Interface Review Workbook & OEM Reference Guide

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Industrial bridge signal conditioning / RFQ planning

This workbook collects requirements for a written quotation and sample review. It is not a released product datasheet, calibration certificate, compliance report, software license or guarantee of replacement compatibility.

Company / contact: _____

Work email: _____

Country / postal code: _____

Quantity / annual forecast / target timing: _____

Existing sensor brand / model / serial: _____

Capacity and force / torque direction: _____

Sensitivity (mV/V) / bridge resistance (ohms): _____

Excitation limits / 4 or 6 wire / cable length: _____

Existing amplifier reference and revision: _____

Receiving PLC / PC / engineering software: _____

Required output / sample rate / bandwidth / latency: _____

Email your sensor datasheet and connector drawing with this checklist to:

inquiry@loadcellamplifiers.com

https://loadcellamplifiers.com/contact

Choose the interface and channel architecture

Family	Review direction
MT-AMP-DIN	Voltage or current signal into a PLC input
MT-AMP-USB	Bridge signal into a PC acquisition chain
MT-AMP-SUM	Several matched bridges into one total signal
MT-AMP-INL	Compact conditioning near the sensor cable
MT-AMP-BUS	Independently readable measurement channels

These families identify configuration requests, not stocked SKU guarantees. Confirm the exact model, excitation, ranges, noise, filtering, software and installation conditions in the written quotation.

Selection decisions

1. Confirm receiver voltage/current/network and its exact input type.
2. Decide whether you need one combined load or individual sensor readings.
3. Check total bridge resistance and available excitation current.
4. Define bandwidth, latency and sustained transfer separately.
5. Match connector, shield, supply and cable installation.

Illustrative bridge calculation - not a hardware performance test:

Four matched 350-ohm bridges in parallel present 87.5 ohms.

At an assumed 5 V excitation, bridge current is about 57 mA.

The actual conditioner must be qualified for the complete load.

Pin-to-function review - complete from the supplied manuals

Function	Sensor pin / color	Amplifier pin / terminal
E+	_____	_____
E-	_____	_____
S+	_____	_____
S-	_____	_____
SEN+	_____	_____
SEN-	_____	_____
Shield/chassis	_____	_____

Connector series / coding / contacts / gender: _____

Mating part number / pin-view orientation: _____

Cable length / conductor / shielding / strain relief: _____

Functional principles only:

- A four-wire sensor has excitation and differential signal pairs.
- A remote-sense installation adds separate excitation feedback conductors.
- Use only the model-specific manual for local sense links and shielding.
- Wire colors and connector appearances are not universal pinout standards.

TEDS or special interface requirement: _____

Driver / OS / command framing / protocol file: _____

Original equipment cross-reference review

Original reference	Proposed review path
FUTEK IAA100 / IAA200	DIN voltage / current
FUTEK USB220 / USB225 / USB520	PC acquisition requirements
FUTEK USB320	Confirm amplified input class
HBM RM4220 / AE101 / AE301	Obtain exact original manual
HBM MP01 / MP30DP / MP55IBS / MP55	Network and input review
HBM ClipX BM40 / BM40IE / BM40PB	Exact interface suffix
Mantracourt DSCUSB / SGA	USB / analogue requirements
Rice Lake JB4SS / JB8SPT / trim boards	Trim / surge / enclosure review
Interface DMA2 / in-line references	Original datasheet required
Siemens WP321 / Beckhoff EL3356	PLC and protocol integration

This list does not establish discontinued status, stock, price, pinout equivalence or manufacturer-approved substitution. Brand names identify existing equipment. Confirm electrical, mechanical and software details.

Original manual / revision supplied: _____

Supply / excitation / input / output differences: _____

Mechanical / connector differences: _____

Driver / fieldbus / calibration migration: _____

Unresolved qualification items: _____

Blank sample acceptance record - not a certificate

Sensor / amplifier serial and revisions: _____

Supply / excitation / output / filter / cable: _____

Reference equipment and calibration status: _____

Test date / operator / temperature / acceptance limits: _____

Point	Reference input	Ascending output	Descending output	Result
1	_____	_____	_____	_____
2	_____	_____	_____	_____
3	_____	_____	_____	_____
4	_____	_____	_____	_____
5	_____	_____	_____	_____

Electrical shunt check / resistor / expected response: _____

Noise / drift / filter settling / timing results: _____

Fault / overload / PLC mapping results: _____

Tested EMC report model / revision / conditions: _____

Untested items / deviations / disposition: _____

Physical-load calibration and an electrical shunt check are different tests.

Request accredited traceability only where a suitable confirmed scope exists.

Price, lead time, warranty, payment and shipment terms require a written offer.

Primary manufacturer references and current review matrix:

https://loadcellamplifiers.com/futek-iaa-usb220-hbm-amplifier-replacement

inquiry@loadcellamplifiers.com