



Special features

- For general purpose
- Strain gauge measuring system
- Tension / Compression
- Made of high-grade stainless steel or aluminium (0.1 – 0.5 kN)
- Small dimensions
- Application:
 - Industry
 - Testing machines
 - Laboratory

Specifications

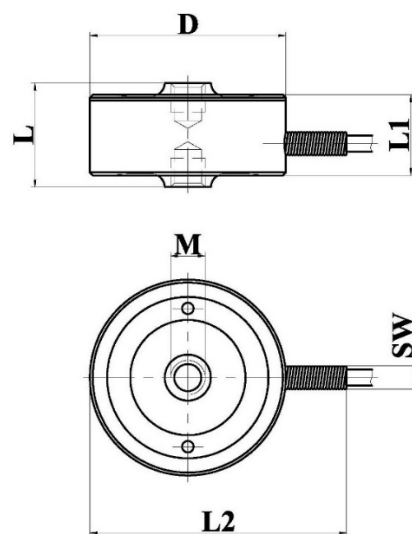
Rated capacity (F _n)	0.1, 0.2, 0.5	1, 2, 5	kN
Overload			
- Safe	130		% F _n
- Ultimate	150		% F _n
- Permanent static load ¹	75		% F _n
- Dynamic load ¹	50		% F _n
Nominal sensitivity (C _n)	1.0 ± 2 %	1.5 ± 2 %	mV/V
Zero balance	2		% F.S.
Max error			
Non-linearity	0.25		% F.S.
Hysteresis	0.25		% F.S.
Creep (30 min)	0.1		% F.S.
Temperature effect			
- On zero	0.1		% F.S./10 °C
- On output	0.1		% F.S./10 °C
Bridge resistance			
- Input	395 ± 10 %	380 ± 10 %	Ω
- Output	350 ± 5 %	350 ± 5 %	Ω
Insulation Impedance	> 5000		MΩ
Excitation ²			
- Recommended	5 ... 7	7 ... 10	V
- Maximal	10	15	V
Temperature range			
- Compensated	0 ... + 50		°C
- Operating	- 10 ... + 70		°C
Protection	IP54		
Construction	Aluminium	Steel	
Cable			
- Type	LifYDY 4 x 0.05		
- Length	2		m

Notes:

1 Recommended value

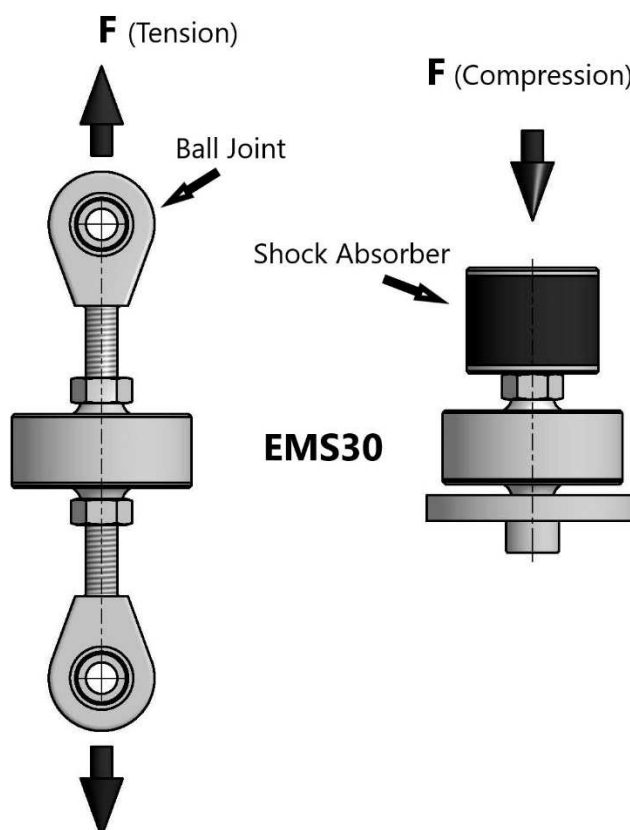
2 DC or AC Voltage

Outline dimensions

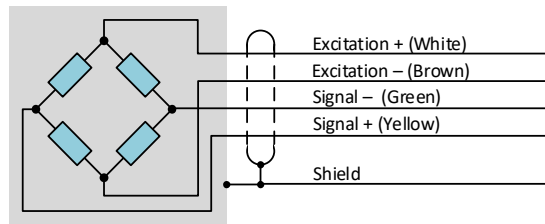


Rated capacity F_n (kN)	D mm	M mm	L mm	L1 mm	L2 mm	SW mm	Mass kg	Deflection, @ F_n (μm)
0.1, 0.2, 0.5	34	M6	18	14	44	$\Phi 4$	0.05	40
1, 2, 5	38	M8	22	18	48	$\Phi 4$	0.13	45

