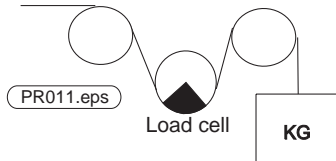


Applications:

The M3200-ce module is used with semiconductor-gauge tension roller assemblies to indicate the exact web tension on process machines such as slitters, coaters, rewinders, embossers, and printing and label presses.

Adjustment procedure:

1. Check that tension sensing roller is mounted correctly.
2. A remote tension meter can be used to calibrate the module. If used, check that meter is adjusted to zero mechanically.
3. In the event that a remote meter is not used, a voltmeter is required. Connect voltmeter between terminals 13 (+) and 15 (-).
4. With the web removed and no tension applied to the tension sensing roller, adjust ZERO until either 0V is measured on **Total output (13)** or the remote meter reads zero.
5. Thread a rope across the **center** of the tension sensing roller following the path of the web through the machine. Thread the rope at least one roller *before* and one roller *after* the tension sensing roller. Insure that rope does not pass over any deadbars or non-freewheeling rolls. All rollers in contact with the rope must be able to rotate freely. Fasten one end of the rope securely, attaching a weight of known value to the other end. This weight should be at least 25% of the full scale value. Rotate rollers in the direction of the weight.



6. Adjust **CAL.** until remote tension meter displays the calibration weight. If using a voltmeter, adjust until **Total output** voltage displays a value calculated by the following formula:

$$V = (\text{cal. weight} / \text{CAL. full-scale value}) \times 10 \text{ volts}$$

Note: A negative meter reading after the hanging of the weight indicates that the signals from the load cells are reversed. In the event of a negative reading, switch the wires between terminals 10 and 11.

7. Remove weight and check that outputs return to 0. If not, repeat steps 3 through 6.

Alarm level adjustment:

Apply a weight to the tension sensing roller equal to the value that should activate the alarm. Adjust **ALARM** potentiometer until **ALARM** LED lights up. Alarm output will be high (+24 V) whenever tension drops below the alarm level.

