0.24
M3626AP	UNIAXIAL LC 14000N	NA	14000	NA	NA	36	29	*	0.15
M3626AP3	UNIAXIAL LC 14000N	NA	14000	NA	NA	36	29	*	0.06
M3626BP	UNIAXIAL LC 50KN	NA	50000	NA	NA	60	39	20	0.49
M3626CP	UNIAXIAL LC 17000N	NA	17000	NA	NA	36	29	20	0.15
M3627A	3 AXIS FOOT LOAD CELL	8000	8000	NA	NA	93	76.5	*	1.00
M3627B	3 AXIS FOOT LOAD CELL	1000	2500	NA	NA	88	30	20	0.18
M3627FP	UNIAXIAL LC 45KN, IP68	NA	45000	NA	NA	*	66	*	0.35
M3628KP	6 AXIS LC D180MM F12KN	3000	12000	1000	1000	180	82	75.8	13.70
M3628KP2	6 AXIS LC D180MM F24KN	6000	24000	2000	2000	180	82	75.8	13.70
M3628M1	UNIAXIAL LC 1000 N	NA	1000	NA	NA	38	90.5	*	0.24
M3628M2	UNIAXIAL LC 800N	NA	800	NA	NA	38	64	*	0.24
M3632	6 AXIS CIRCULAR LC D225MM F8000N	8000	16000	1000	1000	225	50	170	4.10
M3633A	3 AXIS PIN LC 3000N CAPACITY	3000	3000	NA	NA	20	79.5	*	0.05
M3634A	2 AXIS CIRCULAR LC D57MM FZ 50KN	NA	50000	NA	600	57	26	30	0.20
M3634C	6 AXIS CIRCULAR LC COUPLED D280MM F100N	100	150	50	50	280	51	*	5.30
M3634DP	6 AXIS CIRCULAR LC COUPLED D200MM F200N IP68	200	300	50	50	200	51	*	3.10
M3635A	6 AXIS LC D63MM F100N	100	100	5	5	63	22	*	0.18
M3635G	6 AXIS CIRCULAR LC COUPLED D63MM F1600N	1600	3200	56	56	77	14	*	0.25
M3635G1	6 AXIS CIRCULAR LC COUPLED D63MM F3000N	3000	6000	100	100	77	14	*	0.25
M3635B1	6 AXIS LC D180MM F120N	20	120	5	5	180	41	55	2.20
M3635B2	6 AXIS LC D180MM F80N	15	80	2	2	180	41	55	2.20
M3635F3A1	6 AXIS CIRCULAR LC D81MM F200N, DIGITAL(485)OUTPUT	200	200	24	24	81	49.5	*	0.48
M3636A	6 AXIS LC FINGER TIP F100N	100	200	1	1	15.4	35	*	0.01
M3636B1	UNIAXIAL LC 1000 N	NA	1000	NA	NA	56.5	24	25	0.09
M3636C1	SINGLE AXIS TORQUE LC D150MM 2000Nm	NA	2000	NA	NA	150	46	60	3.60
M3636E3P-1	UNIAXIAL LC D81MM F500N IP68	NA	500	NA	NA	81	26.5	*	0.55
M3636R1	TORQUE SENSOR D43MM 800NM	NA	NA	NA	800	43	92	*	0.77
M3636K	2 AXIS LC D30MM F200N	NA	200	NA	2.5	30	8.5	*	0.02
M3636K1	2 AXIS LC FZ100N MZ1Nm D17mm	NA	100	NA	1	17	18.7	*	0.02
M3636M1	3 AXIS LC D190MM F20KN	20000	20000	NA	NA	190	48	70	7.30
M3636N1	3 AXIS LC D35MM F50N	50	NA	NA	2	35	23	*	0.04
M3636N2	3 AXIS LC FX FY MZ500N CAPACITY	500	NA	NA	100	160	30	*	1.20

# Uniaxial and special loadcell

## MODEL SELECTION

Model	Description	Measurement Range(N/Nm)				Dimension(mm)			Weight
		FX,FY	FZ	MX,MY	MZ	OD	Height	ID	Kg
M3636Q2	6 AXIS CIRCULAR LC COUPLED D200MM F50N	50	300	25	10	200	42	*	1.98
M3636S1E	6 AXIS LC 220X135MM ETHERCAT OUTPUT	3000	6500	200300	150	220	21	*	0.95
M3636S2E	6 AXIS LC 220X135MM ETHERCAT OUTPUT	3000	6500	200300	150	200	21	*	0.95
M3637D1	TORQUE SENSOR FRICTION WHEEL D27.5MM 0.6Nm	NA	0.6	NA	NA	27.5	32.4	*	0.03
M3644A	2 AXIS CIRCULAR LC D185MM F2000N	NA	2000	200	NA	185	38.2	*	3.60
M3644B	6 AXIS CIRCULAR LC D185MMF3000N	2000	3000	300	300	185	38	*	3.60
M3644C	6 AXIS CIRCULAR LC D185MMF3000N	2000	3000	300	300	185	39	*	3.60
M3645A	2 AXIS CIRCULAR LC D90MM F200N FY FZ	200	200	NA	NA	90	38	*	0.40
M4312B	6 AXIS LC COUPLED 8MM THICK F80N	80	80	1.2	1.2	36.5	30	8	0.04
M4312B1	6 AXIS LC COUPLED 10MM THICK F80N	80	80	1.2	1.2	47	40	10	0.04
M4312G	6 AXIS SQUARE LC 30×30×22MM F20N	20	40	1.5	1	30	22	*	0.05
M4312G2	6 AXIS SQUARE LC 30×43×13MM F60N	60	60	1.2	1.2	43	13	*	0.08
M4312H	6 AXIS LC D36MM F500N	500	500	9	9	36	21	*	0.08
M4312H1	6 AXIS LC D36MM F500N	500	500	9	9	36	21	*	0.08

## PICTURE



# M4313SXXX Series 6 Axis F/T Sensor for collaborative robot

## DESCRIPTION

The M4313SXX series of industrial-grade six axis force/torque sensor is an ideal choice for collaborative robots and industrial robots. Highlights:

1. High precision. The accuracy of this series of sensors is better than 0.5% F.S.
2. Up to 5 times overload capacity.
3. High reliability. The sensor will not fail after 100 cycles of 500% overload at each direction.
4. Excellent zero drift performance. 0.05%/10°C.
5. Supports multiple communications, such as Ethernet TCP/IP, EtherCAT, RS485, RS232, USB, etc. ISO mechanical flange interface.