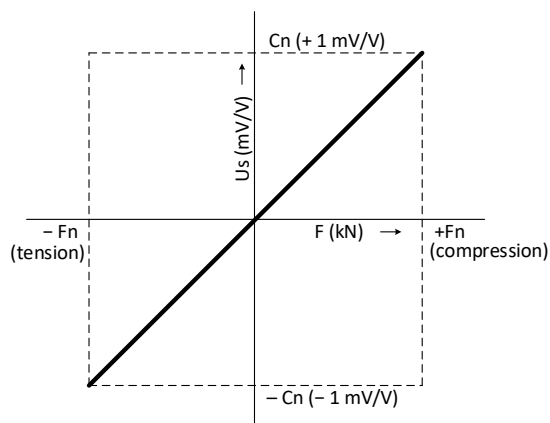
Recommended installation



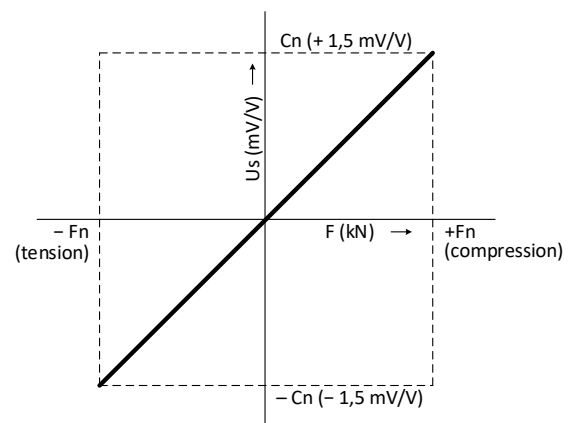
Sensor wiring colour code



Sensor output characteristic



F_n (kN): 0.1, 0.2, 0.5



F_n (kN): 1, 2, 5

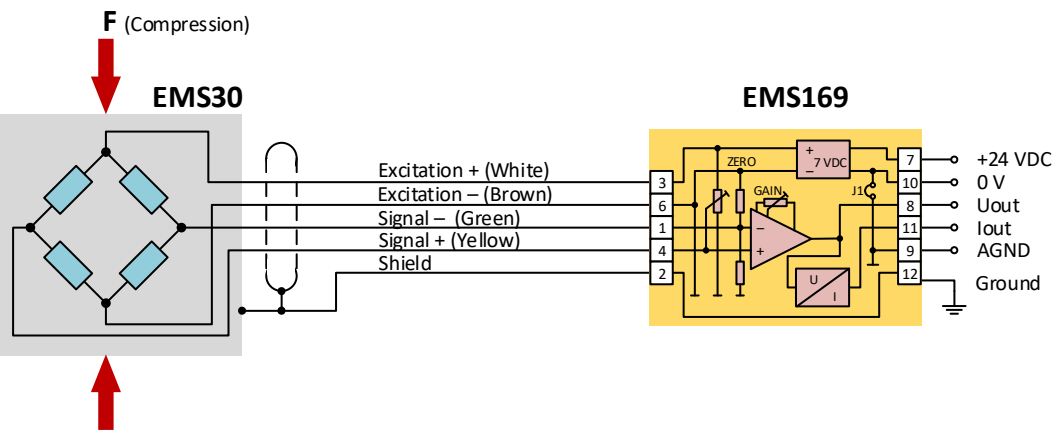
Wiring diagrams, connection examples to EMS169 signal conditioner

1. Load COMPRESSION, signal conditioner output positive (0...+10 V, 4...20 mA)

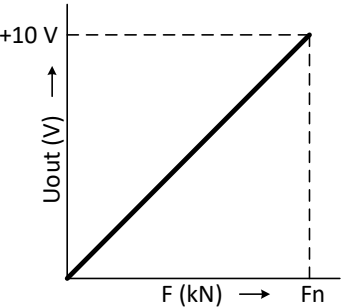
Links setting

J2 = ON, J3 = ON, J4 = 2 – 3 (connect)