Load Cell Amplifier M3200-ce **US**

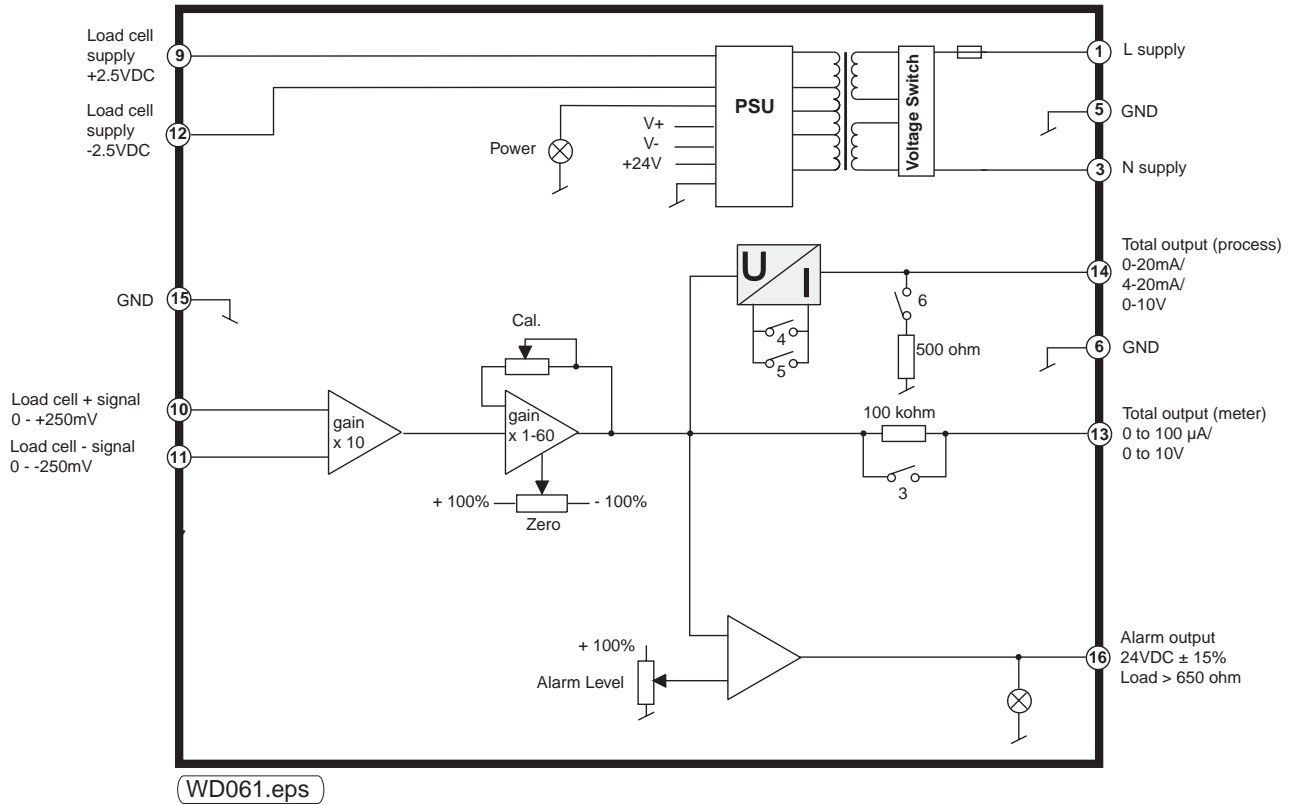
IL077.eps

IL053.eps

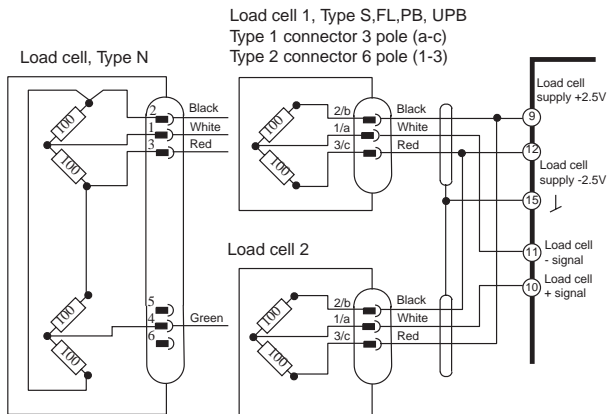
Electrical specifications:

| | |
|---|---|
| Supply Voltage, Selectable | 115V/230V AC ± 10% (IEC 204-1) |
| Supply Frequency..... | 48-62 Hz |
| Overvoltage Category..... | II (IEC 664) |
| Maximum Internal Fuse Size | 5x20mm 115V/80mA(T)/230V/50mA(T) |
| Material Degree of Inflammability..... | UL94V0 |
| Maximum Power Consumption | 3.5 VA |
| Maximum Supply Fuse Size | 10 A |
| Testing Voltage - Primary to Secondary..... | 3.75 kV for 1 Minute |
| | |
| EMC-Immunity | EN 50082-2, Industry |
| EMC-Emission | EN 50081-1, Trade and Light Industry |
| Degree of Protection..... | IP20 (IEC 529) |
| Installation Environment (Pollution Degree) | 2 |
| | |
| Connections | Removable Terminal Blocks |
| Weight | 0.14 lbs. (0.3 kg) |
| Dimension (L x W x H) | 2.95 x 1.77 x 4.21 (75 x 45 x 107 mm) |
| Mounting | DIN Rail 35 mm |
| Mounting Orientation..... | Not Critical |
| Ambient Temperature Range: Operating | 14°F to 122°F (-10°C to 50°C) |
| Ambient Temperature Range: Storing..... | 14°F to 176°F (-10°C to 80°C) |
| Humidity | 95% Non-Condensing |
| | |
| Load Cell Input | ±250mVDC |
| Input Impedance | 100 KΩ |
| | |
| Load Cell Supply | ±2.5 VDC ±2% |
| Meter Output, Selectable..... | 0 to 100µA / 0 to 10V, Max. Load 5 mA |
| Process Output, Selectable | 0 to 20 mA / 4 to 20 mA / 0 to 10V |
| Process Output Load (Current)..... | ≤ 500 Ω |
| Process Output Load (Voltage)..... | > 5000 Ω |
| | |
| Zero Range Adjustment | 50% of Load Cell Rating [Max. 250m VDC (±125 mV)] |
| Gain Adjustment | 11 to 510 |
| Accuracy | Better Than 1% |
| | |
| Alarm Output Voltage | 24 VDC ±15% |
| Alarm Output Load | > 650 Ω |

Block diagram for module type M3200-ce



Load cell installation



Programming

| Output 13: | |
|------------|--------------------------------|
| Total | : 0-10V 3 on |
| *Total | : 0-100 A 3 off |
| Output 14: | |
| *Total | : 4-20mA 4 off, 5 on, 6 off |
| Total | : 0-20mA 4 on, 5 off, 6 off |
| Total | : 0-10V 4 on, 5 off, 6 on |

*Factory set

WD050.eps

Mechanical specifications