## MODEL SELECTION

Model	Description	Measurement Range(N/Nm)				Dimension(mm)			Weight
		FX,FY	FZ	MX,MY	MZ	OD	Height	ID	Kg
M4313S1A	6 AXIS LC D60MM F300N,RS485	300	300	60	60	60	22.8	*	0.12
M4313S1A4B	6 AXIS LC D60MM F400N,RS485	400	400	10	10	60	37	*	0.23
M4313S1A6B	6 AXIS LC D60MM F300N,RS485	300	300	60	60	60	22.8	*	0.12
M4313S1A6K	6 AXIS LC D60MM F300N,RS485,STEEL	300	300	60	60	60	22.8	*	0.24
M4313S1J	6 AXIS LC D60MM F300N,CAN OR RS232	300	300	60	60	60	22.8	*	0.12
M4313S1J6B	6 AXIS LC D60MM F300N,CAN OR RS232,INSTALL FROM ONE SIDE	300	300	60	60	60	22.8	*	0.12
M4313S1J6D	6 AXIS LC D60MM F300N,CAN OR RS232	300	300	60	60	60	22.8	*	0.12
M4313S1F6M	6 AXIS LC D60MM F400N,AnalogMV	300	300	60	60	60	22.8	*	0.12
M4313S1C	6 AXIS LC D60MM F300N,EtherCAT IN	300	300	60	60	60	22.8	*	0.12
M4313S1C6A	6 AXIS LC D60MM F300N,EtherCAT IN&OUT	300	300	60	60	60	25.8	*	0.12
M4313SFA1A	6 AXIS LC D75MM F50N,RS485	50	50	5	5	75	44.5	*	0.33
M4313SFA2A	6 AXIS LC D75MM F100N,RS485	100	100	10	10	75	44.5	*	0.33
M4313SFA3A	6 AXIS LC D75MM F150N,RS485	150	150	15	15	75	44.5	*	0.33
M4313SFA4A	6 AXIS LC D75MM F200N,RS485	200	200	20	20	75	44.5	*	0.33
M4313SFA5A	6 AXIS LC D75MM F250N,RS485	250	250	25	25	75	44.5	*	0.33
M4313SFA6A	6 AXIS LC D75MM F300N,RS485	300	300	30	30	75	44.5	*	0.33
M4313SFA7A	6 AXIS LC D75MM F400N,RS485	400	400	40	40	75	44.5	*	0.33
M4313SFA8A	6 AXIS LC D75MM F500N,RS485	500	500	50	50	75	44.5	*	0.33
M4313SFA9A	6 AXIS LC D75MM F600N,RS485	600	600	60	60	75	44.5	*	0.33
M4313SFA1D	6 AXIS LC D75MM F50N,RS485,M8-4P	50	50	5	5	75	44.5	*	0.33
M4313SFA2D	6 AXIS LC D75MM F100N,RS485,M8-4P	100	100	10	10	75	44.5	*	0.33
M4313SFA3D	6 AXIS LC D75MM F150N,RS485,M8-4P	150	150	15	15	75	44.5	*	0.33
M4313SFA4D	6 AXIS LC D75MM F200N,RS485,M8-4P	200	200	20	20	75	44.5	*	0.33
M4313SFA5D	6 AXIS LC D75MM F250N,RS485,M8-4P	250	250	25	25	75	44.5	*	0.33
M4313SFA6D	6 AXIS LC D75MM F300N,RS485,M8-4P	300	300	30	30	75	44.5	*	0.33
M4313SFA7D	6 AXIS LC D75MM F400N,RS485,M8-4P	400	400	40	40	75	44.5	*	0.33
M4313SFA8D	6 AXIS LC D75MM F500N,RS485,M8-4P	500	500	50	50	75	44.5	*	0.33
M4313SFA9D	6 AXIS LC D75MM F600N,RS485,M8-4P	600	600	60	60	75	44.5	*	0.33
M4313S2E2	6 AXIS LC D83MM F100N,Ethernet TCP/IP	100	100	10	10	83	34.2	*	0.40
M4313S2E4	6 AXIS LC D83MM F200N,Ethernet TCP/IP	200	200	20	20	83	34.2	*	0.40
M4313S2E5	6 AXIS LC D83MM F250N,Ethernet TCP/IP	250	250	25	25	83	34.2	*	0.40
M4313S2E6	6 AXIS LC D83MM F300N,Ethernet TCP/IP	300	300	30	30	83	34.2	*	0.40
M4313S2E7	6 AXIS LC D83MM F400N,Ethernet TCP/IP	400	400	40	40	83	36.2	*	0.40

# M4313SXXX Series 6 Axis F/T Sensor for collaborative robot

## MODEL SELECTION

Model	Description	Measurement Range(N/Nm)				Dimension(mm)			Weight
		FX,FY	FZ	MX,MY	MZ	OD	Height	ID	Kg
M4313S2E9	6 AXIS LC D83MM F600N,Ethernet TCP/IP	600	600	60	60	83	36.2	*	0.40
M4313S3EB	6 AXIS LC D91MM F800N,Ethernet TCP/IP	800	800	80	80	91	34.2	*	1.21
M4313S2A2	6 AXIS LC D83MM F100N,RS485	100	100	10	10	83	34.2	*	0.40
M4313S2A4	6 AXIS LC D83MM F200N,RS485	200	200	20	20	83	34.2	*	0.40
M4313S2A4A	6 AXIS LC D83MM F200N,RS485, M8-4P	200	200	20	20	83	34.2	*	0.40
M4313S2A5	6 AXIS LC D83MM F250N,RS485	250	250	25	25	83	34.2	*	0.40
M4313S2A6	6 AXIS LC D83MM F300N,RS485	300	300	30	30	83	34.2	*	0.40
M4313S2A7	6 AXIS LC D83MM F400N,RS485	400	400	40	40	83	36.2	*	0.40
M4313S2A9	6 AXIS LC D83MM F600N,RS485	600	600	60	60	83	36.2	*	0.40
M4313S3AB	6 AXIS LC D91MM F800N,RS485	800	800	80	80	91	34.2	*	0.60
M4313S2C2	6 AXIS LC D83MM F100N,EtherCAT	100	100	10	10	83	34.2	*	0.40
M4313S2C4	6 AXIS LC D83MM F200N,EtherCAT	200	200	20	20	83	34.2	*	0.40
M4313S2C4C	6 AXIS LC D83MM F200N,EtherCAT,M8-8P	200	200	20	20	83	34.2	*	0.40
M4313S2C5	6 AXIS LC D83MM F250N,EtherCAT	250	250	25	25	83	34.2	*	0.40
M4313S2C6	6 AXIS LC D83MM F300N,EtherCAT	300	300	30	30	83	34.2	*	0.40
M4313S2C6C	6 AXIS LC D83MM F300N,EtherCAT,M8-8P	300	300	30	30	83	34.2	*	0.40
M4313S2C7	6 AXIS LC D83MM F400N,EtherCAT	400	400	40	40	83	36.2	*	0.40
M4313S2C9	6 AXIS LC D83MM F600N,EtherCAT	600	600	60	60	83	36.2	*	0.40
M4313S3CB	6 AXIS LC D91MM F800N,EtherCAT	800	800	80	80	91	34.2	*	0.60
M4313S4F9M	6 AXIS LC D100MM F600N,AnalogMV	600	600	120	120	100	40.2	*	1.42

## PICTURE



# M4313NXX Series 6 Axis F/T Sensor for collaborative robot

## DESCRIPTION

The M4313NXX series is mainly used for collaborative robots.

Highlights:

1. High precision. The accuracy of this series of sensors is better than 0.5% F.S.
2. Supports multiple communications such as Ethernet TCP/IP, EtherCAT, RS485, RS232, USB, etc.
3. Standard flange. The sensor can be directly installed on the collaborative robot without any adapter.

