Load Cell Central OM-19-2

01 DIN-Rail Load Cell Signal Conditioner

Load Cell Central OM-19-2 combines bridge excitation, zero/span adjustment and analog conversion. Bridge impedance, sense wiring and receiver loading must be assessed together.

1 Strain-gauge bridge — 2 Excitation/sense — 3 Zero/span conversion — 4 Analog receiver

Excitation and parallel bridge loading

Standard supply is 24 ±4 V DC. Excitation selects 3, 5 or 10 V, with minimum bridge impedance of 80 Ω at 3/5 V and 160 Ω at 10 V. Four parallel 350 Ω cells therefore require the lower-excitation impedance allowance.

Sense wiring and known-load calibration

Four- and six-wire load-cell connections are supported. Establish the correct sense arrangement before calibrating against known loads. The 0.15–12 mV/V sensitivity adjustment matches bridge output to the receiving scale.

Analog output and filtering

Choose ±10 V, 0–10 V or 4–20 mA output and respect receiver impedance and output-capacitance limits. Engage the 10 Hz filter only when its response suits the process. Separate OM-192S set-point relay functions are not inferred from this identity.

OM-19-2 is the DIN-rail OM-19 execution. OM-192S relay functions and optional 12 V supply are not standard features of this item.

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02 Ratings, interfaces and applicable limits

Standard supply	24 ±4 V DC
Excitation	3 / 5 / 10 V DC
Minimum bridge impedance	80 Ω at 3/5 V; 160 Ω at 10 V
Sensitivity adjustment	0.15–12 mV/V
Voltage output	±10 V / 0–10 V
Current output	4–20 mA
Voltage-load impedance	≥2000 Ω
Current-load impedance	≤500 Ω
Output capacitance	≤1 nF
Low-pass filter	10 Hz at −3 dB

Configuration-specific engineering data

Accuracy class	0.05%
Operating temperature	0–70 °C
Maximum supply current	120 mA, OM-19
Zero temperature effect	≤0.035% FS/°C

Applying these values to the complete installation

OM-19-2 is the DIN-rail OM-19 execution. OM-192S relay functions and optional 12 V supply are not standard features of this item. Calculate parallel resistance before selecting excitation; cell count alone does not qualify 10 V.

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03 Application decisions and system boundaries

01 Weighing conversion

Condition a bridge for the analog receiving system.

02 Force measurement

Calibrate the full mechanical and electrical path.

03 Parallel cells

Choose excitation from combined bridge impedance.

04 Analog retrofit

Match output form and loading to the existing input.

Bridge loading

Calculate parallel resistance before selecting excitation; cell count alone does not qualify 10 V.

Calibration sequence

Establish excitation and wiring before adjusting known-load zero/span.

Receiver assessment

Check loading, capacitance and dynamic response at the destination.

Replacement boundary: Match supply, excitation, bridge impedance, sense wiring and output. Recalibrate with the actual cells.

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04 Eight questions beyond the specification table

1 Can four parallel 350 Ω cells use 10 V excitation from OM-19-2?

Their combined 87.5 Ω is below the 160 Ω minimum at 10 V. Assess 3/5 V excitation and verify the resulting signal and calibration.

2 Why is four-wire versus six-wire selection important on OM-19-2?

Sense wiring affects excitation reference. Follow the selected scheme and calibrate with the actual cables and cells.

3 What can cause OM-19-2's current output to fail near full scale?

Excessive loop impedance can exceed 500 Ω. Measure wiring plus receiver load before altering calibration.

4 How can a low-impedance voltage receiver affect OM-19-2?

Voltage loading must be at least 2000 Ω. Verify receiver impedance and compare the output locally and at its destination.

5 When should filtering be enabled on OM-19-2?

Use it when noise reduction is compatible with process response. Test settling with representative load changes.

6 Does a shunt check replace known-load calibration of OM-19-2?

It checks an electrical response, not the full mechanical load path. Perform known-load calibration and repeatability checks separately.

7 Can set-point relays be assumed on OM-19-2?

No. Those specifications belong to OM-192S. Inspect actual hardware before assigning relay functions.

8 Why assess cable capacitance at OM-19-2's output?

The capacitive-load limit is 1 nF. Assess cable and receiver together and verify stability before masking a wiring problem with filtering.

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05 Selection boundary and service reference

Identify the offered assembly

Inspect OM-19-2 identity, DIN mounting, jumpers and terminals. Request available label and connector photos. Have your maintenance team compare the offered OM-19-2 with the installed equipment and applicable Load Cell Central documents.

Lifecycle and replacement assessment

The current production and manufacturer-support stage for this exact execution is unconfirmed. Match supply, excitation, bridge impedance, sense wiring and output. Recalibrate with the actual cells.

Companion equipment and scope

Confirm the conditioner; cells, junction box and relay options only when itemized. A related product is not an automatic substitute; assess the installed interface and application requirements independently.

Engineering handover

Check loading, capacitance and dynamic response at the destination. Retain the complete hardware identities, approved configuration and accepted test outcome with the installation record.

Related product references

Opto 22 SNAP-AIMA-4

Opto 22 SNAP-AIV-8

Opto 22 SNAP-AIMA-I

Technical basis: Load Cell Central OM-19 / OM-192S Analog Signal Conditioner Technical Data. Apter Power technical synthesis for this product configuration.