SUNMOON
日月科技

Type SM41C Bearing Block Load Cell

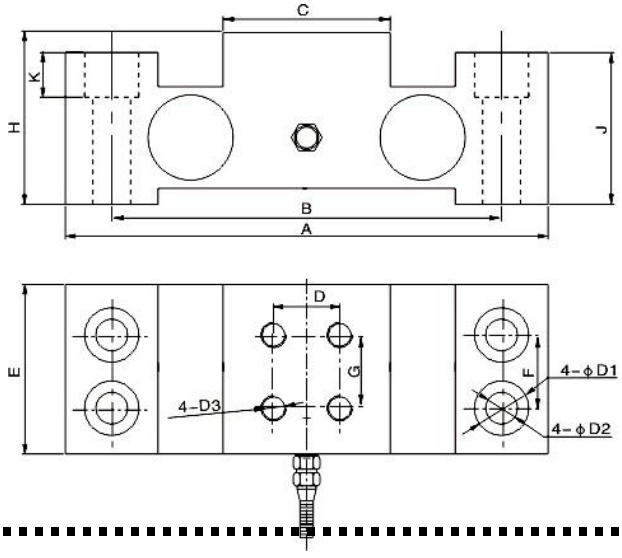
1、Description

The QCX series bearing block load cell is mainly installed under the bearing housing and can also be used in other structural forms. It is a dedicated sensor mainly for measuring the bearing capacity of a certain type of bearing housing. The structural principle is a shear-type resistance strain sensor with both ends fixedly supported and the center bearing. Selected high-quality alloy steel as the elastic body and foil-type resistance strain gauges as the sensitive conversion elements. The socket is installed in the middle of the sensor, and the two ends of the sensor are fixed on the base. When the bearing housing is in load, the load is transmitted to the base through the shear elastic beams at both ends, generating strain proportional to the load in the elastic beams, which is converted into corresponding electrical signals by strain gauges.

2、Characteristics

1. Strong anti-interference ability, is convenient to install and use, and has good stability..
2. The flat plate shape ensures a stable force state, good lateral interference, and can achieve high measurement accuracy.
3. Strong overload capacity and used for overload alarm of bridge cranes.

Dimensions（In mm. 1mm=0.03937 inches）



SUNMOON
日月科技

CAP./SIZE	A	B	C	D	E	F	G	H	J	K	D1	D2	D3
t/mm													
10	200	170	90	60	80	60	60	60	50	17.5	26	18	M16
20	300	240	103	60	120	70	70	120	115	30.5	43	26	M24
30	300	240	110	60	150	70	80	120	110	30.5	43	26	M24
40～50	300	240	110	60	150	70	80	120	115	30.5	43	26	M24
Ib/inches (conversion of above dimensions)													
22046.23	78.74	66.93	35.43	23.62	31.50	23.62	23.62	23.62	19.69	6.89	10.24	7.09	M16
44092.45	118.11	94.49	40.55	23.62	47.24	27.56	27.56	47.24	45.28	12.01	16.93	10.24	M24
66138.68	118.11	94.49	43.31	23.62	59.06	27.56	31.50	47.24	43.31	12.01	16.93	10.24	M24
88184.90～110231.13	118.11	94.49	43.31	23.62	59.06	27.56	31.50	47.24	45.28	12.01	16.93	10.24	M24

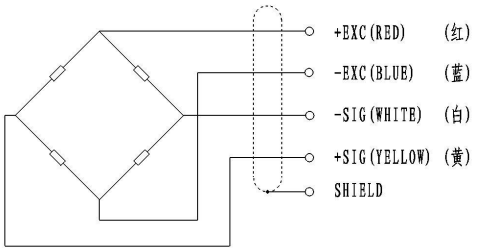
Circuit Diagram:

Red: ＋input

Blue: －input

White: +output

Yellow: -output



Specification：

Type	Technical parameters
Nominal load range	10～50t
Power supply	10~12 VDC
Zero balance	1.0±% of rated output
Analog output	2.0±0.01mV/V
Input resistance（Rlc)	750±20Ω（ohms）
Output resistance（Ro)	700±5Ω（ohms）
Insulation resistance	≥5000 MΩ（Mege-Ohms）
Class precision	0.02%FS
Effect of temperature	0.02%FS/10℃
Operating temperature	-40～+85℃
Safe Load Limit	200% FS
Safety margin against yielding	300% FS
Safety margin against breakage	500% FS
Material material	High performance alloy steel or (chromium ratio>15% stainless steel)
Protection type	IP67/IP68