## MODEL SELECTION

型号	描述	量程范围[N/Nm]				尺寸[mm]			重量
		FX,FY	FZ	MX,MY	MZ	OD	Height	ID	Kg
M4313N2A	6 AXIS CIRCULAR LOAD CELLD81MM F200N, DIGITAL (485) OUTPUT	200	200	8	8	81	26.5	*	0.38
M4313N2A1	6 AXIS CIRCULAR LOAD CELLD81MM F200N, DIGITAL (USB) OUTPUT	200	200	8	8	81	26.5	*	0.38
M4313N2B	6 AXIS CIRCULAR LOAD CELLD81MM F200N, Ethernet TCP/IP	200	200	8	8	81	26.5	*	0.39
M4313N3A	6 AXIS CIRCULAR LOAD CELLD81MM F400N, DIGITAL (485) OUTPUT	400	400	24	24	81	26.5	*	0.58
M4313N3A1	6 AXIS CIRCULAR LOAD CELLD81MM F400N, DIGITAL (USB) OUTPUT	400	400	24	24	81	26.5	*	0.59
M4313N3AS	UNIAXIAL LOAD CELLD81MM F400N, DIGITAL (485) OUTPUT	NA	400	NA	NA	81	26.5	*	0.58
M4313N3AS1	UNIAXIAL CIRCULAR LOAD CELLD81MM F400N, DIGITAL (USB) OUTP	NA	400	NA	NA	81	26.5	*	0.59
M4313N3B	6 AXIS CIRCULAR LOAD CELLD81MM F400N, Ethernet TCP/IP	400	400	24	24	81	26.5	*	0.58
M4313N3C	6 AXIS CIRCULAR LOAD CELLD81MM F400N, EtherCAT	400	400	24	24	81	26.5	*	0.58
M4313N4A	6 AXIS CIRCULAR LOAD CELLD91MM F800N, DIGITAL (485) OUTPUT	800	800	40	40	91	28.5	*	0.66
M4313N4A1	6 AXIS CIRCULAR LOAD CELLD91MM F800N, DIGITAL (USB) OUTPUT	800	800	40	40	91	28.5	*	0.66
M4313N5AS	UNIAXIAL CIRCULAR LOAD CELLD91MM F1200N, DIGITAL (485) OUTF	NA	1200	NA	NA	91	28.5	*	0.68

## PICTURE



# M4313MX Series 6 Axis F/T Sensor for collaborative robot

## DESCRIPTION

The M4313MX series is mainly used for collaborative robots.

Highlights:

1. High precision. The accuracy of this series of sensors is better than 0.5% F.S.
2. Supports multiple communications such as Ethernet TCP/IP, EtherCAT, RS485, RS232, USB, etc.
3. Standard flange. The sensor can be directly installed on the collaborative robot without any adapter.

## MODEL SELECTION

Model	Description	Measurement Range(N/Nm)				Dimension(mm)			Weight
		FX,FY	FZ	MX,MY	MZ	OD	Height	ID	Kg
M4313M1A	6 AXIS LC D85MM F100N RS485	100	200	8	8	85	26.5	*	0.23
M4313M1B	6 AXIS LC D77MM F50N Ethernet TCP/IP	50	50	4	4	77	26.5	*	0.23
M4313M1E	6 AXIS CIRCULAR LOAD CELL D77MM F50N ETHERCAT	50	50	4	4	77	26.5	*	0.23
M4313M2A	6 AXIS LC D85MM F100N RS485	100	100	8	8	85	26.5	*	0.23
M4313M2B	6 AXIS LC D85MM F100N Ethernet TCP/IP	100	100	8	8	85	26.5	*	0.23
M4313M2B1	SINGLE AXIS CIRCULAR LOAD CELL D85MM F100N Ethernet TCP/IP	NA	100	NA	NA	85	26.5	*	0.23
M4313M2E	6 AXIS CIRCULAR LOAD CELL D85MM F100N ETHERCAT	100	100	8	8	85	26.5	*	0.23
M4313M2E3	3 AXIS CIRCULAR LOAD CELL D85MM F100N ETHERCAT	100	100	NA	NA	85	26.5	*	0.23
M4313M3A	6 AXIS CIRCULAR LOAD CELL D95MM F160N RS485	160	160	15	15	95	28.5	*	0.36
M4313M3B	6 AXIS LC D95MM F160N Ethernet TCP/IP	160	160	15	15	95	28.5	*	0.36
M4313M4A	6 AXIS LC D95MM F250N RS485	250	250	24	24	95	28.5	*	0.36
M4313M4B	6 AXIS LC D95MM F250N Ethernet TCP/IP	250	250	24	24	95	28.5	*	0.36
M4313M4E	6 AXIS CIRCULAR LC D95MM F250N ETHERCAT OUTPUT	250	250	24	24	95	28.5	*	0.36

## PICTURE



# JOINT TORQUE SENSOR



## Product Features

SRI torque sensors are specially designed for robot joints and can be widely used in collaborative robots and medical robots. The sensor thickness is as thin as 7mm, the diameter is 20 to 200mm and the torque capacity is 10Nm to 800Nm.

A built-in amplifier is included. The DC voltage input is 5V, and the output is 0-5V. The SRI torque sensor features a light and thin structure, simple installation, strong bending resistance, small crosstalk between axes, and its stiffness is more than 4 times that of harmonic gear.

# M22XX Series Robot Torque Sensor

## DESCRIPTION

Torque sensors are used to measure the output torque of the motor/reducer. SRI torque sensor series features in high precision, thin thickness, light weight, high rigidity and strong bending resistance. Applications include medical surgical robots, exoskeleton, collaborative robot, etc.