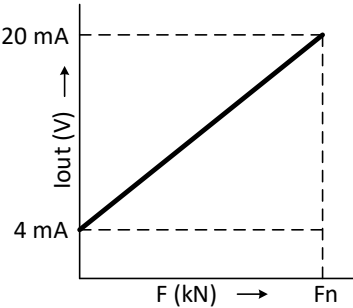
Wiring diagram



System output characteristic



Uout vs. F



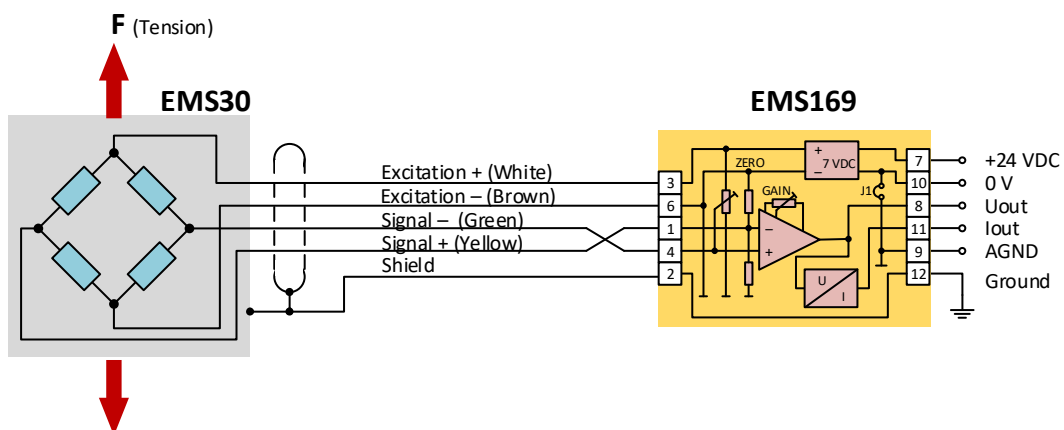
Iout vs. F

2. Load TENSION, signal conditioner output positive (0...+10 V, 4...20 mA)

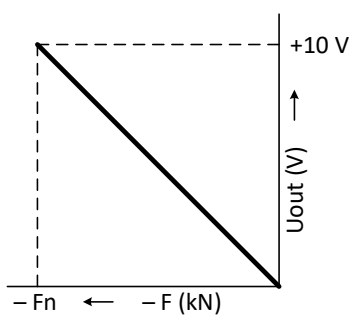
Links setting

J2 = ON, J3 = ON, J4 = 2 – 3 (connect)

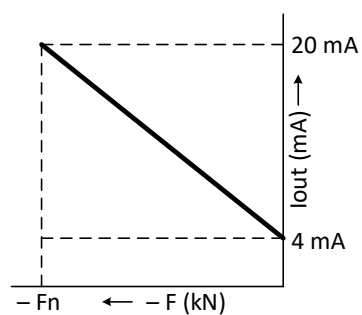
Wiring diagram



System output characteristic



U_{out} vs. F



I_{out} vs. F

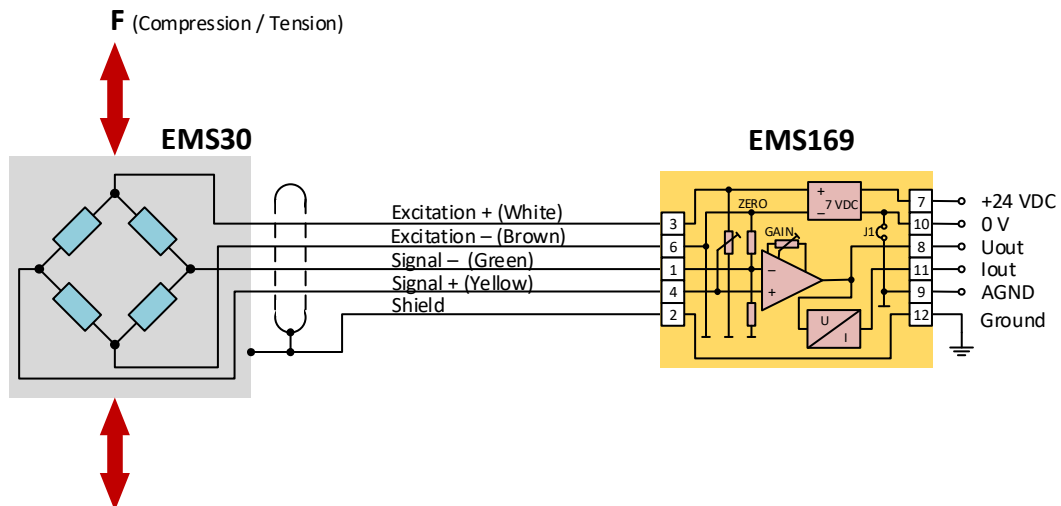
3. Load COMPRESSION and TENSION, signal conditioner output bipolar ($-10\text{ V} \dots 0 \dots +10\text{ V}$)

Note: The current output does not work in the negative range.