## MODEL SELECTION

Model	Description	Measurement Range(N/Nm)				Dimension(mm)			Weight
		FX,FY	FZ	MX,MY	MZ	OD	Height	ID	Kg
M2210A	TORQUE SENSOR D53MM T50NM	NA	NA	NA	50	53	7	13	0.09
M2210A1	TORQUE LC D53MM 50Nm	NA	NA	NA	50	53	7	13	0.09
M2210A2	TORQUE SENSOR D53MM 100Nm	NA	NA	NA	100	53	7	13	0.09
M2210A2A	TORQUE SENSOR LC D53MM, 100Nm DIGITAL OUTPUTA	NA	NA	NA	100	53	14	8.5	0.09
M2210A3	TORQUE LC D78MM T50NM	NA	NA	NA	50	78	9	13	0.20
M2210A4	TORQUE LC D78MM 50Nm	NA	NA	NA	50	53	7	13	0.09
M2210A9	TORQUE SENSOR D53MM 50Nm	NA	NA	NA	50	53	7	13	0.09
M2210B	TORQUE SENSOR D100MM T250NM	NA	NA	NA	250	100	8	27	0.37
M2210B1	TORQUE SENSOR D100MM T250NM	NA	NA	NA	250	100	8	27	0.37
M2210B2	TORQUE SENSOR D100MM T250NM	NA	NA	NA	250	100	8	27	0.37
M2210B3	TORQUE SENSOR D100MM T250NM	NA	NA	NA	250	100	8	27	0.37
M2210B4	TORQUE SENSOR D100MM T250NM	NA	NA	NA	250	100	8	27	0.37
M2210B5	TORQUE SENSOR D100MM T250NM HIGH BENDING	NA	NA	NA	250	100	26.2	27	0.96
M2210B6	TORQUE SENSOR D100MM T250NM	NA	NA	NA	250	100	11	27	0.37
M2210B7	TORQUE SENSOR D100MM T250NM	NA	NA	NA	250	100	11	27	0.37
M2210C	TORQUE SENSOR D80MM T100NM	NA	NA	NA	100	80	7	20	0.18
M2210C1	TORQUE SENSOR D80MM T100NM	NA	NA	NA	100	80	7	20	0.18
M2210C1A	TORQUE SENSOR LC D80MM, 100 Nm	NA	NA	NA	100	80	7	20	0.18
M2210C2	TORQUE SENSOR D80MM T100NM	NA	NA	NA	100	80	7	20	0.18
M2210C3	TORQUE SENSOR D80MM T100NM	NA	NA	NA	100	80	7	20	0.18
M2210C4	TORQUE SENSOR D80MM T100NM	NA	NA	NA	100	80	7	20	0.18
M2210C5	TORQUE SENSOR D80MM T100NM	NA	NA	NA	100	80	7	20	0.18
M2210C6	TORQUE SENSOR D111MM T100NM	NA	NA	NA	100	111	7	20	0.30
M2210C7	TORQUE SENSOR D82MM T150NM	NA	NA	NA	150	82	7	20	0.18
M2210C8	TORQUE SENSOR D82MM T150NM	NA	NA	NA	150	82	7	15	0.21
M2210C9	TORQUE SENSOR D80MM T100NM	NA	NA	NA	100	80	7	20	0.18
M2210C10	TORQUE SENSOR D108MM T250NM	NA	NA	NA	250	108	8	60	0.38
M2210C11	TORQUE SENSOR D70MM T70NM	NA	NA	NA	70	70	7	70	0.15
M2210C12	TORQUE SENSOR D108MM T250NM	NA	NA	NA	250	108	8	22	0.45
M2210C13	TORQUE SENSOR D70MM T50NM	NA	NA	NA	50	70	7	16	0.16
M2210C14	TORQUE LC D80MM 100Nm	NA	NA	NA	80	80	7	20	0.18
M2210C15	TORQUE LC D80MM 100Nm	NA	NA	NA	100	80	7	20	0.18
M2210D	TORQUE SENSOR D100MM T300NM	NA	NA	NA	300	100	8	14	0.38
M2210E	TORQUE SENSOR D53MM T60NM	NA	NA	NA	60	53	7	13	0.09
M2210E1	TORQUE SENSOR D53MM T60NM	NA	NA	NA	60	53	8	10	0.09
M2210E2	TORQUE SENSOR D53MM T100NM	NA	NA	NA	100	53	7	*	0.08
M2210F	TORQUE SENSOR D53MM T30NM	NA	NA	NA	30	53	7	13	0.09
M2210F1	TORQUE SENSOR D59MM T30NM	NA	NA	NA	30	59	7	13	0.10

# M22XX Series Robot Torque Sensor

## MODEL SELECTION

Model	Description	Measurement Range(N/Nm)				Dimension(mm)			Weight
		FX,FY	FZ	MX,MY	MZ	OD	Height	ID	Kg
M2210F2	TORQUE SENSOR D53MM T30Nm	NA	NA	NA	30	53	7	13	0.09
M2210F3	TORQUE LC D53MM 30Nm	NA	NA	NA	30	53	7	13	0.09
M2210G	TORQUE SENSOR D84MM T150NM OIL SEAL	NA	NA	NA	150	84	12.5	*	0.32
M2210G1	TORQUE SENSOR D84MM T150NM OIL SEAL	NA	NA	NA	150	84	12.5	*	0.32
M2210G2	TORQUE SENSOR D84MM T150NM OIL SEAL	NA	NA	NA	150	84	12.5	*	0.32
M2210G3	TORQUE SENSOR D84MM T180NM OIL SEAL	NA	NA	NA	180	84	12.5	17	0.32
M2210G5	TORQUE SENSOR D84MM T150NM OIL SEAL	NA	NA	NA	150	84	24.9	*	0.69
M2210G6	TORQUE SENSOR D84MM T150NM OIL SEAL	NA	NA	NA	150	84	12.5	*	0.32
M2210G7	TORQUE SENSOR D84MM T180NM OIL SEAL	NA	NA	NA	180	84	12.5	*	0.30
M2210G7A	TORQUE SENSOR D84MM T180NM OIL SEAL	NA	NA	NA	180	84	12.5	*	0.30
M2210H	TORQUE SENSOR D53MM T50NM	NA	NA	NA	50	53	7	13	0.09
M2210H5	TORQUE SENSOR D53MM T50Nm	NA	NA	NA	50	53	19	13	0.10
M2210L	TORQUE SENSOR D53MM T60NM	NA	NA	NA	60	53	7	13	0.09
M2210M	TORQUE SENSOR D53MM T20NM	NA	NA	NA	20	53	7	13	0.09
M2210M1	TORQUE SENSOR D53MM T20NM	NA	NA	NA	20	68	9	13	0.15
M2210M2	TORQUE SENSOR D78MM T20NM	NA	NA	NA	20	78	9	13	0.20
M2210M6	TORQUE SENSOR D53MM T20NM	NA	NA	NA	20	53	7	13	0.09
M2210N	TORQUE SENSOR D62MM T50NM	NA	NA	NA	50	62	7	12	0.14
M2210N1	TORQUE SENSOR D62MM T50NM	NA	NA	NA	50	62	7	12	0.14
M2210N2	TORQUE SENSOR D62MM T150NM	NA	NA	NA	150	62	7	12	0.14
M2210N3	TORQUE SENSOR D62MM T150NM	NA	NA	NA	150	62	7	12	0.14
M2210N4	TORQUE SENSOR D62MM T50NM	NA	NA	NA	50	62	7	12	0.14
M2210P	TORQUE SENSOR D146MM T250NM	NA	NA	NA	250	146	34	22	0.38
M2210R	TORQUE SENSOR D104MM T150NM	NA	NA	NA	150	104	25	16	0.20
M2210S	TORQUE SENSOR D41MM T40NM	NA	NA	NA	40	41	7	11	0.05
M2210S1	TORQUE SENSOR D41MM T40NM	NA	NA	NA	40	41	7	11	0.05
M2210T	TORQUE SENSOR D103MM T330NM	NA	NA	NA	330	103	6	26	0.14
M2210T1	TORQUE SENSOR D103MM T230NM	NA	NA	NA	230	103	6	24	0.14
M2210T2	TORQUE SENSOR D103MM T330NM	NA	NA	NA	330	103	6	24	0.14
M2210U	TORQUE SENSOR D103MM T150NM	NA	NA	NA	150	103	5	19	0.14
M2210U1	TORQUE SENSOR D103MM T123NM	NA	NA	NA	123	103	5	18	0.14
M2210V	TORQUE SENSOR D101MM T150NM	NA	NA	NA	150	101	13.25	16.4	0.10
M2210V1	TORQUE SENSOR D101MM T70NM	NA	NA	NA	70	101	11.25	16	0.10
M2210W	TORQUE SENSOR D66MM T50NM	NA	NA	NA	50	66	7	19	0.12
M2210W1	TORQUE SENSOR D66MM T50NM	NA	NA	NA	50	66	7	19	0.12
M2210Y	TORQUE SENSOR D61MM T50NM	NA	NA	NA	50	61	8.5	13	0.12
M2211A	TORQUE SENSOR D82MM T150NM	NA	NA	NA	150	82	22	26	0.26
M2211B	TORQUE SENSOR D110MM T250NM	NA	NA	NA	250	110	22	37	0.39
M2211C	TORQUE SENSOR D58.5MM T50NM	NA	NA	NA	50	58.5	8	12	0.04
M2211D	TORQUE SENSOR D58.5MM T50NM	NA	NA	NA	50	53.5	11.5	12	0.12
M2211D1	TORQUE SENSOR D58.5MM T50NM	NA	NA	NA	50	53.5	11.5	12	0.04
M2211G	TORQUE SENSOR D45MM T10NM	NA	NA	NA	10	45	6	*	0.03
M2211G1	TORQUE SENSOR D45MM T10NM	NA	NA	NA	10	45	6	*	0.03
M2211H	TORQUE SENSOR D63MM T50NM	NA	NA	NA	50	63	11	12	0.04

# M22XX Series Robot Torque Sensor

## MODEL SELECTION

Model	Description	Measurement Range(N/Nm)				Dimension(mm)			Weight
		FX,FY	FZ	MX,MY	MZ	OD	Height	ID	Kg
M2211J	TORQUE SENSOR D118MM T250NM	NA	NA	NA	250	118	13	44	0.69
M2211K	TORQUE SENSOR D72MM T50NM OIL SEAL	NA	NA	NA	50	72	12	*	0.32
M2211M	TORQUE SENSOR D50MM T40NM DUAL CHANNEL	NA	NA	NA	40	50	8.2	11	0.07
M2211M1	TORQUE SENSOR D50MM T40NM	NA	NA	NA	40	50	8.2	*	0.07
M2211M2	TORQUE SENSOR D50MM T40NM	NA	NA	NA	40	50	8.2	*	0.07
M2211N	TORQUE SENSOR D60MM T80NM DUAL CHANNEL	NA	NA	NA	80	60	8.2	11	0.10
M2211N2	TORQUE SENSOR D60MM T80NM	NA	NA	NA	80	60	8.2	11	0.10
M2211P	TORQUE SENSOR D70MM T140NM DUAL CHANNEL	NA	NA	NA	140	70	10.2	16	0.19
M2211P1	TORQUE SENSOR D70MM T140NM	NA	NA	NA	140	70	10.2	16	0.19
M2211P2	TORQUE LC D70MM 140Nm DIGITAL OUTPUT	NA	NA	NA	140	70	10.2	16	0.19
M2211P3	TORQUE LC D70MM 200Nm DIGITAL OUTPUT	NA	NA	NA	200	70	10.2	16	0.19
M2211Q	TORQUE SENSOR D85MM T250NM DUAL CHANNEL	NA	NA	NA	250	85	10.2	20	0.28
M2211Q1	TORQUE SENSOR D85MM T250NM	NA	NA	NA	250	85	10.2	20	0.28
M2211Q2	TORQUE SENSOR D85MM T250NM	NA	NA	NA	250	85	10.2	20	0.28
M2211Q3	TORQUE SENSOR D85MM T250NM	NA	NA	NA	250	85	10.2	20	0.28
M2211S	TORQUE SENSOR D61MM T20NM	NA	NA	NA	20	61	11	33	0.25
M2211T1	TORQUE SENSOR D86MM T200NM	NA	NA	NA	200	86	8	*	0.30
M2211T2	TORQUE SENSOR D86MM T100NM	NA	NA	NA	100	86	8	*	0.30
M2211V1	TORQUE SENSOR D71MM T100NM	NA	NA	NA	100	71	8	19	0.15
M2211V2	TORQUE SENSOR D71MM T50NM	NA	NA	NA	50	71	8	19	0.14
M2211V6	TORQUE SENSOR D69MM T100NM	NA	NA	NA	100	69	8.5	14	0.15
M2211V6A	TORQUE SENSOR LC D69MM, 100Nm	NA	NA	NA	100	69	8.5	14	0.15
M2211V7	TORQUE SENSOR D71MM T100NM	NA	NA	NA	100	71	8	19	0.15
M2211V8	TORQUE SENSOR D71MM T100NM	NA	NA	NA	100	71	8	19	0.15
M2211V9	TORQUE LC D71MM 100Nm	NA	NA	NA	100	71	8	19	0.15
M2211W1	TORQUE SENSOR D69MM T60NM	NA	NA	NA	30	69	10	21	0.20
M2211G1	TORQUE SENSOR D45MM T10NM	NA	NA	NA	10	45	6	*	0.03
M2211Z1	TORQUE SENSOR D61MM T150NM	NA	NA	NA	150	61	8	*	0.15
M2211Z2	TORQUE SENSOR D85MM T300NM	NA	NA	NA	300	85	8	35	0.38
M2212A	TORQUE LC D95MM T150NM	NA	NA	NA	150	95	7	20	0.18
M2212A1	TORQUE SENSOR D95MM T150NM	NA	NA	NA	150	95	7	20	0.18
M2212G1	TORQUE SENSOR D96MM T400NM	NA	NA	NA	400	96	10	20	0.38
M2212G2	TORQUE SENSOR D86MM T200NM	NA	NA	NA	200	86	10	24	0.30
M2212G3	TORQUE SENSOR D64MM T80NM	NA	NA	NA	80	64	13	13	0.15
M2212L	TORQUE SENSOR D67MM T250NM	NA	NA	NA	250	67	16	*	0.37
M2212B1	TORQUE SENSOR D60MM T25Nm	NA	NA	NA	25	60	24.5	9	0.30
M2212B2	TORQUE SENSOR D80MM T70Nm	NA	NA	NA	70	80	28.4	14	0.37
M2212B3	TORQUE SENSOR D92MM T140Nm	NA	NA	NA	140	92	28.5	28	0.60
M2212C	TORQUE LC D88MM 250Nm	NA	NA	NA	250	88	8	30	0.30
M2212D	TORQUE LC D118MM150Nm	NA	NA	NA	150	118	7.4	22	0.57
M2212G1	TORQUE LC D96MM 400Nm	NA	NA	NA	400	96	10	20	0.38
M2212G2	TORQUE LC D86MM 200Nm	NA	NA	NA	200	86	10	24	0.30
M2212G3	TORQUE LC D64MM 80Nm	NA	NA	NA	80	64	13	13	0.15
M2212G4	TORQUE LC D86MM 200Nm	NA	NA	NA	200	86	10	24	0.30