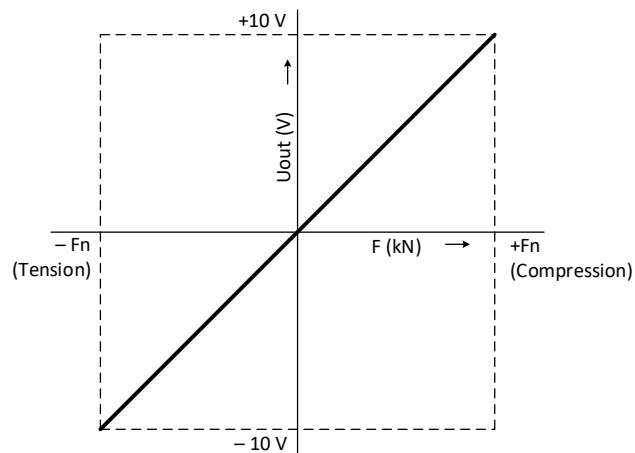
Links setting

J2 = ON, J3 = ON, J4 = 2 – 3 (connect)

Wiring diagram



System output characteristic



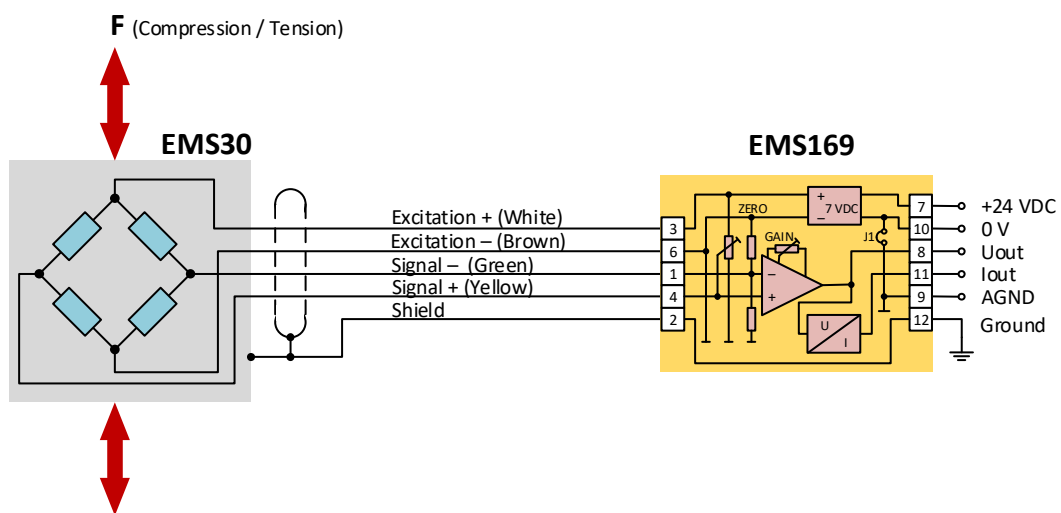
U_{out} vs. F

4. Load COMPRESSION and TENSION, signal conditioner output positive (0...+10 V, 4...20 mA)

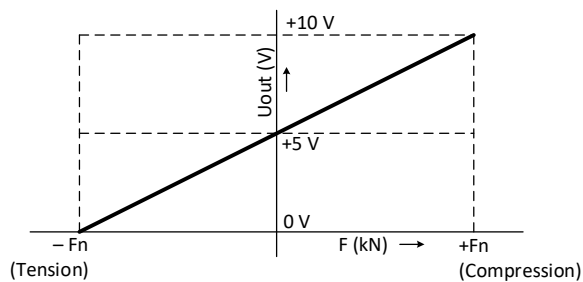
Links setting

- Sensor Sensitivity 1,0 mV/V (Ranges 100, 200, 500 N)
J2 = OFF, J3 = ON, J4 = 1 – 2 (connect)
- Sensor Sensitivity 1,5 mV/V (Ranges 1, 2, 5 kN)
J2 = ON, J3 = OFF, J4 = 1 – 2 (connect)

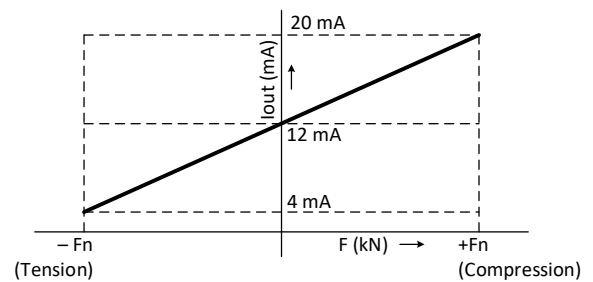
Wiring diagram



System output characteristic



Uout vs. F



Iout vs. F

Parallel wiring diagram