# M22XX Series Robot Torque Sensor

## MODEL SELECTION

Model	Description	Measurement Range(N/Nm)				Dimension(mm)			Weight
		FX,FY	FZ	MX,MY	MZ	OD	Height	ID	Kg
M2212K1	TORQUE SENSOR D75MM T40Nm	NA	NA	NA	40	75	17	20	0.07
M2212K2	TORQUE SENSOR D105MM T160Nm	NA	NA	NA	160	105	22.9	26	0.40
M2212K3	TORQUE SENSOR D130MM T340Nm	NA	NA	NA	340	130	24.9	32	0.76
M2212L	TORQUE LC D67MM 250Nm	NA	NA	NA	250	67	16	*	0.27
M2212M	TORQUE SENSOR D145MM T800Nm	NA	NA	NA	800	145	8	30	0.76
M2212N1	TORQUE SENSOR D53MM T50Nm	NA	NA	NA	50	53	12	9	0.12
M2212N2	TORQUE SENSOR D63.5MM T80Nm	NA	NA	NA	80	63.5	16	10	0.18
M2212P	TORQUE SENSOR D80MM T100Nm	NA	NA	NA	100	80	7	20	0.18
M2212P1	TORQUE SENSOR D46MM T20Nm For HDCSG-14	NA	NA	NA	20	46	5.2	*	0.06
M2212P2	TORQUE SENSOR D46MM T40Nm For HDCSG-14	NA	NA	NA	40	46	5.2	*	0.06
M2212P3	TORQUE SENSOR D55MM T80Nm For HDCSG-17	NA	NA	NA	80	55	5.2	*	0.08
M2212P5	TORQUE LC D55MM 80Nm FOR HDCSG-17	NA	NA	NA	80	55	5.2	*	0.08
M2212Q	TORQUE SENSOR D60MM T100Nm	NA	NA	NA	100	60	7	13	0.10
M2212Q1	TORQUE LC D60MM 100Nm	NA	NA	NA	100	60	7.2	13	0.11
M2212R1	TORQUE SENSOR D120MM T200Nm	NA	NA	NA	200	120	12	30	0.67
M2212R2	TORQUE SENSOR D75MM T50Nm	NA	NA	NA	50	75	14	20	0.36
M2212R3	TORQUE SENSOR D79MM T20Nm	NA	NA	NA	20	79	8	18	0.19
M2212S1	TORQUE SENSOR D92MM T140Nm	NA	NA	NA	140	92	10	29	0.45
M2212S2	TORQUE SENSOR D78MM T70Nm	NA	NA	NA	70	78	10	15	0.33
M2212S3	TORQUE SENSOR D60MM T25Nm	NA	NA	NA	25	60	9	8	0.14
M2212S4	TORQUE SENSOR D90MM T40Nm	NA	NA	NA	40	90	7	45	0.22
M2212S5	TORQUE SENSOR D84MM T70Nm	NA	NA	NA	70	84	7	46	1.19
M2212S6	TORQUE SENSOR D95MM T140Nm	NA	NA	NA	140	95	8	34	0.36
M2212S7	TORQUE SENSOR D115MM T300Nm	NA	NA	NA	300	115	8	48	0.52
M2212U1	TORQUE SENSOR D88MM T150Nm	NA	NA	NA	150	88	8.5	15.2	0.31
M2212S8	TORQUE SENSOR LC D95MM 140Nm	NA	NA	NA	140	95	10.5	34	0.36
M2212S8A	TORQUE LC D95MM 140Nm	NA	NA	NA	140	95	10.5	34	0.36
M2212T1	TORQUE LC D110MM 350Nm	NA	NA	NA	350	110	8	58	0.36
M2212U1	TORQUE LC D111MM 150Nm	NA	NA	NA	150	111	28.7	15.2	0.31
M2212U1D	TORQUE LC D111MM 150Nm	NA	NA	NA	150	111	28.7	15.2	0.31
M2212U2	TORQUE SENSOR D98MM T250Nm	NA	NA	NA	250	98	13	27	0.31
M2212U2D	TORQUE LC D116MM 250Nm	NA	NA	NA	250	116	13	27	0.31
M2212U3	TORQUE SENSOR D64MM T50Nm	NA	NA	NA	50	64	9	13	0.16
M2212U3D	TORQUE LC D83.5MM 50Nm	NA	NA	NA	50	83.5	24.5	18	0.16
M2212U4	TORQUE LC D83.5MM 50Nm	NA	NA	NA	50	83.5	24.5	18	0.16
M2212U4D	TORQUE LC D83.5MM 50Nm	NA	NA	NA	50	83.5	24.5	18	0.16
M2212U4D1	TORQUE LC D83.5MM 50Nm	NA	NA	NA	50	83.5	24.5	18	17.00
M2212U5	TORQUE LC D111MM 150Nm	NA	NA	NA	150	111	28.7	15.2	0.31
M2212U5D	TORQUE LC D111MM 150Nm	NA	NA	NA	150	111	28.7	15.2	0.31
M2212U5D1	TORQUE LC D111MM 150Nm	NA	NA	NA	150	111	28.7	15.2	0.32
M2212U6	TORQUE LC D116MM 250Nm	NA	NA	NA	250	116	13	27	0.31
M2212U6D	TORQUE LC D116MM 250Nm	NA	NA	NA	250	116	13	27	0.31
M2212U6D1	TORQUE LC D116MM 250Nm	NA	NA	NA	250	116	13	27	0.32
M2212U7	TORQUE LC D140MM 250Nm	NA	NA	NA	250	140	29	27	1.40
M2212U8D	TORQUE LC D140MM 250Nm	NA	NA	NA	250	140	29	27	1.40

# M22XX Series Robot Torque Sensor

## MODEL SELECTION

Model	Description	Measurement Range(N/Nm)				Dimension(mm)			Weight
		FX,FY	FZ	MX,MY	MZ	OD	Height	ID	Kg
M2212V1	TORQUE LC D82MM 100Nm	NA	NA	NA	100	82	12.5	27	0.20
M2212V2	TORQUE LC D110MM 250Nm	NA	NA	NA	250	110	15.5	55	0.47
M2212V3	TORQUE LC D150MM 400Nm	NA	NA	NA	400	150	20.5	70	1.40
M2212W1	TORQUE LC D144MM 330Nm	NA	NA	NA	330	144	16.6	26	0.81
M2212W2	TORQUE LC D81.5MM 70Nm	NA	NA	NA	70	81.5	18	16	0.16
M2212W3	TORQUE LC D135MM 330Nm	NA	NA	NA	330	135	15.3	26	0.53
M2212X1	TORQUE LC D61MM 70Nm RS-485OUTPUT	NA	NA	NA	70	61	9.5	10.5	0.11
M2212X2	TORQUE LC D70MM 110Nm RS-485OUTPUT	NA	NA	NA	110	70	9.5	14	0.16
M2212X3	TORQUE LC D85MM 210Nm RS-485OUTPUT	NA	NA	NA	210	85	12	20	0.29
M2212X4	TORQUE LC D61MM 70Nm RS-485OUTPUT	NA	NA	NA	70	61	10.1	17	0.11
M2212X5	TORQUE LC D70MM 110Nm RS-485 OUTPUT	NA	NA	NA	110	70	9.5	17	0.12
M2212X6	TORQUE LC D85MM 210Nm RS-485 OUTPUT	NA	NA	NA	210	85	11.8	18	0.25
M2212X7	TORQUE LC D61MM 70 Nm RS-485 OUTPUT	NA	NA	NA	70	61	9.5	17.5	0.11
M2212Z1	TORQUE LC D63.5MM 60Nm	NA	NA	NA	60	63.5	21.5	12	0.28
M2212Z2	TORQUE LC D63.5MM 60Nm	NA	NA	NA	60	63.5	25.6	12	0.28
M2212Z3	TORQUE LC D73.5MM 110Nm	NA	NA	NA	110	73.5	22.8	14	0.39
M2212Z4	TORQUE LC D103.5MM 210Nm	NA	NA	NA	210	103.5	24.4	20	0.31
M2213A1	TORQUE LC D72MM 150Nm	NA	NA	NA	150	72	7.2	20	0.10
M2213A3	TORQUE LC D56MM 100Nm	NA	NA	NA	100	56	6	11	0.06
M2213A3A	TORQUE LC D56MM 100Nm	NA	NA	NA	100	56	6	11	0.06
M2213A4	TORQUE LC D73MM 100Nm	NA	NA	NA	100	73	6	22	0.10
M2213A5	TORQUE LC D70MM 180Nm	NA	NA	NA	180	70	8	16	0.11
M2213B	TORQUE LC D67MM 250Nm	NA	NA	NA	250	67	14	*	0.25
M2213B1	TORQUE LC D74MM 250Nm	NA	NA	NA	250	74	18	*	0.33
M2213B2	TORQUE LC D80MM 80Nm	NA	NA	NA	80	80	7.5	17	0.20
M2213C	TORQUE LC D110MM 150 Nm	NA	NA	NA	150	110	8.8	26	0.35
M2213D1	6 AXIS CIRCULAR LC D49MM T60NM	NA	NA	NA	60	49	49.8	11	0.10
M2213D2	6 AXIS CIRCULAR LC D49MM T25NM	NA	NA	NA	25	49	42.95	11	0.10
M2213D3	6 AXIS CIRCULAR LC D60MM TI50NM	NA	NA	NA	50	60	50.9	11	0.15
M2213D4	TORQUE LC D72MM 60Nm	NA	NA	NA	60	72	27.6	14	0.06
M2213E1	TORQUE SENSOR LC D80MM 200Nm	NA	NA	NA	200	80	9	12	0.25
M2213E2	TORQUE SENSOR LC D104MM 600Nm	NA	NA	NA	600	104	16.5	26	0.51
M2213E3	TORQUE SENSOR LC D80MM 300Nm	NA	NA	NA	300	80	9	20	0.21
M2213E4	TORQUE SENSOR LC D60MM 75Nm	NA	NA	NA	75	60	8	10	0.10
M2213G1	TORQUE SENSOR LC D112MM 250Nm	NA	NA	NA	250	112	17	20	0.60
M2213G2	TORQUE SENSOR LC D80MM 100 Nm	NA	NA	NA	100	80	25.9	13	0.27
M2213G3	TORQUE SENSOR LC D95MM 140Nm	NA	NA	NA	140	95	17	16	0.55
M2213H1	TORQUE SENSOR LC D107MM 350Nm	NA	NA	NA	350	107	8.8	53.5	0.28
M2213H2	TORQUE SENSOR LC D107MM 170Nm	NA	NA	NA	170	107	8.8	46	0.31
M2213H3	TORQUE SENSOR LC D90MM, 80Nm	NA	NA	NA	80	90	8.8	35	0.24
M2213M	TORQUE SENSOR LC D43MM, 10Nm	NA	NA	NA	10	43	10	13	0.03
M2213N	TORQUE SENSOR LC D100MM 500Nm	NA	NA	NA	500	100	21.9	20	0.40
M2213P	TORQUE SENSOR LC D88MM 10 Nm	NA	NA	NA	10	88	6.5	26	0.08
M2213Q	TORQUE SENSOR LC D74MM 50Nm	NA	NA	NA	50	74	18	55	0.06
M2231A	UNTAXIAL TORQUE SENSOR D18.5MM H21MM M1.4Nm	NA	NA	NA	1.4	18.5	26.3	8	0.02

# M801X&M8302X Signal Amplifier

## DESCRIPTION

The M8301 and M8302 are amplifiers dedicated to SRI force transducers. The overall size is 56\*60\*23mm. The input and output of M8301 all use HIROSE connectors, and the M8302 uses cable for direct input and output. The amplifier is powered by DC24V and has various output forms, including single-ended 0-10V, single-ended -5V to +5V, fully differential +/-5V, fully differential +/-10V. Specify output forms when ordering.

## MODEL SELECTION

Model	Power Supply	Output	Connector
M8301A	±10V (COMM 0V)	N/A	HIROSE
M8301B	±5V (COMM 0V)	N/A	HIROSE
M8301C	N/A	+Signal ±5V,-Signal 0V	HIROSE
N8301F	N/A	+Signal 0~10V,-Signal 5V	HIROSE
M8301G	N/A	+Signal 0~5V,-Signal 2.5V	HIROSE
M8301H	N/A	+Signal ±10V,-Signal 0V	HIROSE
M8302A	±10V (COMM 0V)	N/A	Hardwired Cable
M8302C	N/A	+Signal 0~5V,-Signal 2.5V	Hardwired Cable
M8302D	±5V (COMM 0V)	N/A	Hardwired Cable
M8302E	N/A	+Signal ±5V,-Signal 0V	Hardwired Cable
M8302H	±1.5V (COMM 0V)	N/A	Hardwired Cable

## PICTURE



# M812X Interface Box Data Acquisition System Interface

## DESCRIPTION

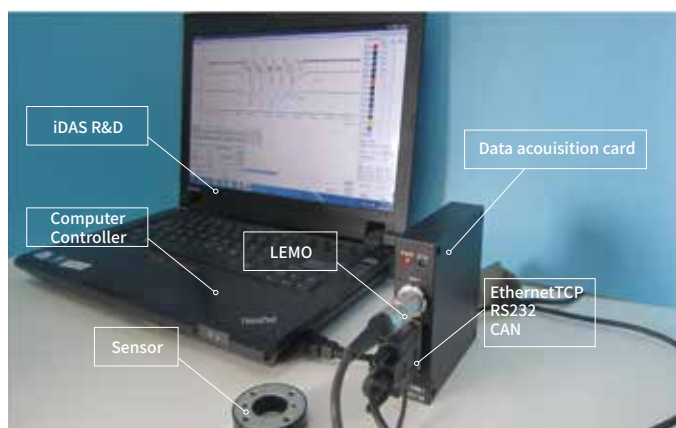
The M812X interface box provides excitation for the sensor and performs signal conditioning and acquisition. M8128 supports Ethernet, RS232 and CAN bus communication; M8126 supports EtherCAT and RS232; M8124 supports Profinet and RS232. Its communication commands are completely open, and data can be queried through simple AT commands. M812X adopts low noise instrumentation amplifier and A/D conversion chip with 24-bit resolution, the system resolution can reach  $1/5000 \sim 1/40000$ FS, and the sampling rate can reach 2KHZ. The sensor is connected to the M812X via a 19-pin LEMO connector (LEMO FGG.2B.319.CLAD52Z).

## MODEL SELECTION

	Analog	Digital	Front Panel	Software
Specifications	6 channel analog input Programmable gain Programmable adjustment of zero offset Low noise instrumentation amplifier	M8128: EthernetTCP, RS232, CAN M8126: EtherCAT, RS232 M8124: Profinet, RS232 M8127: Ethernet TCP, CAN, RS485, RS232 24-bit A/D, Sampling rate up to 2KHZ Resolution 1/5000~1/40000FS	Sensor connector: LEMO FGG.2B.319.CLAD52Z Communication connector: Standard DB-9(including Ethernet, RS232, CAN BUS) Power: DC 12~36V, 200mA. 2m cable (diameter 3.5mm) Indicator lights: Power and status	iDAS R&D: Debugging software, to display curve in real-time and to send commands to the interface box M812X Sample code: C++ source code, for RS232 or TCP/IP communication with M8128

Series	Model	Bus communication	Adaptive sensor Description
M8128	M8128A1	Ethernet TCP/CAN/RS232	Sensor 5V excitation, output signal voltage $2.5 \pm 2V$ , such as joint torque sensor M22XX series
	M8228B1	Ethernet TCP/CAN/RS232	Sensor 5V excitation, output small signal mV/V, such as M37XX or M3813 series
	M8128C6	Ethernet TCP/CAN/RS232	Sensor $\pm 15V$ excitation, output signal voltage within $\pm 5V$ , such as M43XX or M3816 series
	M8128C7	Ethernet TCP/CAN/RS232	Sensor 24V excitation, output signal voltage within $\pm 5V$ , such as M33XX or M3815 series
	M8228B1T	Ethernet TCP/CAN/RS232 With trigger function	Sensor 5V excitation, output small signal mV/V, such as M37XX or M3813 series
M8126	M8126A1	EtherCAT/RS232	Sensor 5V excitation, output signal voltage $2.5 \pm 2V$ , such as joint torque sensor M22XX series
	M8126B1	EtherCAT/RS232	Sensor 5V excitation, output small signal mV/V, such as M37XX or M3813 series
	M8126C6	EtherCAT/RS232	Sensor $\pm 15V$ excitation, output signal voltage within $\pm 5V$ , such as M33XX or M3815 series
	M8126C7	EtherCAT/RS232	Sensor 24V excitation, output signal voltage within $\pm 5V$ , such as M43XX or M3816 series
M8124	M8124A1	Profinet/RS232	Sensor 5V excitation, output signal voltage $2.5 \pm 2V$ , such as joint torque sensor M22XX series
	M8124B1	Profinet/RS232	Sensor 5V excitation, output small signal mV/V, such as M37XX or M3813 series
	M8124C6	Profinet/RS232	Sensor $\pm 15V$ excitation, output signal voltage within $\pm 5V$ , such as M33XX or M3815 series
	M8124C7	Profinet/RS232	Sensor 24V excitation, output signal voltage within $\pm 5V$ , such as M43XX or M3816 series
M8127	M8127B1	Ethernet TCP/CAN/RS232	Sensor 5V excitation, output small signal mV/V, such as M37XX or M3813 series, can be connected to 4 sensors at the same time
	M8127Z1	Ethernet TCP/RS485/RS232	Sensor 5V excitation, output small signal mV/V, such as M37XX or M3813 series, can be connected to 4 sensors at the same time

## PICTURE



# M8228X Series Data Acquisition System

## DESCRIPTION

Provide excitation for sensors, amplify and conditioning signals, and perform A/D conversion. The M8228 supports RS232, CAN and Ethernet communication simultaneously. The M8229 supports EtherCAT and RS232. The M8224 supports Profinet and RS232. Its communication instructions are completely open, and data can be queried through simple AT instructions. The M822X adopts A low-noise instrumentation amplifier and a 24-bit resolution A/D conversion chip. The system resolution can reach 1/5000 to 1/40,000 FS, and the sampling rate can reach 2KHZ.

## PICTURE



## MODEL SELECTION

	Analog	Digital	Front Panel	Software
Specifications	12 channel analog input Programmable gain Programmable adjustment of zero offset Low noise instrumentation amplifier	M8228: EthernetTCP/IP, RS232, CAN M8229: EtherCAT, RS232 M8224: Profinet, RS232 24-bit A/D, Sampling rate up to 2KHZ Resolution 1/5000~1/40000FS	Sensor connector: LEMO FGG.2B.319.CLAD52Z Communication connector: Type-C、RJ45Terminal Power: DC 12~36V, 200mA. 2m Indicator lights: Power and status Slot: Installed in the control cabinet	iDAS R&D: Debugging software, to display curve in real-time and to send commands to the interface box M812X Sample code: C++ source code, for RS232 or TCP/IP communication with M822X

Series	Model	Bus communication	Adaptive sensor Description
M8228XX	M8228B1	Ethernet TCP/CAN/RS232	Sensor 5V excitation, output small signal mV/V, such as M47XX series
M8229XX	M8229B1	Ethernet TCP/RS232	Sensor 5V excitation, output small signal mV/V, such as M47XX series
M8224XX	M8224B1	Profinet/RS232	Sensor 5V excitation, output small signal mV/V, such as M47XX series

# OEM Data Acquisition Circuit Board

## DESCRIPTION

The OEM version of the data acquisition card is particularly suitable for applications with limited space and high integration requirements. The data acquisition cards come with a variety of interfaces that provide sensor excitation, signal conditioning and acquisition. The communication interface includes EtherCAT, RS232 and CAN bus, and its communication commands are completely open, and data can be queried through simple AT commands. The use of low-noise instrumentation amplifiers and 24-bit A/D conversion chips makes the system resolution up to 1/5000-1/40000FS, and the sampling rate up to 2KHZ.

## MODEL SELECTION

Model	figure	Electrical interface	Dimension & Software
M8123B2		Bus communication:EtherCAT/ CAN/RS232 6-channel analog signal input Signal input range:+/-15mV Resolution:10-2000HZ Power suppl: DC24V (48V)	Dimension: D54mm H13.3MM Other: molex Adapted sensor: Sensors without built-in signal amplifiers
M8123B1		Bus communication:Ether- CAT/RS232 6-channel analog signal input Signal input range:+/-15mV Resolution:10-2000HZ Power suppl: DC24V (48V)	Dimension: LWH 50*50*12mm Other: molex Adapted sensor: Sensors without built-in signal amplifiers
M8123B		Bus communication:Ether- CAT/RS232 6-channel analog signal input Signal input range:+/-15mV Resolution:10-2000HZ Power suppl: DC24V (48V)	Dimension: LWH 50*50*12mm Other: Sensor connectors Adapted sensor: Sensors without built-in signal amplifiers
M8123D		Bus communication:EtherCAT (Single channel, not cascaded), RS232 6-channel analog signal input Signal input range:+/-15mV Resolution:10-2000HZ Power suppl: DC24V (48V)	Dimension: LWH 40*30*11mm Other: No joints Adapted sensor: Sensors without built-in signal amplifiers
M8132B1		Bus communication:CAN/RS232 6-channel analog signal input Signal input range:+/-15mV Resolution:10-2000HZ Power suppl: DC24V (48V)	Dimension: LWH 55*36*12mm Other: molex Adapted sensor: Sensors without built-in signal amplifiers
M8226CA		Bus communication:Ether- CAT/RS232 12-channel analog signal input Signal input range:+/-15mV Resolution:10-2000HZ Power suppl: DC24V (48V)	Dimension: D44mm H17MM Other: molex Adapted sensor: Sensors without built-in signal amplifiers
M8226F		Bus communication:Ether- CAT/RS232 12-channel analog signal input Signal input range:+/-15mV Resolution:10-2000HZ Power suppl: DC24V (48V)	Dimension: LWH 60*54*12mm Other: molex Adapted sensor: Sensors without built-in signal amplifiers
M8226G		Bus communication:Ether- CAT/RS232 12-channel analog signal input Signal input range:+/-15mV Resolution:10-2000HZ Power suppl: DC24V (48V)	Dimension: LWH 60*54*12mm Other: molex Adapted sensor: Sensors without built-in signal amplifiers
M8232B1		Bus communication:CAN/CANF- D/RS232 12-channel analog signal input Signal input range:+/-15mV Resolution:10-2000HZ Power suppl: DC24V (48V)	Dimension: LWH 55*36*12mm Other: molex Adapted sensor: Sensors without built-in signal amplifiers

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